



Democratising forest business: a compendium of successful locally controlled forest business organisations

Duncan Macqueen, Anna Bolin and Martin Greijmans
(Editors)



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Edited by Duncan Macqueen, Anna Bolin and Martin Greijmans

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Acronyms

ABT	Autoridad de Bosques y Tierra (Forests and Land Authority), Bolivia
ACOFOP	Asociación de Comunidades Forestales de Petén (Association of Forest Communities in Petén), Guatemala
ADAPICRUZ	Asociación Departamental de Apicultores de Santa Cruz (Departmental Association of Beekeepers of Santa Cruz), Bolivia
ADSDPP	Ancestral Domain Sustainable Development and Protection Plan, the Philippines
AEPC	Alternative Energy Promotion Centre, Nepal
AFISAP	Integrated Forestry Association of San Andrés, Petén (Asociación Forestal Integral), Guatemala
AGEXPORT	Asociación Guatemalteca de Exportadores (Guatemalan Exporters Association)
AIMCU	Asociación Indígena Maderera de Cururú (Indigenous Lumber Association of Cururú), Bolivia
ANSAB	Asia Network for Sustainable Agriculture and Bioresources
APCOB	Apoyo Para el Campesino-Indígena del Oriente Boliviano (Support Project for Indigenous Peasants in Eastern Bolivia)
APFNL	Agence Nationale de Promotion des Produits Forestiers Non Ligneux (National Agency for the Promotion of Non-Timber Forest Products), Burkina Faso
APMIL	Asociación de Apicultores de San Antonio de Lomerío (Beekeepers Association of San Antonio del Lomerío), Bolivia
Arupa	Aliansi Relawan untuk Penyelamatan Alam (Volunteer Alliance for Saving Nature), Indonesia
ASAPA	Asociación de Apicultores de Pailón (Beekeepers Association Pailón), Bolivia
ASSET	Association of Small Scale Enterprises in Tourism, the Gambia
ASL	Agrupaciones sociales del lugar (social organisations), Bolivia
ASMINDO	Asosiasi Industri Permebelan and Kerajinan (Indonesian Furniture and Handicraft Association)
BAAC	Bank for Agriculture and Agricultural Cooperatives, Thailand
BBSM	Bhat-Bhateni Supermarket and Departmental Store, Nepal
BNI	Bank Negara Indonesia (government-owned bank), Indonesia
BOLFOR	Bolivia Sustainable Forest Management Projects (I and II)
BUHITA	Bukidnon-Higaonon Tribal Association Inc, the Philippines
CADT	Certificate of Ancestral Domain Title
CADEFOR	Centro Amazónico de Desarrollo Forestal (Amazon Centre of Forestry Development), Bolivia
CAP	Community action plan
CAR	Cadastro Ambiental Rural (Rural Environmental Registry), Brazil
CATIE	Centro Agronomico Tropical de Investigacion y Ensenanza (Tropical Agricultural Centre for Research and Higher Education)
CBFE	Community-based forest enterprise
CBHE	Cambodia Federation for Bee Conservation and Community-Based Honey Enterprises
CBOs	Community-based organisations
CCC	Central Comunal Cururú, Bolivia
CCMSS	Consejo Civil Mexicano para la Silvicultura Sostenible (Mexican Civil Board for Sustainable Silviculture)
CDI	Comisión Nacional para el Desarrollo de los Pueblos Indígenas (National Commission for the Development of Indigenous Peoples), Mexico

CEPAC	Centro de Promoción Agropecuaria Campesina (Centre for the Promotion of Peasant Agriculture), Bolivia
CF	Community forest/community forestry
CFCs	Community forestry concessions, Guatemala
CFE	Community forest enterprise, Mexico
CFM	Community forest management
CFMA	Community Forest Management Agreement, the Gambia
CFMCs	Community Forest Management Committees, the Gambia
CFO	Certificate of forest origin
CFUG	Community forest user group, Nepal
CFV-SFC	Certificación forestal voluntaria (voluntary forest certification)
CIAT	International Center for Tropical Agriculture
CICOL	Central Indígena de Comunidades Originarias de Lomerío (Centre for Native Communities of Lomerío), Bolivia
CMCC	Custom Made Crafts Center, the Philippines
CoC	Chain of custody
COOMFLONA	Cooperativa Mista Verde da Flona do Tapajós (Mixed Cooperative of the Tapajós National Forest), Brazil
CONAFOR	Comisión Nacional Forestal (National Forestry Commission), Mexico
CONAP	National Council of Protected Areas (Consejo Nacional de Áreas Protegidas), Guatemala
COPNAG	Central Originaria de Pueblo Nativos Guarayos (Central Organisation of Native Guarayos Peoples), Bolivia
CSIDB	Cottage and Small Industries Development Board, Nepal
CUKATA	Credit Union Kharisma Tali Asih, Indonesia
DCCC	Doi Chaang Coffee Company, Thailand
DCCF	Doi Chang Coffee Farm, Thailand
DDC	District Development Committee, Nepal
DFO	District Forest Office, Nepal
DOF	Documento de origem florestal (documentation of forest origin), Brazil
DoF	Department of Forestry, the Gambia
DOLE	Department of Labour and Employment, the Philippines
DTI	Department of Trade and Industry, the Philippines
EIA	Environmental impact analysis
FAO	Food and Agriculture Organization of the United Nations
FASMEC	Federation of Associations for Small and Medium Enterprises of Cambodia
FCFT	Federação das Organizações e Comunidades Tradicionais da Floresta Nacional do Tapajós (Federation of Organisations and Traditional Communities of the Tapajós National Forest), Brazil
FECOFUN	Federation of Community Forestry Users in Nepal
FFF	Forest and Farms Facility
FLEGT	Forest law enforcement, governance and trade
FLONA	Floresta Nacional (National Forest), Brazil
FM	Forest management
FMA	Forest management agreement
FMP	Forest management programme, Mexico
FSC	Forest Stewardship Council
FVCTLDC	Father Vincent Cullen Tulugan Development Center, the Philippines
GACF	Global Alliance for Community Forestry
GDP	Gross Domestic Product

GERHAN	Gerakan Nasional Rehabilitasi Hutan dan Lahan (National Movement of Forest and Land Rehabilitation), Indonesia
GFMC	Gambian Forest Management Concept
GIZ	German Agency for International Cooperation
GMD	Gambian dalasi (currency)
GTA	Gambia Tourism Authority
GTB	Gambia Tourism Board
HANDPASS	Nepal Handmade Paper Association
HBTL	Himalayan Bio Trade Pvt Ltd, Nepal
HR	Hutan rakyat (private/people's forest), Indonesia
IAITPTF	International Alliance for Indigenous and Tribal Peoples of the Tropical Forests
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute of the Environment and Renewable Natural Resources)
IBP	Institut Pertanian Bogor (Bogor Agricultural Institute), Indonesia
ICOFOSA	Integradora Comunal Forestal de Oaxaca SA de CV (Oaxaca Integrated Community Forestry), Mexico
ICMBio	Instituto Chico Mendes de Conservação da Biodiversidade (Chico Mendes Institute for Biodiversity Conservation), Brazil
IDEPRO	Instituto para el Desarrollo de la Pequeña Unidad Productiva (Institute for the Development of the Small Productive Unit), Bolivia
IDR	Indonesian rupiah (currency)
IDS	Integrated Development Society, Nepal
IEEPO	Instituto Estatal de Educación Pública de Oaxaca (State Institute of Public Education in Oaxaca), Mexico
IFAD	International Fund for Agricultural Development
IFFA	International Family Forestry Alliance
IFT	Instituto Floresta Tropical (Tropical Forest Institute), Brazil
IIED	International Institute for Environment and Development
ILCF	Investing in locally controlled forestry
INAB	Instituto Nacional de Bosques (National Forests Institute), Guatemala
INRA	Instituto Nacional de Reforma Agraria (National Agrarian Reform Service), Bolivia
IRD	International Relief and Development
IRR	Internal rate of return
ITTO	International Tropical Timber Organisation
IUCN	International Union for Conservation of Nature
JAVLEC	Java Learning Center, Indonesia
JUN	Jati Unggul Nusantara (fast-growing teak species), Indonesia
KCFA	Kombo Cashew Farmers Association, the Gambia
KD	Kelas diameter – class of diameter, Indonesia
KUB	Kelompok usaha bersama (joint business group), Indonesia
KWLM	Koperasi Wana Lestari Menoreh (Menoreh Sustainable Forest Cooperative), Indonesia
KWML	Koperasi Wana Manunggal Lestari (Manunggal Sustainable Forest Cooperative), Indonesia
LCF	Local cashew facilitator, the Gambia
LEI	Lembaga Ekolabel Indonesia (Indonesian Ecolabelling Institute), Indonesia
LPG	Liquefied petroleum gas
LRF	Lantbrukarnas Riksförbund (Swedish Family Forest Association), Sweden
MA&D	Market analysis and development
MAGA	Ministerio de Agricultura Ganadería y Alimentación (Ministry of Agriculture, Livestock and Food), Guatemala

MDGs	Millennium Development Goals
MEDEP	Micro-Enterprise Development Programme, Nepal
MFV	Mondulkiri Forest Venture, Cambodia
MoA	Memorandum of association
MTK	Maa-ja metsätaloustuottajain Keskusliitto (Finnish Family Forestry Association), Finland
MWHN	Mondulkiri Wild Honey Network, Cambodia
NACO	Natural Resources Consulting, the Gambia
NAFES	National Agriculture and Forestry Extension Service, Laos
NAFRI	National Agriculture and Forestry Research Institute, Laos
NBPA	Nepal Briquette Producer Association
NCIP	National Commission on Indigenous Peoples, the Philippines
NEA	National Environment Agency, the Gambia
NGPME	Natural Gum Processing and Marketing Enterprise
NTFP	Non-timber forest products
NTFP-EP	Non-Timber Forest Products Exchange Programme for South and Southeast Asia
OFWE	Oromia Forest and Wildlife Enterprise
OMYCs	Organización manejo y conservación (Civil society management and conservation organisations), Guatemala
OTB	Organizaciones territoriales de base (grassroots organisations), Bolivia
P2H	Pelayanan pembangunan hutan (forest development services), Indonesia
PAFO	Pan African Farmers' Organisation
PCFMA	Preliminary Community Forest Management Agreement, the Gambia
PFM	Participatory forest management
PGIBT	Planes integrales de bosques y tierras (Integrated forest and land management plans), Bolivia
PGMF	Plan general de manejo forestal (forestry management general plan), Bolivia
PHBML	Pengelolaan hutan berbasis masyarakat lestari (sustainable community-based forest management), Indonesia
PINFOR	Programa de Incentivos Forestales (Forestry Incentive Programme), Guatemala
PINPEP	Programme of Incentives to Small Landowners with Forestal or Agroforestral Vocation (Programa de Incentivos para Pequeños Poseedores de Tierras de Vocación Forestal y Agroforestral), Guatemala
PKHR	Pusat Kajian Hutan Rakyat (People's Forest Research Centre), Indonesia
POAF	Planes operativos anuales forestales (annual forestry operating plan), Bolivia
PPA	Certification and Sustainable Marketing of NTFPs Private Public Alliance project, Nepal
PPC	Provincial People's Committee, Vietnam
PPG7	Programa Piloto para a Proteção das Florestas Tropicais do Brasil (Pilot Project for the Protection of Tropical Forests in Brazil)
ProManejo	Projeto de Apoio ao Manejo Florestal na Amazonia (Project to Support Forest Management in the Amazon), Brazil
RECOFTC	Center for People and Forests
REDD+	Reducing emissions from deforestation and forest degradation
RESEX	Reserva extrativista (extractive reserves), Brazil
RFD	Royal Forestry Department, Thailand
SADU	Smallholder Agricultural Market Development in the Uplands, Laos
SDC	Swiss Agency for Development and Cooperation
SERFORCU	Empresa de Servicios Forestales Cururú (Forest Services Enterprise of Cururú), Bolivia

SEMARNAT	Secretaría del Medio Ambiente y Recursos Naturales (Secretariat of Environment and Natural Resources), Mexico
SFB	Serviço Florestal Brasileiro (Brazilian Forest Service)
SFC	State forestry company, Vietnam
SFE	State forest enterprise, Vietnam
Shorea	Small Home of Rural Empowerment Activists, Indonesia
SKC	Sahakreas CEDAC (Center for Study and Development in Agriculture), Cambodia
SRL	Società a responsabilità limitata (limited company), Bolivia
SSLFMP	Strengthening Sustainable Livelihoods and Forest Management Programme, Ethiopia
SVLK	Sistem Verifikasi Legalitas Kayu (Timber Legality Assurance System), Indonesia
TIOC	Indigenous native peasant territories (territorios indígena originario campesinos), Bolivia
TCOs	Tierra comunitaria de origen (indigenous communities), Bolivia
TFS	Technical Forestry Services, Mexico
UCFAS	Unidad Comunal Forestal Agropecuaria y de Servicios de Ixtlán (Ixtlán Community Forestry, Agriculture and Services Unit), Mexico
UFOPA	Federal University of Western Pará, Brazil
UGM	University of Gadjah Mada, Indonesia
UNDP	United Nations Development Programme
UNFOSTI	Unión Forestal Santo Tomás Ixtlán (Forestry Union of Santo Tomas Ixtlán), Mexico
USDA	US Department of Agriculture
USAID	United States Agency for International Development
VDC	Village development committee
VIJACHIP	Vietnam-Japan Chip Corporation
VND	Vietnamese dong (currency)
VSLA	Village saving and lending association, Ethiopia
VTE	Village Tree Enterprise project, Tree Aid
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature
YABIMA	Yayasan Bina Insan Mandiri Foundation, Indonesia

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Executive summary

Forests are mostly inhabited by approximately 1.3 billion rightsholders. We all depend on them indirectly. Forests therefore have to cater to the multiple needs for local goods (access to income, food, clean water, wood energy, construction materials, fertile soils, medicinal and cosmetic products, and recreation) and global goods (climate change mitigation, biodiversity conservation, hydrological and mineral cycles). It is a tall order because many of these needs compete with one another. Plus, the needs are growing all the time.

Reconciling competing needs is best handled democratically. Because of this, installing good forest governance has been much in vogue within recent sustainable development approaches. But a blind eye has been turned to the business models that directly impact forest landscapes. Many of these serve one single economic need – income – to the detriment of other local or global goods. Typically this is not good locally. Increasingly it is not good globally. Alternative, more democratic, business models are needed. Business models in which local people, living with the consequences of their decisions, reconcile competing needs from forest landscapes in businesses they control. Only then will the pursuit of income be subservient to other local and global goods.

Is the imperative for democratic and locally controlled forest business far-fetched? Representatives of indigenous peoples, community forestry and family forestry think not. They have united behind an agenda of 'investing in locally controlled forestry' (ILCF). Furthermore, increasingly comprehensive bodies of scientific evidence point to better impacts on both forests and people of locally controlled forests – in comparison with government-controlled or private-sector alternatives. What is much more of a challenge, however, is to understand how the democratisation of locally controlled forest business can be made to work economically. With local control comes a significant business challenge – how to reconcile the multiple perspectives of local forest-family smallholders, communities and indigenous peoples into coherent and viable business value propositions? At its core, this is an organisational challenge. Because of that, the focus of this book is primarily on the organisational ownership and management structures of forest business. The introductory Chapter 1 describes the reasons why organisation is so critical for ILCF at a range of levels, from local to international.

The main purpose of this book, however, is to present 19 case studies from 14 developing countries that show how local people have been democratising forest business. By this is meant the process of asserting collective local control through ownership and management arrangements so that the integrated needs of families, communities and indigenous peoples remain central to the business operation. An attempt was made by the Forest and Farm Facility (FFF) and Forest Connect alliance (programmes that led this work) to choose 'successful' case studies. But success, beyond the survival of the business, is difficult to define and is always a work in progress. The reason is that more democratic business models are invariably assessed differently against the multiple

different objectives of their members. Instead of a fixation on the metrics of success, each case study is structured in five sections: the enabling environment, the business model, the ownership structure, how challenges were overcome, and critical success factors.

The book ends with a set of conclusions drawn from analysis of the full set of 19 case studies – which are essentially a set of lessons of what makes for success. At this headline level, some statements are blindingly obvious – others perhaps less so. But there is much in the detail that can only be gleaned from a careful reading of the case studies themselves. Not every case study exemplified all of these conclusions (which shows that businesses can survive without getting everything right!). But most case studies did provide explicit examples in support of these conclusions (ordered under the corresponding sections in which the case studies were presented in Box 1.1). It is hoped that such lessons will assist serious development efforts to scale-up the organisation of locally controlled forest business – both for the local and the global public good.

Box 1.1 Main conclusions from the analysis of the case studies in this book

The enabling environment

- a. An enabling policy environment that gives local people secure commercial forest tenure can trigger or scale-up viable and sustainable business models

The business models

- b. Strong local origins and member-based ownership give resilience
- c. Support for capacity development is enhanced if it includes training in financial administration alongside technical support appropriate to scale
- d. Investing in market research underpins evolution towards better and also more diversified business
- e. Finding ways to differentiate products or services in the market is critical for continued success
- f. Reinvesting some profit towards upgrading the offer to customers helps long-term business prospects
- g. Establishing second-tier organisations that aggregate products and provide services to first-tier producer organisations provides a longer-term growth trajectory

The ownership structures

- h. Clarity over the organisational structure and roles and responsibilities within it increases business efficiency
- i. Financial oversight mechanisms assure accountability and help avoid financial abuses that frequently lead to business failure
- j. Maintaining staff mobility and leadership turnover can help to spread capacity within the business and improve long-term sustainability

How challenges were overcome

- k. A broad vision within which the pursuit of profit plays a supporting role helps maintain cohesion in a group business
- l. Finding creative ways to secure finance for investment and cash flow is often essential to success

Key success factors

- m. Seeking out and taking advantage of partnerships and networking opportunities is crucial to opening up new business opportunities
- n. Maintaining a strong commitment to staff development and production or service quality wins and keeps customers



Developing a framework for presenting successful locally controlled forest business models

by Duncan Macqueen, Martin Greijmans, Sophie Grouwels and Peter deMarsh

1.1 Locally controlled forestry matters at a planetary scale

Human populations and economies are growing in a finite planetary environment. Combining human development and environmental protection is therefore an ever more pressing challenge. Forests must cater to the multiple development needs of local populations and to environmental protection. The reason is that nearly all forests are inhabited – by approximately 1.3 billion rightsholders. Most are forest and farm producers attuned to their forest and farm landscape (Chao, 2012). They derive multiple different benefits from forests: food, fuel, fibre, water flows and a host of other diversified medicinal, cosmetic and craft products that help them adapt to climate change and maintain the integrity of biocultural ecosystems. Reconciling multiple overlapping uses of forests is best handled democratically. Democratising forest governance to engage such forest-farm producers in forest decision making has therefore long been on the forest agenda. But the architecture of business through which forest farm landscapes are developed has largely escaped democratic scrutiny.

The conventional industrial corporate architecture of business is controlled by those with capital (whose proximity to, and concern for, the forest varies hugely). It involves ‘capital seeking natural resources and needing labour’. It searches out forest and farm land to produce particular, often monotypic, products such as timber, agricultural commodities and increasingly energy. At best it offers employment and sometimes skill development to local people. At worst it sweeps aside local people, their customary claims to forest land, and the multiple benefits forests provide them with.

The history of the conventional industrial corporate architecture in balancing human development and environmental protection is often troubling. Because control rests with those who have capital, their interests normally prevail, often unsurprisingly involving the pursuit of yet more capital. The inevitable growth in inequality between the ‘haves’ and ‘have nots’ when the rate of returns to those with capital (interest) exceeds the rates of return to labour (inflation) creates social inequalities that are beginning to bother eminent economists (Piketty, 2014). There is little evidence of substantial contributions from this approach to poverty reduction (Mayers, 2006).

The degree to which broader environmental interests are served by this conventional model depends either on how closely those broader interests can be aligned with those pursuing capital and how far they can be imposed through political governance. Some advances in terms of sustainability have been made (with ever greater scrutiny of legality, sustainability

and the provision of environmental services – notably carbon sequestration and biodiversity). But despite these advances, and a huge expansion in low-biodiversity forest plantations in countries like China, the rate of loss of primary biodiverse tropical forests remains unchecked. Between 2000–2012 Brazil's well-documented, governance-driven reduction in deforestation was more than offset by increasing forest loss in Indonesia, Malaysia, Paraguay, Bolivia, Zambia, Angola and elsewhere (Hansen *et al.* 2013).

An alternative, more democratic, business architecture might help to address the social inequity and environmental degradation brought about by the conventional model. Indeed, global alliances of family forestry, community forestry and indigenous peoples have called for exactly that (see Macqueen *et al.* 2012b). This would require replacing the conventional model ('capital seeking natural resources and needing cheap labour') with a more democratic alternative ('rights holders managing natural resources and seeking capital' – Elson, 2013). Such an alternative model would potentially install some form of democratic local control into the very heart of business such that the multiple benefits of forests are given explicit consideration. Forest and farm producers are embedded within, and have an integrated outlook regarding, forest and farm landscapes. They are well aware of the need to maintain their own livelihoods through community cohesion, income generation, food security, energy provision and so on – referred to as social foundations in the broader analysis of Raworth (2012). They are also well aware of the local need to maintain the integrity of ecosystems upon which their survival depends. This includes locally adapting to and mitigating climate change, conserving necessary biodiversity, and as farmers, maintaining long-term soil fertility without costly and potentially resource-degrading chemical inputs. It also includes maintaining water tables and flows of water from the forests both for drinking water and farming requirements. Their daily experience provides an ongoing demonstration of how the environmental, social and economic dimensions of their lives are a single, integrated reality. Their group businesses are therefore best placed to make sense of often-competing economic, social and environmental agendas, and deserve better investment. The sheer numbers of forest and farm producer business operations around the world further argue for better investment. For instance, in Indonesia, where small and medium enterprises dominate the agricultural and forestry sector, 98.8 per cent of all economic units are classified as micro enterprises, and while they may contribute only 59.08 per cent of the GDP, they are absorbing over 107 million workers.

Building this integrated reality into business architecture matters because without it, it is difficult to see how humanity will avoid breaching planetary boundaries (see Rockström *et al.*, 2009). Attempts to secure both local integrity and planetary-level integrity are much more likely to be achieved fairly through the multifunctional mosaics of locally controlled forestry, than through the monotypic expanses of large-scale industrial forestry (Macqueen, 2013a).

The purpose of this book is to showcase a series of case studies that show how local people have been democratising forest business – the process of asserting collective local control through ownership and management arrangements such that the integrated needs of families, communities and indigenous peoples remain central to the business operation. Democratising forest business does not involve some static democratic blueprint. It always involves ongoing processes of negotiation between multiple individuals and interests – and

the gradual evolution of systems of social accountability to avoid elite capture by the few at the expense of the many. Each of the case studies in this book display works in progress, democratic in intent, if not yet there in reality. The case studies show progress and setbacks in roughly equal measure. Success is not easily measured – except by the survival of business structures that maintain that democratic intent. And in forestry, as noted above, that democratic intent is particularly important because of the multiple overlapping benefits that forests provide to both local and global publics.

1.2 Evidence points to the benefits of locally controlled forestry

Myriad locally controlled forest businesses constitute a vast forest-related private sector in which benefits to livelihoods and forest condition go hand in hand. Landscape-scale improvements in forest condition have emerged in countries where the potential of locally controlled forestry through recognition of the rights of communities to forest land and resources has been unleashed such as Mexico, Nepal and Tanzania (Seymour *et al.*, 2014). This community-managed forestry subcomponent of locally controlled forestry has been shown to be at least as effective as state-enforced protected areas as a means of stemming forest loss (Porter-Bolland *et al.*, 2012) and that it has generally positive impacts on forest condition (Bowler *et al.*, 2010). The environmental benefits of locally controlled forestry that are confirmed by the several multicountry analyses that have been published to date argue for greater attention to this area of work in international sustainable development.

Contrary to common perception, forest protection and economic development can be not just compatible, but complementary, without difficult trade-offs, at least within the subset of forestry that is locally controlled (and with at least some democratic oversight). Improved condition in locally controlled forests has been accompanied by substantial livelihood benefits across a wide range of contexts – including family small-holdings (Ackzell, 2009), community forests (Bray *et al.*, 2003; Molnar *et al.*, 2007; Charnley and Poe 2007; Ojha *et al.*, 2009) and indigenous peoples' territories (Nepstad *et al.*, 2006; CEESP, 2008). The social benefits that come from collective action in pursuit of common social objectives is a further reason for focusing on this area of work.

What is much more of a challenge, however, is to understand how the democratisation of forest business and locally controlled forestry can be made to work economically. With local control comes a significant business challenge – how to reconcile the multiple perspectives within local forest family smallholders, communities and indigenous peoples into a coherent and viable business value proposition? Additionally, how can the frequent small scale of individual family smallholdings, community forests or indigenous people's areas be aggregated to provide scale efficiencies that are required for successful businesses in national or global markets? What ownership and management structures might be able to overcome these challenges? Too often, the potential of locally controlled forestry is dismissed with phrases such as 'it cannot work at scale' because the economic challenges of achieving successful locally controlled forest businesses appear daunting. The argument of this book is that 'it must be made to work at scale' if we want an economic system that also delivers widespread environmental and social benefits. The question becomes 'how to make it work at scale'? This book hopes to shed light on some ownership and management structures that have delivered successful locally controlled forest business.

1.3 Dialogues have unpacked how locally controlled forestry is enabled

Driving this agenda, three alliances representing forest rightsholders began in 2009 to explore common ground: the International Family Forest Alliance (IFFA), the Global Alliance for Community Forestry (GACF) and the International Alliance for Indigenous and Tribal People's of the Tropical Forests (IAITPTF) – referred to jointly as 'the three rightsholders groups' abbreviated to 'the G3'. While representation by such international alliances is inevitably partial, the process of meeting did for the first time develop a credible, combined position, agreed by all parties as to the terminology and agenda that they wished jointly to pursue (G3, 2011). They agreed to work around possible areas of argument or fracture lines to do with: indigenous rights versus non-indigenous interests, collective versus individual rights, land-use conflicts and differences in methods of economic, financial and forest land management.

The G3 adopted the mutually acceptable terminology 'locally controlled forestry' as a shorthand for their joint agenda and defined it as:

[T]he local right for forest owner families and communities to make decisions on commercial forest management and land use, with secure tenure rights, access to markets and technology and freedom of association (ibid).

Between 2009 and 2012, the G3 were key participants in a series of 11 international dialogues (hosted by The Forest Dialogue or TFD) together with investors and forest experts called Investing in Locally Controlled Forestry (ILCF). The dialogues explored pre-conditions for successful locally controlled forestry, and practical strategies for mobilising greater investment in support of this agenda (Macqueen *et al.*, 2012b). Participants reached consensus that two types of investment are essential for successful locally controlled forestry:

- **Enabling investment** in rights, market access, technical and management capacity, and social organisation from which a tangible financial return is not expected – but which creates the conditions for
- **Asset investment** in improved forest management, processing facilities and marketing capacity from which a tangible financial return is expected.

The conditions established by the former serve to attract the latter – but on a fairer and more sustainable footing than has usually been the case.

Enabling conditions for successful locally controlled forest business appear to be very much the same in all parts of the world (see Macqueen, 2013b). They can be deduced from simple questions that any forest and farm producer might ask before embarking on investment in a formal (or indeed, informal) business (see Table 1.1).

Locally controlled forest business models flourish when such enabling investments are made. The four enabling investments are very much a mutually reinforcing package. None is optional. But as noted in Table 1.1, their continued success depends on the fourth

Table 1.1 Enabling conditions and questions linked to locally controlled forestry

Enabling conditions (requiring enabling investment)	Descriptive question to which a forest-farm producer must be able to answer 'Yes' if they are to plant or manage trees
Secure commercial tenure	Question 1. If I plant or manage Tree X (for food, fuel, fibre, conservation etc.) will I have the right to sell it?
Fair market access and business support	Question 2. If I plant or manage Tree X (for food, fuel, fibre, conservation etc.) will I be able to sell it at a fair price?
Appropriate technical extension support	Question 3. If I plant or manage Tree X (for food, fuel, fibre, conservation etc.) will I be able to get the management and technical support to manage it sustainably, protect it from pests and diseases, and package it for the market?
Freedom of association and strength of organisation	Question 4. If I plant or manage Tree X (for food, fuel, fibre, conservation etc.) will I be able to associate with others to make sure circumstances don't change while the trees are growing and so I can carry on answering 'yes' to the previous three questions?

Source: Peter deMarsh, Chair, IFFA.

enabling condition (freedom of association and strength of organisation) to maintain the circumstances under which success is possible. This fundamental point is often missed. Locally controlled forest business models require a central emphasis on organisational structure and process.

1.4 Organisational structure is the foundation for locally controlled forestry

Organisational structures are a tool, normally created by forest-farm producers themselves to achieve goals they cannot achieve as well or at all as individuals, through various kinds of economies of scale (Macqueen *et al.*, 2006, deMarsh *et al.*, 2014). It should be noted that while such organisations may be built around business, in various country examples successful organisations may also be driven primarily by policy advocacy purposes that seek to strengthen the enabling conditions needed by the small family or community businesses that are the members of these organisations.

Nevertheless, the following main goals are often served by a mature organisation (and they may also constitute functions by which that organisation generates its revenue):

- **Negotiating power:** to achieve scale efficiencies and speak with a more powerful, unified voice (lobby) in the market place and with political decision makers (especially on matters relating to enabling conditions 1–3: secure commercial tenure, fair market access and appropriate technical extension).
- **Efficient services:** to reduce transaction costs and provide services for their members: forest protection, forest management, various marketing functions (negotiating sales, aggregating product, improving product quality, storage and transportation), forest extension education and training and other types of capacity building.

- **Upgrading:** to adapt strategically to new opportunities through investments in value-added processing of forest products.

These goals or functions will be pretty much the same for a producer of timber from a family forest in Norway and a producer of wild forest honey from a community forest in Cambodia. The first function, negotiating power, is often the initial rationale for a locally controlled group forest business, and the basis for revenues organised through membership fees (or tariffs on products sold through that organisation). Lobbying governments to put the first three enabling conditions in place (see Table 1.1), and over time, to ensure they stay in place, is an ongoing need. Priorities may change over time; new challenges will likely emerge that were not anticipated in the beginning but in response to which, the negotiating power of the forest and farm producer organisation may be as important as for its early goals.

The second function, efficient services, may often relate to services that the organisation then arranges, initially on a not-for-profit basis, but which may later become a source of revenue, potentially sold to customers outside the organisation.

The third function, upgrading, relates to the enterprises associated with processing forest products and will likely include a profit-making objective (that is often part of a more or less formal 'triple bottom line'). This too evolves over time and often requires a scale that provides a strong rationale for association.

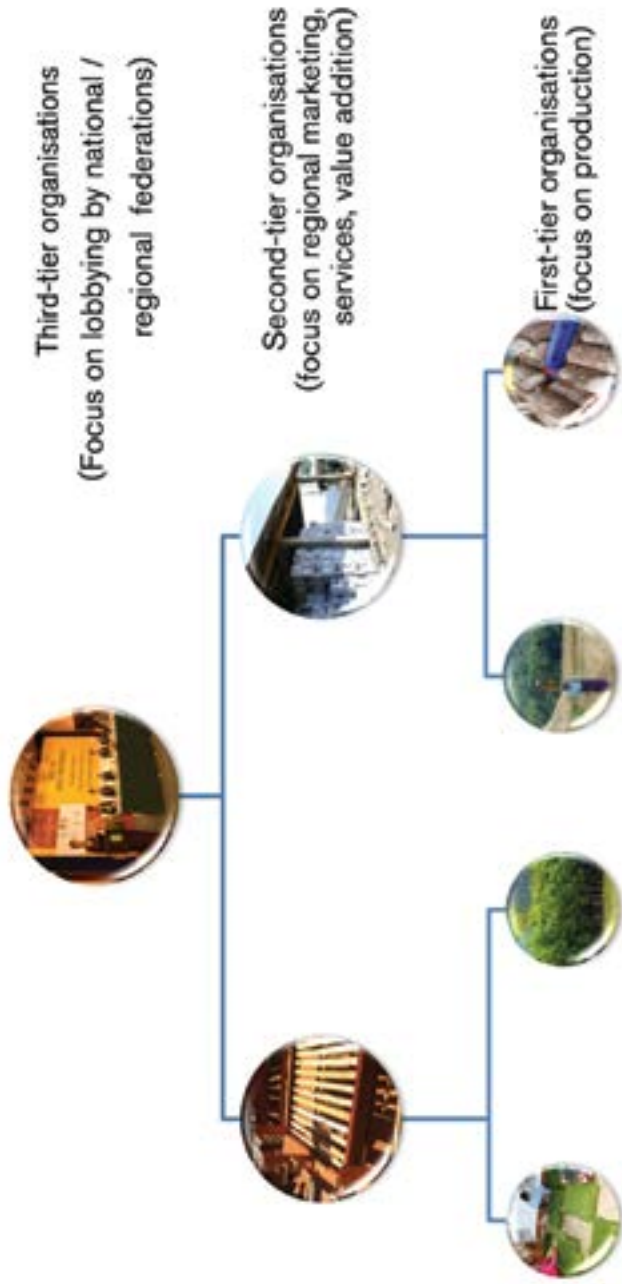
Locally controlled forest businesses share the need for similar enabling conditions the world over, so it is not surprising to find a few common types with some frequency – see Figure 1 (FAO, 2013):

- Informal village-level forest management labour-sharing groups and formally constituted village-level businesses (constituted in various legal ways) for improved forest management capacity or marketing into local markets (first tier organisations).
- County-/district-/township-level associations for marketing into regional and national markets; and forest management support services such as forest extension (second tier organisations). Individual family forest management, harvesting, and/or processing businesses may be direct members at this level of organisation.
- Regional/national federations of local-level forest and farm producer organisations that serve a lobbying function (third tier organisations).

Figure 1 Tiers of organisation relevant to locally controlled forest businesses

Organisation

The critical enabling condition to pursue all others



Such organisations are not an end in themselves. A lot of time and other resources are needed to establish and maintain them. Producers know this, either from previous historical experience, or from observing the experience of other groups. They know the challenges of maintaining or failing to maintain good governance within the organisation. They know the challenge of reducing conflict within the group of producers, and with other groups, communities, the private sector and the government. An effective locally controlled forest business must be able to solve such conflicts. To form a locally controlled forest business, producers must really believe it is worth the effort and the risks.

The generic advantages and challenges of such organisations in the forest sector are now well known, with a wealth of helpful case studies documented from around the world (FAO, 2013). Inevitably, the specific businesses vary in character in a number of ways that reflect national and local history and culture, and the specific activities and products that are the focus of their work. These important differences coexist with other qualities that seem to be universal (deMarsh *et al.*, 2014).

- Strong collective interests which may evolve over time
- Autonomous functioning in relation to government and other agencies and institutions
- Democratic decision making (one member, one vote; regular opportunities for members to discuss and approve or change basic organisation policies and strategy)
- Transparent financial reporting by organisational management to members
- Knowledge of successful experiences from the past or present across members
- Financial self-reliance for basic organisational functioning
- Significance in the total economy in which they operate
- Subsidiarity in the functions performed by the organisation: only perform functions at a secondary level (such as a federation of local forest and farm producer organisations) that cannot be done as well at a level closer to the producers (by the local forest and farm producer organisations themselves).

The geographic scale at which a locally controlled forest business seeks to operate is determined again by the three basic functions: the scale of market and corresponding level of government whose customers and policies the forest producers would like to influence; the size of area that would allow a particular service to be provided most efficiently; and the area required to supply any demand for raw materials from value-added processing facilities. The development of national federations of local organisations has evolved at a fairly early stage in most cases of long-term success of locally controlled forestry (e.g. Nepal: Federation of Community Forestry Users in Nepal (FECOFUN); Finland, Maa- ja metsätaloustuottajain Keskusliitto (MTK); Sweden, Lantbrukarnas Riksförbund (LRF)).

The challenge of maintaining a spirit of ownership and a sense of control by the producers themselves over time can easily increase with the size of the organisation. It increases even more dramatically as additional organisational layers are added, such as a provincial federation of local forestry businesses and a national federation of provincial groups. Beyond the village level, organisations normally adopt a formal legal structure as cooperatives, businesses or not-for-profit associations or corporations, according to the decision by members as to the form that best suits their needs, goals and capacities, and

the options available in the laws of their province or country. But while there are a vast array of informal groups of various sizes and functions that support family and community needs in critically important ways, there are also a growing number of formal locally controlled forest businesses (e.g. 140,000 forest farmer cooperatives in China).

A final consideration in the effectiveness of a locally controlled forest business organisation is the composition of membership (deMarsh *et al.*, 2014). This must balance the call for members with uniform interests (to ensure goals are narrow enough, and cohesion strong enough to achieve success), with calls for diverse membership (to provide greater strength and more diverse capability across its members).

1.5 Organisational structure is key to documenting successful business models

Making organisational structure central to a shared process of documenting successful locally controlled forest business models is key. Preceding sections have argued: that locally controlled forestry matters at a planetary scale, that there is strong credible evidence for the social and environmental benefits of this model, that there is broad consensus on the enabling conditions for it, and that organisation is the foundation or 'entry point' to putting in place those enabling conditions. But, as always, the devil is in the detail. What particular organisational structures of ownership and management have worked in different contexts? Are there generic principles that can be derived to help scale up the benefits of locally controlled forestry?

It was questions such as these that surfaced in Nepal at the third international workshop of the Forest Connect alliance (see Macqueen, 2008). Forest Connect is an ad hoc international alliance, managed by IIED, the Forest and Farm Facility (FFF) hosted by FAO and the Center for People and Forests (RECOFTC). It involves more than 1,000 members from 94 countries tackling the isolation of locally controlled forest and on-farm tree enterprises. Established in late 2007, its vision is to reduce poverty and protect forests by better linking sustainable and locally controlled forest and on-farm tree enterprises to each other, to markets, to service providers and to policy processes. In the first three international workshops, members identified capacity gaps that they faced in supporting locally controlled forestry enterprises (Macqueen and Morrison, 2008), tested subsequent guidance modules that had been developed in a toolkit to address those gaps (Macqueen and Rolington, 2011), and discussed how to prioritise support for their work (Macqueen and Rolington, 2013). It was in a debate on the future focus of the alliance at that latter meeting that members raised the issue of a lack of case studies of successful locally controlled forest business from which members could learn. It was agreed that the organisational ownership and management structures of successful cases should be a particular subject of scrutiny. For this reason, IIED started to develop terms of reference for the case studies and contact partners with whom they might be written (the authors in this book).

Simultaneously, the Forest and Farm Facility (FFF) was launched in 2012 with three key aims: supporting the organisation of forest and farm producer groups for business and policy engagement; catalysing cross-sectorial policy platforms with which they can

engage; and taking their voice into international agendas. Part of that work involves compiling useful knowledge and learning materials. A major priority constraint to more effective work to support forest-farm producer organisations was felt to be the lack of learning materials on successful business models from which to gain experience. Different forest business subsectors (e.g. timber, biomass energy, non-timber forest products (NTFPs), farm forestry or environmental services) in different country contexts, have very different business characteristics. Because of this, a compendium of successful business models, organised by subsector, was felt to be necessary for effective learning (e.g. multiple examples of successful timber and NTFP enterprises from different contexts).

Past efforts at documenting successful business case studies for locally controlled forestry (e.g. Durst *et al.*, 2005) restricted their analyses to success in forest management, or stand-alone case studies of certified forestry operations (FSC, 2015). While these are very informative and support the general argument for a greater focus on locally controlled forestry, they are often too abbreviated to allow learning about the detailed structures and functioning of the business involved. The challenge is threefold:

- To capture such models in a way that clearly present the business model design features so that others might learn from them;
- To capture enough examples so that transfer of knowledge can occur from contexts similar to that where the learning might be applied; and
- To draw out generically useful learning from the more context-specific detail.

1.6 Organisation is embedded in the terms of reference for the case studies

Each of the participating authors in this book was invited to prepare case studies of successful locally controlled forest business models. The term 'business model' describes the rationale of how an organisation creates, delivers and captures value. If adequately described, the description of a business model can serve as a tool to investigate and potentially improve how an existing business works. But importantly, they can also serve to share useful insights with supporters of small forest enterprises elsewhere – who can learn from the structures, process and tactics that made that business model successful. The International Center for Tropical Agriculture (CIAT) has shown how community livelihoods and enterprises are spread on a 'maturity ladder' – from subsistence to more advanced enterprise options (Ostertag *et al.*, 2007). For this reason, the partnership of Forest Connect and the Forest and Farm Facility wished to compile a compendium of successful locally controlled forest and farm business models as a learning resource for its members and the broader public.

For the purposes of this book we wished to capture and share examples of successful business (economically viable, socially beneficial and environmentally sustainable while also accounting for technological, institutional, commercial and financial aspects) – and interrogate the process by which this was achieved. We are aware of multiple and divergent interpretations of what might constitute 'success' (see discussion in Marshall *et al.*, 2006) – but at this proof of concept stage we relied primarily on the knowledge of Forest Connect members to pick stand-out examples on economic, social and

environmental fronts, but with an emphasis on the equitable distribution of benefits to local people and a significant degree of control by those people. To usefully share insights therefore, we needed to adapt the description of the business model to focus on 'how' successful elements came into place, not what those elements were. This would ideally involve a more informative and sequential description of:

- What is the context? The 'enabling environment' (economic, demographic, political, legal, sociocultural, technological and natural) and the 'operating environment' (factors relating to competitors, creditors, customers, labour and suppliers).
- What is the business? The main structural elements of the value chain.
- Who has control over it? The people and processes that have led to those structural elements.
- How has it overcome challenges? The tactics and partnerships used to bring success.
- What are the key factors? Key conclusions – what has enabled it to keep costs down, attract and maintain customers who were willing to pay for the product or service, and survive (or even flourish)?

We proposed to marry a description of context with a structured framework for three components of the business model (see Table 1.2 below) topped off with a section on conclusions.

The framework shown in Table 1.2 provided a basis upon which to contract case study write-ups of successful locally controlled forest business models that will genuinely gather information that is of use to partners elsewhere. Once each partner had been contacted, they were tasked with research and documentation based on a set of questions drawn directly from Table 1.2 – adhering as closely as possible to the numbered sections and making sure to gather information on each point. Each case study was to be based on necessary interviews with management and staff (using the questions outlined above), consultations of documents and sources of data, and acquiring appropriate logos, figures and photos. Two particular diagrams were requested for each case study: (i) a diagrams to illustrate the value-chain map and the position of the business on that map; and (ii) an organisational chart of the business management structure (and its relationship with the community structures where the business was developed, as appropriate).

Table 1.2 Business model framework for shared learning to investigate how success emerges

What?	How?			Who?		
Value proposition	Resource rights	Organisational structure	Business capacity	Delivery partners	Target customers	Marketing strategy
What is the business? Value chain description and illustrated with a diagram of the value chain (including core processes, policy environment and service inputs), maps, photos etc.						
What is the business name and 'vision', what does it offer to whom, when was it founded, where, at what scale and with what trends in sales (amount and to where), profit and staff?	What natural and financial resources (from what forest/farm system, source of credit) form inputs to this business, from where are they sourced, and how is this arranged?	What main activities are located where, how many does it employ, and by whom, and how was it registered (as what)? Is it a member of an association of similar businesses?	What activities/ processes does the business carry out, using what technology, at what scale, and where does each activity take place?	What other business partners are involved in delivery, where are they based and how were they chosen?	What different customer groups (market segments) does the business serve, with what products, where are they located and how do they buy what is on offer?	What differentiates the value proposition from others in terms of the product, price, promotion, placement and pace in different retail outlets?
Who has control over it? Illustrated with organisational chart, timelines etc.						
Who came up with the value proposition for the business and through what process did this idea become a reality and involve other people?	Who controls access and/ or use and extraction of these resources (policies and institutions) and through what process was this access and use negotiated?	Who controls the business (including gendered analysis), what investment was put in, through what ownership structure, with what benefits to whom – and how was this decided?	Who decides who does what (including gendered analysis), with what capacity and under what conditions – how has staff recruitment, training, negotiations taken place?	Who was responsible for choosing the delivery options, how did they decide, and what alternatives were there?	Who is responsible for finding out what customers want, what are the critical factors in what they want, and what innovations are being pursued?	Who undertakes what activities to promote the value proposition to potential customers?
How has it overcome key challenges? Illustrated by key graphs, figures, boxes, etc.						
How have key challenges faced in developing this value proposition been overcome, with what tactics, training and partnerships?	How have key legal or practical resource access challenges been overcome, with what tactics, training and partnerships?	How have key ownership and benefit-sharing challenges been overcome, with what tactics, training and partnerships?	How have key recruitment, labour capacity and infrastructure challenges been overcome, with what tactics, training and partnerships?	How have key delivery challenges been overcome, with what tactics, training and partnerships?	How have challenges in finding and keeping customers been overcome, with what tactics, training and partnerships?	How have key marketing challenges been overcome to distinguish the products/ services, with what tactics training, and partnerships?
Balance	Costs			Returns		
What main factors underlie commercial success (or failure)?	What have been the main successes in keeping down costs (and the main problems in doing so)? How are the costs apportioned among shareholders?			What have been the main successes in building customers and willingness to pay (and the main difficulties overcome)? How are returns to shareholders and other stakeholders managed?		

1.7 Introducing the case studies that follow

The case studies that follow were selected by staff of the Forest and Farm Facility and the Forest Connect alliance management team – based on the knowledge of partners in those two programmes. There was an intention to balance the case studies across geographical regions, and to include examples of both timber and non-timber forest products (NTFPs). The number of case studies was constrained by the budgets of the two programmes – but while we aimed initially for ten, this number soon grew, in part through the interest of those wishing to write the case studies. Not all of the case studies strictly illustrate ‘democratic locally controlled forest businesses’. Case studies from Thailand and Vietnam illustrate family and government models that nevertheless involve partnership with local communities in interesting ways. Their merits as informative case studies in their own right prompt their inclusion here. A summary of the case studies is shown in Table 1.3

Each of these case studies provides rich insights into what it takes to democratise forest business. Some generic conclusions are drawn in the final chapter, but by skipping to that, you may miss a wealth of detail that will certainly interest, and may even surprise you. And the conclusions you draw may be different from our own – as is fitting for a book which alludes to democracy in the title.

Table 1.3 Summary of the case studies presented in this book

Chapter and country	Name of business	Main product or service
Chapter 2. Bolivia	Asociación Indígena Maderera de Cururu (AIMCU)	Timber
Chapter 3. Bolivia	Asociación de Apicultores de San Antonio de Lomerío (APMIL)	Honey
Chapter 4. Brazil	Cooperativa Mista da Flona do Tapajós (COOMFLONA)	Timber
Chapter 5. Burkina Faso	Yemboama Union of non-timber forest product producers	Baobab, shea, tamarind and honey
Chapter 6. Cambodia	Cambodian Federation for Bee Conservation and Community-based Wild Honey Enterprises (CBHE)	Honey products
Chapter 7. Ethiopia	Aburo Forest Managing and Utilization Cooperative and Birbirsra Natural Resource Conservation Cooperative	Frankincense and coffee respectively
Chapter 8. Guatemala	Chachaklum SA	Forestry management and market services
Chapter 9. Guatemala	Mayaland Xate Committee	Xate palm leaves
Chapter 10. Indonesia	Koperasi Wana Lestari Menoreh (KWLM)	Timber, processed timber
Chapter 11. Indonesia	Wana Manunggal Lestari Cooperative (KWML)	Timber, processed timber
Chapter 12. Laos	Keoset organic coffee producer group	Coffee
Chapter 13. Mexico	Unidad Comunal Forestal Agropecuaria y de Servicios de Ixtlán (UCFAS)	Timber, processed wood products and furniture
Chapter 14. Nepal	Himalayan Bio Trade Pvt Ltd	Handmade paper
Chapter 15. Nepal	Himalayan Naturals	Charcoal briquettes
Chapter 16. Thailand	Doi Chang Coffee Farm (DCCF)	Coffee
Chapter 17. The Gambia	Tumani Tenda Eco-Tourism Enterprise	Tourism
Chapter 18. The Gambia	Kombo Cashew Farmers Enterprise	Cashew nuts
Chapter 19. The Philippines	Sunflower Weavers' Association (Sunflower)	Hinabol woven fabric
Chapter 20. Vietnam	Ben Hai Forestry Company	Processed wood products, furniture, resin, polymer bricks and seedlings



Bolivia: Asociación Indígena Maderera de Cururú (AIMCU)

Cooperatives and companies: the Bolivian Cururú community's forest management approach

by Victor Hugo Gutiérrez Rojas

In Bolivia, the Forestry Law has given indigenous communities and social organisations commercial rights to access large areas of forest, leading to many local attempts at business. One such is the Asociación Indígena Maderera de Cururú (AIMCU). Created in 1998, AIMCU saw an opportunity to use its forest resources to benefit the community. Besides selling timber, it developed a specialised service-provider subsidiary company. The Forest Services Enterprise of Cururú (SERFORCU) sold forest inventory, management and harvesting services and AIMCU and SERFORCU became the first community timber business certified by the Forest Stewardship Council (FSC). Despite major setbacks in 2012 following the collapse of SERFORCU when its buyers failed to pay, thanks to the management professionalism gained with AIMCU, it has survived by continuing local sales.

2.1 Context in which AIMCU operates

2.1.1 The enabling environment

In 1996, the Bolivian government enacted Law 1700, the New Forestry Law. By this law, indigenous communities (TCOs) and social organisations (ASLs) received the right to access large areas of forest. One of the communities that benefited was Cururú. The community has existed for more than 20 years and is one holder of Guarayos indigenous community lands. Cururú is located 23 kilometres from Urubichá in Municipal Section Two Guarayos Province in the Department of Santa Cruz de la Sierra.

These Guarayos indigenous community lands cover a combined area of 2.2 million hectares. The overarching authority for Cururú community is the Central Organisation of Native Guarayos Peoples (COPNAG). COPNAG is the right-holding entity for the TCO Guarayos. It is the highest representative body of those communities, their indigenous management plans and their indigenous production initiatives. COPNAG also accredits contracts, rights and obligations between community companies and third parties.

Part of the TCO Guarayos in the community of Cururú is a cooperatively owned leadership organisation AIMCU (Asociación Indígena Maderera de Cururú or Indigenous Lumber Association of Cururú). AIMCU acts as an enterprise and is the chief operating authority for the Cururú forests, responsible for the implementation of the obligatory general forest management plan (PGMF) in Cururú. Over recent years, AIMCU has consolidated its operational forest work through the creation of a subsidiary, the Forest Services Enterprise of Cururú (SERFORCU). This acts as a business service provider for AIMCU focused on forest inventory and forest management.

The stated aims of AIMCU are:

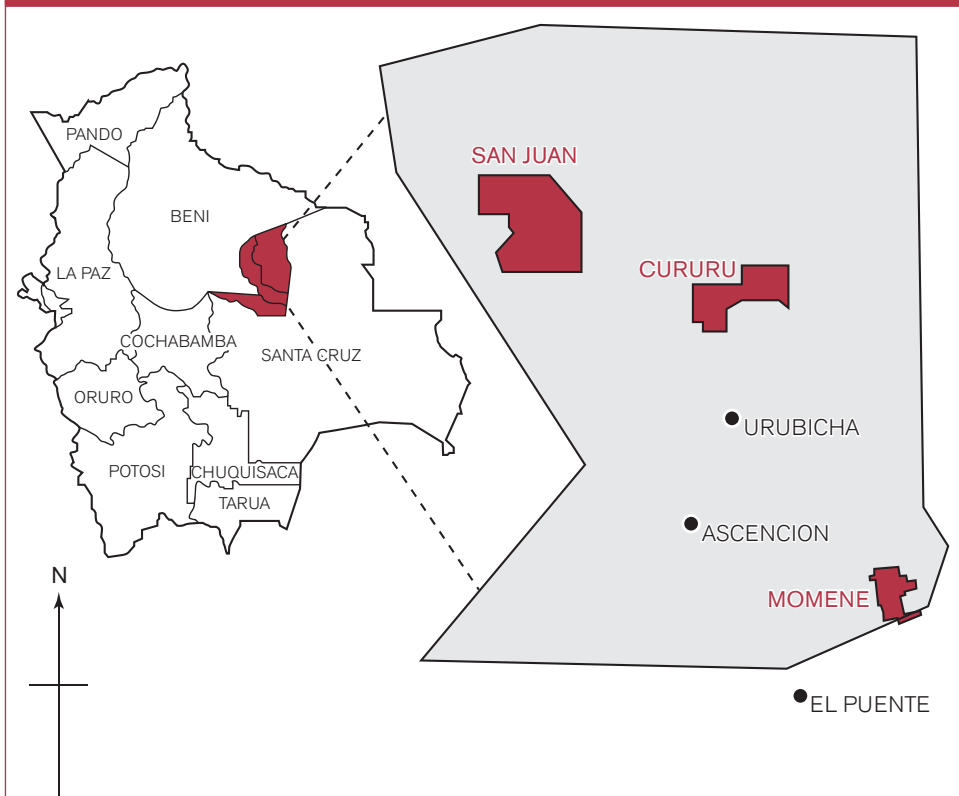
- To strengthen indigenous land management in TCO Guarayos through the integrated management of forest resources, and
- To contribute to improving socio-economic and organisational conditions in Cururú.

AIMCU also has the specific objectives of:

- Ensuring the sustainable management of 26,420.84 hectares of forest pertaining to the community of Cururú,
- Generating additional incomes for its members and other indirect benefits to the community, and
- Strengthening the management capacity of indigenous organisations such as COPNAG and CCC (Central Comunal Cururú), including the management of finances to facilitate the fulfillment of their duties.

To date, the enabling environment that affects the Cururú community can be described with reference to various legal, sociocultural, technological, natural, political-economic and demographic aspects:

Figure 2.1 Map of Bolivia with inset map of Cururú community in Santa Cruz



Legal: within the 1996 new forestry law, the Cururú community has legal status. It carries out its activities under formal statutes and community regulations. It has a general forest management plan that is legally approved by the forestry authority within the framework of a stable TCO, whose direct operator is AIMCU (belonging to the rights owner COPNAG). The legal process began in 1996 after COPNAG requested that the National Institute for Agrarian Reform (INRA) recognise and grant owners' rights over the Guarayo Indigenous Land to their constituent communities – among them the Cururú (see Figure 2.1).

On 11 July 1997, INRA made a resolution that granted titles to COPNAG for over 2.2 million hectares of land located in seven cantons (Ascensión de Guarayos, San Pablo, Santa María, Urubichá, Yaguarú, El Puente and Yotaú) and three sections (the first, second and third) from Guarayos Province in Santa Cruz. Under the same legal instrument (Resolución de Inmovilización RAI-TCO-0009) it ordered interested parties (public and private) to take necessary actions for the implementation of the resolution.

The Cururú community initiated efforts to develop a forest management plan. They were supported by the leadership of COPNAG, which understood how a formally approved forest management plan would further strengthen the efforts of its communities to consolidate their territory.

Sociocultural: Cururú is made up of Gwarayu people, descendants of the Tupi Guarani ethnic group. The community has 44 members (each member represents a registered family) and is politically organised through two local organisations, the CCC and a territorial base organisation (OTB). There is also a council representing the Catholic Church and a women's organisation called the Committee of Guarayas Indigenous Women from Cururú (CEMIG-C). An important issue which helped facilitate the emergence of AIMCU was the desire of local Guarayo people to maintain their customary lifestyle within the forest.

Technological: another enabling factor for AIMCU was the existence of a timber market and a history of timber trading in the region. AIMCU is a community enterprise which is organised through a taskforce for responsible operations. This taskforce is charged with performing forest inventory and harvest operations. AIMCU members are constantly trained in harvesting operations to improve their skills. The training is supported by different institutions and cooperation programmes and AIMCU has consolidated its ability to manage the forest sustainably. In accordance with their general forest management plan, AIMCU offers to different customers its standing timber, felled logs next to their stumps and disease-free sawn timber. In agreement with their clients, AIMCU takes responsibility for checking the quality and health of its lumber and takes control of the chain of custody (CoC). AIMCU members have the necessary field equipment to perform these activities, such as four global positioning system (GPS) units, three laptop computers, three chainsaws and two four-wheel drive vans.

Natural: the natural forest on which AIMCU depends has only a marginal abundance of commercial species. The AIMCU general forest management plan covers 26,420 hectares in a humid, sub-tropical transition forest, in which the timber species are mostly softwood species as Ochoó (*Hura crepitans*), Bibosi (*Ficus sp.*), Yesquero Blanco (*Cariniana sp.*)

and Hoja de Yuca (*Ceiba sp.*). Unfortunately, the valuable hardwood, Mara (*Swietenia macrophilla*) has been virtually eliminated from this forest by over-harvesting in earlier years. It is still possible to find some young trees of this species which has good natural regeneration – so the long-term commercial recovery may be a future possibility.

Political-economic: although not directly affecting AIMCU business operations, the Cururú community's political organisation (CCC) represents the community in terms of defending its territory and overseeing social control operations. For example, it coordinates and controls economic benefits from AIMCU and distributes them from within a community fund. The local economy is based primarily on timber harvesting and subsistence agriculture. Community residents work either directly for AIMCU or are employed as skilled labourers by other logging companies operating in the area. There are also additional revenue streams that come from the sale of SERFORCU's services beyond the community, and from a women's organisation that sells catering services to AIMCU and other logging operations.

The main factor that motivated the community to embrace a general forest management plan and establish AIMCU was the lack of employment options in the region. The PGMF represents an alternative employment opportunity for local people, because subsistence agriculture is minimal and employment opportunities in nearby communities do not generate adequate revenue. Although the process of business development and consolidation is not yet complete, the community wanted to ensure that at least the area of 26,420ha was under the PGMF, in order to generate additional incomes for the families of the community from forestry and to generate other indirect benefits. The vision of the leaders was also to strengthen capabilities and skills in the community. Considering that the community had over 10 years' experience in forest management when AIMCU was founded, they also had the skills and technical conditions for creating a microenterprise, SERFORCU, to provide forest services, focused on forest inventory and felling.

Demographic: the community is over 20 years' old. In 2001, when AIMCU started working under its general forest management plan, there were 33 registered families within the community. This has now expanded to 44 registered families, a total of 292 inhabitants with Guarayos ancestry. There is a low level of migration to Ascensión de Guarayos and Santa Cruz when there is no forestry activity in the region. Main causes for migration are for higher education, or to seek employment opportunities. But the generation of employment within the community was felt to be one option to address out-migration.

2.1.2 The operating environment

Commercial history: the operating environment for AIMCU is relatively remote, but demand for timber is high. When AIMCU formally started its forestry operations in 2001, it offered timber to the highest bidder, as standing trees and trimmings in the forest (e.g. paid for and collected by the buyer), and achieved partial success.

In those early harvests in 2001–2006, AIMCU lacked skilled labour so its client, the Bolivian industrial forestry company Cimal, used inventory specialists and chainsaw operators from other communities to undertake the inventory and fell trees. For example, staff came from Urubichá, where some had previous work experience, and where material

supplies come from in the region. During the first years of implementation of the PGMF the business needed much learning and capacity building to develop. These years saw poor sales volumes and consequently low revenues (volumes sold were not higher than 1–2,000m³/year).

Timber harvesting falls under Bolivian Forest Law 1700, which states that to market any timber, fallen or standing, there is first a requirement for a forest inventory to determine the annual volume of timber available to be harvested and marketed. At the beginning of AIMCU's timber operation, it was necessary to develop a forest inventory as a primary source of information for technical sheets¹ to specify the annual volume of wood available. Only once the inventory was complete was it possible to start felling trees and sawing logs.

Also in those early years, some community members worked as unskilled labourers in forest companies in the region. After a while, AIMCU was able to provide employment for those who had gained the necessary experience.

In 2004, with the aim of creating jobs for community youth without any cost to the forest committee, community forest authorities began developing plans for a company which would offer inventory and direct felling services. By 2006, the Amazon Centre for Forestry Development (CADEFOR), an operator of the Bolivia Sustainable Forest Management Project (BOLFOR) II, helped AIMCU to establish SERFORCU², a private company owned collectively by AIMCU. This was made possible with programme grant funds and matching funds from the community. At that point, AIMCU could use SERFORCU to provide harvesting services to companies from the region, as well as other indigenous communities, non-indigenous private companies, and associations. This was in addition to the sale of timber. In 2006, AIMCU and SERFORCU embarked on a process towards gaining Forest Stewardship Council (FSC) certification. On that basis, AIMCU signed a contract for five years with a single client company, Cimal.

SERFORCU was legally and formally constituted as a limited company in October 2009 in the community of Cururú. SERFORCU's installed capacity allowed them make an inventory of at least 10,000ha of forest, with the possibility to increase to 15,000ha by employing people from neighbouring communities. They also had the capacity to harvest 15,000m³ per year. Together with Cimal, they pursued and achieved sustainable forest management certification with the Forest Stewardship Council (FSC) in 2011.

The negotiation of prices and control of the business remained the responsibility of AIMCU throughout this period. The contract signed by AIMCU with Cimal (and other subsequent buyers) was valid with the Bolivian Forest Authority, and with the overarching community authority (COPNAG). This contract, if the buyer requests it, could also be notarised.

1. Marketing instruments such as brochures that contain information related to the product to be commercialised i.e. data from producers, production capabilities, prices, locations etc.

2. SERFORCU and AIMCU are different organisations that work in coordination with each other. AIMCU is a cooperative, since the PGMF is within communal lands (TCOs). SERFORCU is a private company within the Cururú community.

With the experience gained from early sales of logs, AIMCU began to put more emphasis on its forestry management activities under SERFORCU as the means for longer-term alternative sources of employment. They also raised timber prices per cubic metre, and worked to establish a system of distributing benefits to community members. These benefits reached the families in the form of either wages for labourers or as dividends of annual operations to be distributed to families at the end of the season (albeit this has only happened once in SERFORCU's history). However, there began to be internal tensions with the leadership of SERFORCU, in part because of the privileged status of those who had been trained by external agencies. Allegations of corruption surfaced – and the commitment to transparent presentation of accounts stopped.

Despite such difficulties, the contract with Cimal was maintained until 2011. That year, AIMCU also planned to sell logs to the forest enterprise company SLV Bolivia SRL, which emerged as an interesting new customer. SV was in the process of seeking FSC certification and made a good offer to AIMCU. However, that year SLV's timber harvest from the AIMCU area was delayed by more than four months, which disrupted plans. A protracted struggle for compensation ensued. Eventually, the community was able to demonstrate to the Forest and Land Authority (ABT) that the company was responsible for the disruption and succeeded in recovering the costs incurred.

Nevertheless, the problems with buyers continued and in 2012, after signing a new contract, Cimal failed to harvest timber from the AIMCU area and, having taken no timber from the forest, refused to pay. This left AIMCU without income or benefits, but with heavy debts and unpaid loans. Although Cimal was certified, the third party certifier SmartWood did not sanction Cimal for behaving in this way. As a consequence, AIMCU was left unpaid and had major financial issues. The lack of budgeted revenue generated illiquidity and there were serious internal problems with the community and company leadership. SERFORCU ultimately collapsed. This was attributed to the fact that since it was registered as a private company, the dividend distribution did not favour the TCO in the same way as returns from AIMCU did – and past leadership conflicts left it vulnerable.

Putting these difficulties behind it, in 2013, AIMCU signed a new contract to sell standing timber without FSC certification, to the HLA Sawmill Company, owned by Hilda Ledezma. In 2014, this company took responsibility for forest inventory and management with the stipulation that community members be employed for the forest operations. In this case, two technicians from AIMCU, who were also community residents, took responsibility for the inventory and management processes.

In summary, despite one customer's failure to deliver on its promise, AIMCU maintained its fiscal stability and was able to meet its financial obligations. This was made possible by adopting a payment-in-advance policy, although customers frequently challenge the proposed timber prices.

Figure 2.2 AIMCU's capital: natural, human, economic, social and infrastructure



AIMCU's current resources are illustrated in Figure 2.2. In terms of its operation environment, the AIMCU situation is as follows:

Competitors: due to the management planning stipulations in the law, Bolivian forest companies in general have high administration and monitoring costs. Many companies find it easier and more economical to hire inventory and management services rather than to conduct these activities themselves. Since these kinds of service suppliers did not exist in the area, and the demand from lumber companies operating in the region was very high, AIMCU did not have direct competitors when it set up SERFORCU.

As noted above, the general forest management plan within AIMCU was created because of an economic need within the community. Since they had a marginal forest, they aimed to increase their revenues and optimise their production processes by adopting FSC forest certification in 2006. Although the certification process took until 2011 to finally bear fruit, it did differentiate them from other indigenous forest management units. To date, AIMCU has been the only community to acquire FSC forest certification in Bolivia. The stringency of certified forest management easily allowed AIMCU to overcome changes in legislation emerging from the ABT. It also led to them receiving awards from organisations such as the Forestry Chamber of Bolivia, Engineering School of Bolivia, and the Forest Stewardship Council's Voluntary Forest Certification (Certificación Forestal Voluntaria, CFV-FSC). It was given the Caya Award³ from the ABT for good forest management. All of this helped to attract attention in the market.

Since 2012, AIMCU has continued to sell lumber to local companies in the Guarayos region, although not as certified wood since their voluntary surrender of certification after their difficulties with Cimal.

Creditors: before FSC certification, the main AIMCU creditors were other local forestry companies. During the certification process, their primary liabilities were to Cimal and its backers. Currently, there are proposals from local companies, but now the negotiations are conducted with more experience and under better conditions.

3. Oswaldo Usipales Caya, Bolivian Forest Consulting.

Customers: the main customers for AIMCU's products and services have been indigenous and non-indigenous neighbouring communities, local and national private companies (Cimal, La Chonta, HLA etc.). In terms of the inventory and management services, there have been some problems for the community business. One local customer reported that the costs for their services were too high (at least US\$20–25/ha). Some have accused forest inventory service providers of corruption. For example, an efficiently conducted forest inventory (with a profit margin of 30 per cent) should not cost more than US\$15/ha. Within AIMCU there was a report of one case of corruption – complicity between a forestry inventory consultant and a legal representative (both from the community). Allegedly both performed a job with a higher than actual cost, radically affecting the profitability of the operation, the community and their own forest management. In this case, the only beneficiaries were the forestry consultant and legal representative (responsible for hiring community services).

Labour: all of AIMCU's employees are from Cururú (employees must be from the community). They are paid according to their degree of responsibility, knowledge, skills and risk. As a rule, the lowest wage is above the national minimum wage, with equal treatment for men and women (Bolivian law prohibits child labour).

When it was operational, SERFORCU was comprised of both male and female workers from the community, with the physical skills and demonstrated experience to carry out fieldwork activities such as forest inventories, felling and harvesting. Because of the requirements for inventory and tree felling, only members with consolidated experience and skills were employed. The structure of SERFORCU consisted of a consolidated and experienced technical team. The head of the team reported directly to the legal representative of AIMCU.

Suppliers: food, equipment and other supplies are usually obtained from the Urubichá community and Ascensión de Guarayos local markets (warehouses).

With respect to timber felling services in the area, these are typically provided by anyone with their own chainsaw and the experience to use it. These people, who are hired from Guarayos, have only empirical training and have not been trained in directional felling and industrial safety.

2.2 About AIMCU as a business

2.2.1 Vision

Cururú community members started to map their forest area and conduct forest inventories in 1999 through a general forest management plan (PGMF) which was approved by the forestry authority (known as the Forest Superintendence or SIF at that time). However, they only set up the AIMCU cooperatively owned business in 2000, which then sold its first timber in 2001.

AIMCU's vision was the sale of standing trees and timber to primary processing companies (sawmills) in Santa Cruz de la Sierra for further processing and/or offers to other companies from local, provincial or national markets.

The vision of the private company SERFORCU business was to become a sustainable community organisation that contributes to the conservation of natural resources from the TCO through good forest management and achieving environmental, economic and social benefits for the Cururú community.



© José Ledezma

Management planning meeting in Cururú

In terms of distributing the profits from the business, SERFORCU aimed to:

- Deduct 5 per cent per year to set up its legal financial reserves.
- Dedicate 10 per cent to working capital.
- Distribute profits to partners in proportion to their respective capital contributions and only when profits were effective and liquid.
- Losses would be dealt with relative to the contributions of each of the partners.

From 2001–2006, AIMCU's vision did not yield impressive results. This was attributable not just to the market, but also to the learning process. There were errors in the forest inventory such as overestimating the heights of trees and elevating the proposed volumes above what was actually there. Another common error was the confusion of species when determining the amount and volume per species. These errors were gradually overcome during the following five years, resulting in a higher quality of inventory and more reliable qualitative and quantitative information.

Nevertheless, data from the revised AIMCU annual financial statements and stated expected results began to show a good performance in 2007 during AIMCU's first year

certified under FSC. Although data was not derived from meticulous and systematic accounting, adopting the practices of presenting signed contracts to the community, reporting payments and cash advances made to employees of private companies, and training community members in administration and accounting, has helped to bring accountability. Nevertheless, a true register of accounting since 2007 has not been presented to the author. This situation is thought to be due to the reluctance on the part of some of those accused of corruption and failure to report transactions. Existing information is only available from buyers' contracts and the Forest Operative Plan Annual Report (IAPOAF) which were presented to the ABT.

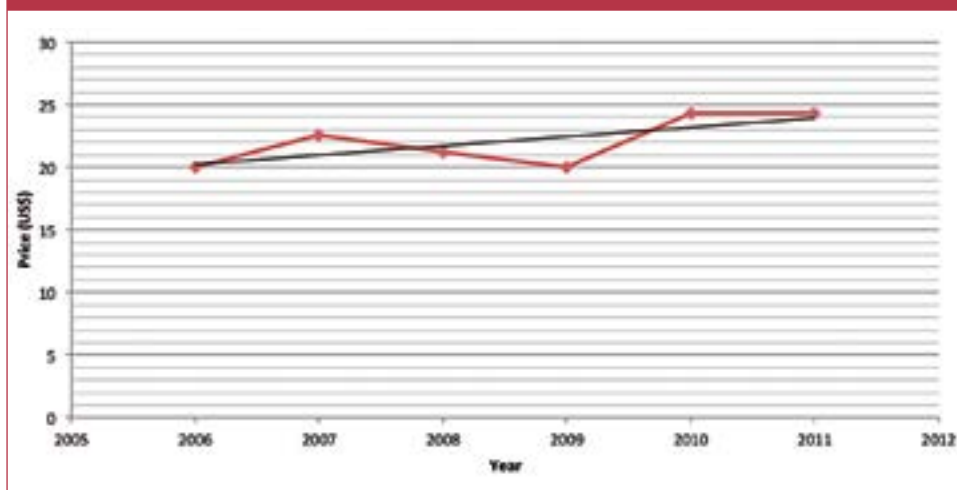
Table 2.1 Evolution of AIMCU's financial statements

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sales revenue	398.304	0	11.520	290.109	647.180	558.510	502.954	439.776	699.106
Other revenue	0	0	0	20.716	54.645	41.240	3.950	6.578	ND
Total revenue	401.330	18.431	11.520	310.825	728.825	599.750	506.904	446.353	ND
Expenses and costs	228.038	96.372	57.368	307.141	494.122	ND	ND	ND	ND
Net profit	173.292	-77.941	-45.848	3.684	238.060	ND	ND	ND	ND
Assets	568.095	190.975	108.312	119.166	280.258	ND	ND	ND	ND
Liabilities	51.095	-26.370	4.571	12.490	0	ND	ND	ND	ND
Legacy	534.757	217.345	103.741	106.676	280.258	ND	ND	ND	ND
Current assets	445.352	190.148	108.312	82.128	202.790	ND	ND	ND	ND
Current liabilities	51.338	-26.370	4.571	12.490	0	ND	ND	ND	ND
Profit margin	43.5%	ND	-398%	1.3%					
ROE (return on equity)	32.4%	-35.9%	-44.2%	3.5%					
ROI (return on investment)	29.6%	-40.8%	-42.3%	3.1%					
Liquidity index	8.7	-7.2	23.7	6.6					

Analysing sales prices in Table 2.1, it can be seen that they do not improve after certification in 2007. Figure 2.3 shows that prices dipped up to 2009, and then average prices increased up to 2010, remaining at almost the same level until 2011. Although not presented here, average selling prices in 2012 and 2013 increased slightly to US\$29/m³ (this increase was due to the government authority ABT in 2011, which reduced the supply of lumber in the country because of excessive control and seizures exercised during 2011 and part of 2012).

At the beginning of its activities, AIMCU had a variety of buyers and could sell its timber to the highest bidder. Table 2.1 shows an increase in revenue from the sales of harvested species after 2006, improving prices for other species considered of low commercial value (this was after formalising its strategic five-year alliance with Cimal in 2006 before achieving FSC certification). In 2011, when the five-year agreement expired, there were negotiations to renew the contract for a similar period although AIMCU no longer had FSC certification.

Figure 2.3 Log prices per year that AIMCU received (in US\$)



2.2.2 Business inputs

After 2011, AIMCU and the community's service-provider company SERFORCU began relying on funding and economic support from financial institutions and fundraising for programmes and projects to conduct their operations.

The PGMF of AIMCU was partially paid for with funds from the BOLFOR I project, which was funded by USAID. The community, using its own resources, contributed labour for initial activities such as identifying harvesting areas, forest inventories and preparing the authorised use document for the qualified agency.

As noted above, in 2001–2006 AIMCU began by selling timber to the highest bidder as stump wood. At that time, AIMCU did not have skilled labour, so personnel were recruited from the town of Urubichá. Significant inputs were received from Cimal, CADEFOR and BOLFOR II.

At present, due to a permanent lack of liquidity and costs of the community's many basic needs, financial income depends on payments in advance by the buyer. This money is used to finance operating costs (forest inventories, timber harvests, removing diseased tree trunks, measuring and scaling timber, food, wages and other costs).

In 2008, SERFORCU applied for credit at the Bolivian Institute for the Development of the Small Productive Unit (IDEPRO) to enhance their available services and add assets such as trucks and chainsaws. AIMCU's forest management plan was presented as security to the bank for this financing. This loan was fully repaid, despite difficulties caused by competition from other regions.

2.2.3 Main activities

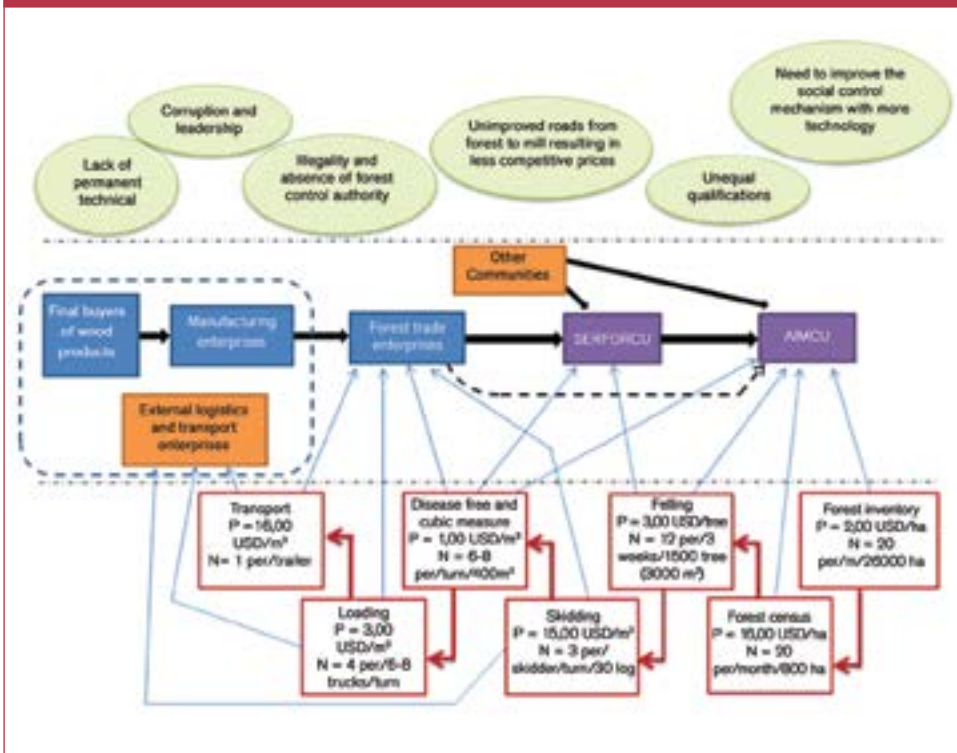
AIMCU was registered with Fundempresa⁴ by the legal representative of the AIMCU with support and advice from CADEFOR. SERFORCU was registered as an employee-owned business whose parent company is AIMCU.

In addition to AIMCU's timber sales, conducting SERFORCU's main activities requires approximately 40 people (e.g. forest inventories, market research, tree felling, removing diseased tree trunks, measuring and scaling timber and delivering logs). These activities are contracted by AIMCU and are performed entirely by community members and ultimately by SERFORCU service members (see Figure 2.4).

2.2.4 Technology and skills

The AIMCU and SERFORCU business models do not require heavy investments in technology. Skills have been acquired through training in the process of executing the management plan with the support of institutions such as the Worldwide Fund for Nature (WWF) Bolivia, BOLFOR I and II, Population Action International (PAI) and CADEFOR.

Figure 2.4 Value chain map for AIMCU



4. The Fundempresa is a non-profit organisation that operates the Registry of Commerce of Bolivia.

Table 2.2 Main skills within the AIMCU/SERFORCU businesses

No	Activity	Responsible	Price	Notes
1	Forest inventory	Community	US\$2/ha	The community is experienced and has an efficient team to perform this activity.
2	Forest inventory census	Community	US\$16/ha	The community is experienced and has the correct equipment for this purpose. The methods most used in the preparation of forest surveys are 'systematic' and 'direct connection'. Cururú can provide services in both methods, but it is important to note that most of their expertise lies in the systematic method.
3	Felling	Community/ SERFORCU	US\$3/tree	The community is experienced and has the correct equipment for this purpose (chainsaws, safety equipment). The tree-felling services that SERFORCU offers are tree felling and cutting (upon request) within the framework of existing laws (directional felling and low-impact techniques).
4	Skidding (moving felled timber to a landing site)	External company	US\$15/m ³	The skidder guide is a community member who has participated in the forest census and directs the skidder operator. This operation is performed in such a way as to reduce impacts on the forest.
5	Removing diseased trees and scaling	Community/ SERFORCU/ external company	US\$1/m ³	The community is experienced and has the correct equipment for this purpose. It requires a loader that is responsibility of the purchasing company.
6	Pick up	External company	US\$3/m ³	Pick up is the responsibility of the purchasing company.
7	Transport	External company	US\$16/m ³	Transport is also the responsibility of the purchasing company

2.2.5 Business partners

When accepting a buyer of its timber, AIMCU generally confirms that the company has the required equipment available, especially for skidding and loading operations. The equipment – such as a skidder, tree farmer, timber crane or loader – must be adequate to handle a maximum volume of approximately 3,000m³/logs per 45-day period.

The buyer must provide transportation services to move the logs from the landing site to the sawmill. A forestry official must authorise the transport with a CFO (certificate of forest origin), which permit the movement of raw material to primary processing sites (sawmills), or secondary ones (manufacturers). Table 2.2 shows which activities the community or the external company are responsible for.

2.2.6 Customer groups and product types

For the only product that AIMCU sells (logs), the market segment consists of forestry companies that require raw material (stump wood). Previously, AIMCU had offered sawn timber, by further engaging sawmilling services, but this was not successful. The main reason that the sale of sawn lumber such as Mara and other valuable species was not successful was the lack of control at different stages of the chain (mainly timber yields and transportation costs). Due to increased prices for services associated with high commercial value wood species, all stakeholder costs soared which could not be recovered by the yields brought to the mill.

However, during the years 2007–2011, when AIMCU was pursuing FSC certification, stump wood was offered to purchasers with FSC certification. Since FSC certification is considered to add value, purchasers offered a slightly higher price on wood. At that time, the main buyers were certified manufacturing companies that exported their final products with the FSC label.

Most buyers who now approach AIMCU have their own infrastructure for primary processing in the town of Ascención de Guarayos. At present, due to liquidity problems within AIMCU, stump wood is sold primarily to local sawmills. They produce the lumber, which is then sold as cut and finally as classified, treated timber to local and national markets.

Today, AIMCU sells to both mills and manufacturers, offering all wood species as stump wood. This offer is considered the only authorised wood in the POAF (annual forestry operating plan). During the time that SERFORCU was in operation, services such as directional felling and conducting forest inventory censuses were awarded to private companies such as Cimal and SLV.

2.2.7 What differentiates the value proposition

The main difference that distinguished AIMCU from the rest of the management plans of the TCO Guarayos was certification. This allowed AIMCU to be recognised as the only community forestry operation that had FSC certification, reflecting an image of legitimacy, accountability and security. This, in turn, developed an environment and practice of accountability and transparency in management.

The reason why AIMCU has not maintained FSC certification is mainly because the international market does not demand certified products, which companies such as Cimal produce. This discouraged interest by Cimal in certified raw material. Additionally, although the international market today pays a good price for the logs, it does not demand certified products. However, the ABT (Forests and Land Authority) is promoting mandatory National Certification based on the FSC certification.

In this sense, AIMCU tries to retain its customers through accountability in their service, maintaining good business relationships, and compliance through contracts. In the medium term, this will narrow the gap between the requirements of FSC and national certification and allow AIMCU to resume the certification process more easily, using all the experience it has garnered in recent years. For the present management, sales will remain as

uncertified stump wood (in 2013 sales of standing trees were successful, apparently at a good price, with the provision that the purchaser hired community personnel).

The social element (social control) and organisational structure (business) of AIMCU was formerly under the control of two directors (see also Section 2.3.1). This ensured that the lengthy process of forming AIMCU into an exemplary model of a successful enterprise was achieved. However, Cururú is a community that has other capable leaders and technicians with extensive experience. In the post-FSC era, the installed capabilities will ensure that AIMCU continues to be able to operate as a successful business.

The measuring of success must consider many different aspects of a business, evaluating the management and availability of natural resources, considering relationships with neighbouring communities and buyers, and understanding internal politics (leadership) alongside typical economic metrics such as efficiency, expenses and investment income. Despite some setbacks, AIMCU continues to operate successfully.

2.3 Who controls AIMCU?

2.3.1 Origin of the value proposition

The idea of pursuing a PGMF and forming AIMCU was an initiative of key leaders within the Cururú community. Their reasoning was that taking these steps could generate additional income and create employment for community members. This objective was fulfilled and continues to be fulfilled, notwithstanding the ambitions of some younger community members to look for opportunities elsewhere.

Similarly, the rationale for creating the microenterprise SERFORCU also came from community leaders, as an opportunity to further develop additional employment options for people in the community. The proposal for SERFORCU was presented to COPNAG by leaders of Cururú community through the Amazon Forest Development Centre (CADEFOR), which had launched an open call for proposals for the creation of productive microenterprises related to forestry, on a 50:50 basis (e.g. the beneficiary must finance 50 per cent of the total cost of the project, and the remaining 50 per cent would be covered by CADEFOR). The proposal submitted by the Cururú community was selected from several proposals from other departmental communities, due to its good approach, fair profit-distribution system and the seriousness and proven experience of recent years.

Despite the successes described above, some within the community question whether the objectives for which the PGMF, AIMCU and SERFORCU were created are being met. Some feel that benefits are only reaching a select group within the community, who handled the PGMF, that the community receives little information and that there is a lack of transparency within the more political organisations responsible for community social control. However, it has been shown that the commercial organisations and political organisations can work efficiently and generate profits, distribute them fairly, and manage the forest in an environmentally sustainable manner. Dealing with issues of corruption/ nepotism needs the constant scrutiny of the political organisations within the community to avoid administrative and financial mismanagement.

2.3.2 Control of forest resource access

The official national supervisory authority is the Forest and Land Authority (ABT) who control and verify the legal origin of wood under the Forestry Act 1700, with its technical and existing guidelines. Management instruments such as the PGMF and POAF are approved by the ABT as a mechanism for controlling access to and use of timber and non-timber forest products.

Cururú community is represented in the State and other public and private institutions by their parent organisation COPNAG. It consists of various departments who are responsible for carrying out actions and decision-making policies for the development of the TCO Guarayos. COPNAG's political representation in communities is through the presidents of communal authorities, which are the link between the community and the parent organisation. In this way, control and regulation of the land and its natural resources are secured locally. There is also CEMIG-C, which is responsible for developing policies for women, so that their views are represented in each community centre.

It should be clarified that the TCO is considered a private property collective, headed by a local organisation (in this case COPNAG) and this in turn allows the use of 26,420ha of forest that AIMCU required under the PGMF. In summary, there is a level of internal control by COPNAG and external legal control by ABT, under the Forestry Law 1700.

Currently, AIMCU is not pushing any technological innovations, but it has expressed interest in advancing up the production chain through the use of a portable sawmill for species of higher commercial value.

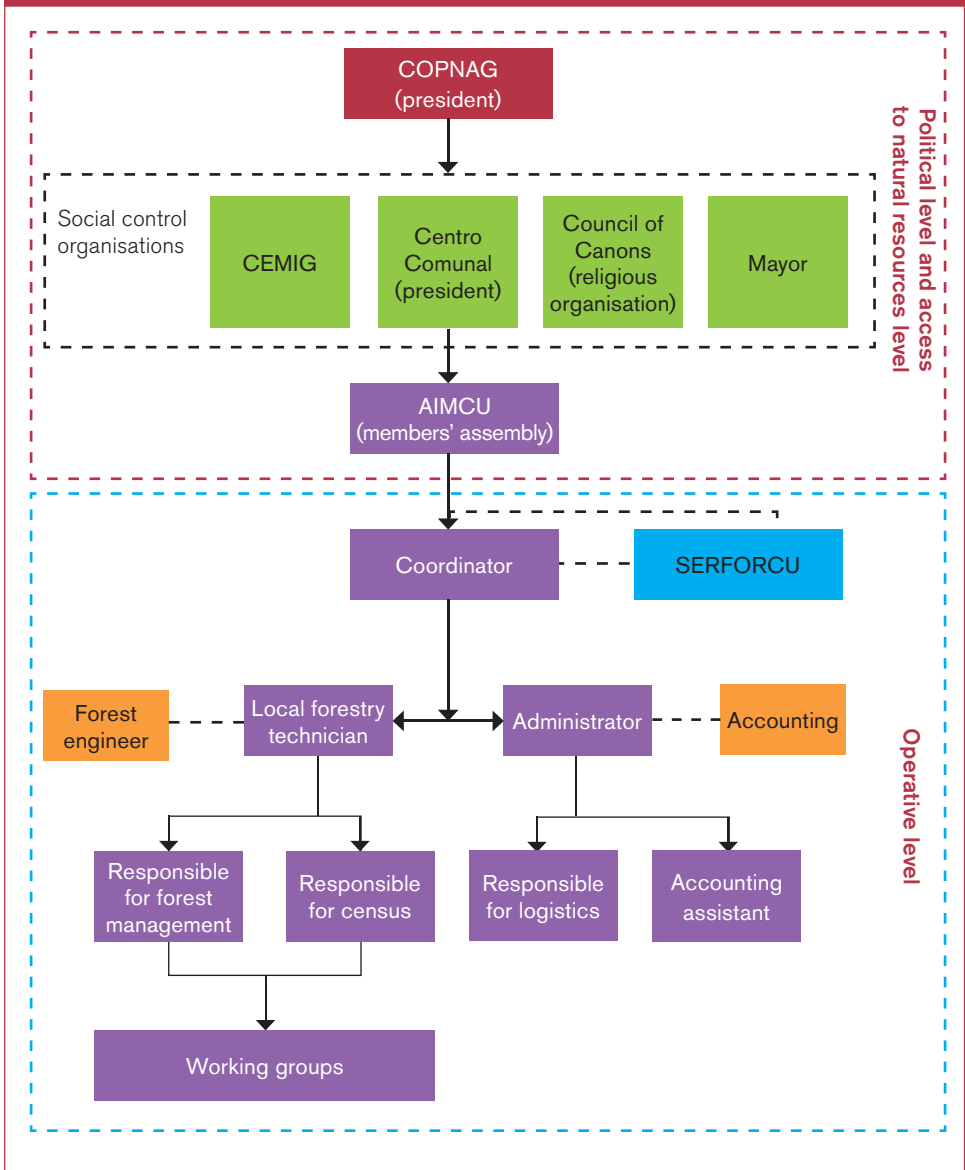
For the community, the level of transparency of information available during the time that the FSC certification was valid counted as a major innovation and advancement. Forest communities are aware that social control over forest activities by AIMCU and SERFORCU are only possible when there is reliable information (including involvement of the buyer at key moments). This enables the community to comply with agreements made in the contract, and also to try to make operational and economic improvements. Without this element of transparency, the community would revert back to much less advantageous approaches.

2.3.3 Control of the business

The Members' Assembly is the highest body, with direct control and responsibility for AIMCU. The control of forest resources is done by the Forestry Committee Assembly, which oversees the forest management plan in its use, marketing and distribution of benefits.

The administration of SERFORCU is the responsibility of AIMCU and legal representation of the company is exercised by the legal representative of the AIMCU within the Members' Assembly. Roles and responsibilities are specifically identified in the statutes of SERFORCU SRL. The organisational structure for the PGMF is shown in Figure 2.5.

Figure 2.5 Organisational structure of the PGMF managed by AIMCU



In terms of decision-making over sales, the various proposals for the purchase of logs are put before the Members' Assembly. They then decide whether to approve the sale. Usually the company with the best deal in terms of price and capacity for immediate extraction and the availability of machinery and equipment such as skidders, loaders and trucks is chosen for approval.

2.3.4 Staff selection and roles

The process of staff recruitment within AIMCU is performed by the coordinator, after consulting the Members' Assembly. Recruitment is done according to plans for each activity. For example, forest inventories require 20 people in different positions (brush cutters, *materos*⁵ and data recorders⁶). Logging requires about 10 people (timber jacks, timber hands, skidder guides, scalers and dispatchers).

In the case of SERFORCU, after finalising the contract for providing particular services, the work is executed by staff who must be Cururú community members exclusively (e.g. men and women recognised as such in the community constitution). Additionally, they can be people from outside the community but employed by SERFORCU if they have skills and expertise required to fulfil contracts of improved forest services.

Since salaries attached to the various positions depend on the levels of responsibility, experience and risks required, training events are generally well attended if they have a practical orientation. Members of the community are interested when the training is conducted in the field, and when it offers them a chance to learn new skills that will allow them to take on more responsible roles in the business. Usually, even the lowest wage paid is above the national minimum.

The participation of women in forestry is growing steadily. Initially their participation was only in catering, but as women have shown leadership potential, they have assumed roles of greater responsibility and better pay, such as scaling logs in rodeos or as warehouse managers. This process of revaluation of women was promoted most by the organisations supporting the community, emphasising the rights of men and women, without ignoring the roles that they must fulfil in the family.

Competitive job openings within the current recruitment policy are generally restricted to members of the community. To date, with the existing staff capacity, the leadership feel it would be a mistake to try to retrain the community with skills that they have already mastered, however they have not ruled out refresher or update courses.

2.3.5 Delivery options

Within AIMCU, decision-making processes have from the very beginning been highly participatory. While there was external support, the external facilitators from different projects always supported the community authorities' analysis of different options for each operation and activity. The decision was then made by the community, once the information was presented.

Regarding transport, the decision was taken by one of the advisors to the community (engineer Orlando Melgarejo), who, at that time, was working on a cooperation project for the community. From an analysis of alternatives and the cost benefit of each option, he asserted that the best option was for the buyer to transport the logs. This option was then

5. A person from the community with ancestral knowledge of the forest.

6. The person responsible for registering all data concerning tree such as species, diameters and location co-ordinates etc.

formalised in the Members' Assembly. This decision is recorded in the Book of Acts of the PGMF. The timber transport for delivery of raw material to the processing industry is therefore the responsibility of the buyer. In every timber purchase, sale contracts specify that AIMCU's responsibility ends at the log yard. AIMCU simply fills in the transport form and confirms that logs were picked up.

2.3.6 Customer research

As AIMCU and SERFORCU began to develop market awareness, market research was undertaken mainly by project technicians supporting the community. These technicians were accompanied during the marketing and selling processes by one or two delegates from the community so that community members could learn about the process of negotiations and sales.

A barrier in the negotiation process was the low level of confidence that community members and buyers had in each other. To alleviate this situation, accompanying technicians from cooperation projects tried to change the community's perception of a lack of accountability and offered to hold buyers strictly to contracts through their cooperation agencies. As a result of past experiences and lessons learnt in the community, AIMCU adopted a policy of communicating with buyers on all relevant matters in writing, with a copy provided to the government authority ABT.

Another lesson learnt was that AIMCU could use the inventory results to decide how their timber will be priced: either as a fixed price (sale of all the species at one price) or price per species. If there is a higher volume of high-value species, then the best option is to offer buyers a price per species and per volume; if not, the best option is a fixed price. Most of the time, buyers do not like the fixed price option, but it is the only way the community can ensure the sale of all timber instead of leaving low-value timber in the forest. Improvements in the quality of the inventory have helped to avoid problems with buyers and ABT concerning the IAPOAF (forest operative plan annual report).

The forestry coordinator is the main actor who promotes and facilitates information exchange, and manages the legality of the timber supply to the purchaser or potential buyers. These activities can be accompanied by other members of the forestry committee or religious/political authorities from the community.

The duties and responsibilities assumed by the community are included in the contract. A copy of the contract is sent to the ABT for registration and ultimate approval, which gives assurances to the buyer that the commitments will be met, and informs the community of the conditions of the contract, responsibilities assumed and defined payment plan.

2.4 How has AIMCU overcome key challenges?

2.4.1 Challenges relating to the value proposition

The community of Cururú offers credible management services and reliable timber availability estimates. Some of the weaknesses that have emerged within SERFORCU have involved internal conflicts, challenges for leadership and corruption amongst leaders. Internal conflicts emerged as abilities and skills developed from interacting with buyers and the urban world. Consequently, it was important to involve those political organisations with a mandate for community social control, and to use community mediators capable of understanding the worldview of the community.

The people of Cururú, while interacting with people from outside the community (such as in urban areas or timber buyers) are occasionally tempted with bribes and alcohol in exchange for certain commitments of natural resources, in this case wood. In the past, these problems divided the community and even forced revision of the zoning of the community. This undermined its capacity to operationalise a management plan involving some groups of community members that had been committed to the timber business. International support has also occasionally exacerbated these conflicts by focusing leadership training on one particular group within the community.

These adverse events have been handled and resolved through access to information (transparency), with the participation of representatives of the purchasing companies reporting to the assembly about the progress and quantity of harvested timber; and through improved fiscal control of the business bank account, in which all movements of money from the community enterprise are recorded.

One of the new practices used to overcome the biggest problems was the publication and democratisation of information in the Members' Assembly where operations must be approved. Although it is widely agreed that a united community is strong, there are individuals that are vulnerable to offers of cash advances in exchange for delivery of a significant amount of timber resources from their land. Community members that are in debt tend to ignore community practices, distracted by the promise of immediate benefit.

2.4.2 Overcoming legal challenges

The main way in which AIMCU has overcome legal challenges is by developing the human resources capacities within the community to develop a PGMF and operational plans that can be readily approved by the government authority ABT.

The legal constitution of SERFORCU was made possible by obtaining funding, but it also required a stable business partner that came from the track record of AIMCU.

With FSC certification, the commitment of professionals from different cooperating agencies and support from NGOs made it possible to achieve the various standards required for certification. For example, it involved the optimisation of the whole production process (inventories, felling and chain of custody).

2.4.3 Overcoming ownership and benefit-sharing challenges

Over the past 18 years, the process of transformation within Cururú from a community with social organisations to a community with production organisations has had its ups and downs. Nevertheless, during this time the community managed to build three wells for a better-quality water supply, provided children with school supplies and medicine to sick people, granted scholarships to students who wished to continue their education and attend college in Santa Cruz, and made partial payments for patients requiring surgery.

Benefit sharing has been practiced as follows:

- After the harvest is completed and financial reconciliation achieved, AIMCU ensures that it puts aside sufficient working capital for the next season (inventory work). After the allocation is made, the results of the annual operation are shared, and, if funds are available, these are distributed as decided by the assembly. Although the PGMF document proposes a form of profit sharing, each year the assembly decides how to distribute the benefits.
- For the distribution of benefits, the assembly ranks collective needs previously identified in the community development plan, such as the construction of wells and houses, the purchase of building materials, education, health, mothers' club, etc.

2.4.4 Overcoming labour challenges

The problems of limited work capacity have been overcome through various international agency training programmes (USAID, SNV Netherlands Development Organisation, etc.) and the development of staff expertise in the community (in cooperation with private buyers, hired professional support, occupational experience, etc.). Financial capacity has also been improved by dealing with contracts and agreements with purchasers and credit extended by financial institutions. Although presently there is still a small debt, AIMCU is an organisation that generally honours its commitments.

Creating AIMCU has allowed the community to become known in the industry as one of the most conscientious, solvent and responsible forestry operations. This is due in large part to the high level of technical ability of its members. These members have also received technical training from international agencies, and capitalised on the use of equipment such as chainsaws and vehicles to solve problems in complying with the requirements of AIMCU's management plan. This capitalisation now allows them to be autonomous in their forest operations. In addition, SERFORCU was also formed and supported by these established abilities, with aims to serve AIMCU and other private and community enterprises in the Guarayos region.

2.4.5 Overcoming delivery challenges

The community members have learnt to plan and budget each task paying particular attention to costs and timeframes. The alliance between community and buyer has been an excellent platform for learning to optimise the production process (inventories, logging, loading and transportation to sawmill) and to reduce costs. Under this alliance, the transport of logs became the responsibility of the purchaser, either directly with their own

equipment, or via sub-contract. This reduced or eliminated the possibility of lost business due to a lack transport equipment to serve buyers.

As AIMCU and SERFORCU developed the possibility of offering other services to buyers, the need arose for more adequate transportation for their activities (primarily logistical support such as the rapid supply of light equipment and administrative support to monitor operations), so SERFORCU and AIMCU each acquired utility vans.

2.4.6 Overcoming marketing challenges

The high level of investment needed to ensure that AIMCU and SERFORCU operations were certified was exhibited in that it retained certification for five years, remaining the only legal operation in the region, and having gained a remarkable reputation among the certified forestry operations.

For AIMCU, the most important commitment made by the community was to ensure that its service provision deadlines were met. In many cases, there was a failure to meet contract terms on the side of the buyer because of time delays and skidding operation delays. Timely payment obligations by buyers were also frequently unmet, Cimal being one of the few exceptions. This gave the community cause for concern each year and added to the risk of losing the harvest season and subsequently expected revenues.

Radio advertising by SERFORCU was frequently used as a marketing tool to promote its inventory and tree-felling services. With the experience of occasional mismanagement within SERFORCU, however, the community is now only willing to make strategic private alliances when there is full transparency of information. So each year the financial returns from logging must be assessed, and adjustments made in annual rates and distribution of profits according to local market prices.

The best experience in terms of marketing was done with advice from BOLFOR and CADEFOR in 2005, when the standing tree price per cubic metre saw an increase from US\$7 to UD\$18. What is now practiced is the use of a database of purchasers who regularly buy, or are interested in the species that the community offers. Information compiled shows the annual volumes of wood on offer (standing timber, stump wood and salvage), with the offer price, species and volumes. After analysis by the technical team, this is then submitted for consideration and approval to the community assembly, and is then sent to interested companies.

2.5 Key lessons

2.5.1 Keeping down costs

The routine practice of planning and budgeting for activities while taking into account potential setbacks such as rain and damage to machinery is considered a breakthrough that allows for reduced costs and more timely completion of activities.

Forecasting and timing has improved considerably. From past experience, technical personnel now have knowledge of the time required for certain production activities and the expected cubic metre yield per hectare and per log. Using such information in comparison with other operations (benchmarking) has enabled AIMCU to optimise its production processes.

To control operating costs through planning a compliance clause is currently contained in the contracts, in which each party agrees to perform the work within agreed-upon dates, and unless otherwise stipulated, the purchaser is held responsible for the cost of time delays.

Despite such progress in planning, there is still a lack of a systematic record keeping of the costs of activities, failure to use other regional costs as reference for the business, lack of full transparency in the management of resources, insufficient reinvestment of resources for training, and fighting between two internal groups and their leaders. To date, these central problems that have not been fully resolved.

2.5.2 Retaining customers and willingness to pay

FSC certification is one factor that expanded the database of buyers or potentially interested large-volume buyers, and others. AIMCU's respect for agreements in longer contracts (more than 5 years in the case of Cimal) and its willingness to fulfill them has been positively assessed by these clients. Other major benefits of the FSC certification were the freedom of access to technical and economic information and improved transparency of both management's activities and forest exploitation by individuals from the community.

Another positive factor is the ability to assert the rights of the community and enforce signed contracts. For example, in the case involving the company SLV, which delayed harvesting periods, the community demonstrated to the ABT the irresponsibility of the company and succeeded in recovering the costs incurred. A similar achievement was made as a result of complaints and demands to stop issuing export CFOs to the United Furniture Company.

2.5.3 Success factors

A very important factor in the qualified success of AIMCU has been its capacity to execute agreements and long-term contracts with local companies such as Cimal. The past decision to specialise in forest management activities and focus all efforts towards this goal was an important factor in this success, at least until 2011. The new determination to buy a sawmill and a woodworking facility, to advance to primary and secondary timber processing, will be important in maintaining the momentum of the business for the future.

Conversely, the most important factors that contributed to the weakening of AIMCU and SERFORCU were the concentration of leadership training in one select group, which provoked jealousy and conflict. According to the community, this situation was unintentionally caused by the international agencies, which has resulted in a lack of reporting and management accountability that continues to this day.

The interference of undesirable or dishonest buyers, who had no interest in the welfare of the community, did at one stage divide the community. Those entrepreneurs promoted the creation of a parallel PGMF in plots involving more than half of the community members, severely disrupting the concept of collective property. These entrepreneurs tried to manipulate the community by making promises surrounding the very sensitive issue of housing. Over a period of four years they tried to lure members of the community into their group through a promise by the timber purchasing company to build houses for members that joined them. However, only 20 per cent of the houses promised were ever built. Ultimately, therefore, the attempt to divide the community failed.

There has also been a lack of ongoing technical support on-site and in the four weakest areas: administration, sales/marketing, finance and production which have all proved problematic. The sudden departure of international agency support did not help that situation.

In addition, the community needs to develop stronger concepts of sanction or punishment in the community. Anyone who contravenes the interests of the community is given three warnings, after which they are suspended from any type of activity for a year. In more than 18 years, only the temporary suspension of a proven corrupt member has occurred.

One key lesson is to do with management and the recognition that learning processes are gradual and take years to mature. It takes time to progress in managing the production chain, learning to add value to primary forest products – AIMCU began by selling standing tree and salvage and contracting section felling services from other communities. To date, the community has since assumed these tasks and learnt to conduct inventories, perform harvesting operations, register to acquire FSC certification and enforce contracts with buyers throughout their duration.

AIMCU has also made significant advances in planning operations and budgeting for the costs of these. It has become skilled at controlling operating costs. It has proved highly useful to create and sell a service package as an employment-generation opportunity, complementary to the PGMF. Likewise, compliance with FSC certification was also a real benefit. It has fostered transparency in the management and administration of the PGMF, and enabled greater social control.

Creating and training local employees (such as in conducting forest inventories, chain-of-custody monitoring, directional felling, scaling or filing CFOs) has maintained enthusiasm for the business. In addition, as staff members have learnt basic business skills including marketing, benchmarking, negotiating skills on prices and volumes and accepting social control (by submitting regular reports from the business management to the Members' Assembly) they have strengthened the business for the future.



Bolivia: Asociación de Apicultores de San Antonio de Lomerío (APMIL)

A business model for local and regional honey production

by Victor Hugo Gutiérrez Rojas

Bolivia has a huge untapped national market for honey, where imports account for about 50 per cent of domestic demand. This chapter explores the activities of the Beekeepers Association of San Antonio de Lomerío (Asociación de Apicultores de San Antonio de Lomerío or APMIL), an association of indigenous Chiquitano beekeepers in Bolivia. Family-run enterprises, APMIL members are part of ADAPICRUZ, an umbrella civil non-profit organisation. Most of their honey is sold via Apícola del Bosque, the corporate arm of ADAPICRUZ, providing much-needed supplementary family income. With an abundance of free natural resources, APMIL could increase both its production and its members' income. Although previous project support has failed to provide sufficient incentives for local producers to scale up production, with more inputs – better training in modern beekeeping and more hives – APMIL could significantly develop its potential.

3.1 Context in which APMIL operates

3.1.1 The enabling environment

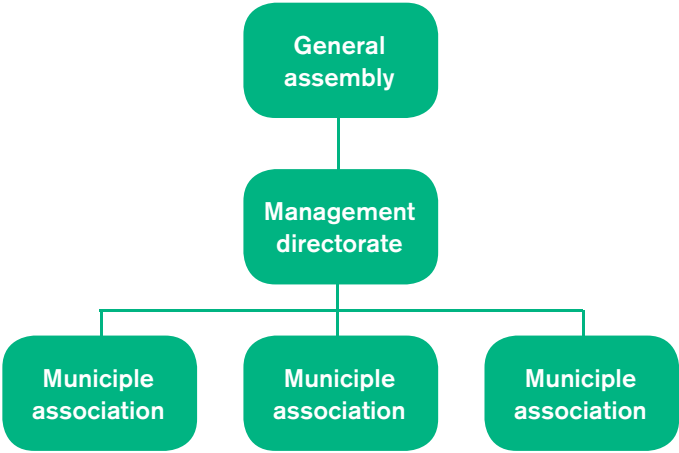
Beekeeping is not new to San Antonio del Lomerío in Bolivia. The collection of wild honey is a traditional activity of the indigenous Chiquitano people, practiced since ancient times. The first projects for the development of modern beekeeping were driven by the evangelical church and the NGO APCOB (Support Project for Indigenous Peasants in Eastern Bolivia) in the late 70s and early 80s. In 1990, the Lomerío indigenous people's organisation the Centre for Native Communities of Lomerío (CICOL) considered the activity in their indigenous territorial management plan as a form of diversification and sustainable use of non-timber forest resources, incorporating 29 communities in the activity.

The Beekeepers Association of San Antonio de Lomerío (APMIL) which is the subject of this case study, formed in early 2000, with around 36 partners organised as communal groups of producers. It has a significant number of hives and apiaries, with up to 20 hives per family (Supayabe, undated). The Bolivian System for Agricultural Technology (SIBTA) provided a training programme to support Lomerío community members in hive management, the process of honey production, the development of a business plan and collectively marketing honey produced by the association.

An important part of the business model is that APMIL is a member of the Departmental Association of Beekeepers of Santa Cruz (ADAPICRUZ), a civil non-profit organisation that brings together the producers of honey and other products of the hives in the area of the department of Santa Cruz. ADAPICRUZ began as an organisation in 1995, with the purpose of promoting the development of departmental beekeeping, and promotes

greater unity among beekeepers, the exchange of information and experiences, and standardises criteria for the management of beekeeping in the region. ADAPICRUZ currently has about 250 members, affiliated through municipal associations and around one hundred communities in the beekeeping region of Santa Cruz. It provides training, technical assistance and marketing services. The institution is managed by an assembly, which selects a directory of five people (see Figure 3.1). APMIL as well as being an active member of ADAPICRUZ, has some shares in Apícola del Bosque ('forest beekeeping'), a company owned by members of ADAPICRUZ. APMIL's associated beekeepers benefit from access to the markets developed by Apícola del Bosque, delivering their honey production to this company for marketing.

Figure 3.1 Structure of the Departmental Association of Beekeepers of Santa Cruz (ADAPICRUZ)



Different projects have supported beekeeping in Lomerío over the years. In recent years ADAPICRUZ promoted the project Nature-Friendly Beekeeping Complex, whose sphere of influence involves 12 municipalities in which the project encourages the activities of local associations, including APMIL. The project supports actions to promote the development of beekeeping with technological innovations, business management, best practices and organisational strengthening, using a market approach designed to generate decent jobs and promote gender equity. Expected outcomes include beekeeping that is a competitive, profitable and sustainable activity.

The characteristics of the area, social organisation and economic characteristics of the population owning the land and its resources are factors that have enabled the development of this business. The region has resources (such as vegetation, water, favourable climate and road infrastructure) conducive to the development of beekeeping. The Chiquitano people of Lomerío are the owners of their territory and have the organisational skills and the management instruments to make use of their natural resources.

The Lomerío population is fairly homogeneous: 86 per cent identify themselves as Chiquitano and speak the *Bésiro* language (Vadillo *et al.*, 2013). The indigenous territory has a population of 8,828 inhabitants, of whom approximately 54 per cent are men and the remaining 46 per cent are women. About 46 per cent are 10 years of age or older, or of working age (Conexión, 2011).

In terms of legal status, the territory where the project has been developed is the Lomerío indigenous native peasant territory (TIOC). Bolivia has legislation that recognises and guarantees the rights of indigenous peoples. The state has ratified the UN Universal Declaration on the rights of indigenous peoples and has enshrined it in its constitution. APMIL is a legally established association of producers registered in the first national census of peasant and indigenous economic associations (CIOEC, 2009), with 32 members (10 men and 32 women).

The organisation's foundation is the community, with the membership belonging to the Lomerío TIOC's indigenous families. The approach is territorial, with the association's boundary being that of the Lomerío TIOC.

Beekeeping in Lomerío has faced a series of challenges: divisions within the indigenous territory, the politicisation of its leaders, losing its ties with ADAPICRUZ, a lack of clarity about which communal activities and family activities to pursue, as well as drought, forest fires causing intense smoke (which leads hives to swarm) and pest attacks (hunting ants).

The indigenous territory (TIOC) of Lomerío is located 380km northwest of the city of Santa Cruz de la Sierra, in the Ñuflo Chávez province. It covers the entire municipality of San Antonio de Lomerío and part of the municipality of San Miguel. The Lomerío TIOC is a socio-cultural construction, which originated when different groups of Chiquitano people in the nineteenth and early twentieth centuries came to this 'place of refuge', fleeing European colonisers (Vadillo *et al.*, 2013). The Chiquitano indigenous organisation of Lomerío, under the umbrella of CICOL, aims to improve the quality of life of their communities, through self-management and communitarian sustainable use and management of natural resources, contributing to the development of the region and the country under its own traditions, norms and customs.

Traditionally the indigenous peoples of the region have gathered honey from wild bees whose hives were in hollow logs, an activity that currently continues and makes possible self-sufficiency in honey. At present, some Chiquitano families of Lomerío also practice modern beekeeping, which was introduced and supported by various external agents, based on raising European bees (*Apis mellifera*) (APCOB–CICOL, 2000).

Those who currently practice beekeeping have very basic materials and equipment, consisting of drawers for hives bodies, frames, honeycombs, smokers, crowbars and protective clothing, etc. Only one family has a centrifuge and honey extraction room. There is certainly traditional empirical knowledge about crude honey extraction, but also a few families have knowledge of modern hive management.

The natural environment is favourable to beekeeping. As a transition zone between the Amazon to the north, sub-Andean ecosystems to the west, the Pantanal to the east and the South American Gran Chaco to the south, it has an enormous biodiversity and distinctive characteristics (Killeen *et al.*, 2006). The climate is sub-humid with marked rainy and dry seasons, nectar sources are abundant and there are many lagoons and watercourses. The warm and rainy season is between November and March and the coldest and driest in July to September. The average temperature is 24°C and the annual rainfall ranges between 1,000 and 1,100mm.

Beekeeping is an extractive activity of a non-timber forest product (NTFP), which uses only a small portion of an abundant resource (bees get to collect only a small part of the nectar and pollen produced by plants in the flowering season). It is an activity that contributes to the diversification of livelihoods, increased incomes and food security without affecting deforestation since its requirements in wood products (construction of boxes, frames and hive lids) is minimal. Instead, helping to increase family incomes and food security reduces the pressure on the forest timber, contributing to reducing deforestation for agriculture and livestock. It is an activity that can engage the family as a whole, with gender equity. The activity does not require changes in land use, except for in very small areas that are required for the installation of the apiaries. No deforestation is needed, avoiding carbon emissions.

Beekeeping can also contribute to the formation of alliances and local platforms, to the extent that new beekeeper associations formed in the region can facilitate the exchange of training, experience and the creation of local supporting industries (carpentry, storage facilities, etc.). They can create jobs for all family members of working age, including women, although care must be taken that the internal divisions and politicisation within the TIOC and communities have no impact on participation, transparency, accountability, etc. The business can strengthen the productive capacities of communities in relation to sustainable forest management. Beekeepers are trained in environmental and sustainability issues and are therefore activists in defence of the environment, contrary to deforestation and burning, or use of agrochemicals.

While over the years there has been support for the economic and technical development of honey production, support programmes have not focused enough to achieve positive results and to generate significant impacts that are sustained over time. There were several main problems with these programmes:

- The small scale of ambition of the support programme in terms of business, which did not fit with the aspirations of the families involved. Usually the programmes distributed a small number of hives to producer groups, which, if divided among the families, did not exceed two or three hives per producer.
- There was an assumption that all the work could be done in groups but in practice forming groups was not primarily based around an economic enterprise.
- Technical assistance and training was not enough for beekeepers to acquire the knowledge and skills necessary to practice modern beekeeping with movable frames and boxes.

With the Nature-Friendly Beekeeping Complex project, through a partnership between the NGO Centre for the Promotion of Peasant Agriculture (CEPAC), ADAPICRUZ and the company Apícola del Bosque, support continues to be given for the development of beekeeping at the departmental level, including Lomerío. The project promotes technological innovation, corporate governance, best practices and organisational strengthening, with a focus on market-oriented generation of decent work with gender equity. Beekeepers have been trained, as local trainers, in training methods and good beekeeping practices for improving both quality and productivity. The current source of financing is the European Union, through ADAPICRUZ (design and project execution) and CEPAC (assistance in the implementation, accountability to the EU).

3.1.2 The operating environment

In terms of the market and competition, nationally there is an unmet demand for honey, which is covered mainly by imports from Argentina, USA and Brazil. Statistics are only available until 2006, when imports totalled 52 MT/year. Currently, according to key informants, the volumes are approximately 80–100 MT/year. It is estimated that domestic production is 858 MT/year (Equipos Mori, 2010). In this sense, it is considered that the main competitor is currently imported honey, which covers about 50 per cent of domestic demand.

In the department of Santa Cruz there are several associations of beekeepers at the municipal or provincial level, among which is APMIL. These associations are united under the umbrella of the ADAPICRUZ. Through ADAPICRUZ, its partners supply a nursing mothers' allowance in the departments of Santa Cruz and Beni with approximately 50–60 tonnes/year.

Among the major honey producing organisations are the following beekeepers associations (asociacións de apicultores):

- ASAPA (Pailón)
- APISARA (Sara)
- APMIL (San Antonio de Lomerío)
- ASAPOR (Portachuelo)
- ASAPIMET (El Torno)
- ASAPIGUARDIA (La Guardia)
- ASAPIMSAC (San Carlos)
- APAEY (APIBUVI) (Yapacaní)
- APIAM (Buena Vista)
- ASAPIOKI (Okinawa)
- ASAMY (Yapacaní)
- ASAPAI (Andrés Ibáñez)
- APIBERMEJO (Bermejo)
- AAPIMA (Mairana)
- APICUEVO (Cuevo)

Similar initiatives were identified in the Chiquitania region. The Intercommunal Forestry Committee of the Velasco Province (Comité Intercomunal Forestal de la Provincia Velasco or COINFO Velasco) supports beekeeping activities in six communities, with about 35 families with a total of 120 beehives of European bees and 20 young villagers with a total of 200 boxes for native bees (melipona).

The producers have no creditors or at least no outstanding debts or liabilities are known. However, it is important to note that all the above mentioned projects which have supported the activity in Lomerío did not ask for any refunding of the money they gave. The same financial approach was used by bilateral cooperation agencies and NGOs who collaborated in the region. Hives, bees and other inputs that APMIL members own today were delivered by different cooperation programmes, through CICOL, with the sole commitment to create jobs, make a more integral use of forest resources and improve the income of families.

Regarding the market and main customers, the Lomerío honey producers target two fronts:

- Direct sales to local (local and neighbouring communities) or regional markets.
- Wholesale to Apícola del Bosque, which is the economic arm of ADAPICRUZ, to which APMIL is affiliated. It is through Apícola del Bosque that the production of Lomerío honey reaches the Santa Cruz and Beni markets through the contract Apícola del Bosque has with central government. Honey is sold to the government under a breastfeeding subsidy programme in the departments of Santa Cruz and Beni.

At the departmental and national levels there is a good market for honey and the Chiquitano forest honey is particularly appreciated for its quality in texture, flavour, colour and aroma. The production in the Lomerío area reaches on average 18–20kg per hive/year. The price of honey sold wholesale to Apícola del Bosque is priced at Bs30/kg (US\$4.50/kg). The honey that producers sell locally at retail reaches prices of Bs40–45/kg (US\$5.90–6.70/kg). Besides honey, there is the potential for exploitation and marketing of wax, propolis, pollen and other derivatives.

Labour for the production of honey is mainly family based because it does not involve full-time jobs, since the work is seasonal and quantitatively does not represent much divergence of the family workforce. Currently families have on average 3–5 hives, which are managed as a part-time job by one or two family members. This number of hives does not represent an attractive income. An increase to 20 or 25 hives per family would mean revenues of more than US\$2,450/year/family, demanding only a little more commitment in terms of time and effort. But still, the demand for labour would not require more than 30 per cent of a family's productive workforce during the harvest season.

Table 3.1 Annual production per family and per hive

Average volume (kg) per hive per year	Minimum hives/family	Maximum hives/family	Average price \$US/kg	Total income/year/family (\$US)
20	5		5.00	500.00
20		25	5.00	2,500.00

Currently there are 18 partners across ten communities (Coloradillo, Cerrillo, Puesto Nuevo, El Puquio, Santa Anita, San Antonio, San Lorenzo, Surusubi, Las Trancas and San José Obrero y Fátima). APMIL is looking to incorporate new partners, with the intention of reaching 25–30 members and that at least 10 of them have the skills needed to produce honey to the standards required for selling the product through Apícola del Bosque. APMIL, as a partner of Apícola del Bosque, has access to its customers, however, to do so it must have adequate extraction and storage facilities, which at present is a limiting factor for production.

The main inputs for the activity come from the forest, such as nectar, water, pollen, resins and bees. Materials such as boxes, frames and covers are provided by local carpenters and craftsmen. Other specific equipment is available from existing specialised shops in major cities, or can be bought through ADAPICRUZ and Apícola del Bosque. Equipment such as centrifuges, smokers, wax presses and dividing grids are imported, mainly from Brazil and Argentina for centrifuges. Bees are captured from wild hives that exist in the forest or, failing that, from beekeepers that offer nuclei of bees (boxes containing six frames and a fertile queen bee to start breeding).

3.2 About APMIL as a business

3.2.1 The vision

The APMIL business is the production of honey by the indigenous communities of Lomerío. Its vision is 'to develop family groups in Lomerío, that deliver high-quality honey to the market, providing an alternative source of income, diversifying production, reducing pressure on forests and improving the livelihoods of the community'.

In 2008 CICOL formed a number of producer associations, legally established, with legal status, in different areas related to agricultural activity, one of which is APMIL. APMIL, under the umbrella of CICOL, offers its members the institutional support to obtain finance, technical assistance and marketing services.

Beekeeping in Lomerío began in 1975, with the support of missionaries in the community of San Lorenzo. Some beekeepers remain from that time: Don Tani, now an old man, was persistent and managed to make the activity an important source of income for his family, with an apiary with about 25 beehives. This experience drew attention and aroused the interest of other community members.

Various programmes have fostered beekeeping activities since then, supporting interested forest farmers with materials, basic equipment and training. The approach of these programmes demanded that those who were interested should form a group, to receive a few hives per producer. This approach did not achieve positive results and most of those who started beekeeping under such schemes abandoned the activity. The reason was that with so few hives the workload was not rewarded with sufficient income. As a result, current production is small-scale and rather stagnant. Most families have only 2–3 hives, with the consequent loss of motivation and interest.

Training was also insufficient. Modern beekeeping requires knowledge of a series of techniques and management practices which cannot be learnt during short and dispersed training events. The lack of knowledge and experience led to failures that discouraged less enthusiastic beekeepers. Despite such setbacks, there were still a few, around eighteen, who managed to maintain honey production. They currently have an average of about five to ten hives. Mr Tani is considered the most successful, with his 25 hives – which emphasises the need to increase the scale at which individual producers are engaged.

The latest project to support beekeeping in Lomerío was developed as part of the Nature-Friendly Beekeeping Complex project, which started as an ADAPICRUZ initiative in 2011 to move towards a beekeeping business with potential to generate permanent jobs, volumes and options to enter demanding markets. The project area of influence included beekeeping in the areas of 12 municipal associations, comprising the 'beekeeping basin', mainly areas bordering the Amboró National Park, a humid tropical zone of the integrated northern region and the Chiquitano dry forest. The project developed actions to strengthen beekeeping with technological innovations, business management, best practices and organisational strengthening, all of these under a market approach that was designed to generate decent jobs and promote gender equity.

The outcome offered by the project was the creation of family enterprises for the production of honey, which is popular in the local market (Santa Cruz). Potential buyers are individual customers and Apícola del Bosque, which is the economic, business-oriented arm of ADAPICRUZ, a non-profit organisation created in 1995 and composed of 14 municipal branches, one of which is APMIL. There is also the potential for the production and marketing of products such as beeswax, propolis, wax, pollen and pollination services for crops such as sunflower.

3.2.2 Business inputs

Honey production is an extractive activity classified as a non-timber forest product (NTFP), which uses only a portion of an abundant resource. Bees can collect only a small part of the nectar and pollen that plants and trees produce in the flowering season. Forest resources are used in the activity: bees, nectar, pollen, resins, water and wood. For the construction of hive bodies and frames locally produced wood is used in very significant volumes, using the labour of local carpenters.

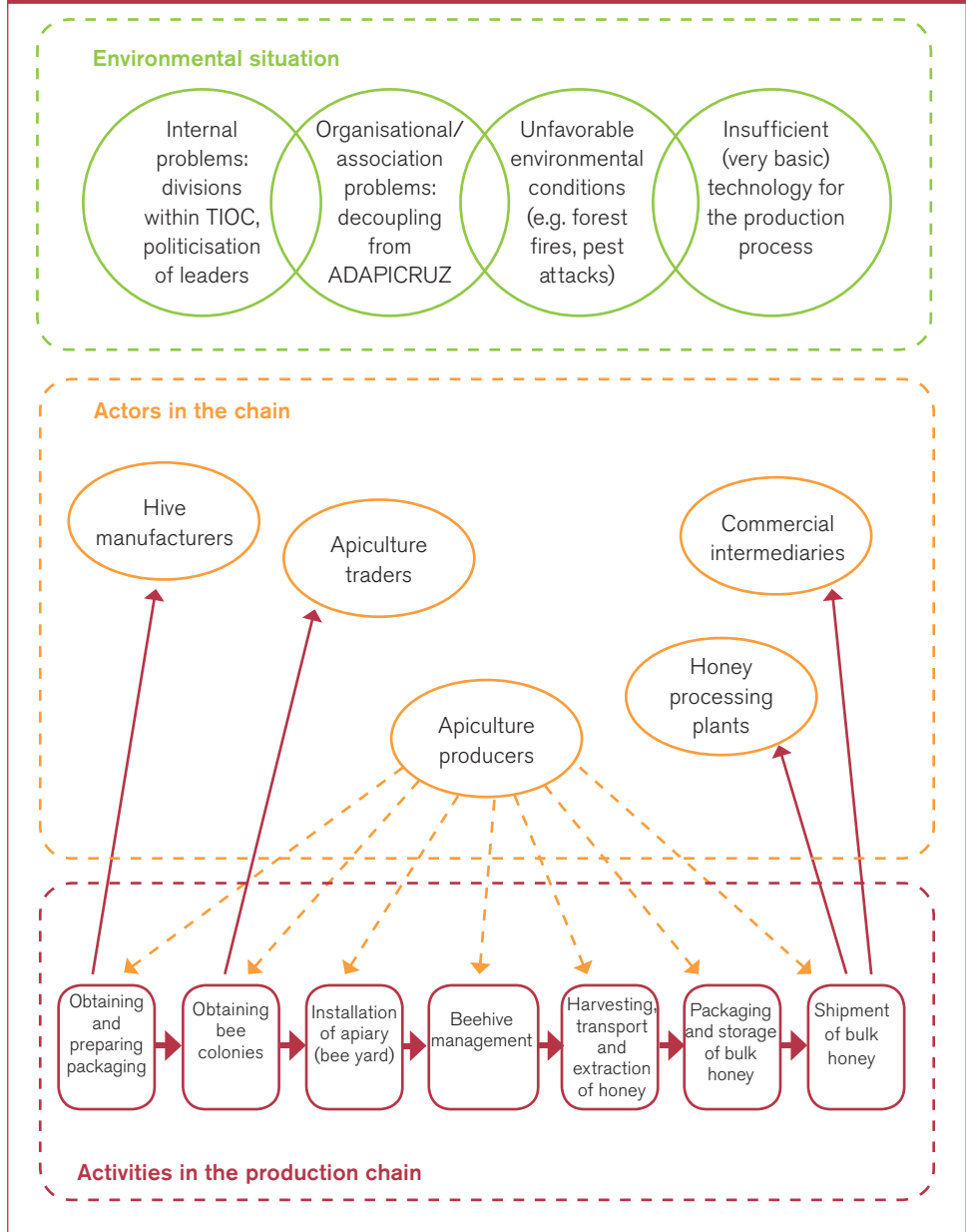
Currently beekeepers in Lomerío have only their own economic resources, and the support of different programmes for acquiring boxes, frames, covers and basic equipment. As yet, they have not sought support from any credit financial institution.

3.2.3 Main activities

All activities, except the marketing of the product, are carried out in the apiaries, and on land owned by the community. These activities include the capture of swarms, apiary installation, hive management, feeding, disease prevention, harvesting and extraction. Honey is sold in the town to visitors or in the city of Santa Cruz to Apícola del Bosque.

The work is done using exclusively family labour. No outside workers are hired. A value-chain diagram details the steps and actors involved (see Figure 3.2).

Figure 3.2 Value chain diagram for APMIL honey production



3.2.4 Technology and skills

The production process can be divided into the following activities (see also Figure 3.3). First, beekeepers need to obtain and prepare the boxes, including the manufacturing and/or purchasing of boxes to be used as hives, wiring up the frames, and preparing and placing wax sheets into the frames.



© Victor Hugo Gutiérrez Rojas

A typical beehive used in Lomerio

The second step is to obtain bee colonies and transfer them to the hives. Bees can be captured from wild colonies usually found in existing cavities in the trees in the surrounding forest. Another alternative source is buying nuclei of bees, or about six frames in boxes containing honeycombs with breeding bees and a fertile queen, from which the colony develops.



© APWIL

Obtaining bee colonies

Once these first inputs are secured, it is necessary to install the apiary. This involves cleaning and conditioning the space where the hives are to be installed and the construction of supports on which the hives will stay.



© AFMIL

Installing beehives in an apiary

With the basic infrastructure installed beekeepers then need to undertake regular hive management. This involves the periodic review of hives, feeding, healthcare and reduction or increase in the number of hives (boxes) according to the season and bee population, the reduction or enlargement of the hive's entry, pest and disease control and other activities of modern beekeeping.



© AFMIL

Regular hive management duties in Lomerio

When the bees have had time to produce honey, the next steps involve the harvest, transport and extraction of honey from the frames. The harvest involves removing frames with honey from the hives, transporting the honeycombs to an extraction room, uncapping and spinning the honeycombs.

The stage after this is the packaging and storage of bulk honey. It comprises decanting the honey to separate fragments of wax, debris from dead bees and other impurities and storing the honey in suitable containers.

Finally, the beekeepers have to manage shipping or delivery of honey in bulk to processing plants or intermediaries. Honey is either packaged in small containers to be sold in retail stores or in larger containers for transport to the collection centres for wholesale marketing.



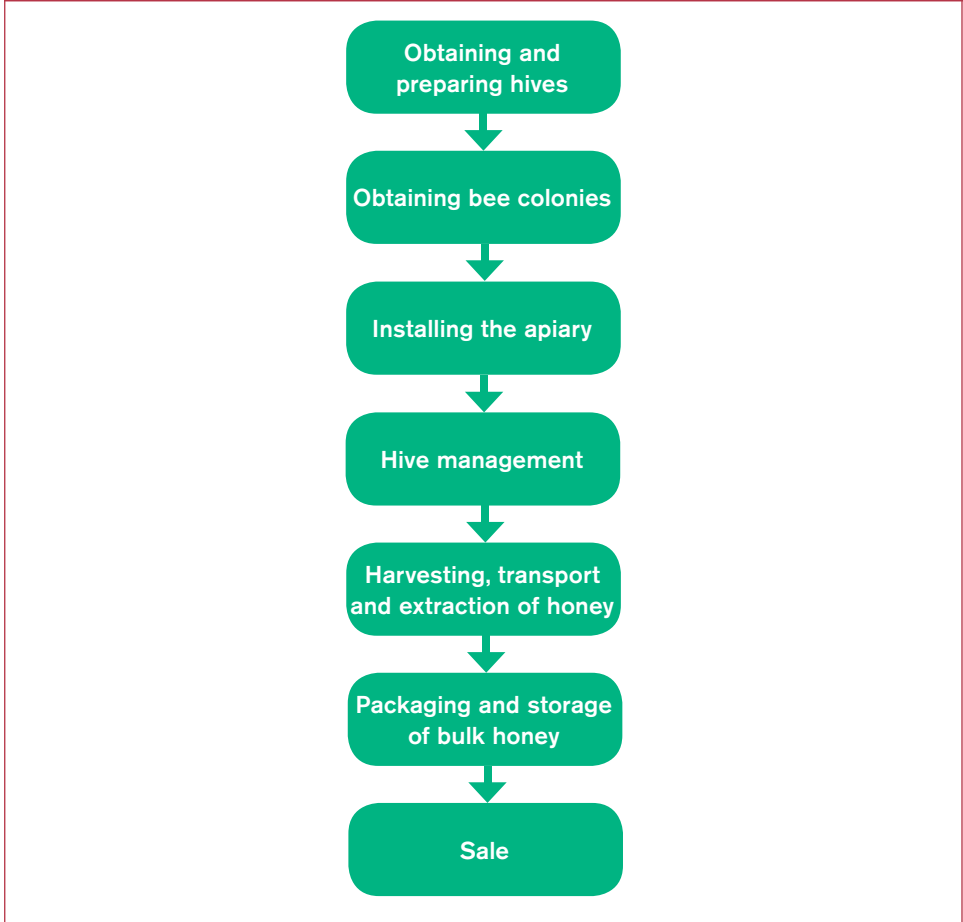
The process of purifying the honey



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Packaging into bottles for sale

Figure 3.3 Steps in the honey production business at Lomerío



3.2.5 Business partners

The only entity that can be considered as a true business partner of APMIL is ADAPICRUZ with its economic arm which is Apícola del Bosque, through which its associates can market their products.

3.2.6 Customer groups and product types

The market which is served with Lomerío honey production is made up of the following categories

- Individual buyers, to which some producers offer their honey locally, and
- Apícola Del Bosque, to which the collective production of APMIL beekeepers is delivered.

Apícola del Bosque, in turn, sells to both individuals and supermarkets. A good part of the honey is sold to the government under a breastfeeding subsidy programme in the departments of Santa Cruz and Beni.

3.2.7 Differentiation in the market place

One of the main advantages Lomerío honey is its quality. In 2004, ADAPICRUZ commissioned a study on the health and quality of honey in different parts of the department of Santa Cruz. The results of this diagnosis established that the honey produced in the region of Lomerío presented the best characteristics in relation to other areas of the department.

The honey of the whole Chiquitano dry forest region, and particularly the product coming from Lomerío, has very good characteristics, mainly due to its dry tropical climate and a floral composition which result in many varieties of honey. The honey from Lomerío is certified by the National Agricultural Health and Food Safety Service (SENASAG), allowing them to access the local, national and international markets.

Another advantage producers in Lomerío have is their membership to ADAPICRUZ and its shareholding in the company Apícola del Bosque, allowing them to participate in markets developed by this institution.

3.3 Who controls APMIL?

3.3.1 Origin of the value proposition

As noted above, the collection of honey is a traditional activity and part of the Chiquitano customs. Modern beekeeping – using boxes with frames – began in the mid-1970s with the support of missionaries in the community of San Lorenzo.

The results of those early experiences and the wealth of local forest within which apiaries can be developed led to several project attempts by support agencies to strengthen honey production with materials, basic equipment (hives, driers, beekeeping clothing) and training through CICOL-driven projects. CICOL aimed to find an income-generating alternative for local families. The experience of some beekeepers who had achieved significant revenues attracted CICOL's attention and roused the interest of other local people.

In marketing and training, people from Apícola del Bosque constitute a kind of technical assistance in situ. This has proved much more effective than earlier project-based attempts to support honey producers.

3.3.2 Control over forest resource access

Administradora Boliviana de Bosques y Tierra (ABT) is the national authority responsible for forest management in Bolivia. It promotes the development and approves the management plans (planes integrales de bosques y tierras or PGIBT), which acknowledge that the users themselves control forest management. At the level of the TIOC, is the local indigenous organisation (CICOL) who is responsible for the control of access, use and/or extraction of resources.

3.3.3 Control of the business

In the first instance the territorial actors, in this case the Lomerío indigenous community, under the umbrella of its parent organisation (CICOL) make their PGIBT using a participatory process. The PGIBT is submitted for approval and authorisation of the ABT. However, in practice, not all beekeepers are aware that they need approval to use and extract products from the surrounding flora such as honey produced by bees from the apiary.

At the level of each household, production and marketing is led by the household or family clan head, and they take responsibility for business and marketing (which is managed by APMIL at associative or community level). It is important that the leader of APMIL has the ability, intuition, theoretical or scientific knowledge, skills and business sense. These are necessary attributes that are not specific to men, so there are also small enterprises led by women.

3.3.4 Staff selection and roles

Beekeeping and honey production in Lomerío is a family business. The tasks of obtaining boxes, obtaining colonies, apiary installation, handling hives, harvesting, packaging, storage and transport of honey to the market are done within the family. The leader of the family and/or extended family, usually the father or grandfather, decides the implementation of these activities. The leader also decides where and how to invest, and who to sell to. Although the family group meets and tries to seek consensus, it is this person who, using his or her leadership and trust of the family, makes the critical decisions.

No hired labour is used as the activity does not demand it. Different family members of working age, regardless of gender, collaborate in different tasks, depending on their abilities, skills and availability of time that enables them leave other tasks essential to the maintenance of the home.

APMIL itself develops plans for marketing through decisions taken at a meeting of partners and board members, who are also responsible for compliance with the decisions made.

3.3.5 Delivery options

Communities sell their production in bulk, packaged in buckets of 50kg, or to retail, packaged in one kilogram bottles. The price is set based on supply and demand and varies little from region to region; it is more a matter of negotiation between seller and buyer. APMIL does not promote its product, but delivers their honey production to Apícola del Bosque for marketing. Apícola del Bosque promotes the product using attractive, labelled containers, offering the product and negotiating prices with wholesale buyers, such as supermarkets and the breastfeeding subsidy programme.

3.3.6 Customer research

Neither APMIL nor individual producers in Lomerío have undertaken any surveys to find out the characteristics of consumer demand for their product. At the beginning of their business CEPAC commissioned a consultant to carry out a study (Equipos Mori, 2010) to identify the structure and requirements of the different marketing channels such as

pharmacies, naturopathic doctors, subsidies, supermarkets, markets, shops, beauty salons and spas in the departments of La Paz and Santa Cruz, to explore consumer preferences regarding consumption of honey and its derivatives.

The innovations sought for the production process are not based on the characteristics of demand, but rather to adopt modern beekeeping and honey production techniques that will improve quality for existing customers. The traditional method of searching for and destroying wild hives to extract honey is gradually being replaced by non-destructive rational breeding, using hives with movable frames and extraction technology which does not destroy the combs.

In the structure of the production unit, there is no person assigned for customer research. Apícola del Bosque and ADAPICRUZ are the entities that are responsible for promoting the product to customers and prospects.

3.4 How has APMIL overcome key challenges?

3.4.1 Challenges to do with the value proposition

With the few exceptions noted above, many of the honey producers originally failed to develop the sort of scale of activity that would reward their effort. The number of hives per family, the approach of the support programmes and insufficient training were factors that meant that interest in beekeeping was not maintained by those families involved.

Those who remained interested acquired more boxes and equipment on their own, acquiring enough hives to bring in significant revenue. They left the group work to engage in individual production, took advantage of all training events offered by the various programmes and gained experience through practice. They still belong to APMIL and have participated in joint marketing operations. The strengthening of market opportunities through Apícola del Bosque and ADAPICRUZ bodes well for the future.

3.4.2 Overcoming legal challenges to do with resource access

To date, there have been no challenges or inconveniences in accessing the resources required for beekeeping, nor at the levels of national and departmental authorities, or of the indigenous territory or communities.

If it is necessary to obtain some kind of license in the future, there are the integrated forest and land management plans (PGIBT), by which producers obtain approval for the exploitation of forest resources. The ABT, as the national authority responsible for forest management in Bolivia, promotes the PGIBT development and gives approval. The local indigenous organisation (CICOL) is responsible for the control of access, use and/or extraction of forest resources, carried out in accordance with PGIBT which was developed with the consensus of representatives of all communities.

3.4.3 Overcoming ownership and benefit-sharing challenges

As mentioned above, programmes that tried to promote the development of beekeeping in Lomerío were of a very small scale, resulting in few active beekeepers. Future support programmes would do well to focus on supporting fewer producers but equipping each with more hives.

3.4.4 Overcoming labour challenges

As the workforce is family based; there is no need to recruit outside labour. The infrastructure for the apiary where the hives are kept is minimal and poses no challenge. Only a small area of land (approximately 500m²) is required, which must be kept free of vegetation. Supports for hives can be built with local materials.

The infrastructure required for extraction, decanting and storage is a challenge that has not been resolved collectively. Support programmes had planned to implement mobile extraction rooms, but the plans never came into reality.

Training is yet another challenge to overcome. This should be given in practice and in a period sufficiently ample to allow those who receive training to perform each of the tasks and understand the theoretical foundations underlying each task. In Lomerío there are currently some community members with significant theoretical and practical knowledge of beekeeping and even training techniques.

3.4.5 Overcoming marketing challenges

There are no significant obstacles to delivering the product to market. There is a stable road infrastructure and transportation available at reasonable prices.

There have been no challenges in finding and keeping customers for the product because, as mentioned above, the production of honey at the national level is not enough to meet market demands.

3.5 Key lessons

3.5.1 Keeping down costs

Costs are kept low because the activity only requires the use of family labour; apart from transport, no other service is hired. The bees and nectar, pollen and resins they collect are freely available inputs. In the case of Don Tani, growth has been gradual, hiring only one to two people when the honey is collected, and he has not resorted to external borrowing, avoiding interest payments.

3.5.2 Retaining customers and willingness to pay

A decisive factor was having the vision and willingness to partner with ADAPICRUZ and to buy shares in Apícola del Bosque, two organisations with long term experience and expertise, so the development of customers was not necessary, since this is automatically present given local and national demand. Associating with ADAPICRUZ and Apícola del Bosque allowed APMIL to access a customer base already been developed by Apícola del Bosque.

3.5.3 Success factors

One of the key lessons learnt in the development of the APMIL business is that honey production is a business of scale; with few hives the profits are not significant to the household economy. From the example of Don Tani it can be interpreted that with greater than 20 hives, the production volume is more attractive and plays a decisive role in the family economy.

One factor worth noting from this case is that, apparently, for this region, the ideal type of organisation is the family clan, where the patriarch or matriarch is the recognised authority within the organisation and any internal problems for business control and management of the production unit are resolved by these authorities. There are fewer discrepancies and internal fights; when they do arise, they are taken to the head of household, who is culturally a recognised authority figure for conflict resolution. To reinforce this perception, consultations were conducted and, according to these interviews, the production unit does not have to be a closed family structure of parents and children; uncles, brothers, cousins or in-laws may also be included.

The flowers of the forest provide more nectar than a typical bee population can collect, although the volume of honey produced per hive varies according to the location of the apiary, the characteristics of production area and weather conditions for each particular year. The key feature that needs investment is in the quality of honey produced – with links to marketing organisations who can position the honey in appropriate packaging and location for sales.



Brazil: Cooperativa Mista da Flona do Tapajós (COOMFLONA)

A successful community-based forest enterprise

by Shoana Humphries, Dárlison Andrade and David McGrath

In 2000, a change in the law in Brazil gave indigenous communities the right to live within public forests. This coincided with growing recognition that local communities are essential in managing forest resources to both conserve the forest and create local sources of income. The Mixed Cooperative of the Tapajós National Forest (Cooperativa Mista Verde da Flona do Tapajós or COOMFLONA) is a community-based forest cooperative that manages a large-scale forest enterprise in the Brazilian Amazon, run by and for local communities. COOMFLONA has obtained FSC certification while creating much-needed jobs and income for community members. This chapter describes how, despite facing many challenges related to leadership, financial viability and access to forest resources, COOMFLONA has found that partnerships with social movements, government agencies, NGOs and the local university have been essential to overcoming these obstacles.

4.1 Context in which COOMFLONA operates

4.1.1 The enabling environment

Timber production is an important economic activity in the Amazon region. In the Brazilian Amazon, Pereira *et al.* (2010) estimate that the timber industry employed 203,705 people (or 2 per cent of the population) and generated US\$2.48 million. While the volume of timber produced in the region is falling (47 per cent from 2004 to 2011) (Pereira *et al.*, 2010; SFB, 2013), selling timber remains an important economic activity for rural families and there is much concern over the role timber harvesting can play in making forests susceptible to forest fires and conversion for crops and pasture. Among the various strategies for controlling deforestation in the region is the government's designation of public lands as conservation units and indigenous territories. According to Brazil's Chico Mendes Institute for Biodiversity Conservation (ICMbio, 2014), Brazil has 122 federal conservation units in the Amazon biome, of which 45 are extractive reserves (RESEX) and 32 are national forests (FLONAs). The RESEXs are designed to promote the sustainable use of resources by local communities who have historically lived in the forests, while FLONAs are designed for the use and protection of forests through concessions to companies and communities.

The Tapajós National Forest is located in Brazil's Amazon region in western Pará State along the eastern margin of the lower Tapajós River, mostly in the municipality of Belterra (Figure 4.1). Created in 1974, with approximately 527,000ha (IBAMA, 2004), this conservation unit contains a great diversity of landscapes, including more than 160

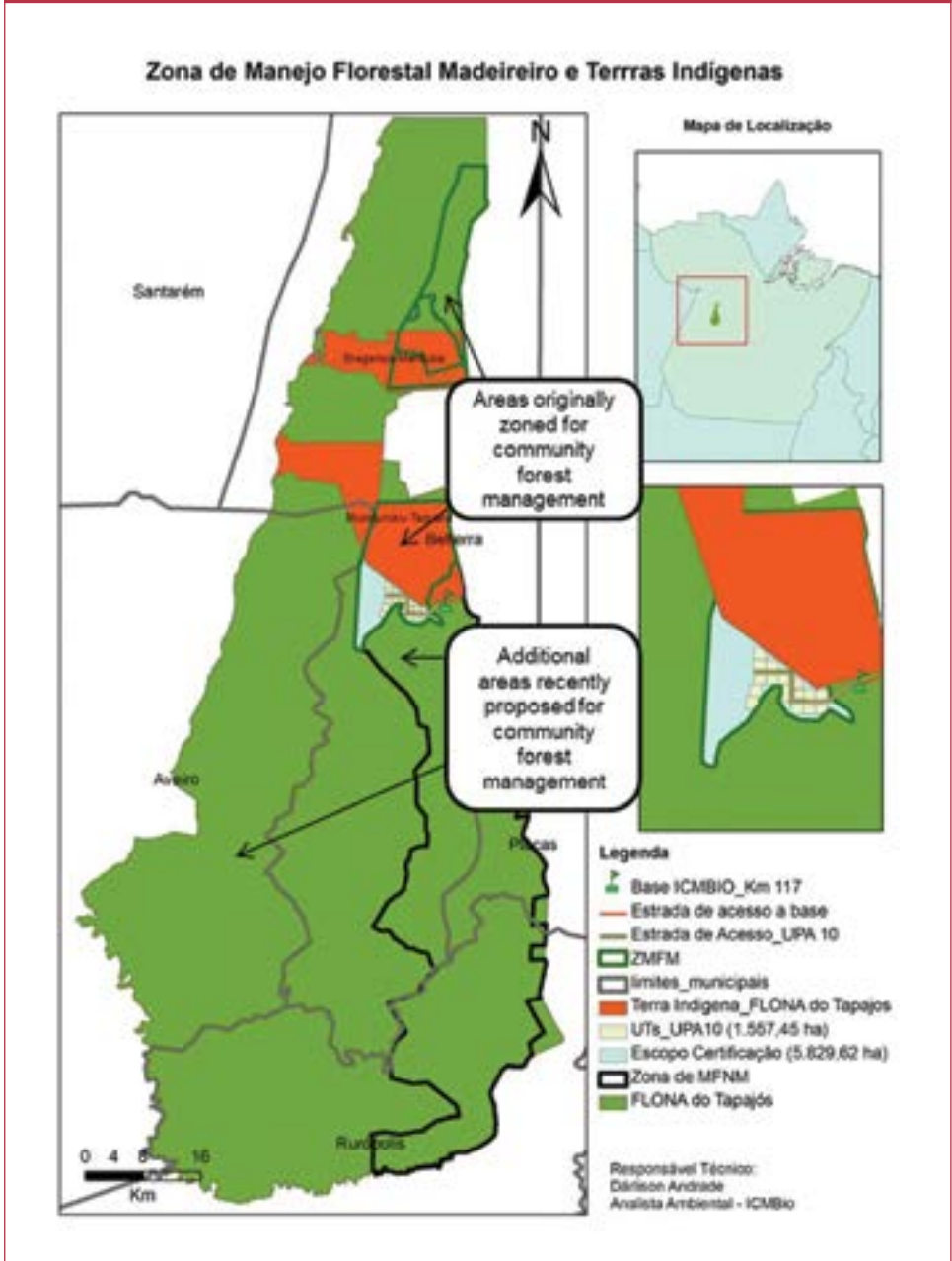
kilometres of shoreline, rivers, lakes, wetlands, upland forest, hills, plateaus, fields and açai palm groves. Since before the creation of the FLONA, the area has also been home to the Munduruku indigenous group and traditional peoples; riverine families with their own culture and customs (IBAMA, 2004). These communities have a long history of making a living from various productive activities, principally subsistence agriculture, fishing, hunting, and the extraction of non-timber forest products, such as natural latex ('cernambi'). Few income-generating activities exist in the region's rural areas, and communities located in the municipality of Belterra were ranked very low in the 2010 United Nations Development Programme (UNDP) Human Development Index (66 out of 143 municipalities in Pará State) (UNDP *et al.*, 2013).

The Tapajós FLONA was created without the consultation or consent of the communities living in the area and in the 1980s and mid-1990s there were several initiatives to remove families who had arrived after the establishment of the FLONA (IBAMA, 2004). The communities initially resisted and organised themselves, with the help of the Catholic Church and the Union of Rural Workers of Santarém, into three intercommunity associations in 1994. However, after a few more years of discussions, a plebiscite was held in 1996 and they voted to be excised from the FLONA. Two proposals for this purpose were submitted to the national congress but were never presented for a vote, and were subsequently archived (IBAMA, 2004).

In the late 1990s and early 2000s, the context of the tenure situation changed. In 1997, community members signed an agreement with the government responsible for the management of the FLONA regarding use rights. In 2000, Brazil's National System of Conservation Units Law (Law No. 9.985/2000) was passed, which provided the right for communities to live within public forests. This coincided with growing recognition of the need to involve local communities in managing forest resources as partners in both forest conservation and in creating local sources of income. Indeed, today the creation of conservation units is often done to resolve and/or avoid conflicts over land use, and to protect the rights of traditional families to live in and sustainably use forests.

Several projects implemented in the Tapajós National Forest in the late 1990s and early 2000s also influenced the situation in the FLONA, including the ProManejo project (Project to Support Forest Management in the Amazon) and an experimental timber-harvesting project financed by the International Tropical Timber Organisation (ITTO). The ProManejo project was part of the Pilot Project for the Protection of Tropical Forests in Brazil (PPG7) and in 1998 it began investing in the management of the Tapajós National Forest and in income-generation opportunities for families, such as small animal husbandry and small furniture workshops (ProManejo, 2006). From 1999–2002, the ITTO project tested the technical and financial feasibility of low-impact logging techniques in the Tapajós National Forest. This was the first experience in Brazil with a forest concession granted to a company to manage a public forest on a short-term, experimental basis. Local residents were indignant that a company was allowed to commercially harvest forest resources near their communities and began lobbying the agency managing the FLONA at the time (Brazilian Institute of the Environment and Renewable Natural Resources – IBAMA) to give this right to communities.

Figure 4.1 Map of the Tapajós National Forest



Source: ICMBio (2014)

In 2003, IBAMA published Ordinance 40, which granted the three intercommunity associations the right to implement community forest management on an experimental basis in the FLONA Tapajós, and another plebiscite in the same year resulted in a majority vote for communities to stay in the FLONA (IBAMA, 2004). This led to the creation of the Mixed Cooperative of the Tapajós National Forest (Cooperativa Mista da Flona do Tapajós – COOMFLONA), and the Ambé forestry pilot project in 2005. The idea to form the cooperative was supported by community members, IBAMA staff and ProManejo consultants with whom they were collaborating to secure the communities' rights to harvest timber in the FLONA. The three intercommunity associations also formed the Federation of Organisations and Traditional Communities of the Tapajós National Forest (Federação das Organizações e Comunidades Tradicionais da Floresta Nacional do Tapajós – FCFT) in 2004, which continues to serve as the organisational base of the cooperative. A total of 37,928ha in the FLONA, organised into two units of approximately equal size, were designated for community forest management. In 2005, COOMFLONA received authorization to harvest timber in 100 ha within one of the units of approximately 19,000 ha (minus sensitive areas). The ProManejo project supported the first three annual harvests of timber (2005-2008).

After ten years of operation in the Tapajós National Forest, COOMFLONA is a model for community-based forest management in the Amazon region and an important global reference. It has faced many challenges over the years and responded in ways that can be instructive to others. It is also important to recognise the critical role that the cooperative's many partners have had in helping COOMFLONA to address these challenges and grow. Finally, the fact that the cooperative operates in a highly bureaucratic system and is surrounded by illegal logging activities means that the cooperative still faces risks and cannot take its success for granted. Among its main challenges today are access to markets, access to forest resources (the excision of indigenous lands from the FLONA in 2012 reduced the total area designated for community forest management to 13,000ha, not including 4,237ha for research), and protecting the financial integrity of the cooperative while responding to the many needs and demands of its members.

4.1.2 The operating environment

Brazil is a major producer, processor and consumer of timber, ranking among the top five countries for the production of wood fuel, industrial roundwood (logs), sawn wood and wood pulp (used mainly for paper products) (FAO, 2014). Within the tropical timber sector, Brazil is second (behind Indonesia) in terms of both tropical log production and tropical log consumption (ITTO, 2012). In 2011, 12.9 million m³ of logs from tropical natural forests were produced in Brazil's Legal Amazon region, and this resulted in 5.9 million m³ of sawn wood (SFB, 2013). The Legal Amazon of Brazil includes eight states and part of a ninth state in the north of the country, and covers approximately 60 per cent of Brazil's territory. The state of Pará, where COOMFLONA operates, produced 33 per cent of Brazil's tropical roundwood in 2011 (SFB, 2013).

Tropical timber production in the Brazilian Amazon is a highly informal industry. In 2009, 36 per cent of the tropical timber sold in Brazil was estimated to be illegal (Pereira *et al.*, 2010). While illegal logging may result in a few trees removed per hectare, operators tend to be indiscriminate when it comes to minimum tree diameters (except for sawmill requirements) and leaving seed trees. In addition, illegal logging is often essentially theft from the government or local families. Among the factors contributing to the large proportion of illegal timber is the fact that very few landowners have a legal land title (Amaral *et al.*, 2007) – an attempt to remedy this situation is the new Rural Environmental Registry (CAR), in which all rural properties must register by 2016 (Law No. 12.651/2012, Decree No. 8.235/2014).

In addition, permission must be obtained for the legal sale and transport of timber through either a forest suppression permit or a sustainable forest management plan. The processes for both, especially the latter, are expensive, time consuming and technically demanding. Furthermore, illegal logging is more lucrative in the short term as it is not constrained by the conservative rules for tree harvesting, including minimum tree-size diameters, the minimum number of seed trees to be left per species, nor by minimum wage legislation, safety regulations, or legal contracts with safeguards and fairly negotiated prices. As a result, legal operations such as COOMFLONA that pay fees and taxes and follow environmental and labour laws are at a disadvantage when competing with illegal loggers. On the other hand, as demand for timber with verified legal origin increases in importing countries such as the UK, which imported US\$405 million of timber in 2011 (SFB, 2013) demand for products from such operations may increase. The campaign by Greenpeace in 2014 which drew attention to the export of illegal timber to Europe by a timber company in Pará may help expedite this process (Greenpeace, 2014).

COOMFLONA has the only concession in a Brazilian national forest implemented by a cooperative. Operators in other national forests are industrial companies, despite the national government's intention to have a part of each national forest managed by local community associations. COOMFLONA is also unique among Brazil's community-based forest enterprises for its large contiguous annual harvest area (1,000ha in 2013 and 1,600ha in 2014), its sale of logs from a central log patio¹, and its employment of local people for field activities (e.g. tree inventories, felling trees, measuring logs). In fact, the cooperative's timber and other productive activities have made it the principal source of employment for the communities in the FLONA (Andrade *et al.*, 2014), with almost 100 timber-related jobs created for local people in 2013. Other community forestry initiatives for timber production in Brazil are implemented in RESEXs, sustainable development reserves and in land reform settlements, and usually sell standing trees to companies who take over all technical activities related to timber extraction.

1. A log patio is a space where logs are stored for longer periods of time, whereas a log deck is temporary log store.

4.2 About COOMFLONA as a business

4.2.1 Vision

In 2005, residents of the Tapajós National Forest formed COOMFLONA with the vision of facilitating forest management and the sale of sustainably harvested timber. The ProManejo project financed the first three years of operating costs, including infrastructure, technical assistance, equipment, training, materials and other services. COOMFLONA has gradually increased its direct role in forest management activities and increased the size of its annual harvest area. COOMFLONA has also increased its membership over time, with new members applying to join each year. After almost 10 years of strengthening its organisational and technical capacity, COOMFLONA achieved FSC certification for its timber production in 2013.

The cooperative implements other initiatives as well aimed at creating additional jobs and income opportunities for cooperative members and other residents of the FLONA. In 2012 it began restoring a carpentry workshop in one of the communities which was originally installed by the ProManejo project, and in 2013 it began using a portable sawmill (also obtained from the ProManejo project) to saw large branches and parts of tree trunks (residues from logging) into boards to supply the carpentry workshop. These initiatives fall under the purview of the COOMFLONA technical and operational team. The cooperative also assists community members in the production and sale of natural latex and latex products, medicinal oils and seeds, and recently opened a store in Santarém (in front of its main office) to sell finished products including doors, furniture and crafts (see photos). It is also working with external partners and communities to develop community-based tourism activities in the FLONA.



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COOMFLONA field camp in the Tapajós National Forest



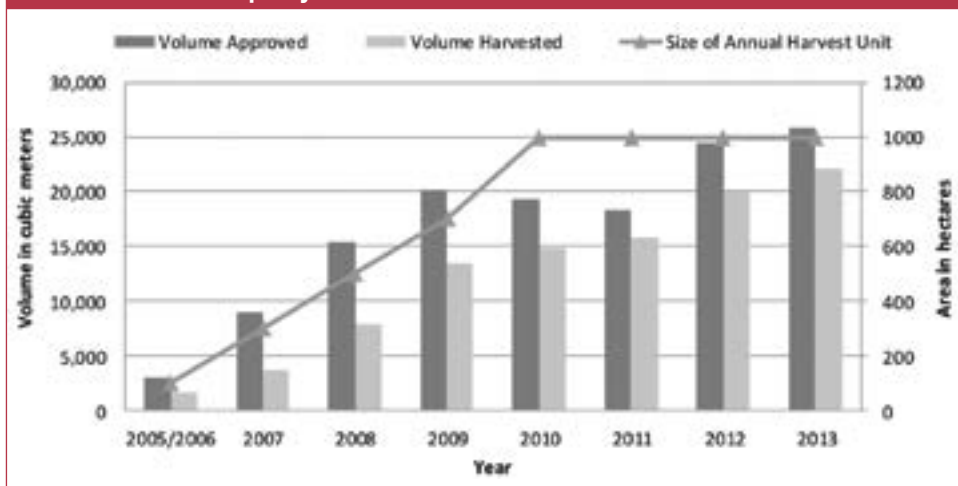
Store run by COOMFLONA in the city of Santarém

With few exceptions, the staff and temporary workers are from the communities in the FLONA and are members of the cooperative. There are currently 212 members, and approximately 96 were directly involved in forest management in 2013 (26 permanent staff and 70 temporary workers). The number has increased since 2004 based on the number of workers needed. Requirements for joining the cooperative include being at least 18 years of age, attending a course on cooperatives, being from a traditional family living in the FLONA, being a member of one of the two remaining intercommunity associations in the FLONA (see Section 3.4.1 for information on the removal of the third intercommunity association from the FLONA). In addition to being eligible to work in the timber operation, members also benefit by being able to decide how to allocate 20 per cent of the cooperative's profit, which is often paid out as a type of dividend. ICMBio staff estimate the cooperative provides direct and indirect benefits to about one quarter of the population of the FLONA.

The annual area and timber volume harvested have increased since the initial harvest in 2006 of 100ha to 1000ha in 2010 (Figure 4.2). The annual harvest area is expected to increase to 1600 ha in 2014 (the annual harvest area size for 2015 forward is currently under discussion). In 2013, COOMFLONA sold 22,023m³ of logs at a central log patio through an auction (Figure 4.2). The average volume extracted was 22m³/ha⁻¹ over

1,000ha; this is well below the legal limit in Pará of 30m³/ha⁻¹ for a 35-year harvest cycle, but double what many Community Forest Enterprises (CFEs) harvest in the region (see Humphries *et al.*, 2012; Medina and Pokorny, 2014). The difference in the volume approved and volume sold can be due to many factors, including the selection of trees for felling that are later found to be unsuitable (e.g. hollow), delays in the authorisation of harvest activities (tree harvest and transport must be completed before the rainy season begins), and the early onset of the rainy season.

Figure 4.2 Volume of timber authorised and harvested (m³) and area (ha) of annual harvest per year



Source: COOMFLONA and ICMBio

The species sold include more valuable hardwoods and other lighter woods. Some hardwoods (e.g. *ipé*, Spanish cedar) can be sold for prices several times higher than other 'high value' species, but after some experimentation with selling wood in different price classes, the cooperative decided to sell all species together for one minimum price, which was R\$230/m³ in 2013 (US\$106.73). Up to the 2013 harvest, the cooperative sold timber to the same local sawmill, with one additional buyer for the 2012 harvest (see Section 3.5.2 on the challenges to date of cultivating more buyers). For the 2012 timber harvest, COOMFLONA allowed another buyer to purchase part of its timber, but that buyer complained that the best logs were going to the other buyer. The cooperative decided to sell all the timber to only one buyer for the 2013 harvest, and to continue considering other options in the future. With FSC certification, the cooperative is hoping to attract buyers from the national and international markets. Currently the high-value hardwood species are processed into boards and/or finished products (e.g. for flooring or furniture) in Brazil and exported to Europe and the US. The other species supply national and local markets in various forms (such as boards for construction, plywood or furniture).

Analyses by Humphries *et al.* (2012) and Medina and Pokorny (2011, 2014) found positive rates of return on timber for COOMFLONA based on data for the second harvest in 2007

of 300ha. Humphries *et al.* (2012) found a 12 per cent rate of return under the scenario that the temporary workers were paid based only on days worked rather than the actual situation of being paid monthly salaries. Medina and Pokorny (2011, 2014) took estimated costs for 100ha (also multiplying daily rates by days worked instead of using monthly salaries) and multiplied them by 10 to get the estimated cost for 1,000ha which was the target annual harvest area at the time, and estimated an 80 per cent rate of return. In more recent analyses, a financial evaluation of COOMFLONA's sixth harvest (2011) found a profit of R\$1.6 million (US\$911,264) and a rate of return of 132 per cent, after including all operating costs for harvesting and transporting logs to the central log patio (Humphries *et al.*, forthcoming).

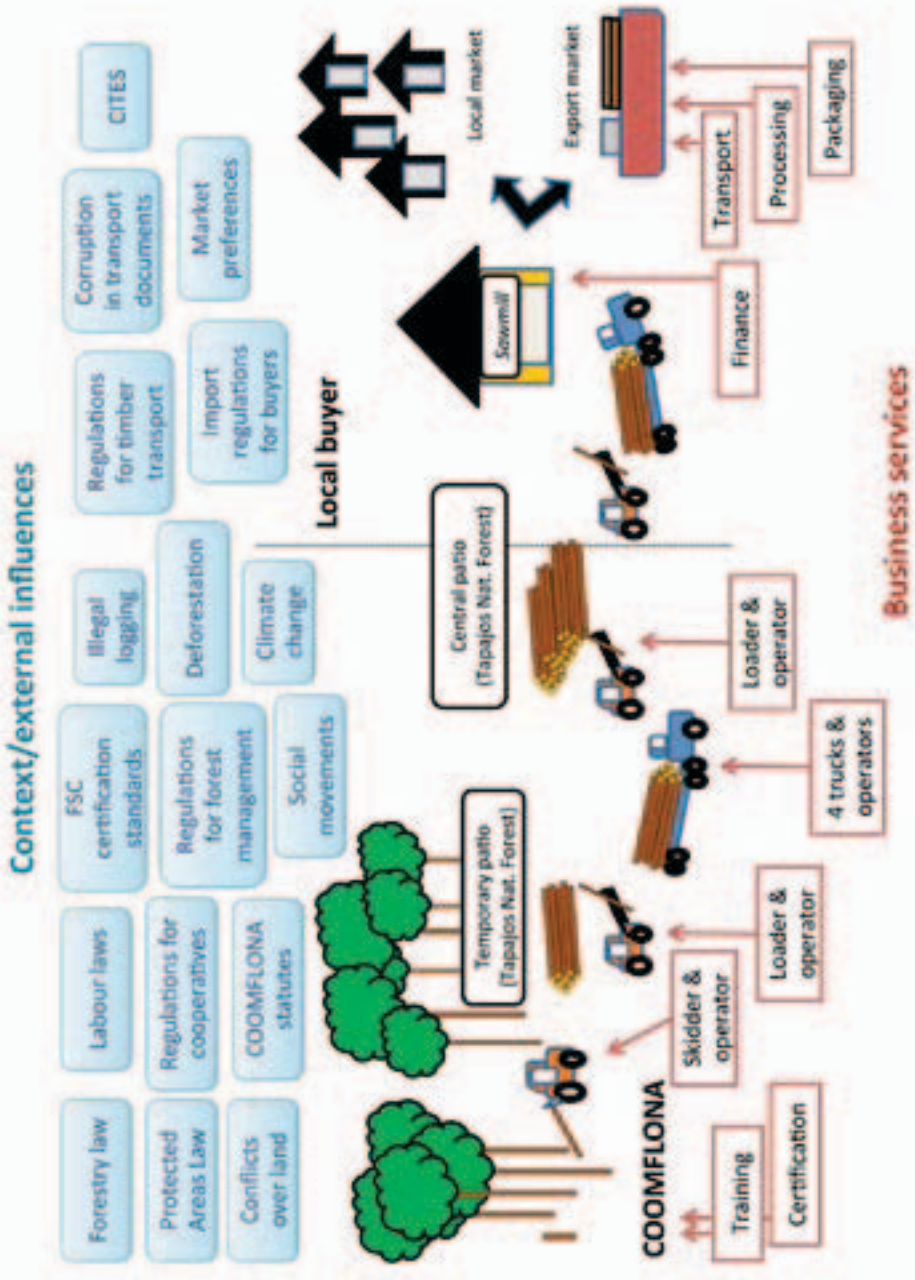
As mentioned, the cooperative supports many productive activities with its timber income, so the annual profitability of the cooperative as a whole is less than its profit from timber. The cooperative's overall profit was calculated to be R\$460,000 for 2011, which indicates it may have used approximately R\$1 million to support other activities and/or to reinvest in its timber operation. But there was no thorough analysis of the use of COOMFLONA's timber income in 2011. The most recent profit estimate by COOMFLONA's accounting team was R\$610,041 in 2013 (see Section 3.3 for more information on the cooperative's accounting system and how it allocates profit among different funds).

4.2.2 Business inputs

As previously mentioned, COOMFLONA received financial assistance for its first three years of operation (2005 to 2007) from the ProManejo project, a programme of the Pilot Project for the Protection of Tropical Forests in Brazil (PPG7), which was funded by Germany, the European Union, the UK, the Netherlands, USA, France, Italy and Russia (ProManejo, 2006). It saved income from its first three timber sales to build the capital it would need to operate independently. It had some financial difficulties in 2007/8 due to mismanagement, and received financial assistance from another internationally funded project, Floresta em Pé, in 2008. Since 2009, it has operated using primarily its own capital. However, it still receives subsidised inputs in the form of workshops and trainings offered as part of projects, a subsidised fee offered by the Tropical Forest Institute (IFT) for the use of a skidder, and financial assistance for preparing and paying for certification from The Amazon Alternative (TAA) Project and certification body the Institute of Agricultural and Forest Management and Certification (IMAFLOA) respectively.

The cooperative's access to the FLONA for timber production is in the form of a non-onerous concession, which exempts the cooperative from paying a set fee per cubic metre of timber harvested. This represents a significant subsidy from the government. Permission to harvest timber was obtained through submission of a sustainable forest management plan to IBAMA in 2005 (which was updated in 2013), as well as an annual operating plan, which details the specific trees to be felled and all related management activities for the year. It is anticipated that ICMBio will take over approval of management plans in the near future (2016). In addition, the cooperative must register its timber credits (received with the approval of the annual operating plan) in IBAMA's documentation of forest origin system (Sistema DOF) to facilitate the transport of its roundwood to saw mills.

Figure 4.3 Value chain for COOMFLONA's timber production



4.2.3 Main activities

COOMFLONA is an officially-registered cooperative and its timber production activities include pre-harvest activities (inventories, preparation of annual operating plans, planning of trails for log removal, road and patio construction); tree felling and transportation to a log patio in the forest with a skidder (a modified tractor or other heavy machinery that can pull a log from the forest); log measurement; loading and transportation of logs to a central log patio near the road with a truck; and cutting logs to a specific length for buyers (see photos and Table 4.1). COOMFLONA employed approximately 96 people in 2013 in positions related to timber production and administration of the cooperative. Buyers transport the logs from the FLONA to their processing facilities, and then either export the sawn wood of higher-value species or sell it to domestic secondary processing plants, which export final products (see Figure 4.3). The remainder is sold in local or national markets.

4.2.4 Technology

Before the beginning of the field season, COOMFLONA holds a members' assembly to discuss plans for timber-harvesting activities. Any changes, such as increases in the size of the annual harvest unit, are discussed and agreed upon in the assembly.

To complete the timber harvest-related activities (Table 4.1), COOMFLONA uses techniques that are required either by law and/or by the FSC certification standards. The specific reference for the FSC standards is FSC-STD-BRA-03-2013 V3-1 PT – FSC Standards for Small Scale and Low Intensity Forest Management (SLIMF) (Padrão de Certificação do FSC para o Manejo Florestal em Pequena Escala e de Baixa Intensidade). Brazilian legislation requires a one hundred per cent inventory of trees above a certain size and reduced impact logging techniques, which include methods for planning harvesting and log removal that aim to minimise environmental impacts. The FSC standards go beyond legislation in several ways, e.g. requiring a demonstration of the financial viability of the operation and the resolution of any social conflicts related to forest management activities.

4.2.5 Business partners

The cooperative's only business partners for timber production are related to machinery rental. These include local businesses as well as the non-profit organisation IFT, which rents a skidder to the cooperative at a greatly reduced price (R\$72/hour instead of R\$350/hour). IFT received funds to purchase the skidder from a private foundation in the US to use in its work to support community forest management. When funding to continue those efforts ended, IFT decided to lease the skidder to COOMFLONA at cost i.e. only charging them the value of annual depreciation and maintenance.

4.2.6 Customer groups and product types

Pereira *et al.* (2010) identified 31 processing companies in the Santarém region who produced 96,000m³ of processed wood in 2009. The same study found that 60 per cent of timber sold in the state is obtained from third parties, including 28 per cent from smallholder lands (holdings of less than 500ha). High-value tropical timber is usually exported as lumber or finished products (e.g. flooring, furniture or musical instruments), while lower-value species are used for construction and furniture in domestic markets.

Table 4.1 Activities related to timber harvesting and the number of workers involved

Activity	Description	Number of workers
Administration (permanent employees)		
Administration	Leadership of the cooperative, planning and supervision of all timber-related activities and general support (including the leadership committee, other committee members, technical staff, accounting staff, lawyer, drivers, maintenance staff, cooks, guards)	26
Field activities (temporary workers)		
Inventories	Demarcation of the area to be inventoried; identification, measurement, tagging and notation of trees; cutting vines from trees of commercial species and with minimum diameter	14
Planning of roads and log decks/patios	Identification of where roads and log decks will be sited; processing of inventory data; preparation and submission of the annual operating plan; road and patio construction	5
Road and patio construction	Use of machinery to open roads and log patios/decks	1 (+ external machinery operators)
Tree felling	Once authorisation for harvest is received and the sale of the trees is negotiated, the trees are felled	10
Planning trails for removing logs	Identification of paths ('skid trails') for tree removal that will cause the least environmental damage and be cost effective	5
Log removal ('skidding')	The transport of trees from where they were felled to a temporary log deck with a tractor modified for this purpose ('skidder')	6
Log measurement	The measurement of the trees at the temporary log decks	14
Log loading and transport	The loading, transport, and unloading of logs to a central log patio where the buyer will retrieve them	1 (+ external machinery operators)
Field support activities	Food preparation; cleaning; transportation; inventories	14
	Subtotal	96

At the level of Pará State, in 2009 there were 1,067 processing facilities who sold 2.55 million m³ of processed timber products, of which 80 per cent was sold as sawn wood, 8 per cent as finished products (e.g. doors, windows and floors), and 12 per cent as laminated panels or plywood (Pereira *et al.*, 2010).

In future, the cooperative plans to install a large capacity permanent sawmill. This will allow the cooperative to provide more jobs and capture more value from its timber through the sale of sawn wood or dimensional lumber, potentially in more lucrative national and international markets.

4.2.7 Differentiation in the market place

Timber offered by COOMFLONA is differentiated by its verifiable legal source, in that it comes from a cooperative-run operation whose employees are almost entirely local community members, and that it is FSC certified. Products made entirely from the cooperative's wood, such as doors and furniture, would qualify to use the FSC's new community origin label, as long as the processing facility has FSC chain-of-custody certification (the small furniture workshops run by COOMFLONA do not have this yet). The buyers of COOMFLONA's wood up to the 2013 harvest were not FSC chain-of-custody certified.



© Darlison Andrade, ICMBio Collection



(Left to right) Tree felling; transporting logs to a temporary log patio; loading logs for transport to the central log patio; logs in central log patio.

4.3 Who controls COOMFLONA?

4.3.1 Origin of the value proposition

The discussion about establishing a community-based forestry initiative in the Tapajós National Forest began when communities complained of timber harvesting by outsiders during the ITTO project and proposed a project involving local community members in sustainable timber harvesting. In addition, a technical team of the ProManejo project lent support to the proposal for a community forestry initiative in the FLONA after visiting community forestry enterprises in Mexico (Medina and Pokorny, 2014). In the end, local community pressure and support from the ProManejo project and IBAMA (the government agency in charge of the forest at the time) led to the formation of the cooperative and its initiation of forest management activities and commercial timber production in 2005.

4.3.2 Control over forest resource access

In 2007, the Chico Mendes Institute for Biodiversity Conservation (ICMBio) was created (Law No. 11.516/2007) to manage federal conservation units, including national forests and extractive reserves. At this time, the administration of the Tapajós National Forest was transferred from IBAMA to ICMBio. However, IBAMA has maintained authority over resource management activities within national forests, including timber harvesting (though it is anticipated this will be transferred to ICMBio in the near future). The FCFT has a concession from ICMBio to use part of the FLONA for timber production (approximately 19,000ha), which provides the legal basis for COOMFLONA's management of the forest, and COOMFLONA had authorisation from IBAMA (based on an annual operating plan) to harvest timber in 1,600ha in 2014. The process to obtain authorisation to harvest timber is regulated by Resolution No. 406, National Congress of the Environment (Congreso Nacional del Medio Ambiente, CONAMA), 02 February 2009. The process to obtain authorisation to transport timber is covered by Normative Instruction No. 21, IBAMA, 26 December 2013. (The original plan was to authorise a second area of almost 19,000ha after harvesting in the first area was complete, but see Section 4.4 for recent changes in the area of COOMFLONA's forest concession.)

4.3.3 Control of the business

COOMFLONA is controlled by its members through an assembly. Membership was originally offered in 2005 to 24 members of the three intercommunity associations (8 members per association). This was based on the amount that ProManejo could invest as start-up capital for the cooperative of R\$200,000, and the estimation that each member would receive 85 quotas or shares with a value of R\$10 each. The number of members increased to 62 in 2009, and reached 212 in 2014. New members are expected to pay 10 quotas of R\$10 each within the first year of membership. Members have the right to work for and to receive a share of the cooperative's profit. Membership requirements and rules are defined in the statutes of the cooperative.

The cooperative is managed on a daily basis by the elected leadership committee, which includes a president, vice-president, treasurer, vice-treasurer, secretary and vice-secretary who work full time for the cooperative (Figure 4.4). The leadership committee is assisted by environmental and/or forest engineers and a part-time lawyer who together form the

technical and legal assistance team, and two or three cooperative members who form a financial committee. The leadership committee also works with the marketing and sales coordinator, the technical and operations coordination team and the financial and administrative assistance team. Only five permanent staff members who work in the technical and legal assistance and the administration and finance assistance teams are not members of the cooperative. Outside organisations who worked with COOMFLONA in 2014 included ICMBio and IBAMA from the government (who provide assistance and ensure compliance with laws and regulations) and the non-governmental organisations IFT, the Federal University of Western Pará (UFOPA) and the International Institute of Education in Brazil (IEB) (who provide technical and organisational assistance).

Women made up only 14 per cent of cooperative members in 2014, and have comprised a small proportion of the workers involved in timber production activities. In the same year, the cooperative employed five women in the main office (one non-member), three on the financial audit committee, and six in the field camp (e.g. as cooks, cleaners and administrators). No women performed tasks in the forest, although two women who had previously worked as forest technicians switched to administrative roles in the main office in 2013 (one as secretary of the cooperative and one as assistant coordinator of non-timber forest products).

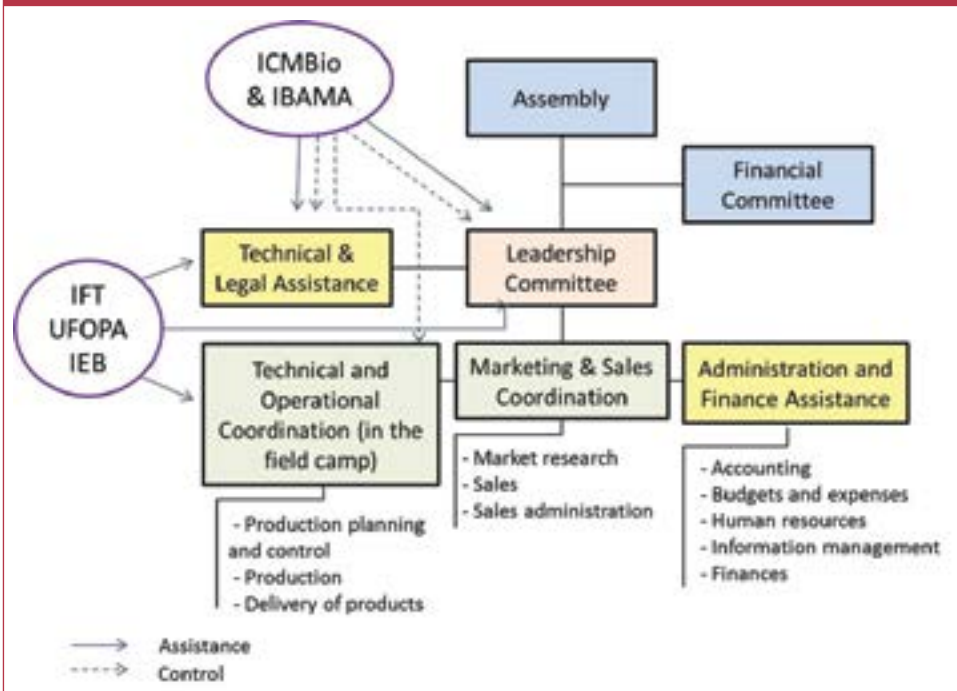
The main source of income for the cooperative is timber. The administration and finance team is responsible for day-to-day accounting. At the general assembly, held during the first three months of the year, the financial information for the previous year is presented and validated by the finance committee. In addition, members can ask to see the accounting records at any time. After accounting for all of the cooperative's expenditure (including for activities related to developing non-timber forest products and tourism), profit is allocated as follows: legal reserve (10 per cent); investment fund (45 per cent); a fund to help communities (15 per cent); healthcare fund (5 per cent); social, educational and technical assistance fund for cooperative members' education and training (5 per cent); and a fund which cooperative members decide how to allocate (20 per cent; this money is often paid in cash in equal shares to cooperative members, like a dividend).

4.3.4 Staff selection and roles

Before the beginning of field activities, representatives of the leadership and technical committees meet with representatives of the intercommunity associations to decide how to divide the jobs evenly among the association members. The members are then assigned to specific work teams, based on their experience and knowledge, and receive additional training as necessary.

The cooperative tries to spread out employment opportunities among families, and in cases where more than one family member is a cooperative member the family must decide who will work. The choice is usually for the male family member to work, as their earning potential is usually higher than for women. Two notable exceptions are two women who worked as forestry technicians before moving on to occupy the posts secretary of the cooperative (part of the leadership committee) and assistant coordinator of non-timber forest products (part of the technical team).

Figure 4.4 Organisational chart of COOMFLONA and its main partners



Adapted version of an organizational chart developed by Coomflona

4.3.5 Delivery options

COOMFLONA does not have the capacity to deliver the logs to the buyer, and has passed this responsibility and cost to the buyer.

4.3.6 Customer research

Tropical hardwoods are in higher demand and command higher prices than lighter wood species, and a subset of hardwoods can sell for very high prices. When the cooperative's annual operating plan is approved, the director of marketing distributes a list containing the volume of trees by species authorised for harvest to potential buyers in local, state and national markets. The cooperative completes the sale of the logs before harvesting begins, which ensures that only trees that will be purchased are felled.

For the 2013 harvest, instead of allowing different buyers to purchase specific species at differentiated prices, the cooperative decided to offer all of its timber in bulk for one price per cubic metre of wood. This decision was made after issues with the 2012 harvest when one of the two buyers complained that the other buyer had received higher-quality logs, and after calculating the potential savings from not separating logs in the log patio into value classes. In addition, the cooperative is hoping to capture greater value for its timber resources through FSC certification and through primary processing with its own permanent sawmill in the next few years.

4.3.7 Promotion and marketing

The director of marketing and the leadership committee promote the cooperative's timber products through various means: posting the list of species and volumes approved for harvest on a local municipality's blogspot, delivering the list to potential buyers and promoting the timber auction via the local newspaper and radio stations. Promotion is limited to letting the potential buyers know about the auction, but no further work is done to promote the product to others (their buyer undertakes his own promotion and has his own network of clients that he will sell primary processed products to).

4.4 How has COOMFLONA overcome key challenges?

4.4.1 Challenges relating to the value proposition

The key challenges for COOMFLONA in establishing and developing its community-based forest enterprise have been obtaining the legal right to manage the forest, ensuring the financial viability of the cooperative and maintaining access to forest resources. In facing all of these challenges, partnerships with government and non-governmental organisations and strong internal leadership have been essential.

Regarding key financial challenges to keeping the business in operation, in 2008, the cooperative's president began distancing the cooperative from its government and non-governmental collaborators. Local IBAMA representatives were very concerned about how the cooperative was managing ProManejo project funds, and there were rumours COOMFLONA was going to lose its forest-use concession. A sufficient number of cooperative members supported a mid-term election and a new president was elected by a small margin. It was discovered that the cooperative had not only spent the capital it had saved from the first three timber sales, but had also accumulated approximately R\$180,000 in debt according to the person who was elected to replace the president in the mid-term election in 2008. COOMFLONA's new leadership secured financial assistance from the Floresta em Pé project for the 2008 harvest season, and scaled back expenses; after a few years it was able to pay off the debt and rebuild the cooperative's capital.

There have also been two major conflicts over land since the use concession was granted to the Federation of Intercommunity Associations in 2003. The first had major financial repercussions, and the second significantly reduced COOMFLONA's forest access. First, in 2012, after years of discussion and previous efforts, four communities that belonged to one of the intercommunal associations were excised from the Tapajós National Forest (these communities were not traditional families). This meant they could no longer be cooperative members and this reduced the number of intercommunal associations in the FLONA from three to two. As compensation for being expelled from the cooperative, in 2013 COOMFLONA paid 55 members a sum of R\$550,000 (US\$255,475). This was a significant and unexpected financial burden, but resolved a long-standing conflict within the FLONA. Second, in 2010 three communities self-identified as indigenous and claimed an area within the FLONA designated for community forest management of approximately 20,700ha. Their claim for territory was acknowledged in 2012 and ICMBio received a recommendation from the Federal Prosecutor's Office to discontinue allowing timber harvesting in the disputed area. The repercussions for COOMFLONA are discussed in Section 3.4.2.

4.4.2 Overcoming legal challenges

COOMFLONA has worked closely with IBAMA and ICMBio to ensure compliance with all legal requirements and to resolve issues related to resource access and financial challenges. The cooperative has faced two major issues related to resource access. The first major resource access issue was the legal right of communities living in the FLONA to manage the forest. This right was granted to the communities of the Tapajós National Forest in 2003 (Ordinance 40, IBAMA).

The second major resource-access challenge was when three communities self-identified themselves as indigenous and requested that the forests they traditionally used were removed from the area that COOMFLONA manages for timber. This reduced the total area within the FLONA designated for community forest management from 38,000ha to approximately 17,000ha: the first unit was reduced from 19,001ha to 11,576ha and the second unit was reduced from 18,927ha to 5,661 ha.

COOMFLONA will complete its last harvest in the first unit in 2014, and is in the process of obtaining authorisation to harvest the second unit, which now has only enough land to support timber harvests for 2015 and 2016. It is currently working with ICMBio to receive authorisation for a completely new area of approximately 79,000ha which, as a less ecologically sensitive area, is expected to provide 75,000ha (Figure 4.1). This will mean new investments in infrastructure, as the current field facilities (canteen, sleeping quarters, storage buildings and field office) are far from the new area. This will be an additional financial burden, but will strengthen the cooperative's access to resources.

4.4.3 Overcoming ownership and benefit-sharing challenges

Employment opportunities are spread evenly among the 21 communities that participate in the cooperative. The communities are represented by two intercommunity associations: one association represents 14 communities and the other represents seven. The cooperative has clear guidelines for the allocation of profit, and any changes must be proposed, discussed and approved in the annual assembly.

4.4.4 Overcoming labour challenges

Sustainable selective logging of tropical forests is a highly technical and dangerous activity. It requires a great deal of training and teamwork. COOMFLONA received considerable financial assistance from the ProManejo project for training and staff during the first few years of operation. Training was provided by IFT, which specialises in tropical forestry planning and harvesting operations, and from the UFOPA regarding inventories of commercial species and, beginning in 2011, with the processing of large branches into rough lumber. Training in basic technology was an important part of this process, as many of the original workers had no previous experience with mobile phones or computers.

Today, the cooperative has a capital reserve that covers its operating costs (though it still benefits from some subsidies) and its more experienced staff train new workers (for example, they took extra work teams to the field for on-the-job training in 2013 in preparation for the larger annual harvest unit in 2014). The cooperative recognises the

importance of bringing young people into the cooperative and investing in their education and training. To underscore this point, the former cooperative president noted in an interview that he and many of the workers were in their 40s when the project started, and they no longer have the physical capacity to fell big trees.

4.4.5 Overcoming delivery challenges

COOMFLONA delivers logs to a central log patio within the FLONA, where the company who purchases the logs retrieves them. Only two delivery problems to date were identified. In one case, some logs were cut shorter than the buyer had specified. The problem was resolved quickly and follow-up training was carried out. Second, in 2013, as noted earlier, when the logs from the 2012 harvest were divided and sold to two buyers, one buyer complained that the best logs had been allocated to the other buyer. In this case, COOMFLONA decided to return to selling all of the timber as a package deal to avoid this problem in the future.

4.4.6 Overcoming marketing challenges

COOMFLONA staff report that the key to keeping customers happy is to immediately respond to their concerns and to correct any mistakes with additional training as soon as possible. For example, when the problem regarding the short logs occurred, the president of the cooperative immediately took responsibility for the problem and went to the field to ensure workers understood the dimensions that had been requested and were correctly measuring logs. As a result of their efforts, the same buyer has returned every year.

Prior to 2013, COOMFLONA did little to distinguish its products. This is now changing, since COOMFLONA earned FSC certification in 2013. The FSC Brazil office is helping to promote timber from COOMFLONA as having the added value of being not only certified, but also from a community-based forest enterprise. Given the tough competition in the tropical timber market, the hope is that the relatively small volume of wood products from an FSC-certified community forest will appeal to organisers of special events, such as the organising committee for the 2016 Olympic Games in Brazil.

4.5 Key lessons

4.5.1 Keeping down costs

A recent study (Humphries *et al.*, forthcoming) undertaken with COOMFLONA staff and partners found the total cost of production for the 2011 harvest was R\$1.28 million (US\$689,741). Materials and services were over half of the total costs (57 per cent), followed by labour (37 per cent) and machinery and equipment (6 per cent). Administrative costs were high (33 per cent), and the most costly field activity was loading and transporting logs from the forest to the central patio (30 per cent).

The cooperative has implemented many measures for reducing costs. First, in the first few years of operation, temporary workers were paid set wages for each 25-day period they spent at the field camp, whether they worked every day or not. In order to make labour more efficient in terms of time and to reduce total costs (e.g. food, fuel), this was

changed to a system of payment based on production. For example, for the activity tree felling, workers are paid based on the number of trees they fell, not how many days they work. If they finish the job quickly, they receive the same pay and can return home to do other productive activities, while consuming less food in the field camp and decreasing transportation costs. In addition, the cooperative offers bonuses to independently contracted machinery operators as an incentive to finish their work as quickly as possible.

The cooperative has taken steps to reduce administrative costs, as well. For example, a bid system is used for the purchase of materials (e.g. fuel, food) and services (heavy machinery), and contracts are awarded to the lowest bidders. In addition, the cooperative staff agreed to maintain 2013 salary rates for 2014.

One of the problems in keeping costs down is that COOMFLONA uses the heavy machinery it rents for maintaining logging roads to help maintain the roads for the communities within the FLONA. This is a significant benefit to the communities, but represents a large expense for COOMFLONA, which comes out of the cooperative's reinvestment fund, not the community or profit-sharing funds.

4.5.2 Retaining customers and willingness to pay

To date, COOMFLONA has had a very limited customer base for several reasons. Its first three annual production areas (100 to 500ha) and volumes were quite small. This and the high costs of transporting logs from the FLONA to processing facilities limited the financial attractiveness of its timber sales. In addition, in order to maximise transparency and to encourage competition, COOMFLONA used an auction system that required the receipt of bids before a certain date. The common perception among COOMFLONA and local government agency staff is that few timber companies in the surrounding region meet the legal qualifications (including being up-to-date on all relevant income and labour taxes) to participate in an auction of logs harvested from a national forest. The bureaucracy involved in participating in the auction also further discourages participation. In retrospect, this sales method has had the adverse effect of minimising competition, with one buyer setting the price for all but one of the last eight harvests. As a result, the cooperative decided to consider other methods for timber sales for 2014, such as direct negotiation with buyers. Recent increases in its annual harvest area and volume, FSC certification, and the increased efforts of the government to crack down on illegal timber sources will likely increase the number of buyers interested in COOMFLONA's timber and improve prices in the future.

4.5.3 Success factors

COOMFLONA staff members report that the cooperative's success to date is due in large part to the strong organisational and financial operating bases it has built with the help of its partners. An early partnership with the local workers' union helped form and strengthen the intercommunity associations as well as the cooperative. Several partners have helped the cooperative access funds and lower costs. Government agencies, including IBAMA, ICMBio and the Brazilian Forest Service (SFB) have helped channel funds to the cooperative from projects (including both the ProManejo and Floresta em

Pé projects). The local university (UFOPA) and NGOs (IFT, IEB, Earth Innovation Institute) have offered training at reduced or no cost. Finally, the staff at IBAMA and ICMBio have helped COOMFLONA navigate the complex bureaucracy for obtaining authorisation to manage part of the Tapajós National Forest, and helped manage internal conflicts (such as the association that left the cooperative in 2012). Other important factors include the abundance of commercial timber species in the forest; the relatively large production area and volume in recent years; an effort to continuously create new sources of jobs within the FLONA, which helps maintain community support; and reinvesting in the cooperative itself in terms of training, infrastructure and equipment.

Other observations by COOMFLONA staff include the importance of avoiding the 'patrão' system (where specific people become entrenched as leaders) by constantly investing in the new leaders of tomorrow and by changing leadership every three years. Indeed, the strong focus on building human resources within the cooperative is notable, and several members of the Leadership Committee are continuing their education at local institutions in the evenings.

With a new, larger area for forest management and timber production expected and its investments to date in infrastructure, leadership and worker capacity, COOMFLONA is poised to consolidate a long-term, sustainable forestry operation. However, it still faces risks associated with forest resources (the income-generation potential of the new area remains to be seen), bureaucracy and social conflicts. COOMFLONA will need to continue to learn, reflect and improve as an organisation, and to maintain good relationships with partners to ensure its long-term success.

In considering COOMFLONA as a model for the region, it is notable that cooperative members are currently working in collaboration with ICMBio and UFOPA to prepare a new cooperative in the neighbouring Tapajós-Arapiuns Extractive Reserve to manage their forest area and produce timber for commercial markets. This is a marked contrast to the initiation of forest management by COOMFLONA, and will be an important test of replicability of the COOMFLONA model with markedly less initial investment and the use of local experts and technical teams instead of people from outside the region.

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Yemboama NTFP Union's stand at the International African Crafts Fair of Ouagadougou SIAO 2012

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Burkina Faso: Yemboama Union of Non-Timber Forest Product Producers

From village tree enterprises to a village tree enterprise union in Burkina Faso

by Yarri Kamara, Tony Hill, Barthélémy Kaboret and Ludovic Conditamde

The Yemboama Union of Non-Timber Forest Product Producers (Union des acteurs et producteurs de PFNL Yemboama) describes the consolidation of multiple small enterprises into one enterprise union. Created in 2012, it sells products made from baobab, shea, balanites or the desert date, gum Arabic, tamarind and honey on behalf of about 1,000 members. The union and its member groups began as a Village Tree Enterprise project initiated by Tree Aid. It is too early to label it a complete success story and there are several challenges that need resolving. However, it is an interesting case study and an opportunity to explore what internal strengths and processes have contributed to its successes to date – and what aspects of Tree Aid's support contributed to the union's achievements.

5.1 Context in which the Yemboama Union operates

5.1.1 The enabling environment

Burkina Faso is a Sahelian country with a very low average income per capita compared to other developing countries, estimated in 2013 at US\$514. In 2009, 46.7 per cent of people were under the poverty line. The government's over-riding priority is to reduce significantly the number of people living in poverty. Forests cover an estimated 21 per cent of the country's surface area in 2010 and forest resources may provide a decent income for poor communities, particularly in the fuelwood sector which provides an overwhelming majority of the country's energy.

There are however, also dynamic value chains based on non-timber forest products (NTFPs) found in naturally occurring dryland forests or agroforest parks. Shea nuts have historically been one of Burkina Faso's main exports, which are processed in industrialised countries to produce a cocoa butter food substitute or shea butter, which is increasingly used in the global cosmetics industry. Other key NTFP products are gum Arabic, honey, dawadawa (*Parkia biglobosa*), tamarind and more recently baobab fruit. The latter is now considered a 'superfood' in the West because of its extremely high content of essential vitamins and minerals.

Burkina Faso faces challenges such as high population growth, food insecurity and increasing scarcity of land for agriculture which puts increasing pressure on forests and tree populations. The Ministry of Environment and Sustainable Development estimates that annually 110,550 hectares of forest are destroyed, just over four per cent of the country's total forests – around three-quarters of this annual loss linked to farming. The data covers forest loss between 1992 and 2002, but the trend continues, according to the ministry.

In this context, government, donor and NGO initiatives were developed to reverse forest losses by planting trees. Unfortunately, many were unsuccessful because villagers did not always see the financial benefit of such activities. The international NGO Tree Aid launched a pilot Village Tree Enterprise (VTE) project in 2005 in an attempt to provide clear incentives to villagers to protect trees by making them a source of revenue. The VTE supported marginalised villagers to develop business plans for the viable and sustainable commercial exploitation of NTFPs. This project was one of the first initiatives in the country targeting NTFPs as a sector.

Following the VTE launch there was a growth in interest for NTFPs as an economic sector. In 2008, a national agency for the promotion of NTFPs was created, the National Agency for the Promotion of Non-Timber Forest Products (Agence Nationale de Promotion des Produits Forestiers Non Ligneux (APFNL), the first in West Africa. A national NTFP strategy was drafted in 2010 and several NTFP value chains are integrated in major national strategies or projects. Some NTFPs even have their own national action plans (Arabic gum, shea).

5.1.2 The operating environment

As a result, there are now an increasing number of successful NTFP producer associations, for example the Nununa Federation and the Table Filière Karité (the shea butter sector organisation). The Yemboama Union is located in east Burkina Faso. The region's directorate for the environment estimates that more than 200 NTFP products are being traded in the region. The key products traded are honey and Arabic gum. Table 5.1 shows the quantities of harvested or processed NTFPs for which data is available in the east region and nationally.

Table 5.1 Quantities of some NTFPs harvested/processed in 2012

Product	East region	National	Estimated production potential (national)
Shea nuts (tonnes)	479	275,000	450,000–650,000
Shea butter (tonnes)	412	178,000	unknown
Balanites nuts (tonnes)	14,000	23,000	unknown
Honey (litres)	121,000	560,000	unknown

Source: MEDD (2014); MASA (2013).

Despite competition between producers, demand from wholesalers and processors in most NTFP value chains outstrips supply. There are, however, difficulties in matching demand with suitable supply and therefore producers are not always able to sell their products. A frequent constraint for grassroots producer organisations is the limited quantities of raw or processed product they are able to supply reliably, due to a lack of suitable storage facilities (especially keeping products dry during the rainy season to maintain their quality) and limited access to processing equipment. There are also quality issues due to ignorance or lack of standards to follow or suitable processing procedures or equipment. This leads to products that do not meet the quality standards particularly

for processors and international buyers. Another difficulty is regarding transport. But in the eastern region it is easy to reach Ouagadougou, Burkina Faso's capital city, and other countries such as Niger, Benin and Togo. So while transport is problematic elsewhere, it is less so for the Yemboama business.

The resource base for most NTFPs remains relatively abundant in most regions. Table 5.1 suggests that the national production potential for shea nuts – the most commercially exploited NTFP – is double the current production level. Nonetheless, there is pressure on the resource base resulting from poor harvesting techniques – harvesting unripe fruits or damaging the plant during harvests, etc. Traditionally, for frequently used products such as shea, village customs would fix harvest periods so as to protect the trees, but as the market potential of these products is increasingly evident to villagers, these customs are not always respected. Driven by profits, many NTFP users are also failing to ensure the future availability of the resource base. As economic activity intensifies, the competition for resources will increase and the renewability of the resources may be jeopardised if replanting and regeneration activities are neglected.

With the exception of the shea value chain, loans or grants for NTFP activities have been largely non-existent until recently. Access to credit is a key constraint in the Burkinabe economy, especially for NTFP activities whose seasonal cycles are not well understood by microfinance institutions. Projects that have partnered with microfinance institutions to support NTFP producers have contributed to developing an awareness of the economic potential of NTFPs and suitable funding mechanisms. Nonetheless, microfinance institutions tend to favour financing of trade activities (including purchase and resale of NTFPs) over production activities.

5.2 About the Yemboama Union as a business

5.2.1 Vision

The Yemboama Union was formed in 2012 to unite producer groups created under the Village Tree Enterprise project. Of 95 village tree enterprises established through that programme, 39 groups chose to join the Union (see Table 5.2).

Initially, just a few groups joined (from Bumoana Village, where the president of the union, Joseph Tambiga, comes from) totalling about 120 individuals, but membership grew rapidly as other groups saw the marketing opportunities the union presented. Today Yemboama brings together more than 1,000 individuals (520 women and 500 men) from 20 villages. The union's head office is in Boumoana village, 80km from the town of Fada N'Gourma, capital of the east region, and about 150km from the border with Niger. The village is located in Burkina Faso's largest administrative region and the union, which has a regional vocation, draws its membership from groups located as far away as 200km from its centre of operations.

Joseph Tambiga, the founder of the union, is a young man in his thirties. Educated to third grade level, he has a modest command of French, can use a calculator and reads and writes in his local language, thanks to literacy training acquired after his formal education.

Table 5.2 Village tree enterprise groups that joined the Yemboama Union

Number	Group name	No. of members	Activities
Groups of pickers and processors of Baobab fruit			
1	Boamiyaba	30	Picking
2	Boayaba	20	Picking
3	Buayaba	10	Picking, processing and marketing
4	Palpougni	22	Picking
5	Soalmani	40	Picking, processing and marketing
6	Soamboala	30	Picking
7	Tanyaba	25	Picking
8	Tormani	40	Picking
9	Wend Kouni	10	Picking, processing and marketing
10	Yempabou	15	Picking, processing and marketing
Groups of pickers and processors of Tamarind			
1	Boalihamou	11	Picking
2	Boayaba	07	Picking
3	Nongtaaba	05	Picking
4	Palpougni	11	Picking
5	Songtaaba	05	Picking
6	Taamba	08	Picking
7	Yenkirma	07	Picking
8	Woumtaaba	05	Picking
Groups of pickers and processors of Shea nuts			
1	Boalhamou 1	06	Picking, processing and marketing
2	Boalhamou 2	06	Picking, processing and marketing
3	Boalhamou 3	12	Picking, processing and marketing
4	Fimba	11	Picking, processing and marketing
5	Lampiari	08	Picking, processing and marketing
6	Nongtaaba/Balwidi	10	Picking, processing and marketing
7	Nongtaaba/Boulinboulidi	08	Picking, processing and marketing
8	Neerwaan	07	Picking, processing and marketing
9	Taamba	14	Picking, processing and marketing
10	Tin-Todiyaba	08	Picking, processing and marketing
11	Tin Suani	22	Picking, processing and marketing
Groups of beekeepers			
1	Hanmtaamba	09	Picking, processing and marketing
2	Manou N'taamba	12	Picking, processing and marketing
3	Taam Yama	07	Picking, processing and marketing
4	Yemboaro	05	Picking, processing and marketing
5	Wend Panga	07	Picking, processing and marketing
Groups of gum Arabic collectors			
1	Tin Suani	07	Collecting and marketing
2	Tin Naabi	10	Collecting and marketing
3	Gm/Tanwalbougou	09	Collecting and marketing
Groups of producers of Moringa leaves			
1	Lanpouguini	10	Picking, processing and marketing
2	Tanyama	07	Picking, processing and marketing

From an early age, Joseph was concerned by environmental issues. When he noticed that in his village, 'The eyes no longer had any brakes' as tree cover diminished, he started to teach himself how to nurse and plant trees. With his personal convictions, Joseph found strong resonance in the key messages of the VTE project, i.e. that:

- tree resources could provide significant revenues, and
- it was necessary to ensure the renewability of such tree resources.

Joseph participated in the VTE project and founded a producer group, Boayaba, producing and trading in primarily tamarind fruit. His group was successful and always able to sell their entire stock at average or better-than-average prices. Due to his prior experience with informal tree nursery activities, his peers elected him to be the village's VTE tree nursery operator. He received project support – equipment, seeds and training – to set up a private nursery business. With the VTE project drawing to a close, Joseph was concerned about the future for individual producer groups the project had supported in his area. He called a meeting of some group members and together they decided to set up a union to unite their forces.

Individual producers groups in the union continue to exist as independent entities with their own governance structures and their own sales circuits, often focused on local markets. Thanks to the Tree Aid VTE project, all 39 groups were already registered before joining the Yemboama Union. The union is currently operating informally as it has not yet completed its registration due to a lack of internal capacity. A first attempt was also made during the Tree Aid VTE project but not completed before the facilitators left at the closing of the project and the Yemboama Union has not yet developed its formal administrative procedures further, focusing instead on its successful marketing activities and the registration of the union has not yet become a pressing issue. As the member groups and union are exempt from paying taxes under Burkinabe law, there is less need for formal legal registration.

5.2.2 Business inputs

Financial resources for the start-up of the producer groups came from group savings, loans or a combination of the two. The loans came from a microfinance institution with whom a partnership was negotiated under the VTE project. VTE groups received training on loan management before accessing loans and were assisted in the loan application process. Seed funding was used to buy basic equipment for harvesting natural resources (basins, weighing scales, packaging) and to provide working capital for the purchase of additional raw material where necessary. Replanting and other natural resource management (NRM) activities included in the producer groups' business plans were funded by the project. The average loan amount was around FCFA 280,000 (US\$460). Several groups later accessed larger loans after paying off their initial loans.

The union, which is not yet officially registered, cannot access conventional loan financing, though it has received a loan from a client which was used for infrastructure investments. Its resources come from member fees which currently total about FCFA 200,000 (US\$325) per year and from profits from sales. The member fees per group per year are fixed at FCFA 5,000 (US\$9.2).

5.2.3 Main activities

The union's main role is to secure large-scale orders and coordinate production between producer groups to meet these orders (see Figure 5.1). Marketing is a key function of the business, as are assurances of quality, quantity and that orders are delivered on time. The business also aims to continue sensitising its members on replanting and protecting natural resources and in some cases gives technical and even financial support for such activities.

The union sells the following NTFPs and derived products:

- Shea butter (this product involves exclusively women's groups).
- Baobab fruit pulp (baobab leaves are used for own consumption or sold at local markets)
- Arabic gum
- Honey (this activity involves exclusively men's groups)
- Soaps made from shea butter, baobab oil, balanites oil, honey and/or tamarind fruit
- Tamarind fruit
- Dried moringa leaves

Figure 5.1 The value chain for the Yemboama Union's products

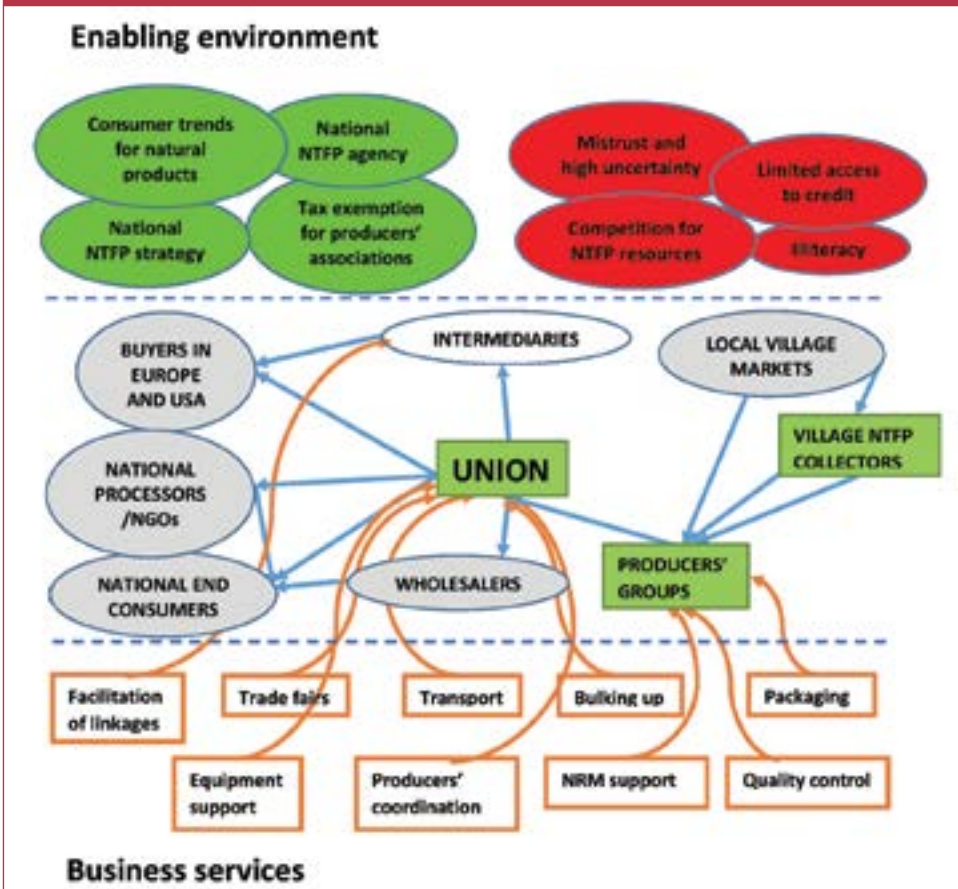


Table 5.3 summarises data on the union's revenues in 2012–13. Annual turnover during that period was estimated at over US\$11,000. This may not be totally accurate, however, as it is based on partial data. The union, largely composed of members with low or no literacy and numeracy skills, still has some organisational challenges and does not yet keep reliable records of sales. As there is little record of expenditures, one cannot say with accuracy how profitable the union is. Partial data on prices at which the union purchases products from its members and sales prices indicate an average gross profit margin rate of 39 per cent for the union, with the rate ranging from 20–65 per cent.

Table 5.3 Data on the union's revenue generated in 2012

Product (year of production)	Quantity	Revenue generated (2012–13)		Comments
Baobab powder (2013)	4 tonnes	FCFA 5.668 million	US\$9,332	3 tonnes exported to Europe. 1 tonne to national processors.
Shea butter (2012)	7 tonnes	FCFA 1.77 million	US\$2,913	Original customer did not honour the order of 7 tonnes and the union ended up selling the butter at unfavourable prices over two years.
Arabic gum (2012)	3 tonnes	FCFA 3 million	US\$4,938	Sold to wholesalers from Niger.
Honey (2012)	2.5 tonnes	FCFA 2.5 million	US\$4,115	Sold to a local NGO in Fada N'Gourma and to wholesalers in Ouagadougou.
Tamarind (2012)	11 tonnes	FCFA 0	US\$0	The 11 tonnes were intended for export to Mali through a wholesaler. Due to the Malian crisis in 2012, the wholesaler did not honour his purchase order and the union was unable to find suitable buyers.
Soaps (2012–13)	2,000 units	FCFA 800,000	US\$1,317	Union was able to sell all soaps it produced at trade fairs it participates in and to some individual clients who placed orders for personal consumption.
Oils	Unknown			The union is still looking for clients to purchase their oils and has distributed samples. In the processing and consumer market, 1 litre of baobab oil can sell for as much as FCFA 10,000 (EUR 15). Currently the union mostly uses the oils for its own soap production.
TOTAL REVENUE (2012–13)	FCFA 13.738 million	US\$22,618		
ANNUAL REVENUE	FCFA 6.869 million	US\$11,309		



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Harvesting baobab fruit by producer group members

In 2013, the largest proportion of the union's turnover came from an order for 3 tonnes of baobab fruit powder from an Austrian natural products company. One of the union's most lucrative contracts to date, the sales price was 150 per cent higher than the average national wholesale price. The union passed on much of the benefits to its members, purchasing the powder from them at a price 67 per cent higher than the national wholesale average and up to 186 per cent higher than the lowest market prices.

Given its membership (more than 1,000 individuals), the union's estimated turnover may seem modest. Indeed, the union is not yet the main source of revenue for its member groups who mostly sell outside of the union: some groups interviewed, sold less than 10 per cent of their sales quantities through the union. However, sales outside the union are mostly to local markets where prices are significantly lower than those the union secures for its members. The union therefore offers great improvements in the profitability of the producer groups. Moreover, union members undertake their NTFP activities alongside their normal subsistence or commercial farming activities. One union member remarked, 'I like this activity because it does not interfere with my farming activities'.

The union's members generally harvest NTFPs themselves from their farms or from wild trees outside the villages. The latter, species such as baobab, balanites and gum Arabic, can be accessed freely after asking permission from the village chief. However, shea and tamarind cannot be freely harvested. Thus the groups are limited to harvesting from trees on their own farms, or for women, on their husbands' farms. Most shea butter and tamarind producer groups must buy shea nuts and tamarind from others to amass large enough quantities for processing. They buy the raw products at the peak of the production season when prices are lowest. When the union coordinates production for a large order, the choice will be made to purchase additional raw material in the villages which have the lowest prices.

5.2.4 Technology and skills

Processing is done with very basic equipment and is for the most part manual. Baobab powder is produced by pounding the deseeded pulp in wooden mortars. It is then sieved to remove impurities. Shea butter production is also mostly manual, but the nuts are ground at the village grinding mills for a fee. The nuts used to make oil (balanites, baobab) are also partially processed in this way. The ground nuts are then mixed with water and the oil that is released is skimmed off. Honey is produced using traditional beehives and generally is left unfiltered in line with market preferences. Soaps are produced using traditional techniques and are either hand-shaped into balls or formed using cutters that the union possesses. The union recently acquired from a client a sealing machine for sealing bags of baobab powder and some other basic materials such as weighing scales and basins.



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Joseph Tambiga (right) and two union members in front of the union's processing centre in Boumoana

The union's centre of operations is located in the family compound of the union's founder and president. In 2013, with union revenues and a loan from a customer, it was able to build a basic three-room processing centre. All processing activities for union orders are centralised here to ensure the quality of production. Some harder processing tasks, like churning shea butter, sometimes require members from remote producer groups to stay in the village until the task is finished. As a consequence, some of the lighter processing tasks are carried out only by groups in close vicinity. This means that not all member groups participate equally in the processing of union products.

5.2.5 Business partners

When the union has to meet large orders, it temporarily hires up to three production coordinators to liaise with the groups located furthest from the union's centre of operations. These coordinators monitor production by the producer groups and arrange payment to the groups and transport of the produce to the union's centre. Many groups have constructed covered straw sheds for storing produce before it is transported to the union's centre.

One important set of business partners are the tricycle taxis, used to deliver the produce from the producer groups to the union. The union regularly uses the same taxi drivers who understand the hygiene standards that they must observe so as to not contaminate the products transported. Quantities are checked at departure and at arrival to ensure that there have been no losses en route. Payment is negotiated informally for each trip; the union has not tried to negotiate formal contracts with its transporters.

Given the relatively limited capacity of its processing centre, the union often has to rent out storage facilities to stock processed products. The neighbouring village has a communal storehouse that can be rented for these purposes, but is not always available, so the union has sometimes resorted to renting space in private houses.

As for transport to customers, the union's customers so far have taken the responsibility of collecting goods from the union for large orders. For small orders for personal consumption, the union uses private bus companies, to courier the product to their customers who are generally in Ouagadougou.

5.2.6 Customer groups and product types

The union's main customer groups to date have included:

- **Local or national processors:** a local NGO in Fada N'Gourma provides support to producer groups in Boumoana II village. It buys shea butter, honey and some oils from the union or its member groups, which it processes further and then packages for sale to urban consumers. There are also small-scale processors based in Ouagadougou and elsewhere that have bought baobab powder from the union.
- **Wholesalers:** these tend to be based in Ouagadougou and supply national processors as well as export markets.
- **International customers:** these tend to use middlemen to coordinate their procurement. One successful order for baobab powder has been fulfilled for an Austrian firm. Contacts were made with an American firm for shea butter, but because of difficulties with the intermediary, the order was not conclusive.
- **Direct consumers:** the union occasionally sells to direct consumers, generally at trade fairs. Sometimes it delivers special orders to people who have learnt of their products at trade fairs.

5.2.7 Differentiation in the market place

The underlying value proposition of the union is linked to the key message of the VTE project: generate revenue by protecting tree resources. The union president likes to tell

customers about the replanting activities of the union and is known in the region as an ardent tree planter. His business card carries the slogan 'Plant trees and flourish'.

To attract customers and differentiate itself from the competition, the union also seeks to ensure it sells high-quality products through careful production techniques. This strategy was adopted following the participation in various trade fairs where Joseph Tambiga noticed that buyers were often more concerned with quality than quantity. The union has special protocols to ensure the cleanliness and quality of all its products. For example, following training by a baobab processor, they willingly adopted techniques for cleaning baobab powder that several producer groups avoid because they call for greater quantities of raw material.

The choice of the union to trade in a range of NTFPs may also give it an edge over single-product unions (nationwide, there are many such unions for shea butter and honey) as it presents advantages for customers interested in several products – cosmetics producers may want to source shea butter along with other NTFP oils, or food processors may want baobab powder, tamarind and honey at the same time. The choice to trade in several products came about because the union members noticed that for most NTFPs, there were not enough registered producer groups in the region to form single-product unions.

5.3 Who controls the Yemboama Union's business?

5.3.1 Origin of the value proposition

The creation of union started with Joseph Tambiga and his desire to restore the degraded forest resources around his village while also helping its people. Joseph was also involved in the Tree Aid VTE project. Using the Food and Agriculture Organizations' (FAO) market analysis and development approach, the VTE project provided guidance to future producer groups in identifying which tree resources with economic potential were abundantly available in their area and in developing a business plan. This plan covered access to the natural resource; production goals and processes; competition analysis and sales goals; and natural resource management.

Individuals chose others in their village to form groups based on affinity, trust and common product interests. With support from project facilitators, the groups completed their business plans, officially registered as producer groups and, when loans were identified as necessary, filed loan applications with a microfinance institution partner to the project. The project negotiated easier administrative procedures for accessing loans and placed a fund with the microfinance partner to help producer groups to pay the required loan down-payment. Another project in the area also running a microfinance scheme then offered loans to the VTE women's groups. Not requiring collateral, this microfinance scheme was better suited to women's groups, as women generally have little or no property that they can use as collateral.

Producers received a range of training and capacity development support to ensure the successful launch of their business (see Table 5.4). Enterprise development support was accompanied with education and support in NRM. The process of analysing the availability

of tree resources with economic potential alone made villagers aware of the extent of the degradation of these resources in many of their villages. When coupled with the market analysis of tree products, many villagers realised for the first time just how much potential there was. Consequently throughout the project villagers have been motivated to participate in NRM activities. They have benefited from training, study tours and competitions for the best replanting. Privately operated tree nurseries were set up where villagers could procure plants for their own replanting initiatives, including the one ran by Joseph Tambiga. The project also worked with local authorities and forest services to develop village and district natural resource management plans based on the villagers' needs.

Table 5.4 Capacity building received by producer groups under the VTE project

Enterprise	Processing	Natural resource management
<ul style="list-style-type: none"> ▪ Group dynamics, enterprise and family ▪ Organisation and functioning of a microenterprise ▪ Supply and stock management ▪ Management of loans ▪ Marketing ▪ Bookkeeping ▪ Using management tools 	<ul style="list-style-type: none"> ▪ Shea butter ▪ Baobab powder, oil, juice and granules ▪ Balanites oil extraction ▪ Soap production ▪ Honey production ▪ Study tours to successful processing units (some as far away as Mali) 	<ul style="list-style-type: none"> ▪ Grafting of shea and baobab ▪ Naturally assisted regeneration ▪ Tree planting and protection techniques ▪ NTFP harvesting techniques ▪ Agroforestry study tours ▪ Establishment of privately operated tree nurseries

Table 5.4 summarises the training and learning activities that the producer groups participated in. Interviews with union members indicate that the NRM activities, the training in NTFP processing and the study tours to existing NTFP processing units were particularly inspiring and useful. Whilst the enterprise training was also generally appreciated, villagers had more difficulty putting into practice what they learnt, as is evidenced by the current poor state of recordkeeping by the union. The training in processing resulted in considerable increases in yield (or reductions in time needed for processing) as well as improvements in product quality. For example, the average yield of traditional beehives increased from 5kg to 20kg (Tree Aid, 2012).

Most producer groups launched their business activities in 2010 and were still active as the project ended in 2012. As part of the exit strategy of the project, information workshops were organised on the forms and benefits of creating producer associations. The initial idea for the union came from these workshops, but it was Joseph Tambiga who brought groups together to form the union, even though it is not yet formally registered.

5.3.2 Control over forest resource access

In identifying potential business opportunities under the VTE project, villagers had to consider what access they had to the targeted natural resources. As explained in Section 5.2, this varied for different tree species, with some species freely harvested by all and other species only harvested within land belonging to the individual although until recently, under customary land law, women did not have the right to own land. A 2009 reform of

rural land tenure means that women now have the right to own land, but uptake is still slow. Women in the union are thus harvesting and replanting on land belonging to their husbands.

The groups report that so far there have been no conflicts related to accessing natural resources. However, the union president foresees that there will be restrictions to free access as communities become increasingly aware of the economic potential of NTFPs. There will be a need for greater clarity regarding the ownership of tree resources.

5.3.3 Control of the business

The Yemboama Union is a member-based organisation. Individual members support the union in two ways. Firstly, they pay membership fees, US\$ 1.60 per person per year. Secondly, the union charges a sales tax for products sold through the union – however the prices they sell products for are substantially higher than they could gain in local markets. For example, the union found a market for 1500kg of baobab pulp powder. The agreed price was US\$2.50/kg and the highest price on the local market was US\$0.75/kg. The union paid the members US\$1.60/kg. The union made a profit of about US\$0.82/kg for 1500kg. The members felt this was good business. With profits from these taxes, the union bought land in Fada N’Gourma and is building a new warehouse there. Due to the abundance of NTFP in this area, the business is thriving, and members of the union are trying to share the profit with communities. For example, the union has been supplying students with school equipment and stationery.

The union’s leadership includes a president, vice president, secretary, deputy secretary and treasurer. The vice president, deputy secretary and treasurer posts are currently held by women. Producer groups retain their autonomous status and have their own leadership structures. They can freely choose whether to sell to the union or elsewhere. Each member group pays annual membership fees which are decided in a general assembly. In the two years of the union’s existence, there have been no incidents of non-payment of fees. Membership fees contribute to meeting the costs of coordinating production amongst members and marketing costs.

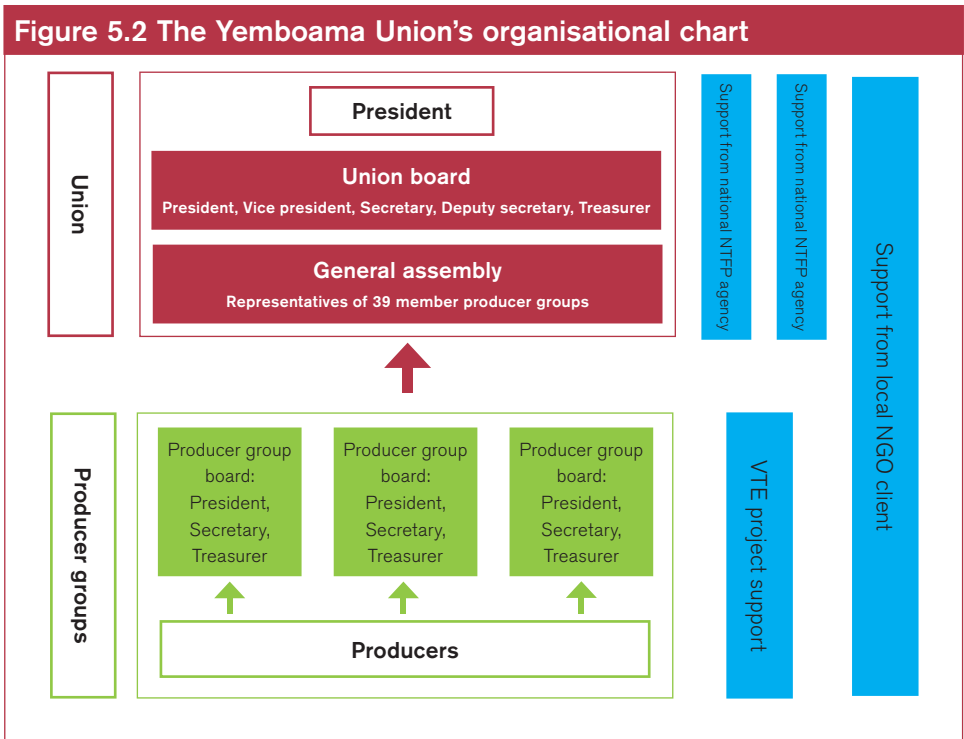
As with several producer associations in Burkina Faso, the founder-president is the union’s driving force. Joseph Tambiga sees his role as that of ‘a head of family who has to ensure that all his families’ needs are being met’. Whilst the union holds regular meetings and many decisions seem to be taken by consensus, the president fulfils most of the union’s key management functions: taking the minutes at union meetings, retaining such modest financial information and serving as the *de facto* marketing manager. The union members meet when decisions need to be taken on how to collect product to supply customers. Most union members are illiterate, which is one of the main impediments to the business. The union does not have yet an annual action plan which can be implemented and reviewed yearly. As the union is not yet registered, there is no official statute or rules to apply to the running of the organisation. The leaders have no obligation to organise yearly meetings or to review the board – and these issues are ones being considered by the leadership.

A trainer who has trained the union and several other producer associations remarked that the centralisation of power within producer organisations is a common occurrence.

In the rural context, people believe that a chief should lead a group for a long time. They usually have no time to worry about emerging leadership within a group, and the issue is not a priority for most group leaders. The Yemboama Union is a new organisation and this behaviour is not yet a critical issue. But without any external advice, the same kind of behaviour might be introduced. Tree Aid could help to ensure that the board is regularly reviewed so that new leaders can emerge.

For each order to be filled, the union board negotiates the price at which it will purchase the products from its members, based on average national prices and the price the client is offering. To ensure transparency, members are invited to call contacts in the capital city to enquire about market prices and compare these to what the higher prices the union is offering. A small sum is retained from each member group’s revenues to pay the production coordinators. This sum is loosely proportionate to the quantity of product each group delivers i.e. for a given volume of product delivered, the cost of 1kg is retained. The difference between the purchase price from members and the sale price to the union’s client constitutes the union’s gross margin. From this, union expenses are covered (storage rental, transport, packaging materials, phone calls and communications, etc.). Investment decisions are decided in a general assembly. As of today, the union’s most significant capital investment has been in the building of the three-room processing/storage facility, financed partly through union revenue and partly through a loan from a client.

The organisational structure of the union is presented in Figure 5.2 below.



As well as past support from the VTE project, the union and its member groups are currently receiving support from a local NGO client. The local branch of the national NTFP agency also regularly provides the union with information and invites them to relevant meetings. The union has received support in the form of equipment and a loan from one of its customers.

5.3.4 Staff selection and roles

At the beginning of the harvesting season, the union leadership visits the producer groups to see what conditions are like and how much the groups think they can produce. Following this, they visit local markets and speak to informants in national markets. The union then fixes the minimum prices it will negotiate with customers. Orders are taken on the basis of the observed production capacities and when these come in, quantities that the union will purchase from individual groups are fixed and the production capacity forecast with an eye on sharing benefits between different groups fairly. However, the president's own producer group plays a priority role in fulfilling orders.

Once the products have been deposited at the union headquarters, a representative from every contributing producer group is invited to view the quantities supplied by everyone else. Each member receives a sample of the processed product made with their raw materials. This is to ensure transparency in the distribution of orders between producer groups.

Three members of staff are hired temporarily to help coordinate the filling of orders. They are selected by the union's board based on qualities deemed important (trustworthy, numerate, able to handle money, no drinking problems, etc.). There is no formal recruitment process.

5.3.5 Delivery options

It is common practice for wholesalers to collect produce from suppliers. This is the easiest option currently available to the union, which does not own any means of transportation. It reduces risk as the union does not have to rely on external paid transporters or meet the costs of purchasing and maintaining a truck. While the union is aware that the ability to transport its products would allow it to prospect more markets, it is also wary of another risk: in Pouytenga, one of the busiest wholesale markets for NTFPs in Burkina Faso, once traders know that someone has transported their merchandise to the town from afar, they collude to lower the price, knowing that the person would rather sell at a lower price than pay to transport their merchandise home or elsewhere.

5.3.6 Customer research

Joseph Tambiga is responsible for marketing activities. He is always present at the trade fairs that the union participates in. Participation in trade fairs is a decision taken collectively, but it is to be noted that Joseph considers trade fairs to be key events for understanding customer's taste and seeing the quality of competitor products.

5.4 How has the Yemboama Union overcome key challenges?

5.4.1 Challenges relating to the value proposition

The value proposition offered by Yemboama Union is all about meeting customer demands for quantity and quality for different NTFP products. This value proposition depends to a considerable degree on the branding of the union and its credibility and track record in delivering what customers want.

One major challenge during the creation of the producer groups and currently for the development of the union is the limited business experience and capacity of the producers, who for the most part are illiterate. Without support from a project facilitator the union has not been able to finalise the preparation of its formal registration application, despite the previous experience in which all groups had registered as producer groups.

A second major challenge is that the union keeps poor records that do not enable it to have a clear idea of its turnover or profit. Currently this situation does not seem to be a problem for the members, as the business is organised on the basis of a cash and carry system and the members trust their leaders. The business is booming and it is expected that it will develop more in the future. In the longer term, however, the lack of bookkeeping might undermine its relationship with customers and breed misunderstanding among members. The leadership have already identified this as a key issue and Tree Aid will support the union to establish and apply a recordkeeping system. Communications with clients, including contact information for potential customers, is not currently available. Whilst the union is able to engage in email communication, it does so with some difficulty, as it is done through a relative of the union's president.

Of the different training topics on enterprise aspects, training on group dynamics appears to have been most effective. Members interviewed individually for this case study all felt that there was a high level of cohesion within their groups and within the union and reported no cases of conflicts. This is quite an achievement for producer groups that have been operating for four to five years now.

5.4.2 Overcoming legal challenges

Despite increasing competition for NTFP resources, union members do not report any difficulties in accessing the resource base.

Natural resource management training provided through the VTE project has borne fruit. The union continues the education work that the project undertook on protecting natural resources and union members appreciate this positively. Despite the end of financial support from the project for replanting activities, these continue and members are provided with technical support from the union. In 2012, the last planting season with project funding, 50,000 saplings were planted by union members. Between 2013 and 2014 without project support, at least 25,000 saplings were planted. Some members have also undertaken assisted natural regeneration for Acacia Senegal (gum Arabic).

Union members have a keen understanding of the importance of replanting to ensure the future resource availability for their businesses. However, one remaining challenge is achieving high survival rates following replanting. The producers do not have the financial resources to buy barriers to protect the saplings and a proposal to use branches of thorny Acacia trees for this purpose was met with opposition from the forest services who did not want to permit the cutting or pruning of any trees for this purpose. This is symptomatic of a lack of local control for local communities over the management of their natural resources. Tree Aid's initiatives to support equitable local governance of forest resources have not yet reached the villages from which the union's member producer groups are drawn.



© Tree Aid

Union members plant grafted baobab saplings

5.4.3 Overcoming ownership and benefit-sharing challenges

As noted above, the union has managed to access markets with much higher rates of return than traditional markets. The benefit-sharing mechanisms, where the union passes on any price increases to members while also making and reinvesting its profit in the development of infrastructure, is one that members have accepted to date.

However, inadequate investment in infrastructure and equipment continues to limit the union's production capacity. The union is actively seeking partners that can provide grant or loan funding. The union particularly needs larger storage facilities that can hold at least 40 tonnes (currently their processing unit can store about 10 tonnes, when processing is not in progress). This would allow the union to accept larger orders. In terms of equipment, the union has already received some from an Austrian customer that has helped improve production quality. To increase their production capacity, the union would also like to acquire a de-hulling machine for baobab fruit and mills and presses for shea butter production. Some customers have already been disappointed by the union's lack of capacity to meet large-scale orders even if they recognise that the quality of the union's product is better than usual.

5.4.4 Overcoming labour challenges

The members of Yemboama Union are rural producer groups, who often initially lack the skills and knowledge necessary to produce quality products for the market. Training provided by the VTE project in NTFP processing has been key to improving the efficiency

and quality of production. Training by processors who know which quality criteria are important further up the value chain has been particularly useful. For instance the project contracted a trainer who runs a cottage baobab processing unit – she also ended up being a small-scale customer. The quality of the baobab powder that the union is able to produce impressed their Austrian customer to the extent that the company wanted to bring their long-term suppliers from Senegal to learn the process. As mentioned previously, training has not only allowed gains in quality, but often also gains in quantities yielded (honey) or a reduction in processing time (shea butter). These benefits to members have contributed to their support for the union.

5.4.5 Overcoming marketing challenges

Participation in trade fairs is a key part of the union's marketing strategy. These provide an opportunity to not only meet several customers at the same time but also to see what the competition is doing. Table 5.5 presents the key trade fairs the union has participated in to date and some of the benefits they have derived. Whilst the union's main customers are processors and wholesalers, it also sells directly to some end-consumers during the trade fairs, who often become repeat, albeit small-scale, customers placing special orders through the union president. The union regularly sends SMS messages to previous customers, sending season's greetings or informing customers of replanting activities, to make sure that customers keep thinking of them.

The union has so far always had its participation in key trade fairs subsidised (especially the cost of stands and transport costs) either through the VTE project (JAAL, 2011; SIAO, 2012) or through other projects in the east region. Going forward, the union is no longer assured of such support, and meeting the costs of participating in these fairs, that are judged strategic for the union's growth, will become a challenge.

Discussions with customers during trade fairs convinced Joseph Tambiga of the need to design labels for the union's products and to open an email account. However, labels are only used for products destined for trade fairs as they are expensive to print (EUR 1 for six

Table 5.5 Participation of the Yemboama Union's leadership in trade fairs

Name of trade fair (year)	Participants	Benefits
Agrofood Days (JAAL), Ouagadougou, 2011	National	Generated FCFA 110,000 (EUR 170) in sales. (Before the union's creation, the future union president participated as a producer group representative.
The International African Crafts Fair of Ouagadougou (SIAO), 2012	International	Generated FCFA 375,000 (EUR 570) in sales and contracts with several customers, including an Austrian customer who placed a FCFA 4.5 million (EUR 6,900) order the following season.
Safari International du Gulmu, Fada N'Gourma, 2012	Regional	Sold all their stock of soap.
Journées nationales du paysan (National Farmers Fair), Fada N'Gourma, 2014	Regional/national	Generated FCFA 100,000 (EUR 150) in sales and won a FCFA 200,000 (EUR 300) prize for best NTFP product. Sold all their stock of soap.

labels, plus the costs of travelling 80km to Fada N'Gourma for printing). In Burkina Faso, packaging and labelling is a key constraint. This applies not only to the union but even to urban-based processors selling to the end-consumer market, who find it difficult to meet costs and find printers able to produce good labels. At trade fairs some clients have been convinced by the quality of the product, despite finding the packaging not particularly appealing – the labels are printed in colour on ordinary paper and the colours easily run or the label simply falls off.

A local NGO partner that works with the producer groups in the union notes that the president is particularly dynamic in making face-to-face contacts, and unlike a lot of his counterparts in rural Burkina Faso, is willing to spend his own money to meet potential customers and show them samples of the union's products to ensure that there are no disputes on product quality before confirming a large order.



© Tree Aid

Selection of the Yeobama Union's packaged products

While the union has been able to attract new customers through the quality of its produce, it has not been so successful in securing repeat orders. In the past, leaders have looked for new customer and neglected past customers. However, in some cases this has been because satisfied customers then want to increase their orders to quantities beyond the union's capacities – especially with orders from Ougadougou. Yemboama Union is aware that it needs to develop a longer-term partnership strategy with customers.

In other cases, particularly in their relations with international customers, the problem has arisen from middlemen. These improvised intermediaries are often based in Ouagadougou. They provide a useful service to international customers allowing them to have one sole interlocutor to reach several potential suppliers across the country. Unfortunately, the union has come across untrustworthy middlemen which has caused them to lose orders. In one case, the intermediary verbally placed an order for several tonnes of shea butter for export to Senegal at an annual trade exhibition. Unrest in Senegal led to the intermediary disappearing with the money that the international buyer sent, leaving the union with a lot of shea butter for which they had no immediate market.

In another case, an international customer was interested in developing a long-term relationship with the union, which included building their capacities through training, equipment and infrastructure that would enable them to fill larger orders at a high level of quality. The intermediary tried to pressurise the union into hiring his wife as the production supervisor under this partnership, which the union was not willing to do. There was also a dispute between the intermediary and the union. The customer had provided a loan for

the construction of processing facilities, and the union claims to have paid back the full loan before the due date through the intermediary. However, the latter claims he did not receive anything from the union. The international customer, who sources products from several countries, found these conflicts too troublesome to deal with directly and currently relations between the union and the customer are at a stand-still. The union is trying to improve its communications capacity – using email in particular – so as to be able to bypass middlemen and deal directly with international clients when possible.

In addition, the union has been confronted by other instances of customers renegeing on their orders, leading in some cases to a total loss of the value of the product. This was the case with tamarind fruit destined for the Malian market in 2012 at the outbreak of the crisis in Mali. The union's wholesaler customer who was to export the tamarind to Mali refused to take the product. The union was unwilling to sell at the low prices offered elsewhere and kept the tamarind until it was no longer saleable. In both cases, member groups had taken out loans from microfinance institutions to purchase additional raw product to meet the orders and the non-materialisation of the orders created problems repaying these loans. Three member groups (including the president's) still owe roughly EUR 1,000 on a EUR 3,000 loan. These negative experiences with loans linked to market uncertainty rather than the loan conditions themselves, have led to union members avoiding loan financing as they consider it too great a risk in an uncertain context.

Another potential challenge for the union is the prospect of market competition from one of its supporting institutions. This local NGO, which has been working with union producer groups since 2010 and is a key client, is in the process of setting up a marketing cooperative for the NTFP products it sources. This cooperative is intended to play a role similar to that of the union. It is not clear for now how this potential conflict of interest on the part of the supporting NGO will be dealt with. This situation flags up the danger of supporting institutions crowding out grassroots initiatives through their marketing efforts.

5.5 Key lessons

Yemboama Union has successfully brought together more than 1,000 villagers and improved their market opportunities for NTFP products. The VTE project laid the foundations for the creation of the union, giving villagers new ideas for the development of NTFP resources and creating organised producer groups. The aspirations generated by the project eventually gave rise to the organisational innovation that is the union.

5.5.1 Keeping down costs

The Yemboama Union is fortunate to have substantial natural resources on which to build its business model. The availability of the produce is one of the key reasons that the union has been able to keep its costs down while meeting customer demand.

One important realisation was that training in quality production was key. Training in NTFP processing was crucial for building the production capacity of the union in quantity and above all quality. Visits to production units created aspirations to upgrade production. However, it is also important that there are opportunities to learn techniques relevant to

the local context. Training is all the more relevant, when it is done by trainers who are active in the value chain concerned, such as the baobab processing trainer who was herself a processor. Again, the founder's personality also played a role in translating capacity building into quality products. The baobab powder processing trainer remembers a very attentive Joseph at the training session, in which he was the only man, asking lots of questions and wanting to put into practice all the steps taught. And it is the founder's conviction that quality sells that led to the union to choose to focus on quality rather than just quantity and adopting production protocols that are sometimes cumbersome.

5.5.2 Retaining customers and willingness to pay

The personal conviction, drive and charisma of the union's founder have been a key ingredient in the union's genesis, its ability to rally members to a common cause, and its capacity to attract customers. This is often an important element in entrepreneurship in all fields: personality counts and not all personality types make good entrepreneurs. Unfortunately, projects and public support schemes are generally not good at choosing 'winners' and often, justifiably, are driven by other criteria such as poverty levels, gender and equity criteria.

One potentially useful tool for identifying project participants with extra drive that could render enterprise endeavours successful is to organise competitions within projects, and use these to determine the recipients of specific enterprise support. Joseph Tambiga's enthusiasm was first evident from his success in several competitions related to NRM activities under the VTE project. Under his leadership, his union has also won prizes for the quality and innovation of their products. This leadership is based on trustworthiness principles. The president of the union works closely with leaders of the 39 groups. He has convinced them that success comes through a building of a strong union. The group leaders are taking the same approach with their group members to maximise their members' commitment to increasing production and sales.

In a competitive market with increasingly sophisticated tastes and requirements, quality is a key selling point, and it is on this point that the union has been able to attract many of its customers and secure premium prices. However, quality alone is not sufficient as markets that are willing to pay a premium for quality also often require large quantities. Whilst a focus on quality is good for opening up markets, sooner or later, all the other capacity issues (equipment, infrastructure, transport, etc.) have to be addressed.

5.5.3 Success factors

Relevant ideas create the right incentives for business. The union has successfully maintained its members' interest in conserving tree resources originally instilled in villagers through the VTE project. The project's key strength was that by providing a relevant idea – linking the economic potential of NTFP products to the protection of tree resources in the villagers' minds – it offered the right incentives. Villagers acquired the knowledge and equipment to plant trees and conduct other NRM activities under the VTE project and continue to use this acquired knowledge. The union president's energy and enthusiasm for tree planting has ensured that this aspect remains at the forefront of the union's activities, thus building the basis for future resource availability.

The most effective training was in product quality. Nevertheless, producer groups received a significant amount of training on enterprise management aspects under the VTE project which unfortunately appear to have been poorly assimilated. The enterprise training was dispensed by project facilitators, most of whom were recent graduates, who received training in the International Labour Organization's (ILO) Start and Improve Your Own Business methodology. The lack of experience in training of most project facilitators coupled with the low literacy rates of most producers, probably created obstacles for the transmission of some key concepts and tools. The groups appear to have assimilated better the hands-on practical training in NRM and NTFP processing techniques. To be effective, enterprise management capacity building has to be as practical as possible. This includes activities such as registering producer groups. Support can be provided in the form of 'doing for' which may be quicker and more efficient, or in the form of 'doing with' which should provide greater learning benefits. Perhaps if the producer groups had participated more actively in the registration process for their groups, the union would today have the capacity to undertake its own registration without external support.

Producers often have very basic needs – such as a desire to break out of isolation. As noted above, there is a high level of satisfaction with the services that the union provides to its members, even if there are several producer groups that sell more outside the union than with the union. As mentioned, the union allows members to access significantly higher prices for their products than they can charge on their own. The union has also in five cases given out advances to members for production activities related to the union and loans for extra-union activities. However, members also appreciate the union for other non-pecuniary services.



© Tree Aid

Yemboama Union's stand at the International African Crafts Fair of Ouagadougou (SIAO) 2012

Members are grateful for the awareness-raising activities the union undertakes and the opportunity for learning from others that it presents. Members report feeling less isolated, even if they are located in remote villages. The union is also much appreciated by its members simply for the opportunity it presents for working together, exchanging information, and regularly meeting with others. The value of these services to grassroots producer groups should not be underestimated.

CONTENTS: 250G (8OZ)

IMPORTED BY:



ឃុំត្រពាំង
WILD HONEY
កោះកុង KOH KONG

100% Natural

PROCEEDS FROM SALE SUPPORTS MEMBERS OF THE CAMBODIAN FEDERATION
FOR BEE CONSERVATION AND COMMUNITY-BASED WILD HONEY ENTERPRISES

CONTENTS: 250G (8OZ)

ឃុំត្រពាំង
កោះកុង

PROCEEDS FROM SALE
FOR BEE CONSERVATION

Processed honey displayed and sold in glass jars

© NTFP-EP

Cambodia: Cambodian Federation for Bee Conservation and Community-Based Wild Honey Enterprises (CBHE)

Honeybees for forests and income

by Lykheang Seat, Sophay Uch and Femy Pinto

In Cambodia, wild honey is a valued traditional product and honey collection is an important forest-based livelihood. The Cambodian Federation for Bee Conservation and Community-Based Wild Honey Enterprises (CBHE) is a national honey network founded in June 2010 by representatives of 16 wild honey enterprises. CBHE aims to produce high-quality honey, while conserving forests and improving livelihoods. Supported by the Non-Timber Forest Products Exchange Programme for South and Southeast Asia (NTFP-EP), and working in partnership with NatureWild and SKC to promote its products, CBHE has developed its own strong brand and Khmum Prey honey has become well-known in the capital Phnom Penh.

6.1 Context in which CBHE operates

6.1.1 The enabling environment

Cambodia's geographical landscape is divided into several regions: the central lowlands and the northeast plateau, the Damrek Mountains in the north and the Cardamom Mountains in the southeast. The forest area of Cambodia was last measured at 56.46 per cent in 2011, according to the World Bank (Trading Economics, 2015). A 'forest area' is defined as land under natural or planted stands of trees of at least 5 metres in height in situ, whether productive or not. It excludes tree stands in agricultural production systems (for example, fruit plantations or agroforestry systems) and trees in urban parks and gardens.

Mondulkiri is an eastern province of Cambodia at an altitude of 200–1,000m, and is the most sparsely populated province in the whole country although being the largest province in Cambodia. The province covers more than 70 per cent of the eastern plains landscape in Cambodia and is full of natural beauty, with thickly forested mountains, waterfalls and rolling hills. Mondulkiri is rich in valuable minerals remaining in its deep red, fertile ground and is one of the largest intact tropical dry forest ecosystems in Southeast Asia, which also serves as a major catchment basin for various tributaries that drain to the Mekong River system (Maling, 2007). Its capital Sen Monorom is about 375km from Phnom Penh. It borders Vietnam to the east and south, Ratanakiri province to the north, and Kratie province to the west.

The total area of Mondulkiri is about 14,288 square kilometres and there are four protected areas: Phnom Prich Wildlife Sanctuary, Seima Protected Forest, Mondulkiri

Protected Forest and Lumphat Wildlife Sanctuary. Mondulkiri province has an unusual climate compared to other parts of Cambodia. Mondulkiri province does have three seasons in common with the rest of the country: a rainy season: June – October (<25°C), a windy season: November – February (>20°C), and a hot season: March – May (20–30°C). However, Mondulkiri's average temperature throughout the year is lower than in other areas of Cambodia (except Ratanakiri province). Climate change is increasing this temperature gradually every year.

The eco-tourism sector has a high potential since the province has deep, pure jungles with huge varieties of flora, and there are more than 10 indigenous groups living within the mountain regions of the Eastern Plains with differing cultures and lifestyles. The richness and diversity of the Mondulkiri dry forest ecosystem is characteristic of the Lower Mekong Dry Forests ecoregion within the Eastern Plains.

Since the Cambodian provinces of Mondulkiri and Ratanakiri share a border with Vietnam, cross-border trade between the two countries through the provinces' four bilateral border checkpoints is very active at present, and it is expected that the economic development of the provinces will be accelerated through strong economic cooperation between the two nations – Cambodia and Vietnam.

Honey production is one of the important forest-based livelihoods that communities living in and around the protected areas of Mondulkiri are dependent upon. By motivating the communities to harvest and process wild honey sustainably and following particular protocols and standards, the links between people and forests are strengthened. Non-timber forest products (NTFPs) like forest honey play a significant role in improving Cambodia's rural livelihoods. For many forest-dependent communities in Cambodia, wild honey is one of the top-harvested NTFPs both for subsistence and representing up to a 40 per cent contribution to cash income. As in many Asian countries, Cambodia's indigenous and other forest-dependent communities harvest from honeybee species that are indigenous to Asia, such as *Apis dorsata* and to a lesser extent, *A. florea* and *A. cerana*, utilising traditional honey-collection techniques.

Several community-based initiatives to develop NTFP-based livelihoods and particularly wild honey enterprises have emerged within the last few years. Some have emerged as a result of spontaneous community-to-community exchanges and others through externally facilitated exchanges, information sharing and project assistance. Technical assistance from a regional network, the NTFP Exchange Programme (NTFP-EP) for South and Southeast Asia, alongside efforts from other local and international NGOs (e.g. World Wide Fund for Nature or WWF) in Cambodia has spurred on partnerships and contacts for NTFP development in Cambodia.

NTFP-EP and WWF initiated their collaboration in 2007 in Mondulkiri province with a focus on introducing improvements in wild honey-collection techniques to make it more sustainable, hygienic and quality graded. At the same time, these community-based efforts were also linked to forest conservation and protection strategies to be implemented by the two organisations and extended to other project areas by other national and international supporting NGOs.

6.1.2 The operating environment

Wild honey has been traditionally harvested by local and indigenous people for home consumption and is widely traded locally because people believe it can treat diseases. They also value wild honey as food. It is one of the key NTFPs people can harvest from the forest besides resin, bamboo, bamboo and rattan shoots, mushrooms, forest fruits and traditional medicine. However, there is not enough technology for packaging or to prove the purity and cleanliness of the honey. Consumers purchase honey based on their trust in particular traders or through using simple techniques to test if the honey is pure or not. But these methods are open to error. Traders put honey in plastic buckets by the roadside, in bottles to sell at farmers' markets, or trade in a more mobile way using bicycle or motorbikes.

There is little commercial honey production in Cambodia and in the major markets such as Phnom Penh, the only historic option to obtain commercial-grade honey was to import it from other countries like Thailand, Vietnam, Australia and China. In 2007, the potential collection of wild honey to serve the market was identified, under project funding support from the International Union for Conservation of Nature (IUCN) Netherlands. WWF and NTFP-EP began their community-based honey enterprise development project. IUCN support was followed by support from others such as The Food and Agriculture Organization of the United Nations (FAO)/ International Tropical Timber Organisation (ITTO), Oxfam Hong Kong, the Toyota Foundation and later from the group Social Investment for Cambodia (SIFC) – an earlier programme of Arun LLC, a Japanese social investment platform.

Through the WWF and NTFP-EP honey project, the Mondulkiri Forest Venture (MFV, formerly known as the Mondulkiri Wild Honey Network or MWHN) was established comprising of two honey-collector groups from Pou Chrey and Krang Teh communes to ensure that sustainable collection techniques were used and that production was raised to a commercial standard. From the wild honey collection that began in Mondulkiri province, the collective enterprise model expanded to another five provinces: Koh Kong (5 groups), Ratanakiri (1 group), Stung Treng (2 groups), Kratie (2) and Preah Vihear (4 groups).

Three years later, the Cambodian Federation for Bee Conservation and Community-Based Honey Enterprises (CBHE) was established in 2010 to improve functions relating to sustainable harvesting techniques, production, honey delivery, membership expansion and quality control, and in particular to achieve economies of scale in honey production. On the production side, NTFP-EP brought in techniques for quality control and processing (especially filtering, drying, storage, value addition and packaging). NTFP-EP initially trained the CBHE members in sustainable collection and honey-handling techniques as well as in the formation and development of group enterprises.

Initially a local brand – Mondulkiri Wild – was launched in 2008 by MFV. Following that, a national brand was launched in 2011 – Khmum Prey – to offer wild honey from six provinces in Cambodia.

Competition soon arrived. Two years later, Mondulkiri Natural Honey, another brand of wild honey traded by a local trader in Mondulkiri, entered the market as well. However, that latter business functions without proper agreements with local communities. The

trader buys any wild honey sold in the market by individual collectors with no proper quality checks or sustainable collection techniques. Although the price is slightly cheaper than Mondulkiri Wild or Khmum Prey, the profit goes directly to the individual trader/entrepreneur. This is different from Khmum Prey where a fair-trade principle has been applied so that long-term income generation is widely distributed to the CBHE member groups and their members.

6.2 About CBHE as a business

6.2.1 The vision

CBHE is a national honey network founded in June 2010 by representatives of 16 wild honey enterprises from six provinces: Mondulkiri, Ratanakiri, Stung Treng, Kratie, Preah Vihear and Koh Kong. In addition, key participants included the commune council, NGO partners from various provinces and communities, international NGOs and the media. The preparations were financially and technically assisted by the NTFP-EP programme and facilitated by CIRD (Cambodia Institute for Research and Development), another local NGO commissioned by NTFP-EP. CBHE was established with the aim to:

- Develop common standards for Cambodia wild honey products,
- Explore the market and promote the price of Cambodian wild honey products,
- Participate in forest and non-timber forest resource conservation, and
- Enhance community livelihoods through the strengthening of Cambodian wild honey collection.

The mission of the CBHE is ‘to contribute to forest resource conservation and enhancement of community livelihoods through the sustainable collection of wild honey, and increasing the dissemination of wild honey product quality.’

The membership of CBHE has not expanded significantly as the focus has been mainly to keep the honey quality consistent and to establish strong internal controls. This has been a challenge area for CBHE. By the end of 2014, CBHE had 17 member groups, with 610 individual members in six provinces (see Figure 6.1 and Table 6.1).

In 2014, CBHE reported sales of US\$41,737 from 4,022kg of honey, a drop from the volume traded in 2013 of 6,697kg. CBHE's market is mainly local middle-class households and tourists. Khmum Prey is distributed in local restaurants, hotels, souvenir shops, wellness shops, minimarts and organic shops via SKC (Sahakreas CEDAC, a social enterprise established by the Center for Study and Development in Agriculture) and NatureWild distribution channels (see Table 6.2).



Inside the NatureWild shop

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© NTFP-EP

Honey packaging and processing equipment at the honey shop in Mondulkiri province, Cambodia



© NTFP-EP

Honey shop in Mondulkiri province, Cambodia



Opening of the MFV honey shop

Table 6.2 Profit and loss 2013–2014 (US\$)

Description	2103	2014
Sales revenue	\$52,983.63	\$41,737.32
Less: cost of goods sold	\$49,113.95	\$35,848.34
Gross profit	\$3,869.68	\$5,888.98
Less: operational expenses	\$878.15	\$1,484.19
Income after operational expenses	\$2,991.53	\$4,404.79
Add: other income	\$435.96	\$0.00
Net profit (loss)	\$3,427.49	\$4,404.79

6.2.2 Business inputs

Khmun Prey wild honey is collected from forests in different provinces which have different ecological conditions and varying floral sources, according to different forest types. For example, in Preah Vihear, Stung Treng and Kratie, the source of wild honey is from swamp forests, which are forests inundated with freshwater, either permanently or seasonally. These forests normally occur along the lower reaches of rivers and around freshwater lakes. In Koh Kong, the forests are mainly parts of the Cardamom Mountain tropical rainforests, which are characterised by high rainfall, with annual rainfall of 250–450cm. Mondulkiri and Preah Vihear forests are mostly lowland dry forests, open woodland in tropical areas that has a long dry season followed by a season of heavy rainfall. The trees in a monsoon forest usually shed their leaves during the dry season

and come into leaf at the start of the rainy season. Ratanakiri province has evergreen forests; trees retain green foliage all year round. Wild honey from different provinces are differentiated and labelled accordingly with corresponding colour marks, such as Khmum Prey Mondulkiri, Khmum Prey Preah Vihear, Khmum Prey Kratie, etc.

CBHE member enterprises in each of the provinces were initially organised with the support of different NGO projects. NTFP-EP provided networking support to these enterprises. NTFP-EP also facilitated cross learning across the enterprises under the CBHE federation umbrella to ensure consistency in the business model and the use of a community-based approach to enterprise development. MFV in Mondulkiri

became a seedbed of learning and where in particular CBHE's Khmum Prey protocols and standards for sustainable collection and processing were pilot tested during a collaborative project between WWF Cambodia and NTFP-EP before these were disseminated further and training was provided across CBHE member enterprises.

To further illustrate the type of support given during the start-up phase of the member enterprises, we describe MFV as an example. MFV's honey collection area is around 56,000 hectares within the community forest-use zone of the Mondulkiri Protected Forest located in Pou Chrey and Krang Teh communes. The honey collection area is dominated mainly by deciduous dipterocarp trees which host the hives of Asian indigenous honeybee species such as *Apis dorsata* and to a lesser extent, *A. florea* and *A. cerana*. For MFV's honey enterprise operations, each business group in in Pou Chrey and Krang Teh received a start-up grant of US\$2,000 as part of a project with WWF Cambodia. This seed fund was mainly used to purchase honey from the members and to cover the operational expense of the group. The group also collected membership fees of US\$5 from each member to top up the buying capital. The project also provided other funds and material support to MFV including production and packaging facilities, starter tools and materials (e.g. a refractometer, plastic containers, filtering materials etc.). Training had been provided to members already as well as facilitation in setting up the internal controls and organisational system of the business groups.

For other CBHE members, for example in Koh Kong province, they tried to access credit from the ACLEDA Bank for their buying capital. They also formed saving groups to finance community loans for buying their own materials or to borrow money whilst waiting for honey payments. For the other CBHE members, similar to MFV, the seed capital was provided through NGO support such as for the CBHE members from Kratie, Stung Treng and Preah Vihear provinces.



© NTFP-EP

Examples of labelling by province

6.2.3 Main activities

CBHE is registered as a business association with the Ministry of Commerce. The executive committee was elected by the general assembly which is comprised of representatives of the CBHE members from each province. Currently, there are 610 registered individual members. There are 11 members in the executive committee. They serve on a voluntary basis.

Figure 6.2 Value chain map of community-based honey enterprises



Before the collective engagement of CBHE and its members in the wild honey value chain, the chain was widely dispersed and informal. Individual collectors dealt directly with village traders who randomly bought raw unprocessed honey from honey collectors. Village traders either sold in bulk to provincial vendors or they retailed the honey themselves on roadside stalls or in small convenience shops.

The entry of CBHE and its members in the market introduced a new level of organisation. Community-based honey enterprises covered village to provincial-level activities such as honey collection, purchasing, processing (mainly filtering, quality control and packaging in volume containers), consolidation (see Figure 6.2), and selling particularly to local markets. CBHE focused mainly on the role of providing market and price information to its members, capacity building and training inputs especially for quality and internal control, and finally providing linkages to the national market. In the latter market, CBHE established two main partners, SKC and NatureWild.

NatureWild is a green intermediary and supports CBHE in marketing and networking. In particular, it facilitates:

- Access to markets through the provision of market information,
- Developing products and product prototypes for presentation to existing and new markets,
- Organising NTFP market networks at local, regional and international levels,
- Producing product marketing collateral and distributing to the right targets,
- Participating in different trade fairs or exhibitions at local, regional and international levels, and
- Developing strong public relations through local, regional and international media networks.

On the other hand, SKC's intermediary role and agreement with CBHE is as a buying partner and distributor nationally.

6.2.4 Technology and skills

The main honey season lasts from February to April during the dry season in five out of the six provinces, except in Koh Kong where the harvest season is mainly from June to September during the wet season (see Table 6.3).

Province	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Koh Kong					x	xx	xxx	xxx	xx	x	x	
Stung Treng	x	xxx	xxx	xxx								
Ratanakiri	x	xxx	xxx	xxx	xx						x	x
Kratie		xxx	xxx	xxx	xx							
Mondulkiri		x	xxx	xxx	xxx	x						
Preah Vihear			xxx	xxx	xxx							

Key: x = little harvesting; xx = some harvesting; xxx = much harvesting

There are certain rules for forest- and bee- resource management to follow before community members can actually harvest the honey. In the production flow, there are four main activities which are carried out at different places, all of which follow the Khmum Prey sustainable honey collection protocols:

Honey collection (in the forests):

- Only mature honeycomb shall be harvested.
- Take only the comb not the bees.
- Use smoke, not fire or pesticides.
- Night-time collection is not allowed.
- No dogs may be brought along.

Initial processing (forest)

- Separate the pollen from the honey.
- Do not wring the comb.
- The head of the comb (also known as the 'honey head' shall be cut horizontally and into small pieces by bamboo knife to allow the honey to flow out naturally onto a clean net.
- Gloves, mask and clean aluminium baskets are to be used in the process.

Honey trading (village and provincial levels). The community-based honey enterprise does the quality checks based on the following criteria:

- Colour of the honey: gold and/or dark red in colour.
- Taste and smell: sweet taste and scent of forest flowers.
- Maximum moisture content: 24 per cent.
- Inside the container there must be no dirt or other debris.
- Recorded on the container is the name of the collector and product, volume, moisture content and grading.

Processing (Phnom Penh, NatureWild and SKC):

- Honey processing must be done within 10 days of collection.
- Processing must be done in a clean, dry and dust-free room. The room must be appropriately 3x4m in size and able to maintain a stable temperature.
- Old or new honey, and honey with high or low moisture content must be kept separate.
- The filtering process must use aluminium baskets and clean cloths. Any bubbles must be removed within 48 hours after filtering.
- Air-conditioning, electric dryers or fans should be used to dry the honey for 24–28 hours once it has been poured onto an aluminium plate.
- After drying, the moisture content and date must be recorded on the container.
- Honey should then be poured slowly into glass jars to avoid adding bubbles.
- Once poured, the bottle must be sealed and labelled with a 'best before' date.
- The finished honey product must be stored in a dry, clean room below 30°C and out of direct sunlight.

See Table 6.4 for the average volume of honey harvested by CBHE members.

Table 6.4 Average volume of honey harvested by CBHE members

Province	Honey volume (kg)
Kratie	116
Koh Kong	1,244
Stkung Treng	655
Preah Vihear	350
Mondulkiri	3,017
Ratanakiri	84
Total	5,466

6.2.5 Business partners

There are two main partners involved in the marketing and distribution of Khmum Prey and with whom CBHE have agreements: NatureWild and SKC.

NatureWild was founded in 2009 as a marketing project of NTFP-EP Cambodia to support the branding and marketing of wild honey products. NatureWild has an NTFP retail shop and showroom in Phnom Penh where Khmum Prey is sold. Under an agreement as marketing agent and intermediary representing CBHE, NatureWild is also responsible for packaging the Khmum Prey products and for the production of value-added products.



Examples of CBHE honey products

NatureWild has also linked CBHE to buyers of Khmum Prey products:

- **Restaurants:** Tinut Café, Comme A'la Maison, Brown Café
- **Hotels:** Park Hyatt Hotel, Song Saa Private Island, Amansara Hotel, La Residence
- **Bodycare industry:** Senteurs d'Angkor, Bodia Nature
- **Organic marts and super markets:** Bayon Supermarket, Arona Mart, Natural Garden, Khmer Farmer Garden, Green-O Farm, Royal Mart
- **Manufacturing companies:** So! Nutritious, Confirel
- **Pharmacies:** Mean Leap, Mekong II (Kampong Cham)
- **Other:** Free the Bears (NGO), Krousar Yoeung (souvenir shop)

SKC is a social enterprise established CEDAC, a prominent Cambodian NGO in the fields of agricultural and rural development, and is especially recognised for its farmer-led extension services, agricultural innovation trainings, support for farmer organisations and publications. SKC serves the commercial arm of CEDAC for its organic and natural products – rice, vegetables and other produce. There are 10 CEDAC shops in Phnom Penh. As one of the most well-known agri-product shops in Cambodia with enough capital to invest in the production of honey, CBHE saw this potential and signed a buying contract with SKC. Through the support of Arun LLC, SKC had access to the Japan export market

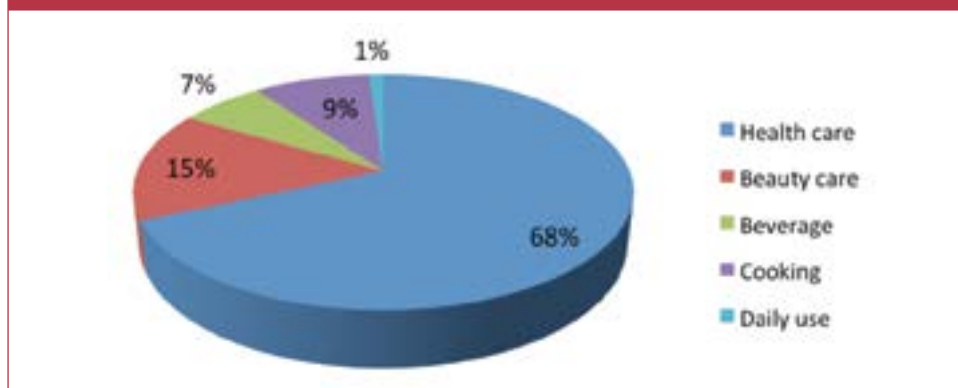
for a trial export in 2013 for the first time. However, stricter quality standards must be developed in order to meet the demanding criteria of the exporting country Japan.

6.2.6 Customer groups and product types

CEDAC undertook a wild honey marketing survey in Cambodia in February 2012 in 5 provinces (CEDAC, 2012; see also Figure 6.3). The results show that honey consumers are households, restaurants, hotels, spas/massage parlours and salons.

Roughly 72 per cent of the households interviewed consume honey every year. Generally, honey is used for different purposes according to family knowledge. Some 68 per cent of the households use honey for healthcare such as to provide strength, counteract poison, protect against colds, to treat coughs and gastric ailments and as postnatal care for mothers. Other uses of honey include beauty treatments such as skincare and for homemade remedies, cooking, beverages and other general purposes (see Figure 6.3).

Figure 6.3 Uses of honey amongst consumers



6.2.7 Differentiation in the market place

As a product, Khmum Prey honey offers singular quality. The product is pure honey harvested from protected forest areas following improved traditional harvesting techniques, using hygienic and sustainable harvesting standards and simple techniques for processing. Another advantage (and benefit to the honey groups) is that the honey enterprise provides a fair procurement price to its members. When it is necessary to hire labour, a resource-management premium is added to the calculation of the selling price. Purchasing Khmum Prey honey not only improves the income levels of the local indigenous community but can also contribute to conservation and natural resource management and also the strengthening of community solidarity and culture.

Table 6.5 below shows the prices of honey on the Cambodian market. Khmum Prey price is extremely high compared to the rest. However, the values of the Khmum Prey products as mentioned above, in addition to the need for pure natural honey for health care or treatment purposes, ensure that at least some consumers would be willing to pay for such a high end product.

Table 6.5 Prices of honey on the Cambodian market

Similar products/competitors	Retail price
Khnum Prey	1 glass jar 28g = US\$1.20 1 glass jar 250g = US\$7.00
Other Cambodian honey - Green Gold by New Rain Organics/Cambodia Biological Ltd - Cambodian Natural Honey by Cambodia Global Action (CGA) Ltd - ARO from an unnamed group	1 glass jar 230g = US\$3.60 1 glass jar 500g = US\$3.10 1 glass jar 650g = US\$5.75
Honey from Thailand Royal Honey	1 plastic jar 200g = US\$2.00 1 glass bottle 1 litre = US\$5.80
Honey from Australia McMahon's Pure Honey	1 plastic box 1kg = US\$7.80
Honey from New Zealand Nuzeabee honey with pollen	1 plastic jar 500g = US\$9.20
Honey from USA Sue Bee	1 plastic jar 340g = \$4.50 1 plastic jar 227g = US\$3.20 1 plastic jar 680g = US\$7.90 1 plastic jar 454g = US\$5.65

In addition to product quality, CBHE also uses a creative marketing strategy reaches to promote its honey. Khnum Prey honey has been exhibited at trade fairs and especially at events promoting local produce. Visitors have a chance to taste the different varieties of Khnum Prey honey, which taste slightly different depending on which province they are from, allowing the customers to choose which they prefer. In the early stages SKC, CBHE's packaging and distributing partners, also launched a promotional campaign which involved cycling in the city to communicate the value of the product to customers on their doorsteps. NatureWild also contributed to promoting Khnum Prey via social media and television interviews with the producers. Such was the success of these marketing campaigns, CBHE reached a point where it could not supply enough honey to its buyers, forcing the cancellation of some consignments to avoid larger gaps in supply to retailers.

Secondary packaging (using palm and rattan boxes to pack the honey jars in) has also improved the attractiveness of the products. Most people buying honey in this type of packaging are purchasing it as a gift.

6.3 Who controls CBHE?

6.3.1 Origin of the value proposition

The origin of the value proposition emerged through the work of IUCN, WWF and NTFP-EP as described above. After supporting honey producer groups to produce better packaging for their honey, it appeared impossible that the producer groups could easily access the markets in Phnom Penh and other major cities in Cambodia. There had to be someone dedicated to meeting potential consumers (hotels, restaurants, processors and distributors) to learn how the product could be developed to better match their needs.

Almost three years after MFV was established, NatureWild was born and provided critical support by developing the wild honey brand Khmum Prey. This included the establishment of honey processing rooms in three locations: NatureWild, SKC and the Mondulkiri Forest Venture (MFV) honey shop in Sen Monorom town, Mondulkiri province.

Following its success in providing marketing services for honey products, NatureWild is about to be registered as a social enterprise (a private limited company) to expand its marketing services to other NTFP products produced by community-based enterprises and partner NGOs.

6.3.2 Control over forest resource access

Under Article 2.B of Forestry Law 2002, forests are the property of the state. It means that beehives found in the forest do not legally belong to any individual. But for communities living within or near the permanent forest reserve, the state recognises and ensures their customary user rights for the purpose of traditions, customs, religion and livelihoods as defined in the law. But a registered forestry community does possess the right to extract non-timber resources in a sustainable manner as part of their livelihood activities. Therefore, the establishment of the community-based enterprise in CBHE's operation area has been legally accepted by the Forestry Administration under the Ministry of Agriculture, Forestry and Fisheries (MAFF).

6.3.3 Control of the business

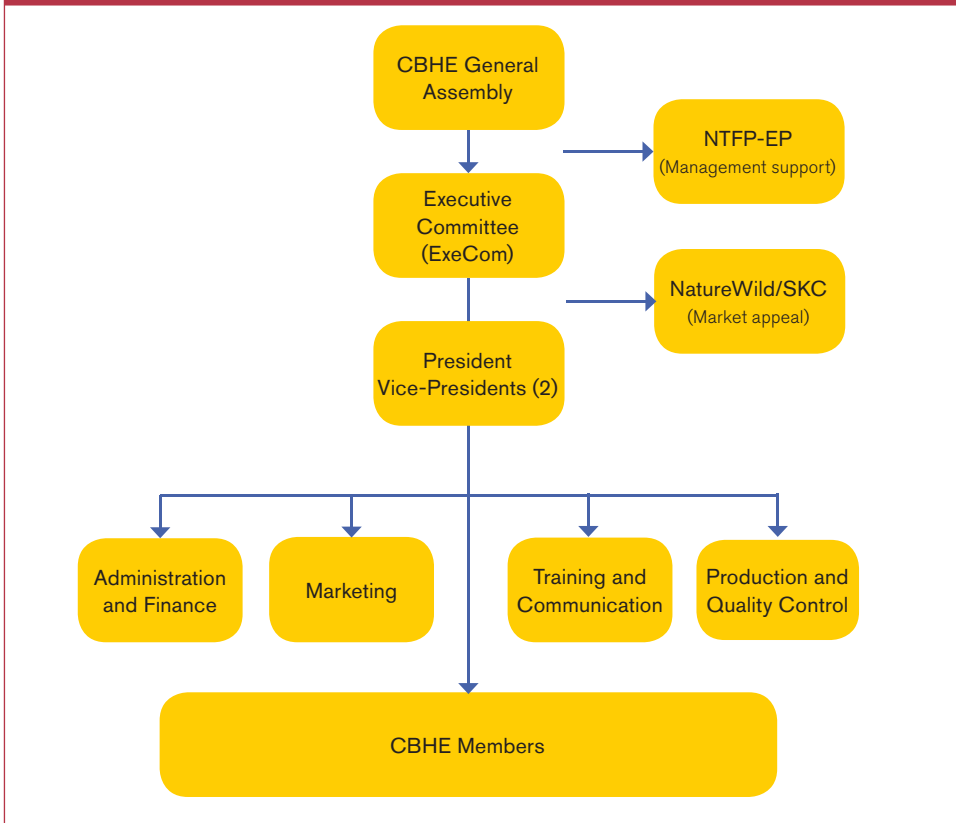
CBHE is controlled by an executive committee. Members are elected by the general assembly of representatives from member community honey enterprises. It plays a crucial role in leading the federation. The executive committee meets quarterly and reports to the general assembly annually (see Figure 6.4). There are 7–15 members serving on this committee who are elected during the annual general assembly. Currently there are 11 members, led by the president and two vice-presidents. Four others have specific functions leading sub-committees: administration and finance, marketing, training and communications, and production and quality control. The mandate of the executive committee is two years. More than 90 per cent of committee members are men, as only men climb trees to harvest the honey and there are limited empowerment and education opportunities for women, which discourages them from taking management roles.

The members of CBHE have to follow certain rules and regulations including:

- Paying a one-off membership fee of Riel20,000 (US\$5)
- Following the Cambodia wild honey collection standards
- Selling their harvested honey to CBHE
- Inspiring more people to join CBHE and sharing best practices with others

There are two ways in which members receive financial benefits from being a member of CBHE. Firstly, from income from direct sales of wild honey to CBHE. Secondly, some provinces such as Mondulkiri and Koh Kong have established their own ventures in which members can buy shares. Members receive a share of the profits from income made from selling wild honey or other NTFP products.

Figure 6.4 Organisational structure of CBHE



This benefit-sharing model was outlined in the CBHE Business Association Articles and By-Laws; the process of producing the document was facilitated by NTFP-EP Cambodia with the participation of CBHE founding members.

6.3.4 Staff selection and roles

The executive committee is elected from member representatives. There are few full-time staff in this operation. The president works as a key player to motivate and support the team in achieving their annual plan. In addition to that, NTFP-EP Cambodia's enterprise team provide strategic and management advice to the executive committee when needed, while NatureWild provides useful information regarding market opportunities, packaging and the feasibility of scaling up. For instance, NTFP-EP Cambodia researches any adjustments needed regarding harvesting techniques and CBHE's executive committee then decides whether the changes suggested are appropriate and possible.

The committee members are mainly based in the provinces they come from and they implement their scope of work there. Only Ms Hak Laang, Administration and Finance Officer, works full time in Phnom Penh to assist in the delivery of honey to Phnom Penh,

doing quality checks, and managing payments from customers before then sending income to the local committees. While others work on a voluntarily basis, she is employed by NTFP-EP Cambodia.

6.3.5 Delivery options

CBHE does need further support from NTFP-EP Cambodia and NatureWild to explore better delivery options. For example, NatureWild contacts potential buyers such as Brown Coffee, Raffles Hotel Le Royal and pharmacies in Phnom Penh. In this context, the primary role of CBHE is to ensure that there is enough supply to meet the orders from NatureWild and SKC.

It would also be possible for CBHE to do their own packaging and sales at provincial level with their own centre and facilities. Currently, only MFV have their own production centre and shop in the provincial town. For example, in Mondulkiri province, the committee set up a venture and shop in Sen Monorom town, where they installed a honey processing and packaging room. However, the final product needs a different label to Khmum Prey honey as it may not comply with national standards.

6.3.6 Customer research

SKC as a founding partner of CBHE continues to have a yearly renewable buying agreement with CBHE. This includes an agreement to package honey using the Khmum Prey branding. SKC has over ten shops which sell natural products in Phnom Penh. More than half of CBHE's annual production is delivered to SKC and packaged and sold by them.

In addition, CBHE also have an agreement with NatureWild, who act as a marketing agent/intermediary responsible for finding more buyers, for positioning Khmum Prey particularly in niche markets, investigating ways to reach these markets and what these customers want. Although the executive committee members take part in exhibitions and promotional events locally, nationally and even internationally, NatureWild takes the lead role in marketing Khmum Prey. NatureWild consists of a business manager, a project officer and a sales and marketing assistant. They promote Khmum Prey honey on television programmes, at exhibitions and trade fairs, youth events, networking and social gathering events, and via social media.

There are three main consumer categories for CBHE's honey. For the home consumer, NatureWild must ensure the product is widely distributed and its core values well communicated (SKC also did a bicycle promotion campaign in Phnom Penh, allowing people to taste the product while raising awareness of the benefits of Khmum Prey honey and where to purchase it). NatureWild also markets Khmum Prey to beauty/healthcare retailers who purchases Khmum Prey honey and beeswax to produce message oils and soaps etc. Most buyers in this category, for example, Bodia Nature, target wealthier customers. CBHE, through NatureWild, is the only supplier that can offer this raw material to them. Last but not least, NatureWild targets hotels, restaurants and coffee shops which use honey for food, drink and gifts/souvenirs. These buyers seek the best natural pure honey as an opportunity to improve their image in terms of meeting their social and environmental responsibilities to their premium customers, which fits well with CBHE's product value proposition.

6.4 How has CBHE overcome key challenges?

6.4.1 Challenges to do with the value proposition

As the number of economic land concessions¹ has increased, Cambodian forests, particularly in areas where people's livelihoods are based on NTFPs, have decreased dramatically in the past 10 years. Between 2000 and 2012 alone, the country's deforestation rate was roughly one per cent a year. Cambodia today ranks the fourth highest in deforestation rates among major forest countries after Brazil, Nigeria and Vietnam (Butler, 2014). Even concessions to some parts of the National Park or protected areas have been granted for rubber and cassava plantation. The shrinking dry forest area causes change in the bee's biological system and decreases the amount of honey harvested. The legal registration of a community forest is the only way to ensure that a particular forest area is well-protected by a local community with the rights of harvesting those NTFPs products within their areas.

The traditional way of collecting honey has been another challenge. It can immediately provide the harvester with a larger amount of honey and it is much easier to harvest honey without following protocols. Not all of the collectors agreed to join the official honey producer group as they were unwilling to change their harvesting patterns. Those who were willing to try and became members of the group received training on sustainable honey harvesting, proper honey handling, labelling and brand development. As community members were not yet completely ready to take on all of the production processes, external technical assistance in packaging and marketing was deemed necessary and NatureWild was contracted. Experience from this test period served to improve the enterprise operation which included quality control and monitoring, a grading system and improved packaging. This experience was incorporated into the 2009–2011 business plan which now serves as a blueprint for business and marketing, and has been subject to annual reviews.

Producers in Koh Kong faced some specific problems. In addition to delays in fulfilling some customer orders for honey in 2008, other problems faced by the honey group included incidents of honey-head theft and harvesting of unripe or immature honey. This was believed to be instigated when the honey-head price was set, which was much better than the prevailing market price. Part of the problem is that honey colonies are regarded as common property. Currently, the honey collectors make small signs and mark the honey trees to establish ownership of the bee colonies. Rafter beekeepers² now also make sure their rafters are guarded. However, overall, the management of the honey group is still weak even though they have clear regulations, structure and roles. Sustainable harvesting techniques are not fully promoted nor widely practiced.

6.4.2 Overcoming legal challenges to do with resource access

Based on Cambodian law, the transportation of NTFPs must be done under a legal licence from the Department of Forestry, and a certain amount of tax must be paid to the department as well. Because the business model is still at the local level with little profit yet generated for its members, CBHE has managed to obtain a tax-free licence from the Department of Forestry. This task was undertaken by NTFP-EP Cambodia's enterprise team.

1. A controversial measure brought in by the Cambodian government in the 1990s, an economic land concession is a long-term lease that allows the beneficiary to clear land to develop industrial agriculture.

2. Rafter beekeeping is where poles (rafters) are used to mimic branches to encourage migrating giant honeybees (*Apis dorsata*) to settle on them. See: www.accb-cambodia.org/en/beekeeping.php

Another challenge was finding proper packaging material locally. In general, glasses and jars are not available in the country and NatureWild worked hard to seek jar suppliers in neighbouring countries like Thailand and Vietnam. The importing of packaging materials has added to costs, but there is no other choice. The available Cambodian plastic bottles were not deemed appropriate for this premium product. Until 2014, NatureWild worked in partnership with Confriel, the largest domestic manufacturer dedicated to promoting authentic Khmer products and values while at the same time improving the economic activities of rural farmers in commercialising sugar-palm products to uplift their incomes and living conditions. This allowed NatureWild access to a variety of bottles in different sizes and shapes with lower costs.

6.4.3 Overcoming ownership and benefit-sharing challenges

Benefit sharing is facilitated according to the regulations created by the honey group. Members who collect honey heads and sell to the honey group receive direct benefits through the honey payments.

The management committee benefits through service fees for overseeing the purchase of honey from members, honey processing and delivery to buyers. However, in 2008, the honey group management committee reported that they had not received their full benefits from the honey project. The reasons were mainly because they were only able to buy a small amount of honey per head (70.6kg) from their members as it was nearly the end of the season.

Also around this time, the Community Forestry Partnership (CFP) team and the committee miscalculated the cost per litre of honey. They assumed that 1 litre of honey equalled 1.36kg of honey head and only later realised during the actual honey processing that 1 litre of honey is actually equivalent to 1.58kg of honey head. A fraction of the honey group's working capital was lost in over-payment to members. While a lesson learnt, this was not seen as a major loss since the extra payment meant a bonus to the members.

6.4.4 Overcoming labour challenges

To ensure that the elected executive committees are competent in leading and managing the network, certain criteria were stated in the articles of association. Member should be:

- Able to read, write and calculate properly on basic mathematic,
- Mature (aged above 25 years),
- Committed to lead, respectful and with a strong team spirit, and
- Impartially appointed (no nepotism).

If a committee member cannot perform his/her duties to the expected level, their candidacy is reconsidered in the next election.

In terms of externally sourced assistance, although NatureWild and SKC in Phnom Penh are responsible for packaging, they are transferring technology to those groups which are ready to do packaging themselves step by step.

Finally, an increasing trend of using off-farm labour on industrial plantations has been widespread in the project area and a tendency of workers migrating abroad has also

attracted honey collectors away from rural areas. However, though some members have left, enough new members have been recruited to replace them.

6.4.5 Overcoming marketing challenges

Thirty-litre plastic tanks are used to transfer honey from the community to the province, and from the province to the national level. A taxi or bus is paid to deliver the honey although for shorter distances and lower volumes, villagers will sometimes transport their produce on their own motorbikes. There has never been any noticeable challenge regarding the delivery of the product.

To attract new customers, a promotional campaign went to the streets, hit crowded events, and popularised the product via the media. Although some people are still unaware of why the product has a high price, CBHE, NatureWild and SKC have managed to find enough buyers for their supply. Customers keep coming as long as the network maintains its wide distribution channels for a product of high and trusted quality and keeps improving the packaging design. NatureWild is building partnerships with the Institute of Technology of Cambodia and Confriel to perform regular quality checks by a third party and to develop new recipes for honey by-product such as honey vinegar, wine, juice and honey-and-lemon tea. While these partnerships are under development, CBHE has also built a good partnership with other small and medium enterprises under the membership of the Federation of Associations for Small and Medium Enterprises of Cambodia (FASMEC), to look for ways of engaging other businesses with honey products.

The number of honey products available on the market is undoubtedly confusing for consumers. Do consumers opt for whatever is available, instead of looking for the Khmum Prey brand? Or when they do see the products on sale with the proper label and nice packaging, do they just pick it up without realising its value proposition and social and environmental impact? CBHE, NatureWild and SKC have joined forces to try to ensure that each consumer knows the message behind the branding. Training on branding and marketing has been provided to members of CBHE in each province.

Setting up pop-up stores at events such as the One Province, One Product trade fair, Christmas fairs, and other annual exhibitions allows more and more people to learn about how CBHE products are distinguished from others and are taking care of environmental and social responsibility. Khmum Prey products are also being exhibited at educational events like the Green Night at Meta House (a cultural centre in Phnom Penh), at major high-school fairs and at 'edutainment' concerts about wildlife. Using mass and social media also offers a greater chance to engage with Khmum Prey's key audiences, answering their questions, and alerting them to its value proposition.

6.5 Key lessons

6.5.1 Keeping down costs

To keep down the cost of transportation and initial processing, the committee waits until it receives an order to buy a large-enough volume of honey that can be processed and transported efficiently to Phnom Penh in one go. This saves processing time and labour costs associated with these jobs. Sometimes, the committee members will just bring the

honey with them when they travel to Phnom Penh for quarterly meeting so that the cost of delivery can be decreased slightly. Furthermore, when jars are ordered from Thailand, usually more than 1,000 jars are ordered at a time to reduce the unit and delivery costs.

Finally, at this stage, the committee is still working on a voluntary basis. Only their operation expenses are covered. This saves on staffing salary costs – but will have to be rethought as the business expands.

6.5.2 Retaining customers and willingness to pay

The use of branding of well-known conservation organisations such as WWF and NTFP-EP has increased customer confidence in CBHE products. But the Khmum Prey brand has now been established in its own right due to the quality of its production, packaging and marketing. The benefits and uses of wild honey have also been clearly communicated to customers who may have been unaware of how to use this product besides making food and drinks. The design of the packaging has also been crucial to winning over customers. Cute, clean packaging motivates them to purchase CBHE products as gifts for special occasions.

Although CBHE operates as a business association, it has not yet focused on making a profit. In addition, there are no shareholders or investors in this business model yet. However, NatureWild and SKC function as business institutions to market and sell this product. The role of CBHE at this stage is focused on ensuring the quality of honey produced by its members and that supply matches demand. CBHE is strengthening its internal control systems and creating a well-respected certification process for the different honey groups so that they are able to generate a sustainable income for the association as well as supporting their own operational costs. The executive committee may in future also get paid by working as auditors in the harvesting and processing value chain.

6.5.3 Success factors

Cultivating economic benefits from community-based honey enterprises provides a powerful incentive for community participation in forest management. It changes attitudes, capacity and resource management practices (particularly in the case of honey harvesting/collection and protection of bee trees).

Developing the economic value of NTFPs like wild honey, provided that there are tangible benefits that communities receive, helps to encourage villagers to be more active in forest protection and also to cooperate with other villagers in this effort. As tangible benefits expand, changes are becoming apparent in attitudes among the honey group members. These relate to their participation in the enterprise activities, compliance to agreed rules and regulations, sharing information and a sense of mutual help and cooperation. Additionally, in the case of Mondulkiri, there has been a revival of traditional rituals and customs associated with honey harvesting that has also resulted through the course of the NTFP-EP project. A sense of stronger leadership and fellowship is also emerging although this still needs to be further encouraged.

The growth of CBHE depends significantly on its distributors NatureWild and SKC. Unless these two institutions discover ways to process raw wild honey into other processed

products, expand the market for existing products, or increase profit margins, the income of CBHE will remain the same.

On the other hand, CBHE itself also has to strengthen its vision in becoming an association that provides quality certification to other individual honey collector groups. They need to consolidate their reputation of wild honey quality which is still at a formative stage, although present acceptance of customers seems promising. A trusted external quality-control process combined with a consistent scientific method can maintain this reputation in the long run and open up possibilities for scaling up.

Community-based enterprises provide the livelihood support dimension for community forestry (CF) and community protected areas (CPA) that are mandated under government policy. The livelihood process and linking should start at the earliest stage of CF/CPA development. For the communities to succeed with their livelihood activities and for good CF/CPA management, facilitation is important. There is a need to strengthen organisation at different levels. There are many types of facilitation including resource inventories, monitoring, policy support, processing techniques and market linkages.

Financial support should be provided in the forms of grants or soft loans at the initial stage of enterprise development so that the communities are able to carry out their business. Capacity building and technical support are needed for the community to fully implement sustainable CF/CPA management and livelihood activities. Networking and knowledge sharing in community-based CF/CPA management and enterprise development could provide the community with opportunities to learn good practice, and identify solutions to challenges. For example, networking has also paved the way for capacity building and organising support of CBHE via NGOs, social entrepreneurs and other stakeholders.

Wild honey is a valued local traditional product and therefore access to the domestic market was not difficult. However, maintaining the edge could also be challenging. Forming local business groups allowed for a stronger negotiating position and a better price in the market. The federation, CBHE, has further built and scaled up this model to national level and beyond.

The role of CBHE officers at federation and local level is critical in keeping members motivated and gathering loyalty to the group and the collective business concept. Developing incentives and building a working mechanism for benefit sharing is key. Benefit-sharing mechanisms established and agreed among members and partners provide a strong incentive for participation and enhance a stronger sense of ownership.

Finally, linking with new intermediaries like NatureWild also provided additional options for getting a better price and provided access to high-value markets. The role of intermediaries for technical and market support is also important in promoting and cultivating fair, equitable and sustainable principles. Exploring the use of CBHE as a collective trademark would add significant value/premium to Khmum Prey products.



Ethiopia: Non-timber forest product business models

A case study from Ethiopia: Aburo Forest Managing and Utilizing Cooperative (Agubela frankincense business group) and Birbirsa Natural Resource Conservation Cooperative (coffee producer group)

by Mulugeta Lemenih and Husien Idris

Can high rates of deforestation be tackled by making forests pay? This is a key question for sustainable forest management in Ethiopia. This chapter describes the work of two cooperatives in Ethiopia: the Abugela frankincense business group of the Aburo Forest Managing and Utilizing Cooperative and the forest coffee-growing group of the Birbirsa Natural Resource Conservation Cooperative. After years of deforestation driven by poor forest management and government policy, the cooperative model is business-oriented (profitable), with clear legislation and guidelines, and has strong support from the government. These two cases show how the cooperative model, combined with participatory forest management and bringing forests under local control, is increasingly providing an incentive for local communities to conserve – and profit from – their forests.

7.1 Context in which the Aburo and Birbirsa cooperatives operate

Ethiopia's forest resources have suffered decades of mismanagement. Deforestation has long been a problem in Ethiopia, and is taking place at the rate of 140,000ha per year (FAO, 2010). The underlying drivers of forest loss and degradation are many but primarily relate to poorly defined forest property rights and tenure security, a lack of engaged and empowered local communities in forest management and unattractive incentives from the use of forests compared to alternative land uses. Government claimed sole ownership of forests in an attempt to protect forests from local people with the help of hired guards. Forests have a high potential for the sustainable production of high-value timber and non-timber forest products (NTFPs) such as coffee, honey and spices. However, due to the government's protectionist approach, forest products-based businesses have been poorly developed, and neither the government nor the local community benefit from this potential. Because of their alienation from managing and benefiting from forests, local communities are instead acting as agents of deforestation.

7.1.1 The enabling environment

In 1995 FARM-Africa Ethiopia, in collaboration with federal and state governments of Ethiopia, introduced participatory forest management (PFM) to Ethiopia. The approach provides a much-needed method to improve forest management conditions in the country by bringing together forest-adjacent communities and governments. Through PFM, local communities (organised into community-based organisations (CBOs)) and government forestry agencies establish a forest management agreement that specifies roles, rights

and responsibilities for each party. The development of CBOs fills the institutional gap at grassroots level, which has historically driven large-scale deforestation and forest degradation. Today, governments in most regional states of Ethiopia have formally recognised PFM as one effective model of forest management and have given it a legal backing, which boosts the confidence in the communities to manage the forest better and improve conditions and productivity. Under the PFM arrangement and through the ratification of management agreements, forest communities acquire an exclusive use right over NTFPs and an opportunity to share revenues from timber extraction and wildlife trophy hunting. At present, close to 1.5 million hectares (30 per cent of total) of natural forests existing in Ethiopia are managed with the PFM system.

A key component of establishing a successful PFM in the model followed in Ethiopia is the development of profitable forest-based enterprises that sufficiently incentivise local communities, providing more than alternative land uses can offer. For communities to sustain their support and efforts in forest management, the forest must pay off. This is the only way to make forest management relevant to them. Along this line of thinking, the PFM approach as a whole has evolved considerably since Farm Africa piloted it first in 1995. The original focus was on improving forest protection by mobilising and engaging communities, combined with non-forest-based livelihoods, primarily agricultural intensification and improvement (Temesgen *et al.*, 2007). The premise was that poverty and agricultural land expansion were the main drivers of deforestation; hence addressing poverty through greater agricultural productivity, plus engaging local communities in forest protection, would resolve the deforestation challenge. However, it quickly became evident that forests, if not economically used, would not be managed well. Local people were found to pay more attention and invest their time and energy more in activities that support their livelihoods. Therefore, rather than simply being ineffective, promoting agriculture has actually proved counterproductive by intensifying deforestation (Temesgen and Lemenih, 2012). PFM has thus evolved to focus on achieving conservation by 'making forests pay'. Forests are now actively managed, rather than protected, and communities are granted legal rights to produce and market forest products on a sustainable basis to enhance their household income (Temesgen and Lemenih, 2012; Amaha, 2013).

Following this evolution, PFM models today are putting equal emphasis on the active management of forests that involves the development of forest-based enterprises from NTFPs and timber in some cases. Local communities are given the support needed to start up such businesses from government and development partners, including support in value-chain development, capacity building and the provision of improved technologies.

In collaboration with regional and federal governments, Farm Africa and SOS Sahel Ethiopia are currently implementing two PFM programmes in the country. These are the Strengthening Sustainable Livelihoods and Forest Management Programme in Ethiopia (SSLFMP) and the Bale REDD+ (reducing emissions from deforestation and forest degradation) project. The former programme was started in 2010, while the latter was started in 2013. The Bale REDD+ project is in fact a continuation of a long-running earlier project (2006–2012) called the Bale Eco-Region Sustainable Management Programme (BERSMP). In this study, we present two community-run forest-based business models

from these two projects. One deals with frankincense production from the SSLFMP project. The second involved forest coffee production from the Bale REDD+ project.

In Ethiopia, frankincense (*Boswellia spp*) and forest coffee (*Coffea arabica*) are important NTFPs with a long history of use and production. The important role which both products play in the Ethiopian culture is illustrated by the intricate coffee-making ceremonies accompanied by incense burning (Wiersum and Lemenih, unpublished).

Coffee originates in the rainforests of southwest and southeast Ethiopia, where it still grows as a natural sub-canopy species in Afromontane forests at altitudes between 1,000 and 2,000m (Gole *et al.*, 2008). Around the 8th or 9th centuries, coffee was introduced to Yemen and from there it was in the late 17th century further distributed as *Coffea arabica* to Asia and Latin America. Coffee is an important component of local and national economies in Ethiopia. At national level, coffee contributes 10 per cent to the national GDP, and its export generates a significant amount of foreign trade accounting for 70 per cent of Ethiopia's foreign exchange earnings. It provides a viable livelihood for 15 million smallholder farmers countrywide (USAID, 2010). At local level, its contribution to household total annual earning share can be as high as 50 per cent or more. Forest coffee, the wild variety, accounts for some 45 per cent of Ethiopia's total production of about 400,000 tonnes per annum (Gole *et al.*, 2008). Because of its forest conservation and economic importance, PFM in rainforest ecosystems in Ethiopia targets the promotion of sustainable forest coffee production as one means of realising profitable forest-based enterprise development.



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Bale Rainforest with naturally grown coffee (left) and drying Bale wild-forest coffee using appropriate technology (right)

Frankincense (also called olibanum) production and use also has a long history in Ethiopia (e.g. Butzer, 1981, Bard *et al.*, 2000). The *Boswellia* species producing frankincense grows in the semi-arid woodlands that cover large tracts of land in both the west and northwest parts of the country (Lemenih and Kassa, 2011). Frankincense has wide cultural and industrial uses. Historically its applications were restricted to traditional medicines, religious applications and house fumigation. Its applications have gradually expanded, and now it is used in a wide range of industrial products. It is a common ingredient in incense, perfumes and potpourris, soaps, detergents, creams and lotions, and also included in meditation blends. It is widely used in Ethiopia for domestic fumigation and

during coffee ceremonies and other social gatherings and ceremonies such as chewing *khat*. Similar domestic applications are popular throughout the Middle East, North Africa and Eastern European countries. Both Orthodox and Catholic Christians worldwide heavily utilise it in church rituals.

Following its expanded industrial application the commercial production of frankincense also expanded in Ethiopia. Large-scale commercial exploitation started in the 1940s in northern Ethiopia by the Italian colonists of neighbouring Eritrea, and later in the 1970s by a state enterprise called the Natural Gum Processing and Marketing Enterprise. This commercial production has gradually been extended to other parts of Ethiopia as well. Today, Ethiopia is the leading producer and exporter of frankincense globally (Coppen, 2005). A total of 29,340 tons of incense was exported in 1998–2008 (Lemenih and Kassa, 2011; Woldeamanuel, 2011) to more than 50 destinations worldwide.



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Frankincense woodlands of Ethiopia during the rainy season (top left) and dry season (above). Finished frankincense product (left)

7.1.2 The operating environment

The Abugela frankincense business group of the Aburo Forest Managing and Utilizing Cooperative is from the Kumruk district in Benishangul-Gumuz Region, while the forest coffee group of the Birbirsa Natural Resource Conservation Cooperative is from Bale eco-region in Oromia (Figure 7.1).

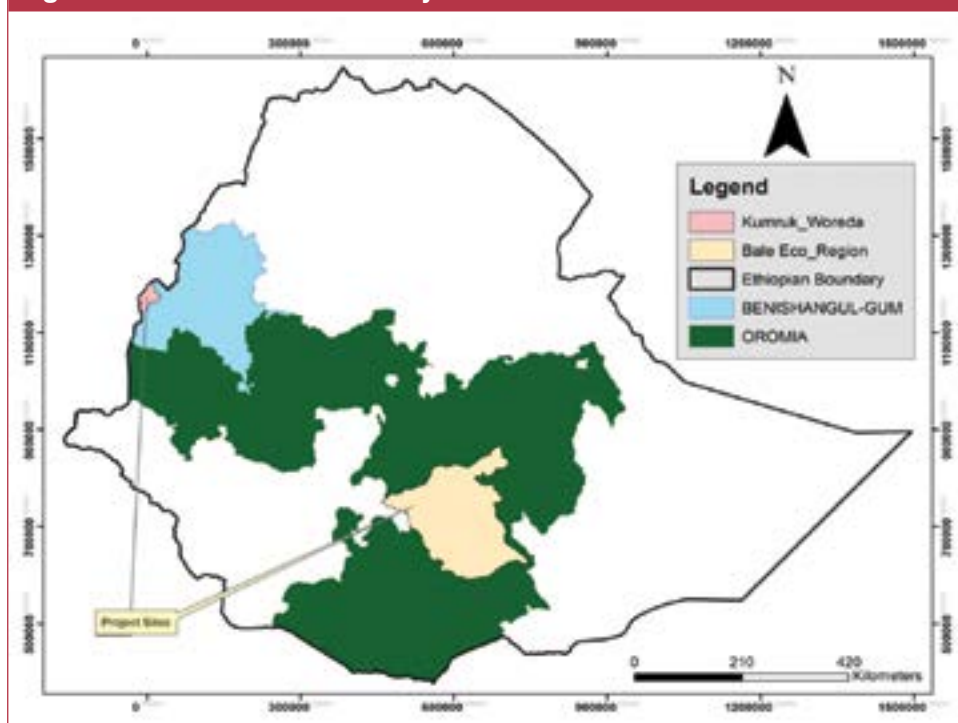
The Abugela frankincense business group falls within Benishangul-Gumuz which covers some 50,336km² of western Ethiopia, sharing a long border with South Sudan and the Republic of Sudan. It also shares a border with Oromia Region along its eastern side, Gambella Region in the south and Amhara Region in the north. The landscape is mainly low-lying flat plains with hills and mountains towards the eastern part of the region. The altitude in the region ranges between 580m to 2731m. The population of Benishangul-Gumuz is 784,345 consisting of 398,655 men and 385,690 women; urban inhabitants number 105,926 or 13.51 per cent of the population (CSA, 2007). Some 91 per cent of

the population lives in rural areas. Agriculture is the main livelihood, and comprises mainly shifting cultivation of sorghum, finger millet and maize, with smallholder mixed-cereal cropping and livestock production at higher altitudes.

Benishangul-Gumuz is endowed with diverse natural resources. It holds the largest lowland bamboo (*O. abyssinica*) in Ethiopia. It is also one of the regional states richly endowed with gum- and frankincense-producing woodlands. About 2.5 million hectares of such woodlands, 8 per cent of the total woodland areas in the country, is estimate to exist in this region (WBISPP, 2004). PFM was introduced to the region in 2010 to five districts including Kumruk. The project targeted 40,500ha of rainforests and woodlands and 30,500 local forest-adjacent communities. The specific ethnic group participating in the frankincense business model is the Bertha, one of Ethiopia's minority and marginalised ethnic groups. The Bertha group accounts for 25.41 per cent of the population of the region. They practice shifting cultivation and grow mainly sorghum and millet.

The forest coffee business group is from Bale eco-region in Oromia (Figure 7.1). Oromia is the largest coffee-producing region in Ethiopia and is also the regional state with the largest rainforest in the country (WBISPP, 2004). The Bale eco-region, where the REDD+ project is under implementation, hosts the second largest stand of moist tropical forest remaining in Ethiopia. It is also one of the last refuges of the wild Arabica coffee (*Coffea arabica*) genetic pool and its birth place. The eco-region covers an area

Figure 7.1 Location of the study sites for the business models



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of about 22,000km². Nearly 420,000ha of forests in the eco-region are already under PFM management. It is from this forest that local communities produce coffee berries from naturally grown wild coffee plants to earn part of their income. The communities in the eco-region managing and using the forests are predominantly from the Oromo ethnic group. Their main livelihoods are based on mixed agriculture (crops plus livestock production), and forest products harvest and trade, mainly forest coffee and honey. Honey and coffee are the main sources of cash income while cereals and livestock products are mainly for household consumption.

A cooperative model is used to organise and engage local communities in forest-based business development in most PFM projects in Ethiopia. The cooperative model is chosen because of its business-oriented (profitable) nature, and the existence of clear legislation and guidelines for its establishment and legalisation. There is also strong support for cooperative development by the government: the Cooperative Promotion Agency at federal level and the Cooperative Promotion Commission/Bureau at regional state level support the establishment, legalisation and monitoring of cooperative associations (Emana, 2009). Cooperatives can be self-initiated by progressive individuals within a community or initiated and supported by government and NGOs. The latter type of cooperative predominates in the case of forest-based cooperatives. The two cases presented here are also established and supported as part of PFM projects implemented by Farm Africa and SOS Sahel in collaboration with the governments in the respective regional states.

7.2 About the Aburo and Birbirsa cooperatives businesses

7.2.1 The vision

The **Agubela frankincense business group** belongs to the Aburo Forest Managing and Utilizing Cooperative, which was founded in 2011. The cooperative also signed a forest management agreement with the district agriculture office in the same year. The cooperative has a total of 181 members: 123 men and 58 women. The Agubela frankincense business group was founded in the same year as the cooperative with 19 members but until 2014 only seven members were active (Table 7.1). Membership size changes from time to time depending on leavers or new individuals joining the group. For instance, the frankincense business group started with 19 members in 2011 but grew to 21 members in 2014 (Table 7.1). Recruitment to a business group is only from within the cooperative.

Frankincense production has been practiced in the area for decades but local people have never been involved in the business. Companies such as the government-owned Natural Gum Processing and Marketing Enterprise (NGPME) held the forest concession and were producing incense from the area.¹ The companies used to employ people from other areas for production since the local community considered the work too arduous and it was stigmatised as poor peoples' work. Local uses of the forest were restricted to forest grazing and firewood collection, or clearing and converting it to farmland.

1. See <http://naturalgum.diytrade.com>

Since 2010/2011, forest-use rights to produce frankincense have been transferred to the organised community cooperative, and a market linkage was established with NGPME in 2011. NGPME has also supported the community by training them in tapping, collecting and handling the product. The group has also received other training on business skills and financial management. The trainings involved development agents (extension workers) to enable them to provide continuous technical support and regular follow-ups with the producer group.

The forest coffee group was established within the Birbirsa Natural Resource Conservation Cooperative which was founded in June 2009. Initially, the cooperative comprised about 450 members out of which 75 were women. However, members have grown to 1352 with 100 women by 2014. Out of the total members of the forest coffee group, of which 75 are women, 1002 are engaged in coffee production. In spite of having legal license to trade coffee both in the country and abroad, the Birbirsa PFM cooperative preferred to allow its members to join another cooperative called Magnete Coffee Producers' Cooperative of the neighbouring Chiri Peasant Association. The reason for joining is that the latter has established a good market linkage, hence can provide better marketing services. The Magnete cooperative is also a member of the Oromia Coffee Farmers Cooperative Union that has a long-standing track record of exporting coffee products of its member cooperatives. The Magnete cooperative was established in January 2008 and is operational with a total of 44 members out of which only 2 are women. Half of its members are also members that founded Birbirsa.

7.2.2 Business inputs and progress

The **Agubela frankincense business group** started with few business inputs. Before 2011, none of the local people engaged in the production and trade of incense. The main inputs came from Farm Africa in terms of forming a cooperative and joining forces in production. NGPME also supported the community by providing training. Since 2012, the incense group's production is growing, and so does the income received (Table 7.1). Having recognised the value of their resource, the community is committed to managing



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Agubela frankincense business group attend a practical training session on incense tree tapping (left) and a business group member with the incense collected by the group (right)

their resources and sustainably producing incense. Some of the business group members interviewed explained the tremendous impact the development of the enterprise has had on their livelihoods and incomes. Box 7.1 gives Ahmed Yakob's story, a member of the Agubela frankincense business group.

The business group members are responsible for the production of frankincense. They collect their annual produce and deliver it to NGPME through their legally recognised and licensed Aburo Forest Management and Utilizing Cooperative. The cooperative represent the business group in price negotiation and also provides marketing services to the group. Individual producers pay a marketing service fee to the cooperative as set out in the cooperative internal bylaws. Over the last three production years, for instance, individual frankincense producers generated a total revenue of ETB 215,342, whilst the Aburo Forest Management and Utilizing Cooperative received ETB 7,812 as marketing service fee.

Box 7.1 Ahmed Yakob's story: Agubela frankincense business group

Ahmed Yakob is a farmer and member of the Aburo Forest Managing and Utilizing Cooperative. He is 52 years old and married with six children. Ahmed narrated the history of how PFM was introduced to his village:

Initially, when Farm Africa people arrived at our kebele [neighbourhood] almost all of us were resistant to the idea of participatory forest management and making income out of NTFPs. This was because we were completely new to the concept. But after repeated awareness raising, trainings and exchange visits, some people changed their mind and began to engage in PFM, NTFP businesses and VSLA activities. I am one among the early joiners of the scheme.

In 2011, after receiving incense-tapping training, he and his group of seven actively produced the product throughout 2012. They earned a total of ETB 17,000. Ahmed's share for that year was ETB 2,428. The following year in 2013, he more than tripled his income from the production of incense to ETB 9,900. As a group, they earned ETB 67,000. Again in 2014, despite a security problem hindering their incense production business, the group has earned ETB 8300. The group has expanded to 21 members, and has collectively earned ETB 131,654.

Ahmed says that, inspired by their performance and income earning, more and more people are joining their business group and engaging in incense production. He says, 'I myself envisage to continue engaging and increasing my earning from NTFPs, God willing.' Ahmed thinks the incentive of generating income from forest resources is encouraging him and his colleagues to care more for its very existence and sustainable management.



Ahmed (right) with his fellow incense business group women member (left) with sack full of tapped incense.

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Table 7.1 Business performance of the Agubela frankincense business group

Year	Numbers involved in production			Quantity produced (kg)	Revenue generated (ETB)*		
	Men	Women	Total		Revenue divided among individual members	Fee paid to the cooperative	Gross revenue generated
2011	7	0	7	0	0	0	0
2012	7	0	7	700	22,050	700	22,750
2013	7	0	7	2,000	64,750	4,000	68,750
2014	14	7	21	3,279	128,542	3,112	131,654
Total	35	7	42	5,979	215,342	7,812	223,154

*ETB denotes Ethiopian Birr: ETB20 = approximately US\$1.

The forest coffee group also started from a very low base with initial inputs from Farm Africa to train members in quality collection, processing and storage. Members have continued to develop activities that include collecting, drying and packing coffee. Since 2011, the group has also done well in trade through the Birbirsa Cooperative. As shown in Table 7.2 the quantity of coffee produced and income earned has grown over time.

Box 7.2 below presents Abdulmajid Isak's story, one of the participants in the forest coffee business group. His story demonstrates the potentials of NTFPs business development to enhance household income and reduce poverty.

Table 7.2 Coffee supplied by the Birbirsa forest coffee group cooperative since 2011

Year	Quantity (kg)	Price (ETB/kg)	Total revenue generated (ETB)	Remarks
2011	1,020	150	153,000	Traded overseas
2012	5,100	85	433,500	Sold locally
2013	10,000	120	1,200,000	
2014	7,650	112	856,8000	

7.2.3 Main activities

The main activities of the Agubela frankincense business group members are to collect the incense, sun dry the product, and then pack and store it in a storehouse belonging to the cooperative. The market chain for frankincense shown in Figure 7.2.

Box 7.2 Abdulmajid Isak's story: Birbirsa Cooperative and coffee producer group

Dello Mena is a district in Bale which includes a large part of Bale's moist tropical forest. The forest is rich in resources. Despite this, many of the coffee farmers including Abdulmajid Isak were desperate because of the poor performance of their coffee businesses. They all decided to quit coffee farming altogether and were in the process of transitioning to subsistence crop farming when Farm Africa/SOS Sahel Ethiopia arrived in their village.

Now, according to Abdulmajid, things have changed. When he and his colleagues began working with the project in mid-2007, he received training he needed to produce high-quality coffee. The farmers organised into cooperatives and began linking their businesses to the market properly. The training he acquired included how to select and collect the best berries; how to dry them properly on a raised bed made with mesh, and how to use hessian sacks for packing and storing. The project also arranged for Abdulmajid and his colleagues to meet and exchange experiences with other successful coffee farmers.

The Birbirsa Cooperative was formed in 2009 and started providing marketing services to Abdulmajid and other members of the cooperative. Members supply their produce to the cooperative which in turn exports it through the Oromia Coffee Farmers Cooperative Union. Abdulmajid supplied 50kg, 345kg and 633kg of coffee in 2010, 2011 and 2013 and sold a kilogram of coffee for the premium prices of ETB 150, ETB 87 and ETB 120 respectively, against central market prices of ETB 50, ETB 57 and ETB 55. This made him a total income of ETB 113,000.



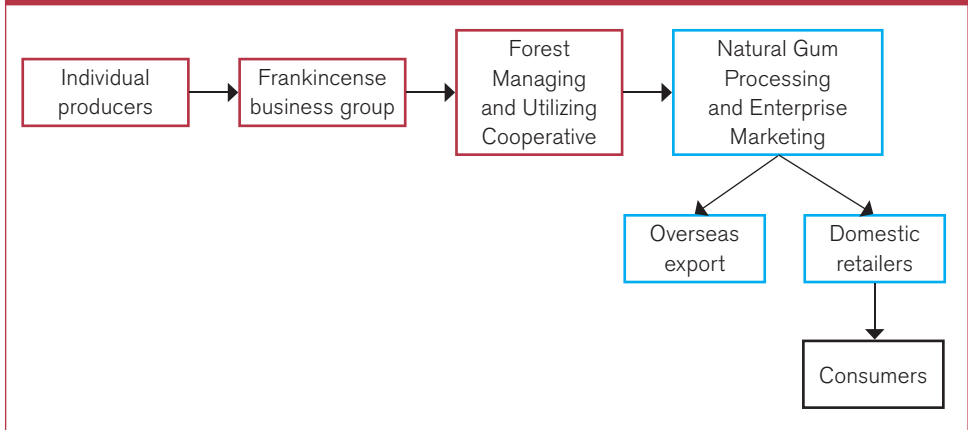
© Farm Africa

Abdulmajid proudly showing his quality coffee which is ready for sale

Abdulmajid told us that his earnings from coffee are growing exponentially from a couple of hundred Ethiopian Birr before the project to thousands. As Abdulmajid explained, the primary source of his increased income originates from premium prices accessed for the higher-quality coffee he has been producing since benefiting from the project's technical and material support. In 2014, Abdulmajid and his fellow cooperative members sold their coffee to Equoqui Roasters Association, an Italian company. They sold it through the Oromia Coffee Farmers Cooperative Union for US\$3.8/450g (about ETB 159/Kg). From supplying 1,500kg of coffee, Abdulmajid earned ETB 238, 500. Compared to local prices, which in 2014 was about ETB 50–55/kg, the price that the premium coffee project beneficiaries obtained was three times higher. Abdulmajid stated that the difference before and after the project has been huge and the impact is clear. When our team recently spoke to Abdulmajid, he proudly told us: 'Steadily but surely I am chasing poverty out of my home.'

For the **forest coffee business group**, coffee-producing farmers were not organised for production and marketing of coffee prior to the project. Consequently, the marketing chain was long, involving a number of intermediaries (Figure 7.3). Farmers collected their coffee cherries (often a mix of green and red cherries) and air dried the cherries on the bare ground. The air-dried coffee beans were purchased by village collectors (village coffee merchants), who sold their collection to larger town merchants (collectors). These town collectors added value by de-pulping the dried coffee cherries, which they transported to

Figure 7.2 Frankincense market chain

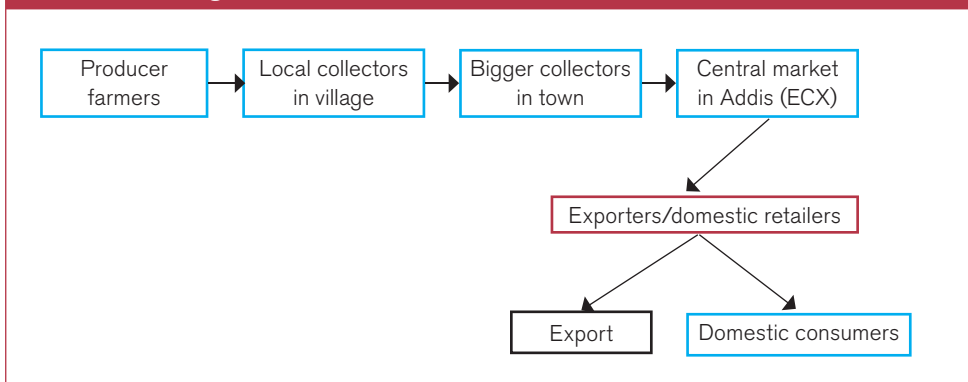


the central market in Addis Ababa. Once in Addis, the coffee was purchased by coffee exporters at auctions in the central market. While the best quality coffee was finally exported to overseas markets, the lower-grade quality coffee was supplied to local markets through retailers.

But because of the poor quality of coffee from the area, there was limited, if any, exported coffee from the Bale eco-region. However, exports became a common target market following the establishment of the cooperative and support in market linkages. The intervention through the project has changed this chain in several ways:

- Coffee producers are now organised into cooperatives
- Coffee producers from the cooperatives are now linked to several markets
- Coffee producers are trained to improve their coffee and receive material support, and
- Certification of the produce has been supported through the Rainforest Alliance certification scheme.

Figure 7.3 Forest coffee market chain before PFM project intervention in Bale eco-region

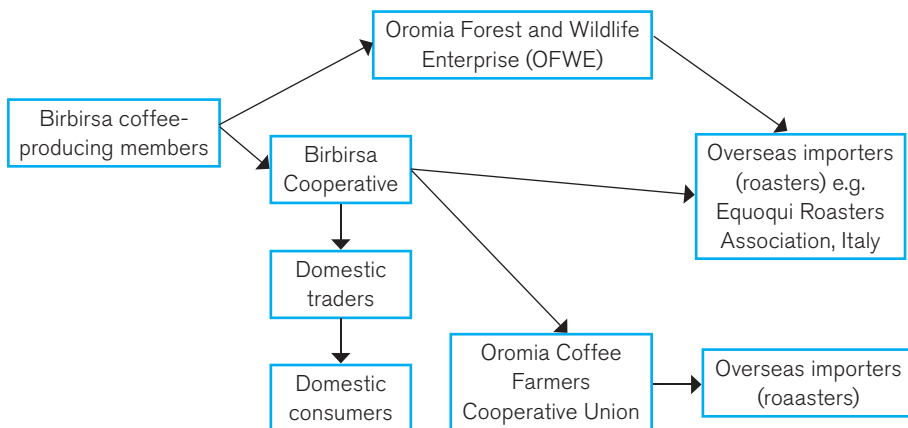


Market linkages were established with Oromia Forest and Wildlife Enterprise (OFWE) in 2009, which was further linked to importers in Europe. The arrangement is that OFWE purchases the quality coffee from Birbirs group with a 10–25 per cent price premium above the local market price. In other arrangements, Birbirs and similar coffee cooperatives are directly linked to specialty export markets with the Equoqui Roasters Association facilitated by Slow Food Italy. This linkage yields a price that is three times higher than the local price (Table 7.2). Before, farmers were selling a kilogram of coffee with a maximum price of ETB 40–50 (about US\$2–2.50). With Equoqui Roasters, farmers were able to sell their coffee at a price as high as ETB 150 (about US\$7.50), which is nearly a 300 per cent increase over local prices. The price gain was the function of improvement in both the quality and quantity of production. This also improved the market chain significantly. At present, three main market chains are observed for coffee from the eco-region (Figure 7.4).

7.2.4 Technology and skills

The **Agubela frankincense business group** uses fairly basic technology. Members collect, sun dry and store the incense. The business group delivers bulk production but does no further processing such as sorting, grading or any other value-addition activities. At end of the production season, NGPME is informed when the season's harvest is ready. Then the company visits the storehouse, weighs the harvest and pays the group according to an agreed price, which is negotiated based on local prices at the time of sale. NGPME has willingly agreed to pay ETB 5/kg above the local price at the time of sale. NGPME transports the incense to its store in the regional town where it cleans, sorts by size and colour and grades the incense according to its own standards and finally relays its annual purchase to the central store in Adama (near Addis Ababa) for export.

Figure 7.4 Forest coffee value chain after PFM project intervention in Bale eco-region



For the **forest coffee business group**, until 2009 there was no export of coffee from this part of the country. Most of the coffee produced from the area was also of poor quality. Farmers had no formal training on how to ensure quality during production and post-harvest handling (see Box 7.3). Since 2008, the project has provided intensive training and provided coffee improvement technologies (drying beds/hessian storage sacks), which have resulted in significant improvements in the production system (see Box 7.3). This was followed by organising the farmers into cooperatives and finally establishing market linkages in 2009.

7.2.5 Business partners

The main business partners for both cooperatives have been Farm Africa which has provided them with support in both forming the cooperatives and training its members to improve their production processes.

7.2.6 Customer groups and product types

For the **Abugela frankincense business group**, so far NGPME is the only agent to purchase the incense produced by the group. This is because NGPME has been the dominant actor in the sector. As a government enterprise it also shows more social responsibility as reflected in its willingness to pay better prices than the local market.

The **forest coffee business group** has seen some major advances in establishing new customers since forming the cooperative, as described above. For example, they managed to establish a sales agreement with OFWE, which was further linked to importers in Europe, alongside direct market links to buyers such as the Equoqui Roasters Association in Italy.

Box 7.3 Changing forest coffee production and handling techniques

Following a Farm Africa/SOS Sahel Ethiopia project intervention, the Birbirsa Cooperative has changed its forest coffee production and handling techniques, resulting in higher-quality and standard coffee.



© Farm Africa

These photos show the collection, drying and packing techniques used before the project. Note how mostly green coffee cherries that have been collected, dried on the bare ground and packed, which results in poor-quality coffee.



These photos show the proper technique of collecting and drying of coffee following training provided by the project.

7.2.7 Differentiation in the market place

Whereas the **Agubela frankincense business group** has no particular strategy in place to differentiate its product in the marketplace, because of strong demand from NGPME, the **forest coffee business group** has managed to achieve certification of its produce through the Rainforest Alliance certification scheme. This certification, along with supported tests in coffee quality with the Ethiopian export agency, and the development of a strong Bale Wild brand (coffee coming from the genetic origin of the species from the natural rainforest understory) has helped the Birbirsa Cooperative to market their product to export buyers directly and through OFWE. The results have been a major price increase as described above.

7.3 Who controls the Aburo and Birbirsa cooperatives?

7.3.1 Origin of the value proposition

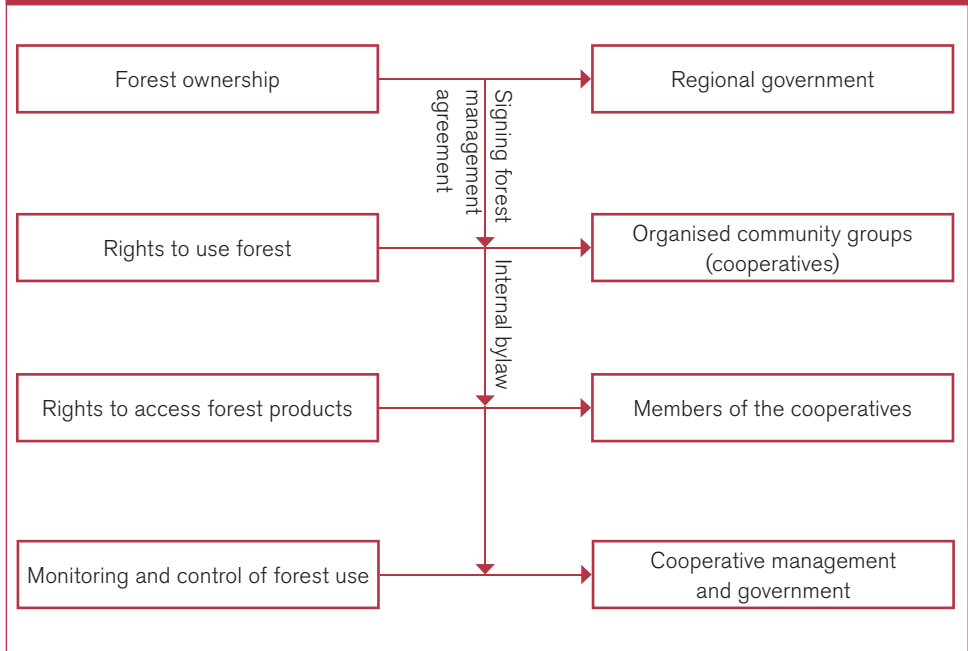
The founders of both business groups are members of their respective cooperatives interested in engaging in developing NTFPs as a business. A group member must first be a cooperative member. A member of a cooperative can be enrolled into one or more business groups at any one time without differential treatment from the initial members. Joining a business group involves no cost or payment. Operation of the business groups is governed by cooperative regulation and the respective cooperative internal bylaws. According to the country's cooperative regulation, cooperative membership must be open to all and at all times, provided members fulfil the requirements (see Section 7.3.3). Once registered as a cooperative member, new members have also the same right as others to enrol into any of the business groups.

Membership is equally free to men and women. It is voluntary, and makes no restriction on the basis of sex, ethnicity, religion, political outlook or any other differences. Whoever is interested and fulfils the requirements (see Section 7.3.3) can qualify to be a member. Projects always encourage both genders to participate and conduct awareness-raising activities to motivate people to join. However, as it is often the case in many development initiatives, men dominate in terms of membership size (e.g. Table 7.1).

7.3.2 Control over forest resource access

The signing of forest management agreements (FMAs) grants cooperatives the right to access forests for the production of NTFPs and market what they produce. The forest management agreement document comprises a map of the forest and a forest management plan. The management plan outlines activities related to forest development, protection, utilisation and monitoring procedures. Cooperatives are granted an exclusive use right to NTFPs and domestic use of forest products, and access to timber products under a special agreement. Yet the forest ownership right remains with the government (Figure 7.5). The role of the government is to monitor performance of the cooperatives such as implementation of the forest management plan. If these are fulfilled, the cooperatives can enjoy their rights without restriction. Access rights for members of a cooperative are governed by cooperative internal bylaws, which are required to be documented and included with the forest management plan before the FMA can be signed. Members of a cooperative collectively defend their forest against outsiders, whether non-members within the same village or outside of the village.

Figure 7.5 Forest access control and rights applied to the business models



7.3.3 Control of the business

The business is fully managed and administered by the cooperative. However, there are some requirements to be fulfilled. Candidates must be 14 years of age or older; willing and able to pay the membership fee; able to purchase a minimum number of shares; and a permanent resident of the geographic area where the cooperative operates, which is usually the lowest administrative unit or kebele. Individuals fulfilling these requirements can register and be a member of a cooperative.

The steps required to form a forest cooperative include:

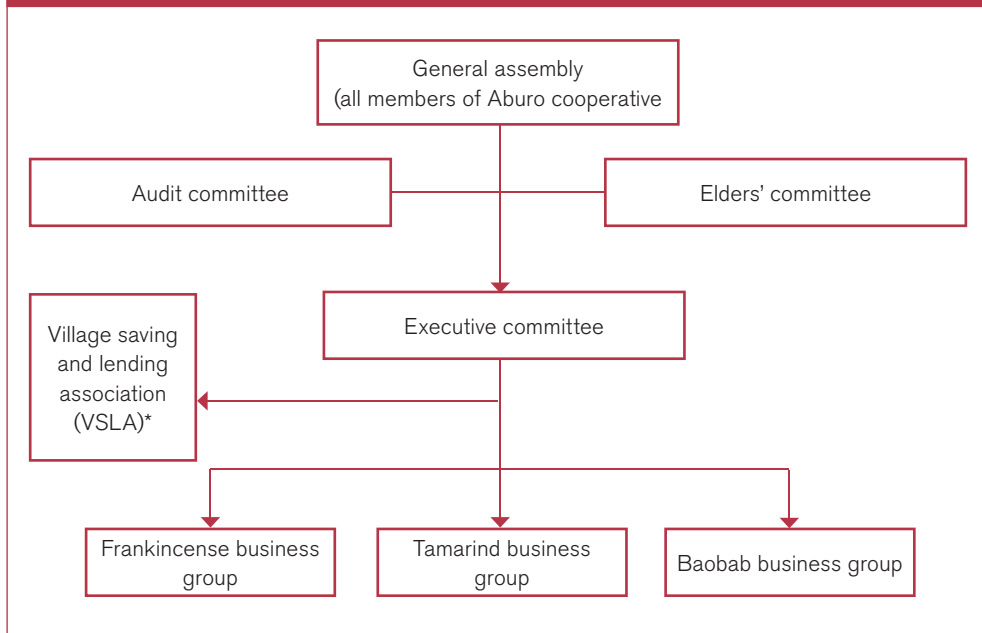
- Establishing a planning team, the plan preparatory committee (PPC)
- Training the PPC on the basics of running a cooperative
- Developing bylaws
- Membership registration
- Deciding on membership fees and shares
- Electing an executive committee and conducting an audit
- Collecting membership fees and payments for minimum shares
- Developing a business plan
- Legally applying to become a cooperative development office
- Becoming legally certified
- Signing a forest management agreement with the government, and
- Running the business.

The PFM projects chosen for this study are two of 93 forest-managing cooperatives: 63 in the Bale eco-region of Oromia and 29 in Benishangul-Gumuz. Figure 7.6 shows the structure of the Aburo Forest Managing and Utilizing Cooperative. The structure is more or less similar to all of the forest-managing cooperatives although business groups vary depending on the types of NTFPs found in the managed forest.

All members of the cooperative form a general assembly (see Figure 7.6) which is the ultimate decision-making body. It is also responsible for electing the executive committee. The cooperative has three main committees: the elders' committee, the audit committee and the executive committee. The elders' committee is established to oversee the performance of the executive committee and is responsible for problem-solving and mediating internal and external conflicts according to existing local traditions and norms, such as conflicts arising from the performance of the executive committee or any sub-committees. It is responsible for maintaining the integrity of the cooperative in general.

The audit committee is responsible for auditing the financial and material possessions of the cooperative. The executive committee has a chairman, vice chairman and a cashier. As the managing body, it is responsible for the cooperative's day-to-day business and forest management.

Figure 7.6 Structure of the Aburo Forest Managing and Utilizing Cooperative



*VSLA is a subordinate unit established to assist women members in particular to cultivate a culture of saving and to help them start small businesses.

The elected executives' performance and operations are audited internally and externally. The internal audit is done by the audit committee. External auditing is done annually by the cooperative promotion office.

Members are responsible for the production of goods or services. Production can be done collectively or privately depending on agreed arrangements among the business group members, the nature of the product, and existing customary access rights. For instance, the frankincense business group have a system of collective production, while the forest coffee business group, prefer private collection. The business group members bulk their produce by delivering it to a collection centre, which is usually a cooperative store. The cooperative sells the bulked quantity to business partners and distributes the return to business group members, after deducting a service charge. Business partners could be a union (e.g. in the case of forest coffee) or a private company (e.g. in the case of frankincense), based on prior arrangement or new negotiations. When collecting produce, cooperatives register the quantity supplied by each member or a group. Reimbursement is divided among individuals based on the quantity supplied. Members of the cooperative are also entitled to an annual dividend based on performance of the cooperative. Shares of dividends are usually proportional to participation such as the quantity of produce supplied.

7.3.4 Staff selection and roles

The whole business is fully run by the community with some support from the government and development partners. There are no professional staff members recruited to support their operations, which is an obvious constraint. The limited capital and low scale of operations limit these cooperatives from recruiting professional staff to support their businesses. Instead, trainings are provided to build the capacity of members to ensure self-governance and conduct operations. These trainings include leadership, business and financial management as well as technical training in production techniques and quality control.

The cooperatives also incur some initial investment costs in starting up their businesses. The investments include the construction and furnishing of a cooperative office and store and purchasing tools/equipment needed for production and post-harvest handling. For Aburo and Birbira, like most cooperatives associated with projects, these costs are covered by the respective projects. The community also makes in-kind contributions such as providing labour and locally available materials, such as posts and poles for construction.

7.3.5 Customer research

Customer research is carried out by the cooperatives mainly through the support of local NGOs such as Farm Africa together with coffee business partners such as OFWE and frankincense business partners such as NGPME. The capacity for the cooperatives to undertake their own market research is currently still quite limited – in part due to the limited infrastructure and connectivity in the two regions.

7.4 How have the Aburo and Birbirsa cooperatives overcome key challenges?

7.4.1 Challenges to do with the value proposition

Despite their apparent successes, the business models have faced a number of challenges along their journey. They have managed to overcome some, while some still remain to be dealt with. The first challenge was specific to the Agubela frankincense group, and is related to the production of frankincense and starting the business itself. Although the community has observed external bodies harvesting and making money from the frankincense from their forest, they never attempted to try it themselves. Instead, they developed a cultural taboo of associating individuals involved in incense tapping as poor and destitute people with no better alternative. This was addressed through awareness-raising campaigns, exchange visits and business skill training. Another challenge came from incense-producing companies. They considered community engagement as a threat and tried to resist it. To address this, discussions and negotiations took place until they were convinced to accept the new intervention.

7.4.2 Overcoming legal challenges to do with resource access

While the government has been supportive in helping local cooperatives to develop forest management agreements (FMAs) there is still some uncertainty of the durability of these arrangements. But so far, access to resources has not been a major constraint for either cooperative.

7.4.3 Overcoming ownership and benefit-sharing challenges

A key challenge common to both models is related to the costs of going through the whole process of PFM including organising the community and getting them to start a business. The process incurs a huge cost, and government alone cannot afford to pay or may not be willing to invest. This is why development partners and donor support are essential in filling this financial gap through projects. The process of establishing and developing bylaws is a substantial opportunity cost in terms of time and has required external support until now.

7.4.4 Overcoming labour challenges

The various challenges relating to the lack of labour or knowledge of quality production techniques for both products have been addressed successfully through a series of training events and the provision of basic facilities (such as a coffee store). Cooperative members are now much more aware of how to ensure quality in their product, and the higher returns that this brings in the market place.

7.4.5 Overcoming marketing challenges

The market is increasingly willing to pay better prices for quality products that the community has managed to supply. However, despite efforts made to train and build capacity physically and technically, it has been difficult to maintain consistency. Often the community itself, tempted by the higher prices received, adulterates their supplies with poorer-quality produce. This has been disappointing for trade partners and has affected the sustainability of project initiatives. This is among the issues that are yet unresolved and need further work.

Coffee market price fluctuations are also a major problem affecting those engaged in the forest coffee business such as the Birbirs group. This has been a challenge for coffee growers worldwide and will remain so for the future as well.

7.5 Key lessons

A number of lessons have been drawn from the two business models and these are summarised into the following points.

7.5.1 Keeping down costs

The main lessons learnt so far have been less about costs and more about secure access to the resource and an emphasis on quality production.

Granting of forest-use rights by the government has been a critical factor of success: the granting of these rights to the communities has been the fundamental starting point for the success of both businesses. The transfer of these rights has helped those community members, as it gives them the right to exclude outside users and consider the forest as their own, while also boosting their confidence in persevering with the business. It has also helped to improve forest conservation. Evidence collected at the beginning of PFM and after it is implementation or in comparison with forests under PFM and those which are not show clear differences in forest conditions. There are fewer incidences of fire, higher forest regeneration and better forest health for those under PFM. This security of use rights has provided a critical platform upon which to build a business – with a reliable supply of raw material.

Another key lesson has been that extensive capacity building to cultivate a business mentality among community groups is the way to success. Non-supported adjacent communities are demonstrably less aware of the demand from the market, particularly regarding product quality aspects. To raise community awareness about the demand side of the market, much needs to be done through training, exchange visits with successful community businesses and so on.

7.5.2 Retaining customers and willingness to pay

For both cases, an initial critical step has been to improve market linkages for the community. Being isolated from markets, community members usually fail to engage in forest-based business development because they do not see the prospect of reasonable returns. Buyers are also reluctant to reach these distant producers because they are not quality conscious. However, by bringing the two together and making them understand each other's requirements it is possible to address these gaps and help start a viable business.

Another lesson is that certification offers the potential to enhance income but also has some limitations. Certification has the potential to improve returns for smallholder farmers by allowing them access to niche and high-paying markets. However, obtaining the certificate is tedious, procedurally complex and is unlikely to be accessed and achieved by smallholder farmers alone without external support. It took Farm Africa more than three years to finally receive certification for coffee producers from the Rainforest

Alliance. Furthermore, the initial cost leading to a certificate is high, and difficult for small businesses to cover unless supported by projects.

7.5.3 Success factors

A key factor in the development of these two successful cooperative business models in Ethiopia has been the government support for the participatory forest management (PFM) arrangements. This legislative provision is resulting in increasing decentralisation of forest governance in Ethiopia and allowing forests to come under profitable local control – which in turn enhances incentives to conserve the forest.

A second key factor in this success story is the progress that can be made by organising community producers into cooperatives which can then identify, prioritise and promote viable forest-based (NTFP) businesses.

A third key success factor is that, while cooperatives may have a broad membership, the sub-grouping of members into business groups focusing on a particular product (marketable NTFPs) has enabled the emergence of specific enterprises. The cooperative controls the business and facilitates rights to access the forest with the government; development partners then play a supportive role.

The final key success factor is customer linkages – with a strong emphasis on product quality and uniformity, which has underpinned early success in each case. Finding ways to link interested buyers with communities and then to establish the market possibilities and requirements between them is a necessary activity and one in which support agencies can play a useful role.



Chachaklum SA

© FAO-GFP

Guatemala: Chachaklum SA

Mutually enlivening: a community logging cooperative's story of local empowerment

by Juan José Ochaeta Castellanos

In San Francisco Petén, Guatemala, a new culture of forestry is emerging. Chachaklum is a local forestry management service created by local forest growers. Initially set up to take advantage of national incentives, the business now promotes reforestation, provides a valuable management service to plantation owners in the area, and has identified a market segment for forest products previously discarded as waste. With national and international support, Chachaklum has built its capacities, from forest management skills to business development, while providing local employment and reinvigorating the local economy.

8.1 Context in which Chachaklum operates

8.1.1 The enabling environment

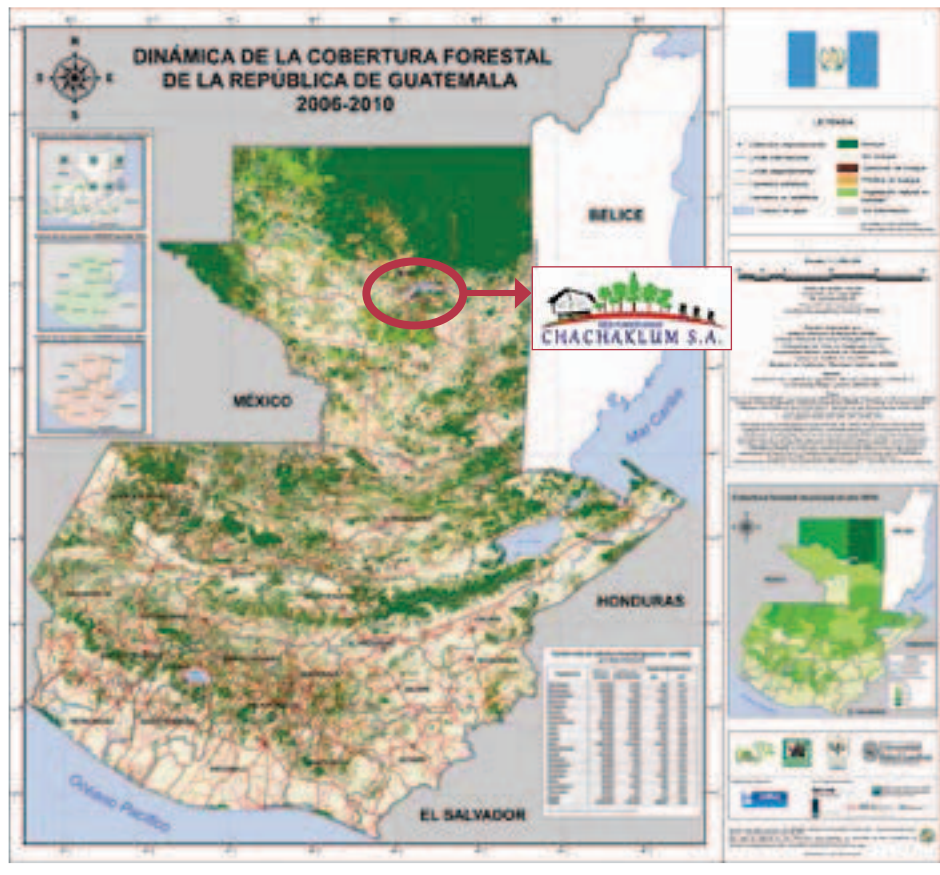
In 2012, Guatemala saw the emergence of Chachaklum, an incorporated company in the town of San Francisco, Petén, formed by 29 community associates (see Figure 8.1). The founding associates of Chachaklum identified an opportunity to create a company which provides a unique service in the central area of Petén, to satisfy a demand amongst existing plantation owners for forest management services, market intelligence and commercial mediation services.

The company's main objective is to provide services to the forest grower's network of San Francisco. Forest management activities are located in the towns of San Francisco, San Benito and Santa Ana, Petén, all of which adjoin the operational offices of Chachaklum in San Francisco. This network is formed of 218 private forest growers and municipal lessees (tenants) of 1,118ha plantations, mainly of the hardwood melina (*Gmelina arborea Roxb*). Chachaklum also sells forestry products obtained from first and second thinnings in such plantations.

San Francisco town is located approximately 500km from the capital city of Guatemala and 20km from Flores, the capital city of the Petén region. The town is 502km² with a population of 17,124. Approximately 73 per cent of the population is urban and 27 per cent are engaged in farming. The indigenous population is 28 per cent. Some 51 per cent are men and 49 per cent women. The population's illiteracy level is approximately 7.5 per cent. The level of poverty is 67 per cent and 16.3 per cent live in extreme poverty.

San Francisco's economy is mainly oriented to agricultural activities. The economically working population is approximately 8,500 people. The majority of those in employment are unqualified workers. Agricultural jobs account for 19 per cent of the working population, qualified workers 7 per cent, mid-level professionals 6 per cent, and unqualified workers 54 per cent. The majority of community-based forest growers are unqualified workers. Some also work jointly in livestock, farming and do other jobs such as beekeeping, masonry and carpentry near San Francisco and in cities located nearby.

Figure 8.1. Map showing location of Chachaklum plantations



Source: National Geographic Institute, Ingeniero Alfredo Obiols Gómez

In San Francisco, the majority of residents have access to basic services like electricity, piped water, residential or mobile telephones, the Internet, transport, education and health. Their proximity to the city of Flores makes it easier for them to access additional services such as further technical or university education, public and private hospitals, the airport and national and international transportation routes.

The culture of reforestation (forestry plantations) is new to the town. It began in 2001, as a result of a reforestation process promoted by the municipality of the town. The main driver for forest growers to get involved was access to payments from the newly established Forestry Incentive Programme (PINFOR). During this process, the municipality had a key role in organising the forest growers' group, providing contracts and managing the incentive funds, and implementing the creation of nurseries and plantations.

Through this process, the forest grower's network of San Francisco, Petén was formed. Most of the plantations were established on municipal ejidos (common land). The amount of money generated from the PINFOR programme as a result of the new network was approximately US\$2,035,000 of which 80 per cent was given to the forest growers directly, and 20 per cent was deposited in the municipal treasury as part of the management fund. Besides these areas belonging to the network, other forest plantation areas came into existence, located within San Francisco and other towns. These areas also offered a clear opportunity for further potential demand for Chachaklum's services.

At the beginning, the municipality underwrote the reforestation process by creating nurseries and delivering seedlings to establish the plantations. In addition, the municipality provided forestry training and oversaw the contracts with PINFOR. From the start, reforesting both private areas and the municipal ejidos was conceived with the objective of the recovery of the forest area around the town. These lands were previously unproductive, mostly degraded savannah that suffered outbreaks of fire every year because of the growth of the pasture and extensive shepherding. Another objective was to realise economic returns to the local communities from PINFOR.

Initially, the forest growers were not too concerned with forest management in their plantations – they were mostly motivated by the substantial PINFOR incentive. Additionally, they did not visualise how they might commercialise timber products from thinnings. This meant that some plantations risked not achieving their optimal development potential – expected returns would be inferior to those that might have been possible had forestry management been more of a priority.

As time passed, the forest growers realised that the plantations represented an asset that in the future could create better economic returns from the commercialisation of forestry products. By 2012, a group of forest growers from the network had identified the idea of a business selling forestry management services, market intelligence and commercial mediation, initially to individuals within the forest growers' network itself. That is when the idea for the Chachaklum business emerged, as a company that would deliver a unique service in the Petén area.

To date, the services Chachaklum offers mainly use basic tools and skilled labour. Felling and cutting is done with chainsaws. Internal skidding (moving the felled timber to a landing site) and vehicle loading are done by hand, as well as the use of livestock and tractors to skid the logs. Internal transportation to storage areas is done using 4x4 pick-up trucks, and the final transportation is done by truck.

The sustainability and viability of the company is reinforced through five key areas of business development:

Economic marketing issues: Chachaklum has undertaken a forestry inventory in all the plantations it manages. This has allowed Chachaklum to establish a commercial agreement with the network members for 20 years. In the two years since its creation, the company has arranged working capital of US\$7,000 with the support of the Rainforest

Alliance and the Tropical Agricultural Centre for Research and Higher Education (CATIE). This amount has grown to reach a sum of US\$20,000. Chachaklum has also signed business agreements with companies that purchase its forestry products. In addition, it has also created a market for products obtained from the first and second thinning of its plantations (logs and firewood).

Socio-cultural issues: the company has helped to create a culture of forestry in an area of the country where such a culture previously did not exist. It has provided a foundation to guarantee local networks and individuals a qualified market for their products in the future, backed by technical forestry management.

Legal and institutional issues: the owners of Chachaklum have set up a legally registered incorporated company. They have worked hard to ensure that the business is legally reliable. For example, the company complies with its monthly tax obligations, keeping accounts and registering its operations with the Tax Management Superintendency (SAT).

Technology research issues: Chachaklum has developed local capacity for forest management, and with the support of NGOs has provided training related to technical plantation management (e.g. managing thinning and pruning activities) and training in the



© FAO/GFP

Felling and cutting is done with chainsaws

use of, maintenance and repair of forestry machinery, and the use of appropriate tools. At the moment, the company is hoping to install a sawmill for small-diameter timber (of less than 5 inches), which would allow them to diversify their market and help guarantee the sustainability of the company. For this reason, they are working with the San Carlos University of Guatemala and the Council for Science and Technology (CONCYT) to carry out productivity studies and to analyse the possibility of establishing an industry for small-diameter timber processing.

Resource sustainability issues: through the technical management of plantations Chachaklum is assuring future volumes of wood – not just in quantity, but also in quality. In addition, in Guatemala, PINFOR has been shown to improve the economic sustainability of plantations, which has helped to defend and promote the programme at a national level as well as in Petén, with Chachaklum being cited as an opportunity growth area.

8.1.2 The operating environment

In terms of its competitive competence, since its creation, Chachaklum has remained a company unique in its industry. There is no other company in Petén that offers the same services. There are other private plantation companies in the area but they focus their businesses on forestry management of their own plantations and do not sell services to third parties.

In terms of customers, the demand for national forestry products has grown constantly in recent years. Chachaklum's main clients are the forest grower's network and private forest growers in Petén. The products it obtains from forest management (firewood and logs) are sold to an intermediary (purchaser-driver) who sells the products to two industrial clients, Alianza Estratégica (agglomerated wood) and Diconforest (pallet construction). For marketing products obtained from the first and second thinnings, Chachaklum has signed a letter of understanding with the intermediary.

As for available workforce, in the beginning, the associates of Chachaklum did not have the knowledge or technical skills for forestry management. They knew nothing about the administrative, legal and commercial aspects of managing a business. In the town, there were limited human resources and limited knowledge of forestry. With the support of national and international organisations such as the Food and Agriculture Organization of the United Nations (FAO), CATIE, Rainforest Alliance, International Union for Conservation of Nature (IUCN), the Ministry of Agriculture, Livestock and Food (MAGA) and the Association of Forest Communities in Petén (ACOFOP), the company started a training process, which built local capacity. Now, the associates of Chachaklum and their hired employees have the relevant technical skills required. Capacity training and strengthening have become ongoing within the company. Human capacity was and continues to be its most important asset.

Two years since it began, the company now has the know-how required for the business. It has extended its technological capacity (e.g. purchasing chainsaws and industrial security equipment). The company has created an internal division that focuses on task specialisation. Chachaklum also has easy access to the supplies it requires. San Francisco

has a network of services and commerce that offers equipment, fuel, tools and other materials. Flores, 20km away, offers all the facilities of a large city.

Transportation, a key factor for its forestry activities, is handled by hiring drivers from the capital city, centralised through a single company. This company is also the official representative of the 'transforming industries' in Petén and acts as the intermediary (purchaser-driver). This situation has been formalised through a letter of understanding between Chachaklum, its industrial clients and the intermediary. More recently, Chachaklum has developed some of its own transport capability.

In terms of credit, Chachaklum has directly financed its operation with the working capital from the Rainforest Alliance and CATIE. This amount has tripled from US\$7,000 to US\$20,000. So far, the company has not borrowed funds from financial institutions. However, it is considering asking for credit to increase its working capital, following an analysis of the financial costs of the loan conditions. In Petén there are banking institutions which could grant credit, as well as financial institutions for development.

8.2 About the Chachaklum business

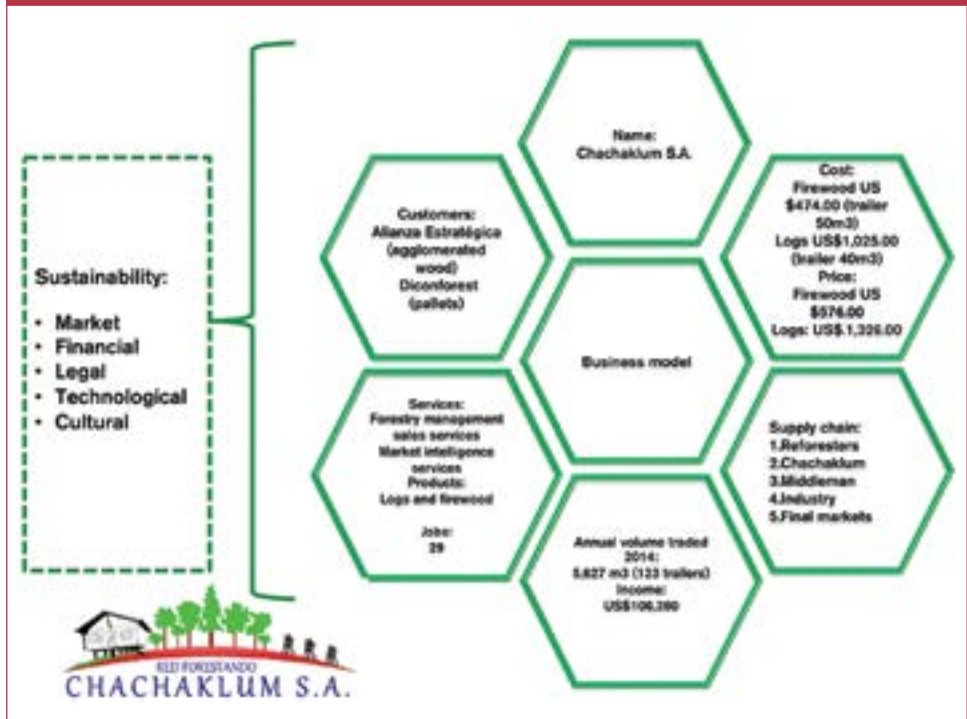
8.2.1 Vision

Chachaklum is a community company, legally registered in 2012. The company has a board of directors including a president, vice president, secretary and five committee members. In addition, there is an accountant and a commercial manager (whose position is currently supported by CATIE).

The company has a forestry inventory that helps with organising commercial agreements and an annual management plan, which the company uses to establish a sales participation schedule for its forest growers to supply its clients' demand for forest products. Firewood is sold in 50m³ truckloads and logs are sold in 40m³ truckloads. The services of Chachaklum and the products that it commercialises are not certified under any kind of scheme. The main reason is that the national market does not require such certification. Neither is it a marketing tool that guarantees its access to the market or makes it easy to obtain commercial benefits.

Chachaklum's vision and its achievements have been strongly supported by FAO, the National Forests Institute (INAB) and CATIE, initially through support for the plantation inventory of the forest grower's network which enabled Chachaklum to make its initial commercial proposition to the network. With this marketing tool and the support of FAO and INAB, it started researching markets for interim forestry products obtained from the plantations, i.e. firewood and logs. Such products were previously discarded by the forest growers or left as waste inside the plantations. Sometimes, they were sold as firewood for US\$38 per truck load of 50m³. As a result of this research, Chachaklum identified its two clients, Alianza Estratégica and Diconforest, with which they now trade these products from the plantations. Both clients are located in the town of El Rancho, El Progreso, 385km from Chachaklum's operating base. The business model is shown below in Figure 8.2.

Figure 8.2 Chachaklum business model



8.2.2 Business inputs

The main input to the business is the forest itself. Within Guatemala, possession of plantation land is either based on private property or municipal ejidos. All Chachaklum's forest plantations have been authorised by INAB and are registered with both the National Forestry Registry and PINFOR.

Through PINFOR, each forest grower receives an implementation and maintenance fee per hectare of US\$1,800 over a period of six years. Forest growers of the *ejidos* discount from their income 20 per cent which is collected and used to support a fund for managing the common land, a task carried out by the municipality of San Francisco Petén, who was the first sponsor of the plantations process in the area.

At the time of writing, the price of firewood is US\$577 per 50m³ per truckload and the price of logs is US\$1,327 per 40m³ per truckload. These prices are paid once the product is delivered to the designated storage areas. Loading and transportation is the responsibility of the intermediary (purchaser-driver). The income distribution for Chachaklum is as follows: of the US\$577 per 50m³ truckload of firewood, US\$154 is paid to the forest grower. A further US\$320 is paid to the outsourced staff payroll. The final US\$103 is taken as a commission by Chachaklum (for carrying out the process of forest management and commercial mediation). For logs, of the US\$1,327 per 40m³ truckload, US\$577 is paid to the forest grower, US\$448 to the outsourced staff payroll, and US\$302 is retained as a commission by Chachaklum.

In 2013, 64 trucks (3,200m³) of forestry products (38 of firewood and 26 of logs) were sold through Chachaklum. In 2014, this rose to 123 trucks, with a total volume of 5,650 m³ (73 trucks of firewood and 50 of logs). In terms of turnover, in 2013, US\$55,873 was earned through sales and in 2014, this amount increased to US\$106,280. The area of plantation harvested and replanted in 2013 was 224ha rising to 422ha in 2014.

At present, Chachaklum has created 27 direct jobs in three staff payroll groups, two jobs at an administrative level and two indirect jobs in the loading team – a total of 31 jobs (a single job is equivalent to 250 daily wages per year according to the rural employment methodology of USAID). As noted above, good financial management means that the working capital of the company has almost tripled in two years.

Nowadays, funding for forest plantation management comes directly from Chachaklum, using its working capital which was originally provided by the Rainforest Alliance and CATIE. The income from sales is received a week after product delivery to the storage areas within the plantations, either through cheques issued to Chachaklum or deposits to its bank account. Chachaklum then pays both the plantation owner and the outsourced payroll. As Chachaklum is now directly funding the plantation management it needs to have working capital available, so it collects its percentage of the client's payment as soon as it is received.

8.2.3 Main activities

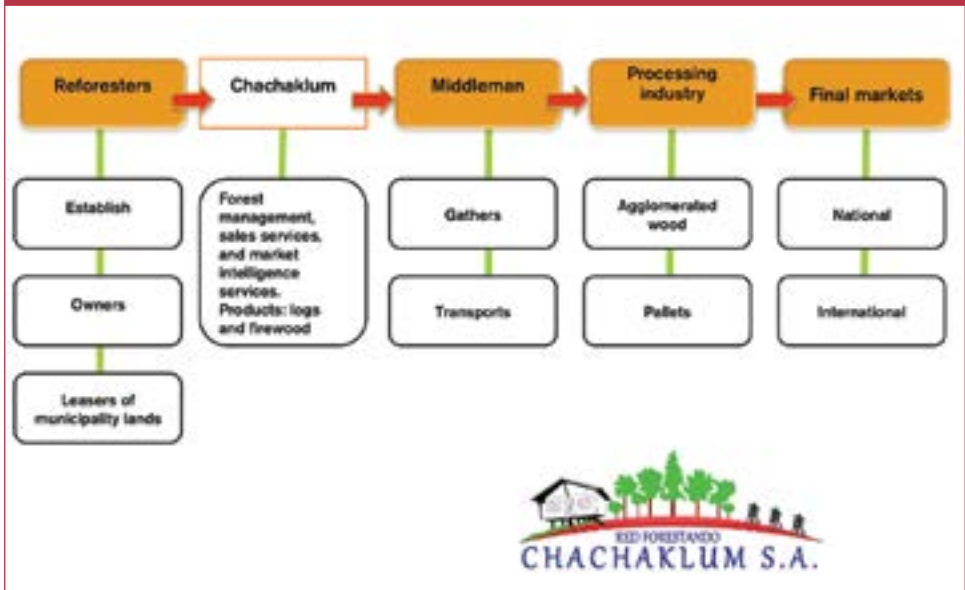
To supply forest management services, the company hires three groups formed of approximately nine individuals each. Within these groups, each individual internally manages a specific task such as marking, felling, skidding and loading timber. Each thinning service that is performed lasts approximately two days per hectare. There is a person in charge of the chainsaws, a chainsaw helper, a person in charge of removing branches, four people responsible for loading, and a driver. Chachaklum uses the model of outsourcing its payrolls. They hire staff services based on individual job descriptions relating to the number of tasks required (e.g. supplying 50m³ truckloads of firewood or a 40m³ truckloads of logs).

Commercial activities (sales and administration) are done by the commercial manager and the president of the company. All the services supplied are duly invoiced and registered with SAT. The value chain for Chachaklum is shown in Figure 8.3.

8.2.4 Technology and skills

Apart from the skills needed for forest management already described, gathering market intelligence is done in the main office of Chachaklum by telephone, from contacts found in a database of timber buyers and national forestry industries. However, at present, Chachaklum has no need of additional clients to purchase its forest products. Commercial mediation is done in person, as well as by telephone with the intermediary and the general managers of its industrial clients.

Figure 8.3. Value chain of Chachaklum



8.2.5 Business partners

Chachaklum has a direct relationship with the intermediary who purchases and transports the forest products to the processing companies. The intermediary transportation company has had a commercial relationship with the group of forest growers since the beginning, and this was later formalised with Chachaklum due to the existing commercial relationship between the intermediary and the purchasing companies. This agreement includes a clause to give the intermediary exclusive rights to transport goods between Chachaklum and its client companies.

The operations of the intermediary are located in Guatemala city. To optimise the transportation costs he loads the forest products in Petén, delivers them to El Rancho 345km away, then drives 110km back to Guatemala city where he reloads his truck with construction materials and distributes them to local retailer companies back in Petén.

8.2.6 Customer groups and product types

Chachaklum has two types of client according to the different services it sells:

- Forestry management services, market intelligence and commercial mediation: forest growers' network of San Francisco and other local forest growers not included in the network but located in Petén.
- Forest products sales: forestry management products (from thinnings) sold by Chachaklum include firewood and logs. Most of the firewood is sold to the agglomerated wood producer. The logs are used for pallet manufacturing.

8.2.7 Differentiation in the market place

Chachaklum has differentiated itself in the market place by developing new products and services that were not formerly widely offered. It is the only specialised company in Petén offering its range of services related to forest management, consolidating an attractive commercial service for the national forestry industry.

8.3 Who controls Chachaklum?

8.3.1 Origin of the value proposition

In 1996, the government of the Republic of Guatemala decreed a process to promote the establishment of forest plantations in the country, as a tool to increase and restore forestry land. In 1997, it created PINFOR, which was oriented towards legal landowners. Later in 2010, PINFOR was replaced by the Programme of Incentives to Small Landowners with Forestal or Agroforestral Vocation (PINPEP), which is oriented towards landowners who lack legal certainty to entitlement over their lands.

Between 1996 and 2006, the municipality of San Francisco, Petén saw an opportunity to increase their income through PINFOR. As the owner of municipal *ejidos* leased to the community, it was able to administrate PINFOR funds and collect a 20 per cent management fee. In addition, the municipality obtained an extra Quetzal (Guatemalan national currency) for each Quetzal earned, according to a constitutional mandate.

In 2006, the municipality created the forest growers' network, supporting the organisation and implementation process for the incentive contracts, nursery and plantations. During 2006–2012, as the plantations were developing, it became clear that some forest growers lacked sufficient experience in forest management. So in 2012, a group of forest growers created a company to supply and sell forest management services, market intelligence and forestry mediation. All members of the network were invited to participate but only 29 accepted the offer.

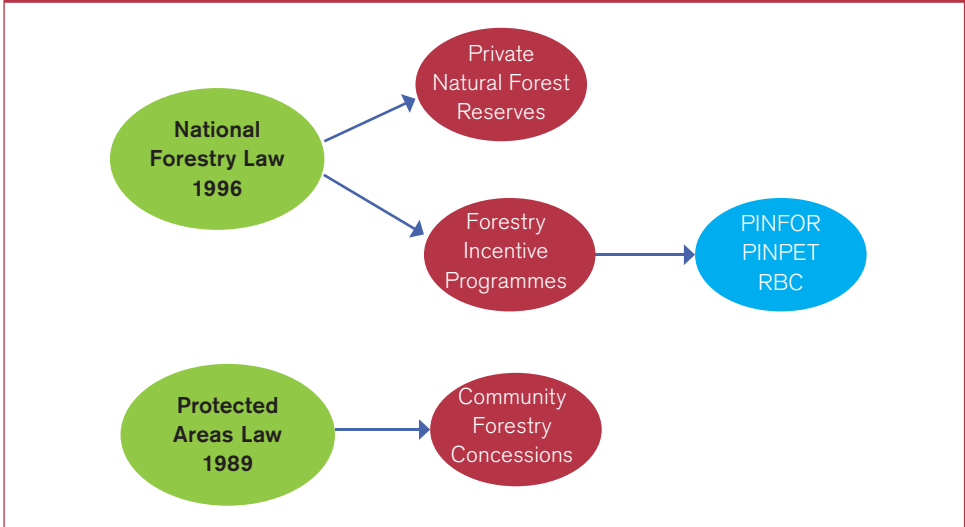
Once Chachaklum was registered as an incorporated company, the founders began researching ways to create local capacity in the services they offered, create working capital alternatives and find support for the business organisation.

8.3.2 Control over forest resource access

In Guatemala, forest management rules are defined directly by the National Forestry Law, Decree 101-96, whose corresponding authority is INAB. In addition, there exists the Protected Areas Law, whose authority is the National Council of Protected Areas (CONAP) (see Figure 8.4).

In Guatemala, planting processes are either voluntary or obligatory (depending on whether the land is degraded or within standing forest). In the case of the Chachaklum forest growers' network, this process was voluntary.

Figure 8.4 Linkages between national forestry laws and programmes



To implement a plantation, the grower registers it with INAB's National Forestry Registry. It is necessary to follow an internal procedure that begins with the registry application and the delivery of the forestry management plan for the plantation. An inspection is performed by INAB and if the plantation is authorised, they issue the grower with a corresponding certificate. That registry then enables the issue of transportation permits that are an essential requirement for transporting forestry products.

8.3.3 Control of the business

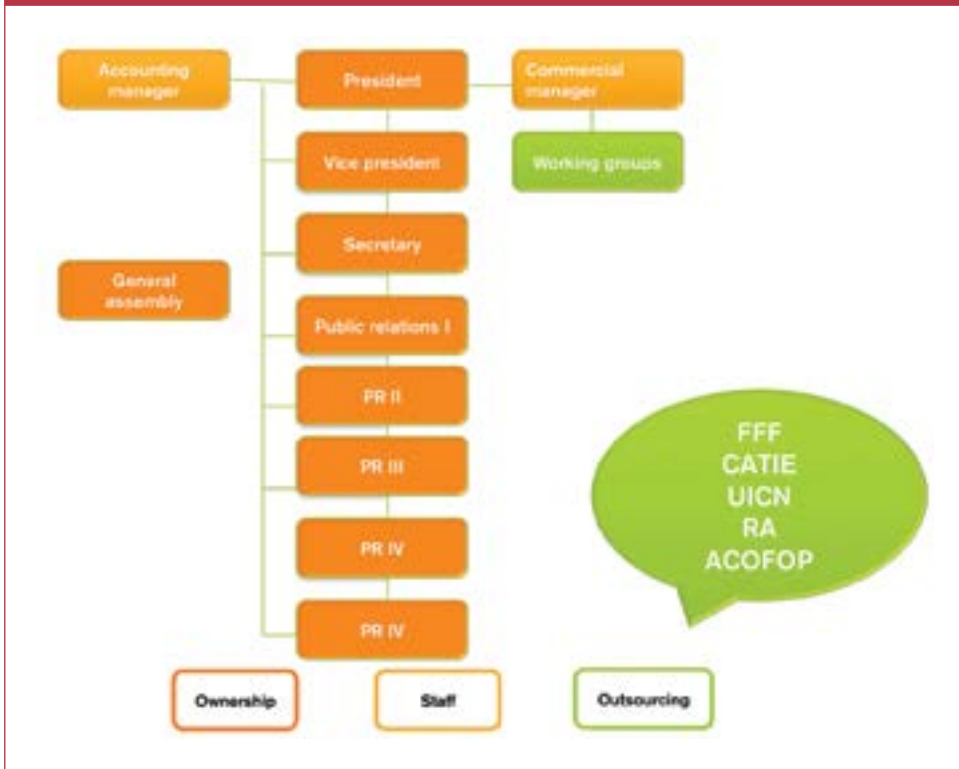
The organisational structure of Chachaklum can be seen in Figure 8.5. The business is directly managed by a board of directors; any major decisions must be made during the annual general assembly or during a special general assembly (which can be convened as many times as it is considered necessary).

The board of directors hire the services of a commercial manager and an accountant. The commercial manager has been hired with the financial support of CATIE and IUCN.

According to the law, to be legally registered, a company is required to have a social capital of Q5,000 (US\$645). For Chachaklum, this capital was provided in equal parts by each of the 29 company associates.

Once an incorporated company is created, an incorporation deed is issued, in which the articles of association are established including matters relating to the distribution of profits and legal reserves. Such articles of association are approved by the general assembly for the establishment of the company, which is carried out in the presence of an attorney at law and public notary, who also prepare the incorporation deed which has to be signed by each of the company associates.

Figure 8.5 Chachaklum organisational structure



Within Chachaklum's board of directors are five committee members. They are appointed to cover the responsibilities and act as substitutes for the president, vice president and secretary in the event that they no longer have the capacity to perform their roles, such as communications, public relations, monitoring and auditing.

8.3.4 Staff selection and roles

Each member of the board of directors has specific responsibilities set out in the incorporation deed and the articles of association. They have the responsibility to hire and assign responsibilities to any hired employee, as well as supervise the development of activities and the objective achievement of each position. Any hiring is done using an annual labour agreement, renewable at the beginning of each year.

At present, the training processes relating to forestry management, financial resources management, organisation and association have been led by supporting NGOs. As a result, some company members have gained new knowledge, abilities and specific competences. They then transfer their new skills to other members of the organisation.

8.3.5 Delivery options

Chachaklum's purchasing company clients require the forestry products to be delivered to their plants. With their current clients, this is not Chachaklum's responsibility, but the intermediary's, who officially represents the purchasing companies.

When Chachaklum was first established, the intention was to eliminate the requirement for an intermediary's role. However, after a direct delivery practice run from the plantations to the purchasing company, Chachaklum decided only to deliver the product to the storage areas for the intermediary to then collect. This experience enabled the company to understand how high transportation costs really were and that it was not a viable economic activity for the company.

8.3.6 Customer research

Researching new clients is the responsibility of the commercial manager and the company president. However, Chachaklum does not currently need to find new clients. Although there is no apparent ceiling to production, their existing clients' demand for logs and firewood is both increasing and constant and they are willing to purchase any larger quantities of timber that Chachaklum is capable of organising and selling.

The products commercialised by Chachaklum are the raw materials required by their clients' industries. Chachaklum is not involved in any primary transformation processes or in adding value for the purchaser. However, for logs, minimum quality standards do exist.

Chachaklum's board of directors, through its president and commercial manager and with the support of NGOs, is constantly making contact with national companies that process forestry products, with the aim of visiting them and forging new links with the forest growers' network of San Francisco, Petén. In the same way, they respond to requests for their services from other forest grower groups and individual forest growers in Petén, visiting these potential clients to verify them and learn about the areas and plantation conditions.

8.4 How has Chachaklum overcome key challenges?

8.4.1 Challenges relating to the value proposition

There are three main challenges Chachaklum has had to overcome in relation to the value proposition:

- **Forestry culture:** establishing a culture of forestry in San Francisco, Petén started with the PINFOR forestry incentive system. In this area, economic activity was mainly based on agriculture, livestock and commercial activities. Forest growers soon realised that the plantations could generate economic resources and that with better management could produce a better quality and quantity of timber in future.
- **Skills development:** developing skills in the sale of forest management services and commercial mediation has been achieved by forming strategic alliances with national and international NGOs, whose aim is to strengthen the national forestry system. Through these organisations, Chachaklum has received direct support in the form of working capital; training related to forestry management, administration, negotiation,

accounting and taxation. This support has enabled Chachaklum to create local capacity and foster internal talent, knowledge, abilities and competences, which will support the sustainability of the business in future.

- **Consolidating the commercial agreement:** at the same time, there was support from those organisations for an inventory to establish and organise the company's commercial agreement with the forest grower's network of San Francisco, Petén, which was essential for being able to offer the client purchasers an attractive deal.

8.4.2 Overcoming legal challenges relating to resource access

In Guatemala, forest plantations involve a strict authorisation and implementation process from a legal and environmental perspective. Since it was established, Chachaklum has held the corresponding forestry licenses, which has enabled the company to operate without any inconvenience. The forest growers' network has the legal authority to conduct its forestry activities. Besides this, Chachaklum directly follows the official guidance for transporting forest products to its client purchaser companies. To comply with the guidance, members of Chachaklum have been trained with NGO support.

8.4.3 Overcoming ownership and benefit-sharing challenges

From the company's creation, the management of benefits obtained from commercial activities was established. From the total amount of the profit obtained during one tax year, a legal reserve of 5 per cent is saved and the rest is distributed among the associates equally (all shareholders have the same number of shares, in quantity and value). However, as yet, a profit distribution has not taken place because all resources generated have been used to increase the working capital of the organisation and will be used to establish a sawmill for processing small-diameter timber.

8.4.4 Overcoming labour challenges

Some NGOs like CATIE, FAO and the Rainforest Alliance have supported Chachaklum and their staff by strengthening their technical abilities. Through a series of workshops in the field, the associates of Chachaklum have learnt by experience about forestry regency (pruning, thinning, forestry management), handling tools, directional felling and tool maintenance and appropriate techniques for lagging, loading and determining volume, among others. Accounting, negotiation and organisation skills have also been strengthened.

8.4.5 Overcoming marketing challenges

Making an inventory of productive plantations has been key to the success of Chachaklum. To do this required the initial support of FAO and CATIE. However, the inventory has enabled the company to make attractive commercial propositions to its different clients, leading to solid commercial agreements. Deliveries to clients, however, continue to be made by the intermediary. Chachaklum made one attempt to carry out deliveries directly, but realised that it was not financially viable.



Skidding (moving the felled timber to a landing site using 4x4 pick-up trucks) and vehicle loading are done by hand

Chachaklum does not advertise its services and products, yet its forestry management services and commercial mediation have become well known locally with forest growers located in Petén by word of mouth. Chachaklum is also constantly in touch with other purchasers in the forest sector in Guatemala, either by telephone or by visiting in person, to promote the network's forest products, as well as searching for new market alternatives.

When the company first started, support for researching markets came directly from FAO and INAB, institutions that helped organise business meetings between Chachaklum and potential purchasers. They also provided the resources so that Chachaklum representatives could travel to the main offices of potential client companies to learn about their demands and productive processes.

8.5 Key lessons

8.5.1 Keeping down costs

Chachaklum is a company dedicated to supplying services. Its administrative structure is basic and low cost, formed by an accountant and a commercial manager. The commercial manager's post is currently supported by CATIE.

The company has no production lines as its forest products are sold as raw materials and require no processing besides felling, cutting and moving the product to storage areas (this is the added value that Chachaklum gives to the product).

In this regard, the only way to optimise costs has been to outsource payroll services. Staff perform forest management activities through direct agreements, in which an amount per task is established. Besides this, outsourced personnel know that the faster they work, the faster they receive their payment and be assigned to another service. If productivity is high, the profit will be higher.

8.5.2 Retaining customers and willingness to pay

In terms of satisfying customer demand and retaining their customers, Chachaklum has worked hard to research and then present a credible offer of timber that they know they will be able to deliver. They work on a weekly basis, ensuring that weekly deliveries are fulfilled so that they do not get into a situation in which they are in arrears.

Formal company registration and careful attention to all the legal requirements necessary to perform their activities is another critical aspect to the success of the business to date.

Finally, Chachaklum has worked hard to arrange and sign formal business agreement so that both sides can have confidence that these agreements will be honoured – building up mutual trust between the forest growers on the one side and the timber processing industries on the other.

8.5.3 Success factors

In assessing the case of Chachaklum, a number of key factors seem to stand out as having contributed to the success of the business:

- **Strong local ownership of the idea:** Chachaklum is a business which emerged directly from its associates. This voluntary involvement generated, automatically, a sense of ownership and commitment to develop the company's technical, financial and administrative capacities.
- **Differentiation in the market:** the company had a vision of a business opportunity that no-one else was yet pursuing – to offer forest management services to plantation owners in an area where there was no culture of forestry or similar services. In addition, the company identified a market segment for forest products obtained from interim forest plantations thinnings. Previously, this product had been sold as cheap firewood – or discarded as waste.



Loading timber onto the transportation truck

- **Preparing a consolidated offer to clients:** Chachaklum made a major effort to undertake a forestry inventory to define precisely what it could sell and when – so that there was a reliable and attractive commercial offer available for purchasers.
- **Strict attention to legality:** the company has formally registered its business, despite the costs of doing so, keeps accounts of its operations and pays its taxes. It has also entered into formal commercial agreements with the intermediary (purchaser-driver) and with the purchasing companies, in which it commits to delivery dates and quantities.
- **Customer service:** within the area of forest management, the company has created a reliable income stream for both the forest grower's network and itself that has maintained the participation and interest of these crucial resource owners.
- **Social contributions:** although relatively small, the company has created local employment opportunities by outsourcing the working staff payrolls to people who perform forest management activities in the plantation areas. In addition, it has invigorated the economy of the town and has created a vision of a forest plantation business in the population, which did not exist before. At present, people see their plantations as a business and an economic alternative to generate income in the future. They have also realised that this profit will be increased by appropriate forest management that enables them to offer a greater quality and quantity of wood in the future.

- **A commitment to capacity development:** Chachaklum has created local capacities, training its associates and workers in skills related to forestry management, industrial security and business management.
- **Environmental credentials:** the company is able to showcase solid environmental credentials, because they have supported income generation from land that was previously unproductive and prone to outbreaks of fire.
- **Attracting investment:** national banking institutions have opened agencies in the area to grant small amounts of credit to forest growers. This has happened because the forest activities that Chachaklum has helped to initiate have invigorated the local economy.
- **Attention to finance and reinvestment of profits:** a key success factor from the beginning has been the recognition that the company needs working capital, which Chachaklum has increased as a result of efficient resource management. The company has also developed an efficient sales and collection system through which the client pays for the product a week after its delivery, using cheques or banking deposits. The company has reinvested profits in building up its assets: not just working capital, but also the purchase of tools and even a small business premises in San Francisco, which will be the base for developing its industrial capacity in processing small-diameter timber.
- **Promotional activities:** since its beginning in 2012, Chachaklum has developed a commercial brand in the area of Petén. This brand is used not only by the members of the forest growers' network of San Francisco Petén, but also by other forest growers in the area, which shows promising prospects for the business in future.
- **Support for future development:** finally, Chachaklum has developed a network of supporters. National, local and international organisations support its business management and development in terms of its organisation, marketing and technical capacities and researching future projects for processing small-diameter timber, which will enable Chachaklum to sell forest products from its plantations not just as a raw material, but also as a value-added product.



Preparing FSC-certified xate plam leaves

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Guatemala: Xate Mayaland Committee

Community forestry concessions in the Maya Biosphere Reserve

by Juan José Ochaeta Castellanos

This case study focuses on the Xate Mayaland Committee in Guatemala which exports FSC-certified xate palm leaves, a non-timber forest product used in flower arrangements. The committee represents local community forestry concessions (CFCs) and manages their commercial relationship with an international US purchaser. The CFCs have a legal right of access to and direct control of their forest resources. Economic benefits help to ensure that the forests are managed sustainably, while training in business management and product collection, processing, storage and transport ensures that the client receives a high-quality product.

9.1 Context in which the Xate Mayaland Committee operates

9.1.1 The enabling environment

The Xate Mayaland Committee in is a community business which exports xate palm leaves (pronounced in English as 'shatay'), a non-timber forest product (NTFP) used in flower arrangements. The committee is made up of representatives of smaller local xate committees of community forestry concessions (CFCs). Its role is to consolidate the commercial offer of xate palm sold by the collective CFCs and to help simplify the process of dealing with purchasers.

Guatemala is a country which still boasts 37 per cent forest cover. Approximately half of this total forest cover is located in the north of the country, specifically in the area of Petén. Petén is home to Guatemala's (and Central America's) largest tropical forest reserve, the Maya Biosphere Reserve. This reserve encompasses 1,615,473 hectares and is still covered by tropical forests. It has various natural ecosystems and a great diversity of species. It was created in 1990 under Decree 5-90 of the Congress of the Republic of Guatemala.

The Maya Biosphere Reserve is divided into three areas according to the type of activity that is performed in them: the buffer zone, multiple-uses zone and core zone. Each has a specific objective. The buffer zone is used to develop agricultural and livestock activities, while stemming any advance of the agricultural frontier. The multiple-uses zone involves sustainable forestry management and the core zone is formed of natural forest and archaeological areas which are strictly protected. For ecological, scientific and cultural reasons, there is also no permanent human settlement, forestry management or agricultural and livestock development in the core zone.

Since the foundation of the Maya Biosphere Reserve in Petén more than 20 years ago, a series of community forestry (CFC) concessions have been given to communities and private companies in the multiple-uses zone of the Maya Biosphere Reserve. For many

years, forestry activities (as part of cultural practices) and industrial forestry processes have taken place in the reserve. There are currently 15 forestry concessions in the Maya Biosphere Reserve, 13 of which are community concessions alongside two industrial concessions. The community forestry concessions harvest timber and NTFPs like gum from gum trees and xate palm, while the industrial concessions only harvest timber products. Under the National Protected Areas Law, the National Council of Protected Areas (CONAP) can also grant special permissions to third parties to extract NTFPs in the industrial concessions.

The Xate Mayaland Committee organises and commercialises xate palm for the CFCs of the Maya Biosphere Reserve. The Xate Mayaland Committee began operations in 2004, based on selling forest products from the CFCs of Carmelita and Uaxactún (management and conservation organisations or OMYCs). Now it sells products from eight community organisations linked to CFCs: the Integrated Forestry Association of San Andrés, Petén (AFISAP), Carmelita, Uaxactún, Árbol Verde, Custosel, Laborantes del Bosque, El Esfuerzo and Amigos del Bosque. More than 1,500 direct associates of the CFCs benefit from forest-related economic activities. Indirect beneficiaries include 7,500 people (immediate families of concession employees). Additionally, the forestry concessions benefit other indirect participants, as suppliers of other services.



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Harvested xate palms ready to take to the community collection centre

Petén is the largest province in Guatemala divided into 13 townships. Its total population is 662,779. Of this, 51.6 per cent are men and 48.4 per cent are women; 68.7 per cent is rural and 31.3 per cent urban. The poverty level of the area is calculated at 57 per cent and extreme poverty at 14.5; the illiteracy rate is 11.8 per cent and approximately 35 per cent of inhabitants are indigenous.

Petén's economy is based on agricultural activities such as growing corn, beans, vegetables and fruit; forestry activities such as fine hardwood extraction and processing, such as cedar and mahogany; and harvesting NTFPs like xate (*chamaedorea* species), chicle (*chicozapote*) and pepper. There is also a strong livestock sector, some handicraft activities and tourism: Petén is famous worldwide not only for its tropical forests but also for its cultural wealth and Mayan archaeology. Some of the most important Mayan cities in Mesoamerica – Tikal, Yaxha, Ceibal, Piedras Negras and Mirador – are located in the heart of the Maya Biosphere Reserve.

Petén is located 500km from the capital Guatemala City and is well connected with asphalt roads. Petén's internal road network is also considered good and consists of asphalt and dirt roads that connect all the communities with Flores, the capital city of Petén. There are good public transport services, with regular routes and schedules. Petén also has an international airport which operates with three international airlines and daily flights to and from Guatemala City and Belize.

In the last decade, there has been an enormous advance in telecommunications in Petén. Most people now have access to smartphones as well as the Internet on both their mobile phones and home telephone lines. It is common to have access to television and cable services. In the main cities and towns, education is also widely available, in both private and state schools. There are also several universities in the country, both private and state. However, access to education continues to be limited in remote areas.

The fact that communities have for a long time benefitted economically from commercial forest activities has led to reduced levels of deforestation, fewer forest fires, and higher living standards for those who are directly or indirectly involved in forestry activities. The xate palm harvesting and trade emerged in Petén during the 1960s. The collection and use of xate is a cultural practice that has become deeply rooted in forest-dependent settlers, and has provided an important source of income generation and job opportunities for men and women. Three types of palms or leaves of xate palms are extracted: xate jade or macho (*Chamaedorea oblongata*), cola de pescado (*Chamaedorea ernesti-augustii*) and xate hembra (*Chamaedorea elegans*). These products are in demand in international markets because palms are often used to create floral arrangements. Most of the current demand is for jade xate, even though there is also growing demand for cola de pescado xate (xate hembra is not in very high demand).

The xate palm extraction process has changed little over time. It is an activity performed manually, in which a *xatero*¹ goes to the forestry area, cuts the palms with a penknife and

1. A *xatero* is a person who collects xate in the forest. The Xate Mayaland Committee *xateros* are all men from the local CFC communities.

collects them in a large bag until a large enough quantity of palms has been collected to transport to the base camp established in the same forest. In such base camps, the *xatero* groups bring together all the collected palm leaves, check and classify them, ready to be transported to the community collection centre. The palms are then transported using pack animals, motorcycles, or in some cases 4x4 vehicles.

Before the concessions were granted, intermediaries (contractors and sub-contractors) paid the communities to extract the palm leaves. The contractors then collected the product from the communities and transported it by land or air to central Petén or Guatemala City. There was no classification or quality control required of the *xateros*. This situation and the lack of management plans made the extraction arduous and unsustainable.

With the creation of the Maya Biosphere Reserve in 1990 and the beginning of the concessions process, xate palm collection underwent some important changes. Management plans (alongside similar management plans required for timber products) were now required, which helped to formalise the organised production of NTFPs and establish a basis for sustainability. Xate extraction became an activity under the direct control of the CFCs. Once this happened, the intermediaries disappeared and the relationship between the communities and the purchasers was negotiated directly through the Xate Mayaland Committee.

The extraction process continues to be done using traditional manual techniques. However, over time, the *xateros* have been trained in quality control which allows them to collect leaves to specific sales standards. This has reduced rejection levels for collected material and has increased operational efficiency. Previously, the rejection level of the palms was as high as 65 per cent. Now it has fallen to 15–30 per cent.

9.1.2 The operating environment

All of the CFC *xateros* are people from the local forest communities of Petén – most have performed these activities for many years. Most are adults between 40 and 70 years old. There is some youth participation, but this has been decreasing. For collectors to undertake this activity, they must first apply for special permission from the board of directors of the community forestry concession of which they are part.

There is an increasing demand for xate palm leaves, especially for the *cola de pescado* and *jade* species. For these and other more valuable varieties, the Xate Mayaland Committee has plans to create projects to establish forest-canopy understory-enrichment planting of these species. In this way, the communities hope to meet the growing demand for the product.

Competition hardly exists for this product. In the community concession areas, xate extraction is under the absolute control of the forest communities of the Maya Biosphere Reserve. The industrial concessions do not have the authorisation to extract NTFPs.



Xate palms are sorted and graded at the community collection centre

CONAP has authorised two individual third-party businesses to collect xate from the areas within the industrial concessions. Being new to the process, however, their extraction activities do not have the same quality standards and the product can only be sold in local markets. In contrast, Xate Mayaland Committee's main purchaser is international, an American company, Continental Floral Greens. This commercial relationship has been functioning since 2005 and strengthened through formal commercial agreements, which have established quantities, delivery dates and prices. These agreements were developed with the support of the Rainforest Alliance.

Through Continental Floral Greens, xate is exported to a church association in the USA (where the product is used for Palm Sunday Easter decorations). This association makes a special order each year, in March or April. In addition to this annual order, the church association also grants a prize that is distributed among the participating Xate Mayaland Committee CFCs. The percentage of the prize that is distributed to each one of those communities depends on the volume of delivered product. Before receiving the prize money, each CFC also has to present an investment plan which specifies how received funds will be used.

There are other potential clients that have shown an interest in acquiring NTFPs from the Xate Mayaland Committee. However, the quantity of product that the committee can offer is currently insufficient even to meet the demand from Continental Floral Greens. For this reason, the committee has not yet considered exploring other commercialisation channels. While it is a commercial risk to have only one client, the decision not to enter into any agreements with other customers stems from the fact that the Xate Mayaland Committee is as yet still unable to fulfil the demand for its product from its existing customer.

Local clients that previously purchased the product have disappeared as the CFCs have developed more organised commercial offers. The prices offered by previous clients were not competitive compared to those offered by Continental Floral Greens. A database provided by the Association of Forest Communities in Petén (ACOFOP), which supports the committee, indicates that since 2008, 168,830 xate packages have been sold. This volume of packages has generated a total income of US\$1,651,261.

Xate extraction activities are funded directly by advanced payments received from the purchaser. Such payments have allowed the committee to generate working capital, without requiring credit from any banking or financial institutions. Supplies used for xate palm collection, classification and packing (e.g. penknives, paper, rubber and labels) are easily acquired in central Petén or other towns. Transport supplies required to deliver product to the refrigerated collection centre (e.g. fuel and lubricants, spare parts and other materials) are also readily available.

9.2 About the Xate Mayaland Committee business

9.2.1 Vision

The vision of the Xate Mayaland Committee is mainly focused on organising the commercial offer of xate palm for member CFCs of the Maya Biosphere Reserve. In recent years, sales of xate jade and macho have predominated (see Figure 9.1).

The Xate Mayaland Committee was created following an internal agreement between its associates and with the direct support of ACOFOP. To commercialise and export its forest products, the Xate Mayaland Committee uses the legal status of the organisations that supply it with their products, taking advantage of the export permits these organisations already have.

Supply to Continental Floral Greens started in 2005 with the delivery of 280 packages per week – this has now risen to 340 weekly packages. However, only 80 per cent of the quantity requested by Continental Forest Greens can be met because of the limited commercial offer available from the CFCs. Demand is constantly increasing year on year. However, the CFCs have a lack of xate palm collectors to meet this demand. This problem has arisen because collectors are also involved in other activities, attracted by the higher returns from emerging job opportunities such as those associated with the timber industry.

The Xate Mayaland Committee operates with the support of local xate committees in each CFC. These committees jointly organise and plan their activities through regular phone calls. The Xate Mayaland Committee has a commercial coordinator, a secretary and two people

Figure 9.1 Business model of the Xate Mayaland Committee



Source: www.acofop.org. The annual volume traded has been calculated at 80 per cent of the total demand of 340 packages per week = 272 packages per week.

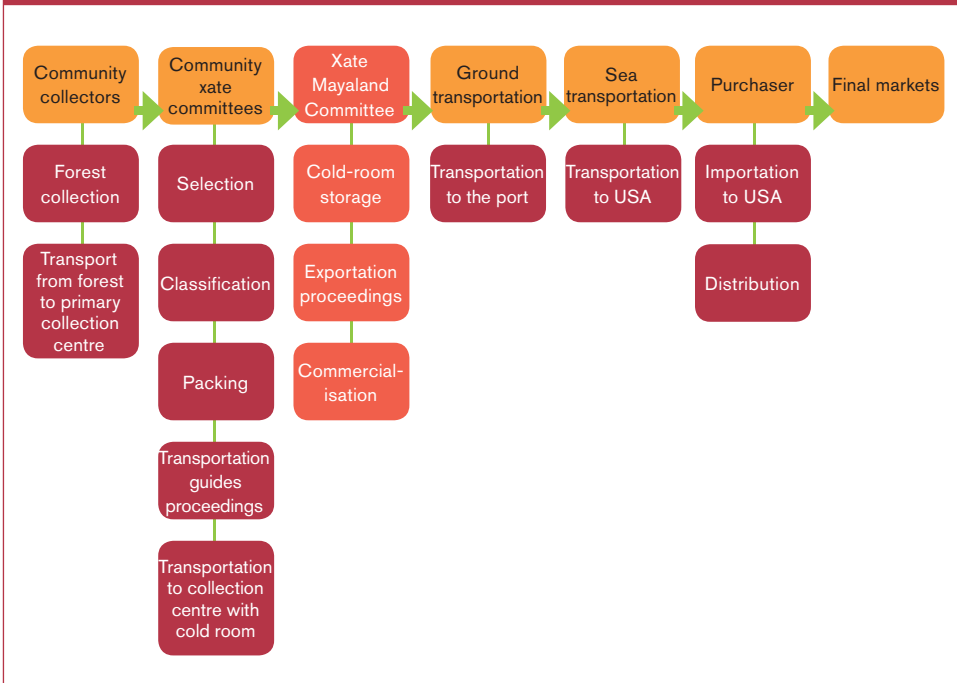
supporting the training processes. It is also responsible for strengthening the commercial relationship with its buyer, and researching new markets and business opportunities.

The Xate Mayaland Committee receives direct support from ACOFOP, which subsidises the salaries of trainers and supports some of the logistics (e.g. transportation of the product between communities). Numerous other institutions like the Wildlife Conservation Society (WCS), Rainforest Alliance, Ministry of Agriculture, Livestock and Food (MAGA), USAID and the Inter-American Foundation have also supported capacity development in the Xate Mayaland Committee. For example, the Inter-American Foundation funded the construction of and relocation to new business premises.

9.2.2 Business inputs

The xate palm commercialised by the Xate Mayaland Committee comes directly from the CFC forests in the Maya Biosphere Reserve. These CFCs use management plans authorised by CONAP. The financial resources for the collection, transportation and processing of xate come from the CFCs and from payments received from the purchaser company – these activities are also subsidised by support from national and international institutions like ACOFOP and WCS, among others. A working capital revolving fund has also been established which is funded through sales and is used for internal payments to collectors.

Figure 9.2 Xate palm value chain



9.2.3 Main activities

The main activities involved in the extraction and commercialisation of the xate palm are shown in Figure 9.3. They are performed throughout the year, although in some CFCs collection decreases during the winter because access to the extraction areas is complicated (from May to September). A sales unit of this product is 600 palms (30 packages, each of which contains 20 palms). The average cost to put together one package of jade xate is US\$7.82 (the most sought-after species). The average sales price is US\$12.25. The cost includes collection, classification and selection, packaging, transport to the collection centre, warehouse management, refrigeration, export management and transport to the port.

The areas in the forest where xate is collected are divided into 25 blocks per concession. Each year, one block is harvested by men from the communities. In some cases, the xateros stay in the forest for as long as five days. They set up base camps that also act as primary collection centres. They then transport the xate to the main collection centres located within the communities. Transportation from the forest is unlikely to present any important challenges in the medium term because the roads are good within the forestry concessions. As these concessions are also protected areas, they cannot be part of any intervention that may cause environmental harm.

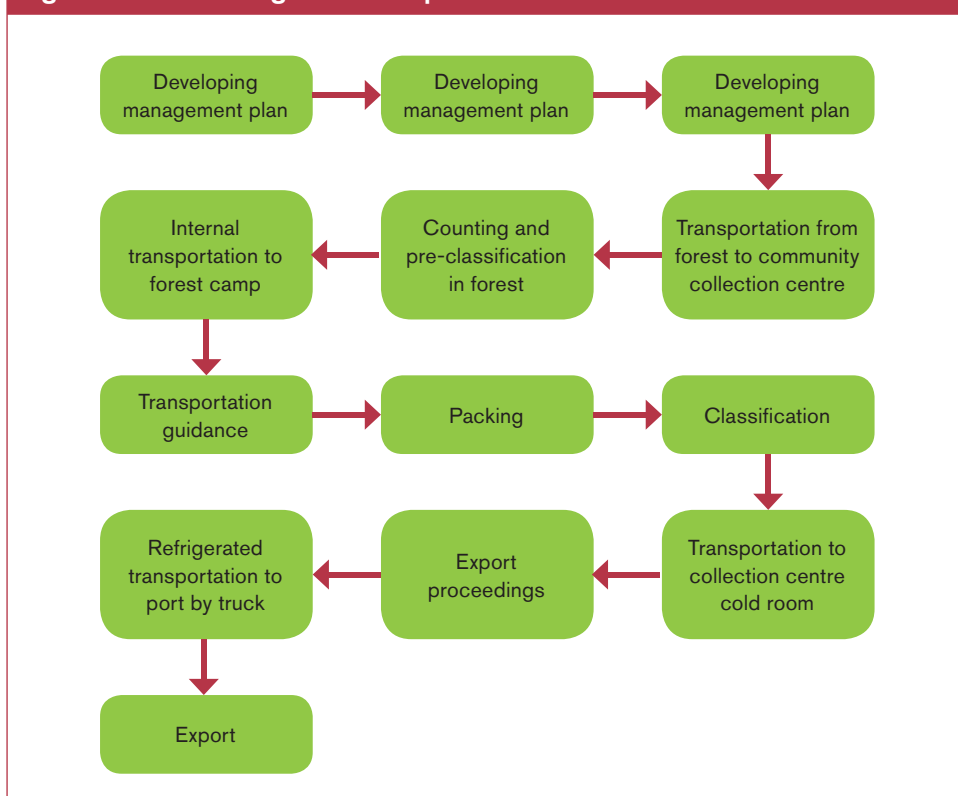
Approximately 200 people are employed in activities overseen by the Xate Mayaland Committee. In terms of xate collection, approximately 150 men are involved. In addition, during the classification, approximately 50 women participate in the production process. At the main offices, a commercial coordinator and an assistant record all incoming and outgoing product deliveries prior to subsequent settlement with each of the CFCs.

With economic benefits arising from the sustainable use of the forest, the communities have had an increasing incentive to protect it. During the last 20 years, this has meant that the concession process has halted the expansion of the agricultural frontier and prevented deforestation and forest fires.

9.2.4 Technology and skills

The *xateros* know what leaf quality is acceptable to the buyer. The palm leaves have to be clean of any spots, insect bites and discolouration. The minimum size for a regular-quality leaf is 18–20cm and for a superior-quality leaf, 21–24cm. The xate collectors are regularly trained in optimum product-handling techniques as well as in product labelling, transportation, and loading and unloading to help guarantee a better quality of product.

Figure 9.3 Main stages in xate production



While the collection, cutting and final packaging is done by men, the classification is done by women from the communities, who have been trained in quality control according to the specific requirements of the purchasers. The packaged product is then transported in pick-up trucks from the communities to the final collection centre in the community of San Benito Petén in central Petén. The centre has a refrigerated storage room, where the xate is stored at 12°C. Refrigeration is a key factor for controlling the quality of the product. The coordinator of the Xate Mayaland Committee and the people in charge of loading and unloading the product have also been trained in managing the refrigerated room and setting the correct storage temperature.

Under the oversight of the Xate Mayaland Committee, local xate committees have also been trained in business management skills including managing costs, accounts and taxes; leadership and negotiation skills; and market access.

9.2.5 Business partners

The only real business partners involved in the production process are the drivers who transport the product from the refrigerated store to the port. However, WCS and ACOFOP support the product transportation to the final collection centre where the refrigerated room is located. In addition, the services of a customs agency are used to support the export proceedings. The driver and the customs agent were selected during a competitive tendering process for quoting the lowest prices, which met with the needs of the committee.

9.2.6 Customer groups and product types

The Xate Mayaland Committee's main purchaser is Continental Floral Greens, with which they have signed a commercial agreement containing terms and specific deliveries. The company pays the Xate Mayaland Committee in advance via bank transfer, and the payment is then used as working capital to pay the collectors two weeks after the deliveries have been made.

9.2.7 Differentiation in the market place

There are several ways in which the Xate Mayaland Committee's product is differentiated in the market place. Firstly, in terms of the brand, the product is Forest Stewardship Council (FSC) certified and is from sustainably managed forests. In addition, there is a strong social story associated with the product: it originates from communities where the commercialisation benefits have a direct impact on their quality of life. Additionally, there is a proven link between community forestry management and forest sustainability due to reduced deforestation, agricultural frontier advancement and forest fires.

But the product is also differentiated in terms of its quality. Product quality is high because the collectors have clearly established the quality requirements of the purchasers, and implement them. The classification, packaging, transport and refrigeration processes have been developed in a way that guarantees the product's quality.

9.3 Who controls the Xate Mayaland Committee?

9.3.1 Origin of the value proposition

The collection and sale of xate palm is an activity that has developed in the forests of Petén since the 1960s. This activity is a cultural practice amongst forest-dependent communities. But it is also a source of economic income.

The committee was created with the support of ACOFOP, whose principal objective was to form an institution that would organise the commercialisation of xate for all the CFCs, strengthen the CFCs' negotiating capacity and ease the commercial process between purchasers and collectors. The business opportunity was originally promoted by national and international businessmen who identified the market.

With the creation of the Maya Biosphere Reserve and the CFCs, xate commercialisation came under the control of local committees within the concession management organisations, and later, the Xate Mayaland Committee. The commercial participants before the concession process have largely disappeared and some of them now work in zones outside of the Maya Biosphere Reserve. However, they have no relationship with the CFCs and the Xate Mayaland Committee.

9.3.2 Control over forest resource access

The management of the forestry resources of the Maya Biosphere Reserve CFCs is legalised by the Protected Area Law of CONAP. The CFCs are authorised to manage timber and non-timber resources in their forest areas given on concession. Xate collection is authorised by the board of directors and the general assembly of each of the CFCs.

In the areas where xate is collected, the concessions were granted for 25 years. Twenty years have already passed. In five years' time, it is expected that the government of Guatemala will carry out an evaluation to decide whether to extend the period of concession management.

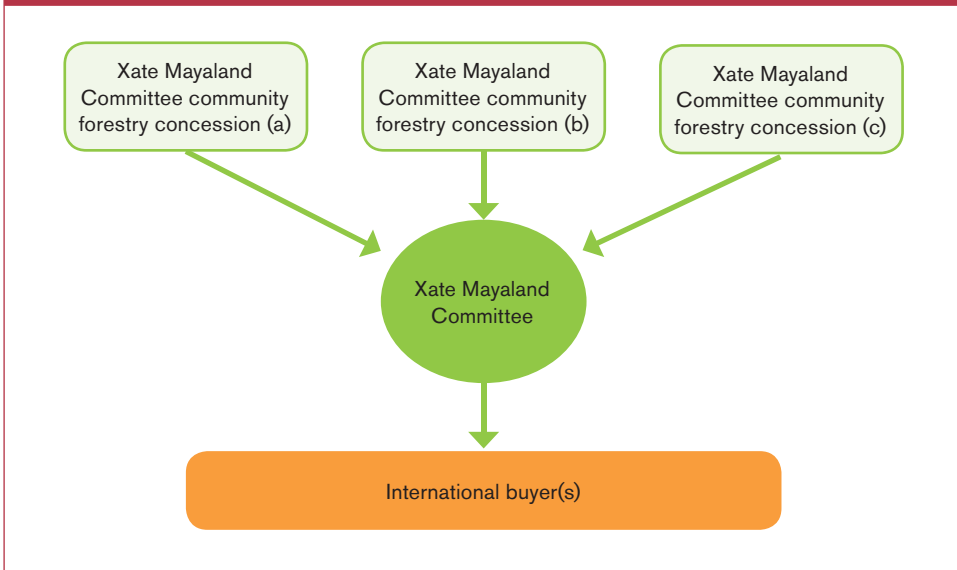
9.3.3 Control of the business

The Xate Mayaland Committee has a board of directors consisting of a president, vice president, secretary-treasurer and members of the committee. The committee was established through a letter of understanding between the organisations managing the CFCs (it involves internal regulations, not formal bylaws). The committee has its own logo and commercial brand.

Local xate collection activities in each CFC are coordinated by its own local xate committee. These committees are then represented on the Xate Mayaland Committee (through a single member) and coordinated by it (see Figure 9.4).

The Xate Mayaland Committee have constructed a single-storey business premises on land belonging to Forescom (the commercial company belonging to ACOFOP). The building includes the refrigerated storage room, administrative offices and a conference room. The resources were donated by the Inter-American Foundation.

Figure 9.4 Coordinating role of the Xate Mayaland Committee



Income generated by xate sales is paid directly to the local xate committees minus operating costs, once the sales are finalised. The product is purchased from the collectors at a set price. Operational costs include electricity, water, telephone, fuel, office supplies, export management, refrigerated transportation to the capital city and the salaries of the coordinator, accountant and administrative assistant.

9.3.4 Staff selection and roles

Most *xateros* are experienced collectors from the communities. There are new, young collectors too. All have received training, supported by national and international organisations like the Rainforest Alliance, WCS and ACOFOP. Each CFC also has its own board of directors. They are responsible for decisions about who does what in terms of xate activities in their communities.

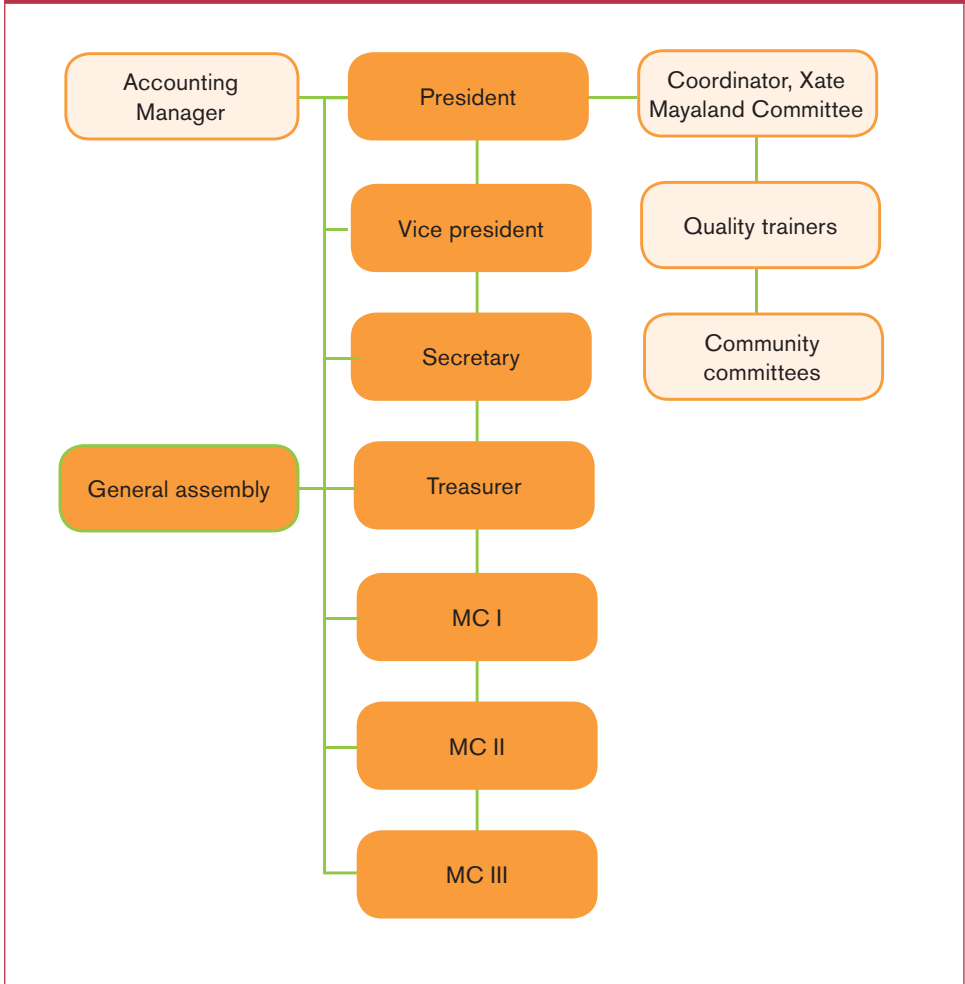
9.3.5 Delivery options

The final product is delivered by refrigerated truck. The driver was selected both because of his availability and the competitive price he quoted following a request for tenders.

9.3.6 Customer research

The management of the committee's commercial relationships is the responsibility of the coordinator of the Xate Mayaland Committee, with the direct support of ACOFOP. The coordinator maintains constant communication with the client by email or telephone, to provide ongoing feedback regarding their commercial activities and to make decisions regarding to the product volume, quality, delivery schedules and compliance. As the product does not require any processing, the purchaser's requirements for quality are consistently met (size, colour, packaging and refrigeration).

Figure 9.5 Organisational structure of the Xate Mayaland Committee



The Xate Mayaland Committee is constantly researching new clients. Organisations like ACOFOP, the Rainforest Alliance and WCS support advertising activities. They also help to oversee commercial contacts and promote the product internationally. Nevertheless, the volume of product available for the commercial offer is again a limiting factor. The committee is aware that it must increase the volume of product on offer to satisfy any future increase in demands, in addition to its current offer. In the last two years, because of internal situations, only three CFC communities have contributed any product to the committee: Carmelita, Uaxactún and El Esfuerzo. This has contributed to the purchaser's demand being larger than the offer, which has created a favourable business scenario for the Xate Mayaland Committee.



© ACOFOP

Xate palm classification is done by women from the communities, who are trained in quality control

9.4 How has the Xate Mayaland Committee overcome key challenges?

9.4.1 Challenges relating to the value proposition

With the creation of the Xate Mayaland Committee in 2004, a new process of xate palm commercialisation began. A capacity-building process to improve the quality of collection activities was done with in-the-field training for collectors, as well to improve transportation, management, classification, packaging and product refrigeration.

Capacity building also included infrastructure development (primary collection centres in the communities and a main refrigerated storage centre). Several national and international organisations supported the capacity-strengthening process including ACOFOP, the Rainforest Alliance, WCS, Inter-American Foundation and AGEXPORT.

FSC certification and the gradual involvement of more CFCs have been factors that have helped to strengthen the committee's commercial offer. A product coming from sustainably managed forests and from forestry communities is seen as a value-added product by the purchasers from the United States.

9.4.2 Overcoming legal challenges relating to resource access

Access to NTFPs is clearly defined by Guatemalan legislation in favour of local communities. The CFCs were originally granted by CONAP under the National Protected Areas Law. In 2005, CONAP introduced a new requirement for specific management plans for the use of xate palm. These plans are reviewed and authorised for each local organisation. Despite the labour involved in that process, the outcome has been favourable in that sustainability has been assured and better planning has been introduced.

9.4.3 Overcoming ownership and benefit-sharing challenges

Since its creation, the Xate Mayaland Committee has overseen the commercial management of the consolidated sales of xate from the participating CFCs. All benefits generated have been transferred directly to the communities who are represented on the Xate Mayaland Committee. The only deductions are for costs incurred.

While the committee has no legal status, it is based on an agreement between the member CFCs. In this agreement, the responsibilities and rights of the members are established. The board of directors is responsible for overseeing the appropriate development of the committee, and committee members are elected annually.

9.4.4 Overcoming labour challenges

There is no formal recruitment process for the xate collectors. Any men from the community can do this provided they have the approval of the concession's management organisation. However, one major issue has been a lack of new *xateros* (as many people prefer other work that is considered easier to do and better paid). An additional challenge has been the fact that, for some of the CFCs, access to the forest is only permitted during the summer and in some cases, the collection areas are considered to be too far away to be an attractive proposition for potential collectors.

In terms of those in charge of classification and packing, they are community members who are interested in being part of the productive process. All workers are trained in the appropriate management of resources and quality processes. Administrative personnel are hired following an open recruitment and selection process, although people from the communities with the appropriate skills and experience are preferred.

9.4.5 Overcoming delivery challenges

The product management needs are specific. The product requires refrigerated storage and transportation to the city of Guatemala, the port and the United States. The Xate Mayaland Committee is responsible for the product's storage and refrigerated transport to Guatemala City. From that point onwards, the product management is the responsibility of the purchaser.

9.4.6 Overcoming marketing challenges

The committee has had a commercial relationship with two clients since 2005: Continental Floral Greens in the USA and through that company, since 2008, a US church association. During these years, the key factors strengthening the commercial relationships have

included an understanding of the conditions under which the product is obtained, its sustainable management and also its certification. On some occasions, the Xate Mayaland Committee has been unable to fulfil the agreed sales volume. However, it is expected that in future, the offered volume will increase as more product becomes available due to enrichment planting in the forest understory.

The search for new clients has been limited because of the lack of product on offer. At the beginning, promoting the product to an international market was done using direct contacts with potential purchasers. The key to the product's placement was its origin, the economic benefits it generates for the participating forest communities, and also their commitment to the sustainable management of their forest resources through FSC certification.

9.5 Key lessons

9.5.1 Keeping down costs

Improving the quality of collection in the field has been one of the main factors that has helped to keep down costs. It has reduced the volume of substandard material collected, which had led to high rejection rates. With training, the collectors have become more efficient in collecting xate palm leaves that meet the required quality conditions, which means more income and a more efficient business.

Optimising product transportation has been another way of reducing costs. Production is organised so that each time the product is transported, the vehicle is completely loaded. This reduces the transportation costs per xate palm sales unit.

Using and understanding the maximum and minimum recommended storage capacity of the refrigerated storage room has also reduced storage and refrigeration costs. Likewise, the wholesale purchase of the raw materials from xate committees (rather than purchasing from individual collectors) has reduced costs. Those involved in selection, classification, cutting and packing are paid by worked volume, rather than on a fixed salary. This increases volume and reduces per unit costs and also reduces employee benefit liabilities and overall costs as a result.

9.5.2 Retaining customers and willingness to pay

The main factor contributing to a good commercial relationship with the purchaser is the correct understanding of the conditions under which the forestry communities work and obtain the product. This enables the purchaser to understand the available monthly volume and the committee's ability to fulfil the order. The commercial relationship has developed over nine years, in which time confidence and reciprocity have been generated.

9.5.3 Success factors

A number of factors have contributed to the success of this business model. It cannot be overemphasised how important it has been to the communities involved that they have a legal right to access their forest resources because of the concessions agreement between the CFCs and CONAP.



Xate is packaged and loaded ready for transportation

Another important factor has been that this business model has been built on a longstanding cultural extraction activity that has developed over the last 50 years. The familiarity with the production process has allowed the communities of the forestry areas of Petén to create an income to support themselves and their families.

The creation of management plans for extracting xate sustainably, as required by CONAP, has formed part of the FSC certification process. This has provided a guarantee of sustainability in the market that has strengthened the brand. The CFCs have had FSC certification for these products for more than ten years, which has enabled them to access specialised markets and generate added value.

The creation of the Xate Mayaland Committee itself, in charge of integrating the commercial offer of the xate palm CFC's across the whole Petén region, has guaranteed a unique sales channel, maximising direct benefits for the collectors and minimising commercial effort for the purchasers.

Every year, the CFCs have an obligation to plant 25,000 units of xate palm, to increase the population of the species. This forms part of their management plans. Product quality has been a core focus, and the subject of considerable investment. Quality processes – from collection to storage and transportation – have been set up and maintained. This has allowed the creation of an internationally recognised commercial brand. The strengthening of the commercial relationship with the purchaser is largely thanks to constant improvements in the quality of the export product. Training has also been a determining factor.

A captive market in the USA and an increasing demand from other potential buyers puts the Xate Mayaland Committee in a strong commercial position. With new CFCs joining the committee and the intention to enrichment plant xate in the forest understory, the commercial offer could be increased. New CFCs will provide larger volumes of product to sell. The Xate Mayaland Committee's current business premises have the capacity to store at least double the volume that is currently being produced.

Finally, the Xate Mayaland Committee has created synergies with national and international NGOs like ACOFOP, the Rainforest Alliance, WCS, MAGA, CONAP, USAID, AGEXPORT and Inter-American Foundation. These organisations support the continued development of the committee's capacities and infrastructure.



Indonesia: Koperasi Wana Lestari Menoreh (KWLM)

Mutually enlivening: a community logging cooperative's story of local empowerment

by Bernadus Sad Windratmo, Khusnul Zaini, Silverius Oscar Unggul and Wibowo Sulistio

The Menoreh Sustainable Forest Cooperative (KWLM) is a great example of a successful community logging cooperative in Indonesia. Operating on the 'one member, one vote' principle, KWLM works with its members to protect their forests through for example FSC certification and replanting, while ensuring economic and social benefits such as fair prices, an assured market for their timber, and the use of their trees as collateral with the local credit union. Here, the authors describe the roots of the business, and how KWLM has expanded to include over 1200 members in just five years.

10.1 Context in which KWLM operates

10.1.1 The enabling environment

This chapter describes the work of Menoreh Sustainable Forest Cooperative (KWLM or Koperasi Wana Lestari Menoreh). KWLM is located in Kulon Progo at the foot of the Menoreh Mountains, a water catchment area that supplies clean water for the adjacent major city, Yogyakarta, a cultural melting pot known across the Indonesian archipelago for its many universities.

Most of Kulon Progo's inhabitants are farmers whose average landholding is 2,500m³ per family. While the north and west of the district is dominated by clove plantations, the dry southern region is dominated by on-farm teak plantations. Aside from that, villagers also plant rice paddies, fruit, herbs and cocoa.

About 40 per cent of the population is aged between 19 and 60 years. Most families strive to provide proper education for their children. About 15 per cent are university graduates, while roughly 40 per cent graduated from high school, and the rest left school after junior high or elementary school.

Being situated near a major city in Java (where 50 per cent of Indonesians live) Kulon Progo inhabitants enjoy the benefits of modern information and communication technologies. At present, most inhabitants own a mobile phone, and Internet connection coverage is pretty good. Transportation infrastructure has always been good as well.

Culturally, Kulon Progo inhabitants live according to the Javanese tradition. This involves strong social ties and civility in social discourse and personal interactions. A key factor that has led to our establishment and success is the local people's tradition of '*gotong-royong*' or working collaboratively, for example, to help build each other's houses as well as on projects that serve the common good, e.g. building bridges.

Another big factor that led to the birth of KWLM was the awareness that the locals have about the importance of preserving nature. It has roots in the Javanese traditional adage, '*Hamemayu Hayuning Bawono*', guiding humans to live harmoniously with the Creator, their fellow humans, other sentient beings and with the natural environment. Tree planting is part of that pattern of life.

Tree planting was also strengthened by a government programme Gerakan Nasional Rehabilitasi Hutan dan Lahan (GERHAN) (National Movement of Forest and Land Rehabilitation) launched by the Ministry of Forestry in 2004. Kulon Progo was particularly successful in the implementation of this programme, leading to a visit by the Forestry Minister himself, of which the locals are proud.

Legally, the development of our cooperative business was made easier by the fact that villagers individually own land plots that amounted to 22,000 hectares of forest in the district. So, there was no need for us to obtain land management rights from the government. There was also a successful example of previous cooperative work facilitated by Telapak Association in South Konawe. This latter example of forming a similar community logging cooperative also helped in convincing the villagers in Kulon Progo to follow suit.

10.1.2 The operating environment

There were four local conventional timber traders operating in Kulon Progo when KWLM started operations in 2009, and none of them had any monopoly over the market. These traders bought timber from villagers when those villagers needed an extra income, such as at the start of the school year, during times of illness, when their children got married or when their house needed renovating. Timber sales were not, and continue not to be, the main source of income for local villagers. The existing traders did not see the new cooperative as a threat to their business. This allowed us to start without undue interference from competitors.

Most of those traders continue to rely on the conventional banking establishment for financing. KWLM on the other hand financed start-up and continued running costs by collaborating with a local credit union, Credit Union Kharisma Tali Asih (CUKATA), as well as with ASMINDO (a local association of furniture producers) who wanted to source wood from community logging cooperatives such as ours. ASMINDO was also facilitated by Telapak Association, who played a key role in establishing KWLM. The financial independence from the conventional banking system created a strong sense of self-reliance within KWLM.

At the outset, the main customers for existing traders were furniture companies in Jepara, at the northern tip of Central Java, who sourced timber from many different regions in Indonesia. The furniture they make is often exported to foreign markets. Additionally, albizia wood was sold to plywood companies in nearby Temanggung, Kutoarjo and Wonosobo. KWLM's first customer was Pt. Ploss Asia, who bought small volumes of timber during the start-up phase when the total area managed by KWLM was a mere 110 hectares.

From the beginning, KWLM took a strong stand on employing local labour to cut, haul, process and deliver wood. We also recruited middlemen between villagers and the traders, who now operate as traders for KWLM. A key part of the way we conduct our business is to always try to internalise external processes, including sourcing labour and traders to deal with customers. Over the years, this has helped reduce the outflow of capital and increase the welfare of the local community.

The villager members of KWLM themselves are the suppliers. They had planted timber many years before KWLM started, and sold to traders at below the market rate. We decided to offer villagers supermarket-like (i.e. non-haggled) prices, which are fixed and fair. This was unlike prices offered by the local traders that were often varied and thus unfair, especially for villagers who did not understand market prices or were in a hurry to get some cash.

In offering fixed and fair prices, KWLM was a unique endeavour. We offered a way for the local community to predictably, collectively and sustainably profit from logging, which had not always been the case. Later, KWLM also obtained certification from the Forest Stewardship Council (FSC) which opened up an entirely new market for local timber. We also developed a sawmill for non-FSC timber.

In terms of the operating environment, even if all existing suppliers of FSC-certified wood combined their output, the demand for FSC timber still outstrips supply, mostly eliminating the element of competition. This is true for the entire island of Java, including the large-scale Perum Perhutani operations (a state-owned enterprise), Pt. Dipantara, Koperasi Kostajasa and KWLM itself.

10.2 About KWLM as a business

10.2.1 Vision

Founded in March 2009, KWLM is a timber business trading primarily in teak, mahogany, albizia and rosewood. The process was initiated by CUKATA, a local credit union; Yayasan Bina Insan Mandiri (YABIMA), a local NGO; and Telapak Association, a national NGO. The 'K' in KWLM means *koperasi serba usaha* (KSU, or multi-business cooperative).

The vision of KWLM is 'to improve the community's economic condition by developing the spirit of social entrepreneurship while ensuring the conservation of the natural environment it is situated in'. More specifically we operate under the following goals:

- **Ecological:** to prioritise the conservation of nature by limiting tree cutting per year, protecting endangered species, preserving cultural heritage sites and safeguarding water sources. All of this is based on FSC sustainability standards, and local wisdom.
- **Economic:** to increase profit margins for products made with local natural resources, by establishing the shortest paths to local, national and international markets.
- **Social:** to improve the bargaining power, entrepreneurial spirit and gender equality of the local community while obeying existing laws and regulations.

To our members, KWLM not only offers additional income through fair prices and market access, but we also enable them to use their trees as loan guarantees at the CUKATA credit union, providing an additional financial cushion for cooperative members. This avoids short term 'needs-based cutting' that would undermine sustainable management planning. To its buyers, KWLM offers sustainably sourced wood of high quality and predictable availability. And to the local government, KWLM provide additional tax revenue previously not available when farmers were selling individually to traders who often evade tax regulations.

Table 10.1 Trends in sales, profit and staff

	2009	2010	2011	2012	2013	2014 ¹
Staff (male/female)	0	2 (1m/1f)	6 (4m/2f)	7 (4m/3f)	9 (6m/3f)	9 (6m/3f)
Members	23	225	375	822	1,088	1,205
Land (hectares)	n/a	129	417	647	700	800
Trees (d>40cm) ²	14,937	21,589	28,520	68,493	74,616	95,500
Production (m ³) ³	Non-FSC	Non-FSC	213	671	792	900
Sales (US\$) ⁴	0	13,523	53,346	125,145	168,554	227,272
Profit (US\$) ⁵	0	1,129	3,801	6,084	4,373	6,818

10.2.2 Business inputs

All natural inputs for the KWLM business (seedlings, timber, labour etc.) come from the surrounding local environment and community. Villagers who have since become KWLM members planted timber trees many years ago on their own land. Once a tree is felled and sold to KWLM, in addition to payment members receive 10 free seedlings to be planted in its place. KWLM covers the cost of seedlings by including it as part of the cost component of agreed timber sales prices. This ensures that in the long term, tree coverage not only is preserved, but also enlarged, and we are guaranteed a stable source of timber.

Initially, financial inputs came from a variety of sources including Telapak Association, the Samdhana Institute and other NGOs, CUKATA and ASMINDO. After KWLM was formed, members began to pay compulsory monthly instalments, which are paid in bulk when their trees are felled and sold to KWLM. Members can also voluntarily invest in KWLM with interest rates comparable to conventional banking deposit rates. For conducting FSC certification, KWLM receives grants from YABIMA, the Samdhana Institute, Telapak and Hivos.

1. Figures for 2014 are projected, except for 'members' row, which gives the figure as of August 2014.

2. Standing trees in members' plots under KWLM's management with a diameter larger than 40cm

3. Only FSC-certified timber production undergoes the inventarisisation process.

4. Assuming 1 US\$ = 11,000 IDR.

5. KWLM's goal is not to maximise institutional profit, but to distribute added and captured value to its members, e.g. by purchasing timber from members at 10–15 per cent higher than market prices, or by investing in business development including purchasing industrial tools and providing training to members.



Source: www.youtube.com/watch?v=70xwihKtE8

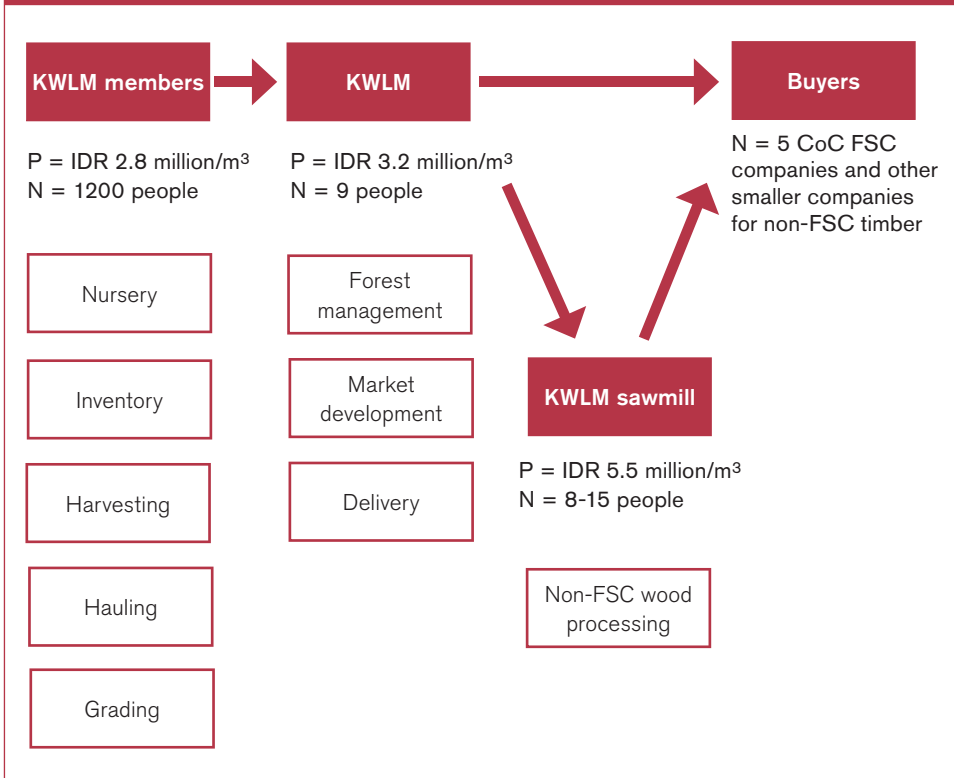
KWLM business facilities and processes: photos taken from a video by the British Council Indonesia, 'Social Enterprise Indonesia – Koperasi Wana Lestari Menoreh KWLM (Yogyakarta – Kulon Progo)'.

10.2.3 Main activities

KWLM undertakes a number of activities through its members. These include activities relating to the nursery, planting and inventory work, harvesting and grading, processing, and delivery and distribution.

The nursery: a nursery business unit belonging to KWLM produces seedlings to compensate members for harvested trees. This nursery is located in the village of Pagerharjo, Samigaluh District, where KWLM rents 3,000 m² of land owned by the village government. The nursery employs one staff member (part of KWLM) and hires between four and eight daily workers to manage operations. After the seedlings have been distributed, the remainder are sold to the public as an additional income stream for KWLM. Each seedling is valued between IDR 2–15,000 (US\$ 0.15–1.20) depending on the tree species. The nursery is financed by including seedling production costs in the timber sales price. While not fully covering costs, it does make some profit. Income from sales of surplus seedlings is a further additional profit.

Figure 10.1 Value-chain map of KWLM operations



Planting and inventory work: the planting of seedlings is done by KWLM members themselves on their own land at the beginning of the rainy season. Coordination of the seedling distribution and planting is done carefully by KWLM. Post-plantation, KWLM performs an annual inventory to measure the growth of each seedling. Some trees will be felled before they reach maturity in a conventional thinning process. This ensures that only trees with the best likelihood of producing high-quality timber are grown through to maturity. Valuation of trees to be thinned is about IDR 300,000 per teak tree felled at five years of age, and IDR 2–300,000 per albizia tree felled aged two to three years. All trees felled at this stage have a diameter of 10cm.

Harvesting and aggregation: once a tree reaches maturity, KWLM sends three service station coordinators to harvest the tree from the members' land. This is integral to KWLM's forest management activities under FSC certification standards. At this stage, teak and mahogany trees aged 17.5 years are valued at IDR 1.2 million (US\$ 95) – and albizia trees aged 7 years are valued at IDR 800,000 (US\$ 63). After harvesting, trees will be hauled to the nearest asphalt road (usually less than 500m away) and graded. Grading involves measuring the length and diameter of the stem, adding markings according to FSC standards, and including the tree in KWLM's official harvest report. Harvesters and haulers at this stage are employed from the local community.

Processing: at present, KWLM has not obtained the chain of custody (CoC) certification to process wood as part of the FSC Standard. To process non-FSC wood, KWLM has created a sawmill as one of its business units, employing local people. Logs originally valued at IDR 2.8 million (US\$ 220) per m³ are valued at IDR 5.5 million (US\$ 435) per m³ as blocks/boards. This is part of KWLM's philosophy to capture value and internalise its distribution to the local community (members and non-members).

Delivery and distribution: for logs still within the FSC certification specifications, KWLM sells and delivers them directly to buyers. This is done twice per week, managed by the three coordinators of KWLM's service station aided by six daily workers to load the logs onto the delivery truck. The truck is owned by Tuhu Transport, a cooperative formed by members of KWLM to deliver KWLM's timber, and also to do other paid transport-related business activities such as taking local market traders to and from the market and transporting building materials for local villagers, etc. The added benefit of using Tuhu Transport is that KWLM minimises or eliminates the risk of delivery truck drivers bypassing KWLM altogether and brokering trade between buyers and KWLM members.

10.2.4 Technology

KWLM uses a range of knowledge and technology for each of the different sets of activities listed above.

Nursery: KWLM collaborates with Gadjah Mada University to improve the quality of teak stands. KWLM currently employs bud-grafting (*okulasi tempel*) and stem-cutting (*stek pucuk*) techniques. Both are employed because they use different parts of a quality selected seedling, so nothing goes to waste. For non-teak seedlings, conventional techniques are used (seeds are scattered on the ground, and later on separated into polybags after germination).

The scale of KWLM's nursery has grown. In 2009, KWLM bought seedlings from third parties. Growing production steadily rose to 60,000 seedlings per planting season in 2011 to compensate members for trees felled that season. By the end of 2014, KWLM aims to produce 100,000 seedlings, with a significant proportion sold to third parties for additional profit.

Planting and inventory work: Planting does not need specialised technology and follows customary habits where the typical pattern is agroforestry, including multiple-crops. People are used to planting trees on their land such as durian, banana, coconut, cocoa, etc. This provides resilience in income as they can sell different produce at different times of the year. In terms of the density of timber trees planted, inventory data from FSC-certified trees (teak, mahogany, albizia and rosewood) shows that the average standing trees planted by each member is 68 trees on an average-sized plot of 6,400m².

For inventory work, KWLM keeps written records combined with GPS equipment to mark tree locations on the map, and some basic digitalisation workflow using spreadsheets (MS Excel) where data is aggregated and sorted per member.

Harvesting and aggregation: Harvesting is done using chainsaws owned by KWLM, and aggregation with manual human labour and trucks to transport the logs to KWLM's warehouse.

Processing: Basic mechanical tools are used for processing non-FSC timber. This includes a bench saw to cut the logs and a kiln to dry them. All the tools are owned by KWLM as part of its own sawmill business unit.

10.2.5 Business partners

For deliveries, KWLM partners with Tuhu Transport. This guarantees that there will be no misconduct such as falsification of documents used to deliver third-party timber using KWLM's brand, which has happened in the past. KWLM started using their services in 2011–2012 because delivery volume rose beyond internal capacity. The arrangement also benefits the local community as owners of the business, rather than using another company's services.

10.2.6 Customer groups and product types

KWLM has two customer groups: buyers of FSC and non-FSC timber. Each is supplied with different product types through different purchase methods.

FSC timber (teak, mahogany, albizia and rosewood) is sold to furniture companies with FSC chain of custody (CoC) certification in the form of logs (unprocessed):

- Teak: Pt. Ploss Asia (Semarang); Pt. Java Furniture and Pt. KWAS (Yogyakarta); Pt. Citra Jepara Furniture (Jepara).
- Mahogany: Pt. Citra Jepara Furniture (Jepara); Pt. Vincent (Cirebon), Pt. Dwipapuri (Bandung).
- Albizia: Pt. Indotama Omicron Kahar (Purworejo).
- Rosewood: a small company in Solo.

KWLM creates a contract with such companies specifying among other things:

- Volume needed (m³)
- Delivery period(s)
- Type, length, diameter and cluster (super/non-super) of logs
- Amount of down payment (first instalment) and a schedule of the remainder
- How the grading is done

Purchase orders (POs) are based on this contract, with smaller volumes or shorter periods (weekly or monthly) adjusted to suit the cash flow of both KWLM and the buyer.

Non-FSC timber is processed at the sawmill owned by KWLM. Logs are sold to buyers as far away as Jepara (100km away) and as close as Temanggung (40km away). KWLM also sells timber as half-processed boards/blocks for building materials (roofing, windows, doors) to smaller shops in Kulon Progo and full payment is required upon delivery.

10.2.7 Differentiation in the marketplace

To date, KWLM has not investigated how we differ from our competitors in terms of what we offers. But the cooperative does have a specific marketing approach using the five 'Ps' (product, price, promotion, placement and pace).

Product: For FSC timber, no special treatment or differentiation is applied. KWLM simply sells log according to the annual harvest allocation calculated based on the FSC sustainability standard. Demand exceeds supply, so there are always available buyers.

Price: The only differentiation KWLM makes is to buy timber from cooperative members at a 10–15 per cent higher price compared to local traders, so that members are willing to sell to KWLM. Compared to other FSC-certified businesses operating in the region, the sales price to buyers is similar. Nevertheless KWLM produces better-quality timber due to the favourable, dry climate in Kulon Progo. This ensures market access, but does not translate into higher prices. The supply for FSC timber is still lower than demand, so in reality, KWLM always sells any amount of timber its members can produce. The scale of the Indonesia timber supply–demand gap means that this is unlikely to change in the near future.

Promotion: KWLM initially sought buyers with chain of custody (CoC) certification through the FSC website. However, things have quickly turned around and buyers now proactively seek suppliers with FSC forest management (FM) certification. The majority of KWLM buyers found the cooperative through FSC's website. Only two companies have so far bought from KWLM though personal lobbying. KWLM also has a basic website which includes the business phone number.⁶ Several people have called in and visited the business office.

Placement: No specific marketing or product placement activities have been developed yet. KWLM's timber is not displayed on store shelves nor showcased in any chain stores.

Pace: KWLM have not yet seen any need to pursue product innovation as KWLM's FSC timber is being sold as logs according to the FSC Standard, and non-FSC timber is sold according to common market needs. When and if KWLM establishes its own furniture company, we anticipate the need to innovate, especially in relation to design trends in both domestic and foreign markets.

10.3 Who controls KWLM?

10.3.1 Origin of the value proposition

The value proposition is based on Telapak's work with its community logging cooperative model.⁷ First trialled and implemented in South Konawe, Sulawesi, it has proven to be a viable model to empower the local community there to prosper alongside the forest and not against it. This model is also the result of Telapak's many years of work trying to curb illegal logging through investigative reporting and advocacy, which has evolved into a more solution-based, social enterprise to empower local communities to guard their forest. It is also Telapak's core programme that is not project-based and receives first priority in resource allocation.

6. See <http://menorehwood.wordpress.com>

7. See www.communitylogging.cooperative

In Kulon Progo, this model found fertile ground following the success of the government reforestation initiative, GERHAN, under the leadership of YABIMA. Community groups formed during that initiative were ready to adopt the community logging model.

Other factors came into play as well:

- Located in central Java, Kulon Progo is well situated to supply timber to furniture companies. The demand was there.
- Local government was very supportive.
- The local community was enthusiastic, as shown by the high turnout at the early meetings. This was most probably due to the opportunity for generating additional income.

The process of realising the value proposition happened in stages over the course of one year and involved socialisation, conceptualisation and mobilisation.

Socialisation: a Telapak facilitator conducted seminars, workshops and trainings to increase the local community's understanding of the community logging cooperative model. This was done in collaboration with YABIMA, which provided access to local government officials and facilities. From each of the 11 villages in Kulon Progo, three representatives were invited to participate in the process.

Conceptualisation: A core team was selected which would later become the cooperative's organising body. The process began with implanting the concept of organising and organisation, its constitution and why it is needed. Among the methods used were simulation and role-playing. Some people would play the role of government, some the local community, and others business men. There were also sessions where the cooperative law was dissected and related to the true spirit of the cooperative model, and how badly implemented cooperatives have tainted its image in society. Another session covered simulating conventional trade practices, from the village level to export companies.

The local community gained an understanding of the crookedness of ill-intentioned middle men, and how banding together can increase the community's bargaining power and income. One participant went on a field trip to Tapos, Ciwaluh, in West Java, to see another community in the process of implementing the community logging cooperative model.

Mobilisation: Once a draft constitution for the cooperative was created, village representatives would discuss it in their respective villages, initially through their circle of friends. Once the cooperative was formed, each village formed their own committee to work with the cooperative, among others, to recruit new members and help with forest management processes according to FSC standards. In practice, if the socialisation and conceptualisation process is done correctly, it is not difficult to attract new members to join the cooperative. And in reality KWLM membership has grown rapidly over the last five years.

The key to success was a focused, constant effort on the part of Telapak's facilitator to work with the local community through to cooperative formation and beyond. Even to date, this work continues. But none of this would be possible without the local community's willingness to move up the economic ladder while preserving the forest.

10.3.2 Control over forest resource access

Through the cooperative's constitution, tree access, extraction from member-owned land and plantation are regulated. This starts with the annual members' assembly that produces the annual work plan and harvest allocation, all based on FSC standards.

Next, individual members initiate the process of harvesting trees and selling the timber. This usually happens at predictable times of the year (the beginning of the school year, at the end of Ramadhan when people need extra cash for food) and for other less predictable times of financial need (illnesses, weddings etc.). But overall, the annual harvest allocation has grown along with the growth of the member base.

We foresee that the cooperative aims to increase predictability in the whole process, which will feed into marketing efforts in the future.

10.3.3 Control over the business

Our business has the following organisational structure that describes the hierarchy of control within the business.

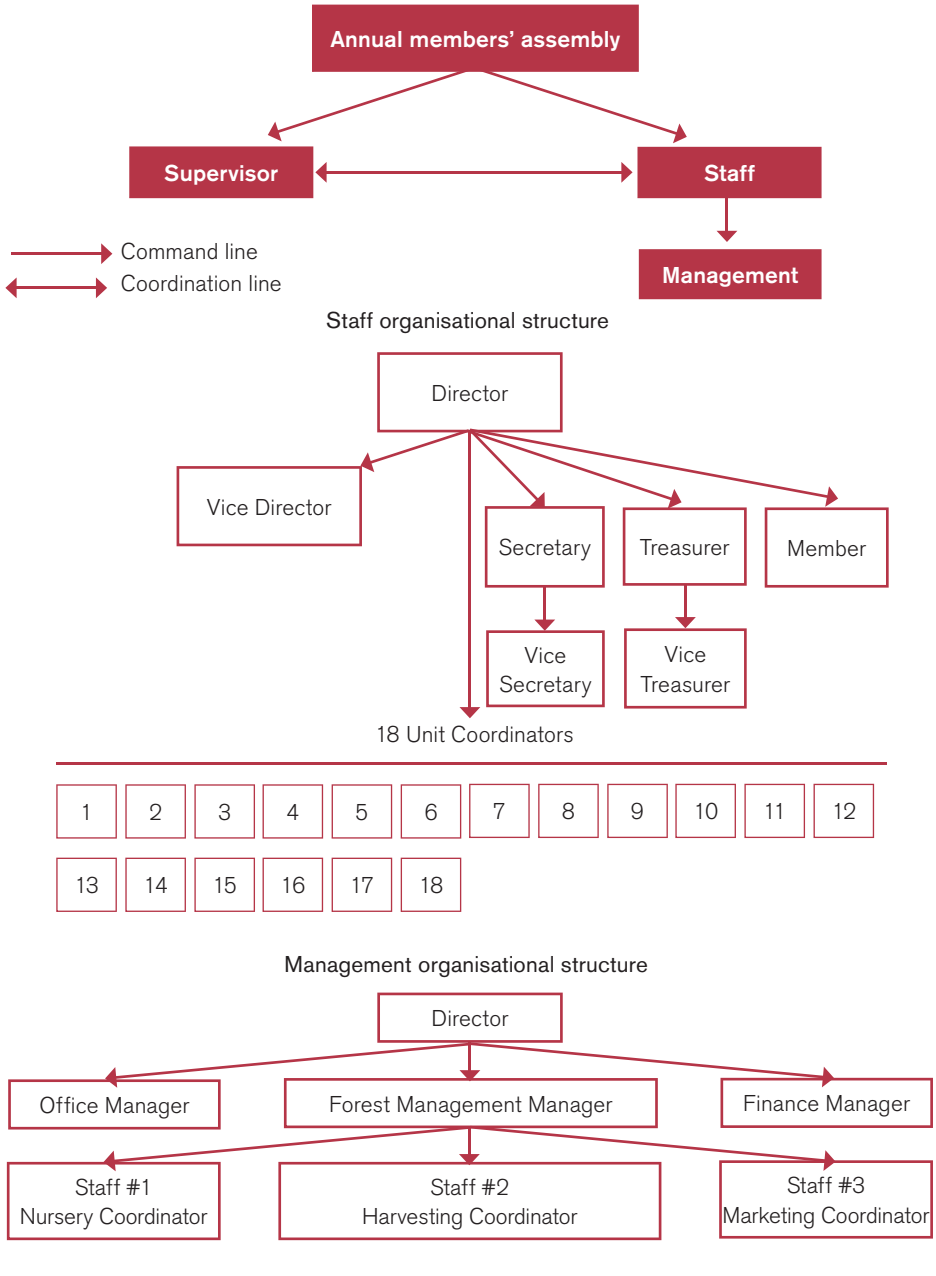
The core principle of a cooperative in terms of investment, management, ownership and profit sharing is: from, by and for the members. KWLM (as of August 2014, with 1205 members, 15 per cent of whom are women) applies this principle in all aspects of its operation. This can be seen in each of the sections below relating to investment, ownership, decision making and benefit sharing.

Investment: this mainly comes from initial membership contributions, monthly compulsory contributions and members' voluntary savings. Initial membership contributions amount to IDR 100,000 (US\$ 7.90), while monthly compulsory contributions are IDR 5,000 (US\$ 0.40). These are usually paid when a member sells his/her timber to KWLM. Voluntary savings are compensated with an annual interest rate of 10 per cent. There are also grants from NGOs, individuals, private businesses and government institutions. KWLM can also borrow money from conventional financial institutions such as banks and credit unions.

Members' instalments and savings play a major role in KWLM's cash flow, while investment from external parties is accepted only when KWLM has an immediate/unexpected need for funds, and will only be done when the likelihood of paying it back is high. This happens for example when buyers exist and members have timber to sell, but KWLM does not have the funds to purchase timber from its members.

Ownership and decision making: the business is owned by all of its members. It is as simple as that. KWLM also applies the core tenet of cooperatives: one member one vote. The other organisation processes follow more or less standard practice in cooperatives, from the annual members' assembly to staff recruitment. One thing that is probably unique to KWLM is the role of the unit coordinator, the leader in each village in KWLM's work area. They are appointed by KWLM members in each village and work as a bridge between KWLM and the members and communities.

Figure 10.2 KWLM's organisational structure⁸



8. A 'member' is a member of staff, not tasked with specific responsibilities other than representing cooperative members in helping the staff to vote on decisions. 'Staff' refers to people responsible for creating policies, while 'management' positions are responsible for implementing those policies. So e.g. the Treasurer is responsible for setting financial policies and monitoring the implementation of those policies by the Finance Manager.

Benefit sharing: KWLM members are the main beneficiaries of the business. Economic benefits include the following:

- Commanding 10–15 per cent higher prices for their timber compared to local market prices. KWLM also provides a market guarantee. If they plant the trees, they will be able to sell the timber at a good price.
- A fair share of KWLM's profit at the end of the fiscal year. Members receive 30 per cent of annual profits. This takes the form of higher timber purchase prices, free seedlings, interest on voluntary savings, and cash. The amount of cash distributed at the end of the fiscal year is not substantial at this point, well below IDR 1 million (< US\$ 80).
- Compensation for harvesting in the form of 10 free seedlings for each tree felled. The quality of the seedlings is above average due to advanced techniques used in the nursery.
- Members can use their trees as collateral to borrow money from CUKATA. This provides an additional financial cushion in times of need.
- Savings invested in KWLM have better annual interest rates than conventional banking (10 per cent versus 3 per cent).
- Increased business means KWLM is increasingly contributing to local government's tax income.

Social benefits include the following:

- Increased bargaining power through KWLM when dealing with policy makers and potential buyers.
- A stronger spirit of entrepreneurship within the local community. In reality, the growth of the community's timber industry has initiated the birth of new businesses, including Tuhu Transport and more recently, several small furniture companies formed by local community members, to whom CUKATA lends money at better annual interest rates than conventional banking (8 per cent versus 12 per cent). In the longer term, KWLM is planning to form its own furniture company aiming for CoC FSC certification, so we can generate more added value and distribute that value to its members.
- Advances in gender equality that have been made due to the equal participation of women members in KWLM's decision-making processes and the increasing number of women staff in its organisational structure.

Environmental benefits include the following:

- Increased tree coverage in KWLM's work region: by going beyond FSC requirements to simply replant after harvesting by giving away free seedlings and checking to ensure that members plant and care for them.
- Better water quality: the Menoreh Mountain catchment is one of Yogyakarta's main sources of water – by protecting the forest, KWLM helps to provide clean water from this watershed.
- Carbon sequestration: increasing tree coverage has helped stabilise the climate through CO₂ absorption. KWLM has not quantified this yet, but plans to do so with the help of an expert from Bogor Agricultural Institute (IPB). Telapak has also discussed the business potential of selling carbon offsets from the cooperatives in its network. However, efforts are currently focused on increasing the number of cooperatives and strengthening their business capacities.

- Biodiversity conservation: by abiding by FSC standards, KWLM helps preserve places with high biodiversity and social conservation value. This includes water fountains, and also Gua Maria Sendangsono (a site of Catholic worship and a tourist destination).

10.3.4 Staff selection and roles

The annual members' assembly elects the staff and supervisors. The five supervisors are responsible for ensuring that staff are making policies and running the cooperative in accordance with the constitution and decisions made during the annual members' assembly. Staff then appoint the management to implement the policies made. Please see organisational chart in Figure 10.2.

Recruitment is done by announcing vacancies in public places where KWLM members often gather. The first priority goes to KWLM members and then local community members. If none qualifies, only then can candidates from outside the community be considered.

Training for staff and management is done as follows:

- Sending staff and management to relevant institutions to participate in workshops and seminars.
- Inviting experts to provide training in KWLM's offices.
- Due to the minimal training budget, KWLM focuses on self and collective learning. This is done by observing internal processes and identifying opportunities for continuous improvement. These are discussed in the weekly staff and management meeting and problems dealt with through collective learning opportunities – often something as simple as a book purchase.

As for gender equality, KWLM employs the meritocracy principle. What is prioritised is the person's ability to carry out their duties according to her/his job description, regardless of gender. In 2014, this is the gender composition:

- Supervisors: all five are male
- Staff: six male, one female
- Management: six male, three female

10.3.5 Delivery options

The seven staff members collectively decide the delivery method to customers through discussion until a point of agreement is reached: there are not many options, due to the small-scale nature of deliveries. Using Tuwu Transport, formed by KWLM members, has served to capture value previously leaking outside the local community.

10.3.6 Customer research

As demand for FSC timber is larger than supply in Java, and this in effect guarantees that all timber produced by KWLM will be sold. KWLM's strategy to maximise the financial value of its FSC logs and non-FSC blocks and boards is to carefully plan and execute the cutting of the logs in such a way that the sales value for all the products is at its maximum. So, customer research is less about product innovation at this stage and more about product optimisation.

However, anticipating larger sales volumes in the future, and more specific requirements from customers, KWLM through its director always tries to find out those specifics when meeting existing or potential customers. For example, there is an identified and specific demand for timber with reduced moisture content due to a specific harvesting procedure, which minimises volume shrinkage when the timber is kiln dried. KWLM staff also visit furniture companies across Java to understand emerging market demands. Among those, two factors that affect customers are the predictable and stable supply of FSC timber and furniture design trends in the target export countries.

10.3.7 Promotion and marketing

Promotional activities are mainly done by KWLM's director. There is no specific position in the organisation for this function yet – demand is still greater than supply. But it is also a strategic move at this stage for KWLM's scale, because buyers tend to want to meet the director to discuss potential business deals.

10.4 How has KWLM overcome key challenges?

10.4.1 Challenges relating to the value proposition

KWLM has not faced any specific challenges regarding resource vulnerabilities, cultural issues or internal/external conflicts. Fortunately, there has been a good combination of enabling factors as described earlier here. However, KWLM has faced challenges to do with initial funding, ill-intentioned middlemen, government trainers, unskilled local government staff and the habit of 'needs-based cutting'.

Funding: when forming the KWLM cooperative, had the funding been adequate and on time, the initial process that took between eight months and a year could have been done in half the time.

The ill-intentioned middlemen: these impeded the cooperative formation process and spread negative rumours about cooperatives. The solution arrived at was that the Telapak facilitators would invite them to a dialogue so that they might start to consider instead the betterment of the local community in its entirety, including themselves. The facilitators ceaselessly communicated with the local stakeholders about the benefits of organising as a cooperative. Year by year, members of KWLM have been growing and are choosing to sell their timber to KWLM due to the many benefits.

Government trainers: these were not doing their job properly. Local villagers should have been well-advised to not plant trees on slopes, as those are difficult to harvest. Farmers also should not have needed to buy seedlings in the marketplace as they should have received free seedlings from the government. In some ways, these shortcomings are understandable. The job of government trainers only goes as far as giving training on certain forestry aspects, and does not extend to solving fundamental economic and ecological problems plaguing the forestry sector. So the training they offered was more text-book based, rather than covering innovations designed to solve problems. KWLM was born as a solution in that regard.

Local government: as part of the cooperative formation process, the facilitators always try to involve government officials, usually high-level officials. But what happens is that

they almost always send representatives instead, who generally do not have an adequate understanding of the issues nor are equipped to partake in the formation process. So at best, their presence simply provides a seal of approval from the local government. Otherwise, the support from local government has been good, for example in terms of the facilities they have allowed for the various socialisation meetings.

The habit of ‘needs-based cutting’: the challenge here was to transform old habits of harvesting to harvesting on a regular and sustainable basis. There is a continuing concern in the community that if too heavily regulated, they will be restricted in terms of harvesting when villagers have a financial need. The solution offered by KWLM was to use their trees as collateral to borrow money from CUKATA. KWLM in turns guarantee payment to CUKATA should the member default, by felling the trees, selling them to buyers and paying CUKATA with the proceeds. By offering these alternatives, villagers could forego unplanned harvesting, while still having access to credit for immediate financial needs.

10.4.2 Overcoming legal challenges

KWLM did not face significant legal or practical resource-access challenges as the forest area was comprised of individually owned plots and road access far into the forest was available. The farthest distance between harvest location and the nearest road is 500m.

10.4.3 Overcoming ownership and benefit-sharing challenges

Employing the cooperative model from the start, KWLM faced no significant ownership challenges. Members are well aware that the cooperative is owned by all members: ‘one member, one vote’. Differences in land owned or money saved in the cooperative does not affect the equality between members in terms of ownership and decision making.

With regards to benefit-sharing, KWLM always tries to distribute benefits along the value chain, not just at the end of the fiscal year. For example, the greatest direct benefit members receive is selling their timber to KWLM for better prices. Another is our decision to use Tuhu Transport, the member-owned would-be cooperative, to handle delivery of KWLM’s timber to customers. If there is net profit at the end of the fiscal year, it is very small especially after distributed amongst all members in proportion to their contributions to KWLM. If there is extra cash flow, KWLM usually opts to invest in assets and equipment purchases, which in turn benefits all members. Benefit-sharing challenges are tackled before they materialise.

Another part of this preventive approach is conducting financial literacy workshops for members. The more they understand about finance, the more likely they are to closely monitor KWLM’s finances for errors and abuse.

10.4.4 Overcoming labour challenges

KWLM is still a very lean organisation at its core, with no dedicated human resources staff for recruitment. So far, the recruitment process has been conventional (using application forms and interviews). One of our key requirements for any new staff member is the desire to learn and develop one’s self professionally. Once someone is hired, capacity building is done following the process described previously.

KWLM also does not face any specific infrastructure challenges as roads have been built by the government and reach the farthest corners of KWLM's work area.

10.4.5 Overcoming delivery challenges

One key challenge we faced was when a delivery service provider who had become familiar with KWLM's processes and customers decided to sabotage transactions by brokering trade directly between KWLM members and buyers. To overcome this, KWLM encouraged its members to form Tuhu Transport, which then partners with KWLM for deliveries. Our continued success is also a concern to Tuhu Transport, as both involve KWLM members.

10.4.6 Overcoming marketing challenges

KWLM does not face any significant challenges in finding customers: they are the one making the effort to find and establish business relationships with us. And our experience so far has been great in terms of customer retention. We are well aware that we are a very young business, so strive to maintain trust and good relationships with our customer base. If there is a problem, it is with one of our customers who is having cash flow issues and has been delaying payment to KWLM. However, in anticipation of upcoming competition in the market, for example, when the state-owned company Perum Perhutani obtains FSC certification for their much-larger forest area, they will be able to fulfil market demands relatively easily.

We are preparing to face such competition by increasing our production volume by increasing the land area managed and thus our annual harvest allocation. This is mainly done through increasing the membership base. Increased production will decrease several cost components like the fees for FSC certification which remains the same for larger forest areas managed. All of this will allow KWLM to offer more competitive pricing in the marketplace.

Another plan is to produce proper visual promotion materials about the advantages of FSC-certified timbers and have that linked to the local folklore in Kulon Progo. Empowerment of local communities will also be a key message, which is an advantage that Perum Perhutani does not have as it is being run much like a conventional business.

10.5 Key lessons

10.5.1 Keeping costs down

In principle, we do not consider our operating costs to be high in comparison with our competitors, and members seem willing to collectively shoulder those costs. Our goal is not to increase the margin between costs and sales for maximum profit, but to shoulder the costs together, share the profits fairly, and prosper together.

As an illustration, KWLM buys its members timber at above market rates. If we were a conventional for-profit business, this probably would not make much sense as it reduces the profit margin. But because our cooperative's goal is to increase the welfare of its members, the increased costs associated with the higher price are shouldered collectively through KWLM. And so long as sales to end buyers are secured and the profit margin is sufficient

for KWLM to maintain good business, there is no problem with this model. As an institution, at the end of the fiscal year, the net profit will not be large, but so long as our members directly receive profits through better prices, we will have achieved its primary goal.

Referring to Table 10.1., we can see that membership, land area managed, trees planted, production volume and sales all have grown quite fast, but profit has grown quite slowly. This is precisely a reflection of the above principle. This is the basis of why KWLM is economically viable, socially beneficial and environmentally sustainable.

That said, below is the cost components that goes into each m³ of timber sold.

Strategies to lower costs (for the items in red in Table 10.2) include the following:

- FSC certification: by growing the KWLM membership base and production volume, the cost per m³ will go down. This may result in lower prices without affecting KWLM's cash flow.
- Seedlings: we hope to reduce costs by increasing the volume of seedling production and reaching economies of scale.
- Socialisation: the more members KWLM has, the higher will be the density of members for a given area. This makes it easier to do further socialisation, e.g. by holding a single meeting as opposed to going door-to-door.
- Warehouse rental: increased production does not affect rental prices, at least until it reaches full capacity. This will lower per m³ rental costs.

Table 10.2 Cost components for 2013 annual harvest allocation (800m³)⁹

Note	Cost per m ³ (IDR)	Annual/total cost (IDR)
FSC Certification	135,000	108,000,000
Transport/delivery	55,000	44,000,000
Seedlings	40,000	32,000,000
Socialisation and inventarisasi	30,000	24,000,000
Marketing	10,000	8,000,000
Grading	16,500	13,200,000
Service station coordinator fee	50,000	40,000,000
Wages	140,000	112,000,000
Warehouse rent	10,000	8,000,000
Environmental impact analysis (EIA)	10,000	8,000,000
Communications	10,000	8,000,000
Letters	10,000	8,000,000
Administration	15,000	12,000,000
Office rent and utility bills	4,000	3,200,000
Other costs	4,500	3,600,000
Total	540,000	432,000,000

9. Items in red indicate costs per m³ that can be reduced, especially with increasing production volumes and achieving economies of scale.

- Communications, administration, office rent and utility bills: similarly, these fixed costs that will decrease per m³ with increased production volume.

10.5.2 Retaining customers and willingness to pay

The key success factor in developing KWLM's customer base so far has been the FSC certification. Demand in Java is still higher than supply, and customers can easily find KWLM through FSC's website. KWLM simply needs to fulfil the requirements written in contracts and purchase orders with the customers.

As for creating the conditions so customers are willing to pay on time, our key strategy has been to break down the contract into smaller purchase orders to fit KWLM's and our customers' cash flows. This can be in the form of smaller volumes and/or shorter period deliveries per purchase order. In effect, this ensures that KWLM has enough cash to buy timber from its members, and customers have enough cash to buy timber from KWLM.

As for managing returns to our shareholders, i.e. KWLM members, please refer to earlier explanations on this. For our other stakeholders, below is how KWLM defines them and distributes returns:

- **Government:** increased sales means additional tax income for the local government. The presence of a successful social enterprise is something they can be proud of too.
- **Supporting NGOs:** the success of KWLM is the success of our supporting NGOs too. This in turn will help them to raise funds for their organisations as well, and help them build credibility in the sector and in the eyes of the public.
- **Universities:** KWLM has been a research subject several times now, ranging from undergraduate research to a doctoral thesis.

10.5.3 Factors underlying commercial success (or failure)

During the formation of KWLM, there were several key factors for success:

- The main supporting NGO, Telapak was consistent in helping the local community to realise the idea. They approached it with the mindset of establishing a long-term, core programme of the organisation, as part of its constitutional document.
- The facilitator provided by Telapak had the right combination of experience, skills and personality. This enabled him to build a network and gain the trust of the local community regarding the potential of the community logging cooperative model.
- The success of the early socialisation and ideologisation process created a common vision, a solid understanding, and a strong commitment to realise the vision and mission of the cooperative.
- The community logging cooperative model answered a need the local community had for additional income stream/better economic welfare. The model also tapped into existing habits of tree planting within the local community, by providing them with a market guarantee.
- There was a strong willingness in the local community to move forward and do better. They already aspired to higher education, which translated into a desire to be better through self-development.

- KWLM also answered a need for an additional financial cushion in times of needs, by allowing members to use their trees as collateral for loans for consumptive (e.g. emergencies) or productive needs (e.g. capital for business).

After KWLM became operational, there were several key factors for success:

- Technical and non-technical training were planned and scheduled (such as silviculture, accountancy and other technical training) as well as informal interactions between members and staff. These related to the spirit of the cooperative. For example:
 - The importance of environmental conservation as an integral part of the cooperative's work
 - The core tenet 'from, by and for members', and the importance of basing decisions on how they benefit members
 - That members maintain a sense of family, of camaraderie, especially as the cooperative grows and more money comes in.
- KWLM continues to nurture solidarity and trust among members, between members and staff, and from members towards the cooperative. More specifically:
 - Members can trust staff to optimally carry out their duties
 - Members can trust that their savings will be safe and interest paid on time
 - Members trusts that KWLM will always be able to buy their timber at a good price and that the harvest is sustainable
 - Members will eventually pay their compulsory instalment on a regular basis.
- KWLM must continuously stress the importance of self-financing, whereby the main source of our operational funds comes from our members' compulsory instalments and voluntary savings, instead of relying on grants and loans from external institutions. This minimises our dependency on external resources, and in line with the 'from, by and for members' principle. Philosophically, this also means that KWLM as a cooperative really intends to increase independence and welfare by adding or capturing values (to be) closer to the local community. When and if funding is 100 per cent from members and it is sufficient to finance operations and growth of KWLM, the more added value we will be able to return to our members. This will create a positive cycle where members' welfare increases, the cooperative's cash flow grows and becomes more fluid, and business is evolving forward.

Factors that may lead to commercial failure include:

- High FSC certification cost with no market guarantee once certification has been obtained.
- When the supporting NGO is putting forth their own agenda and not answering the real needs of the local community.

Into the future, the keys to success would be:

- A more predictable fulfilment of the annual harvest allocation. Currently it still depends on members contacting KWLM to harvest and buy their timber. The plan is to socialise the need for members to inform KWLM one or two years in advance. This would allow us to provide more certainty to buyers about the annual production volume and provide staff some peace of mind when negotiating contracts with customers.



Cutting logs at KWML

© Irak R Sanyoto

Indonesia: Wana Manunggal Lestari Cooperative (KWML)

Weaving dreams from teak logs

by Irfan Bakhtiar, Hery Santoso, Sudarwan, Exwan Novianto, Rohni Sanyoto, Aulia Zaki

The Manunggal Sustainable Forest Cooperative (KWML or Koperasi Wana Manunggal Lestari) is a timber cooperative that trades timber products from locally controlled forests (described here as 'people's forests'), and teak in particular. Over the last decade, market demand for teak from people's forests has increased considerably. But most price-increase benefits have gone to timber traders and industrial businesses instead of farmers. Now, groups of private forest farmers supported by local government, universities and NGOs are facing that challenge by establishing associations of people's forest managers. Although the process of transformation from subsistence cultivation to timber industrialisation faces significant challenges, KWML has succeeded in obtaining sustainable forest management and timber legality certification while creating a platform for community learning about sustainable forest management.

11.1 Context in which Wana Manunggal Lestari Cooperative (KWML) operates

11.1.1 The enabling environment

This case study is based in Gunungkidul, one of the districts in Yogyakarta Province of Java, Indonesia. The district is the largest in the province and covers 1,485.36 km². Wonosari is the capital of the district, located in the southeast of the city of Yogyakarta and approximately 39 kilometres from it (see Figure 11.1). Administratively, Gunungkidul is divided into 18 sub-districts and 144 villages.

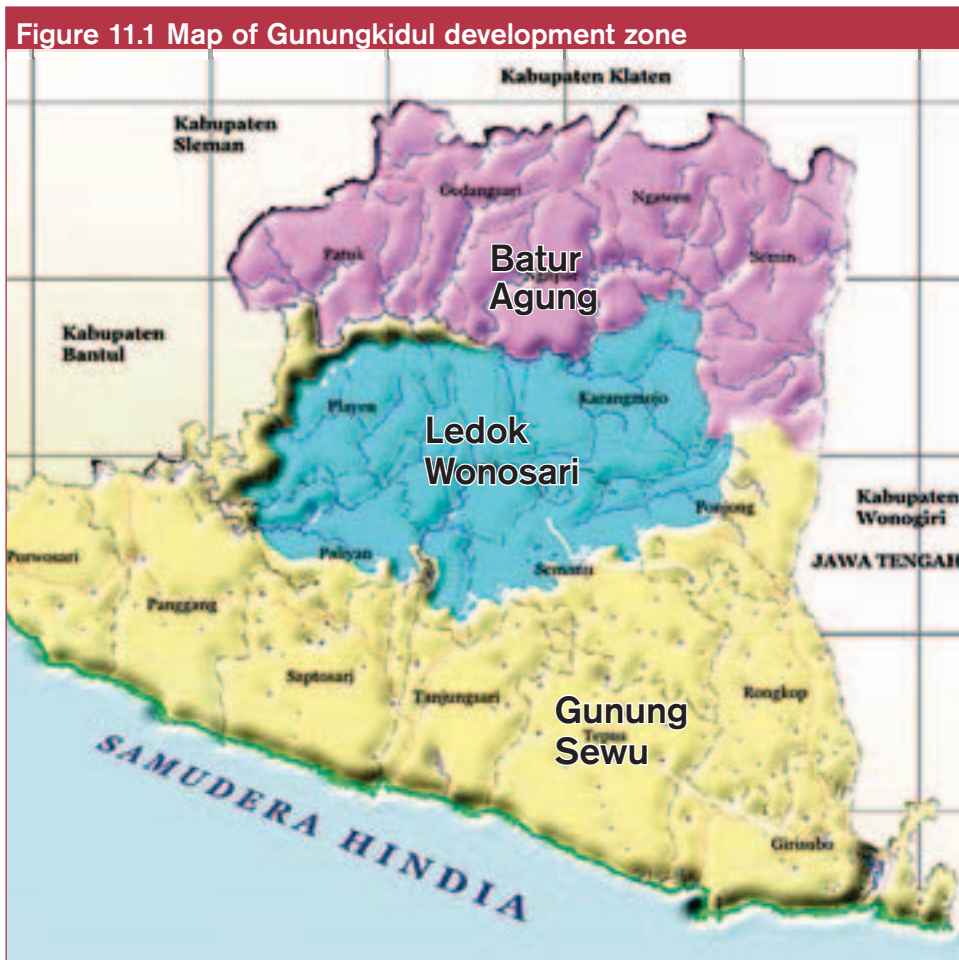
Gunungkidul is a mountainous region, especially near Mount Sewu and Mount Agung. Gunungkidul is a well-known karst area with about 460 caves and underground streams. The potential of culture-based tourism is high, although historically Gunungkidul has been seen as a barren area that suffers from drought in the dry season.

The area is densely populated and more than half of the population works in the agricultural sector. In 2013, the agricultural sector accounted for one third of total gross regional domestic product (GRDP) but other sectors such as industry and trade, and the hotel and restaurant industries have increased significantly.

Poverty rates are high (22.72 per cent) equating to 154,588 people (see Figure 11.2). This figure is much higher than that of the national average of 11.47 per cent. Rural poverty often forces local people to migrate to big cities to earn more money. This phenomenon has, however, contributed to the development of people's forests in the district. As

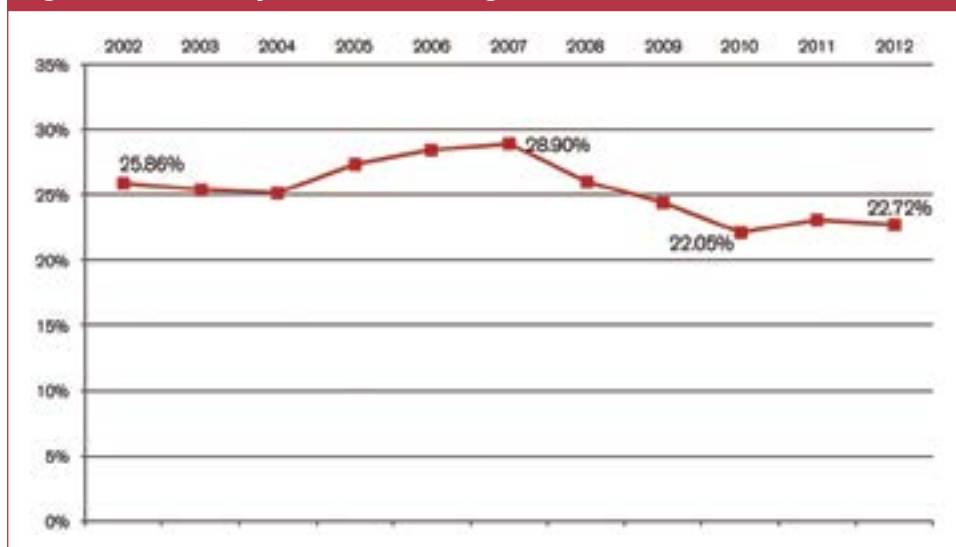
migrants leave their farms in the villages, they plant them with forest trees to act as a savings bank that can be converted into cash in the future.

In 2012, the total area of locally controlled forest in Gunungkidul was 39,500 hectares or 26.6 per cent of the district's area. More than half of this forest sits in the zone of Mount Sewu. This type of forest is dominated by homogeneous and privately owned teak. Another third of this forest type especially in the Agung Batur zone is more heterogeneous with a mixture of fruit trees. Finally, in the Ledok Wonosari zone, which is relatively fertile (but covers only 15.3 per cent of this forest type), the main planting arrangement is borderline trees (trees demarcating boundaries). The production from locally controlled forests in Gunungkidul reached 122,460m³ in 2012, a 2.79 increase in the last ten years.



Adapted from BPS (2014).

Figure 11.2 Poverty levels in Gunungkidul



Adapted from BPS (2014).

Most land in Gunungkidul has only a thin layer of good soil. With hilly contours and slopes of more than 45 degrees, the land is challenging for farmers to cultivate. These conditions spurred the Gunungkidul government to promote land improvement through reforestation. Land with perennial vegetation is believed to help improve the quality of the land, and also enhance river flows in the region. Reforestation began in the 1960s, which later became known as the people's forest development. From a total area of 148,536ha in Gunungkidul district, the area of people's forest development currently occupies 41,180ha (BPS, 2014), with 50,144 hectares of potential land available for further development. This area makes Gunungkidul one of the prime districts in which to develop people's forests.

People's forests in Gunungkidul include many different species of which the most important commercial trees include: teak (*Tectona grandis*), acacia (*Acacia auriculiformis*), mahogany (*Swietenia macrophylla*), sengon laut (*Paraserianthes falcataria*), trembesi (*Samanea saman*), coconut (*Cocos nucifera*), pulai (*Alstonia scholaris*), trengguli, turi, sliresede, bamboo, jabon, and some fruit trees such as rambutan, starfruit, grapefruit, papaya and banana.

11.1.2 The operating environment

Reforestation has played an important role in supporting the economic and social life of the communities in the district, especially when farming activities fail due to drought. The people's forests provide financial benefits to supplement income from local agricultural products. Many people who rely on subsistence farming but also work in the city can now find new income-generating opportunities by planting teak on their land. The people's forest has been recorded as contributing up to 30 per cent of family income to farmers in Gunungkidul, as it also does in other areas like Wonosobo and Wonogiri (Central Java).

The people's forest in Gunungkidul now consists of potential timber forest products (both for furniture and firewood) and non-timber forest products (leaves, forage to feed livestock and fruit), as well as improving the structure and composition of vegetation. Local people rank the different species in terms of importance in the following order: teak, acacia, mahogany, and then other species. People's forest timber production (especially teak) in Gunungkidul reached 86,063m³ in 2011 but in 2012 dropped to 55,958m³. The decline in production in 2012 was strongly disputed by local operators who suspect the decline was caused by under-reporting following a requirement for legal authorisation from the Office of Forestry and Plantation of Gunungkidul. As these businesses noted, timber sales rose year on year in line with increasing demands for raw materials from industries in Yogyakarta and Central Java, while at the same time there was a decrease in potential timber available from state-owned forests.

Along with the development of the people's forests, small-scale industries – both primary (sawmills) and secondary (furniture, handicrafts such as manufacturing wooden masks, and building components such as door frames and windows) – have developed in Gunungkidul. However, most of these newly-developed industries only serve the local market. Only the mask industry has entered the export market. Such industry thrives in Bobung village (Patuk sub-district). Although that local industry has existed since 1955, it only began to really flourish in the 1990s and does not use teak wood, but pulai and sengon instead.

To date, there are 24 listed sawmills all over Gunungkidul. Most only provide sawmill services and do not deal with any timber transactions. They only process timber that already belongs to timber traders or secondary industries (who will further process the timber into ready-to-use products). In other words, the sawmill sector is basically a service industry, and is not included in timber trade chains.

The secondary industry is dominated by furniture manufacturers and the construction industry. The industry exists throughout Gunungkidul. The furniture industry is generally small-scale and the production is based on orders from neighbours and local or state agencies, such as schools and village offices. There are 3,440 small-scale furniture enterprises in Gunungkidul. These SMEs provide employment to 14,370 people. Furniture SMEs in Gunungkidul mostly operate in furniture centres like Umbulrejo (Ponjong), Pengkol (Nglipar), and Kedungpoh (Nglipar).

In the last ten years, the market demand for people's teak has increased considerably. This has to do with a decreasing supply from state-owned forests and with the high price of teak timber from Perum Perhutani, a state-owned enterprise in Indonesia, which enforces the planning, processing, utilisation and protection of state-owned forests. The increasing industrial demand for timber from the people's forests has triggered a price rise of the people's timber. Unfortunately, this price rise has not generally been enjoyed by forest farmers but by timber traders and industrial owners. On the other hand, there is also a growing concern about maintaining the rate of planting of people's teak. As a result, some parties such as local governments, universities, NGOs, and groups of private forest farmers are trying to meet that challenge by establishing associations of people's forest managers.

Box 11.1 Teak was chosen not because of theory. It was chosen because of history

Mr Tumino, Head of Sekar Pijer Association, Giri Sekar village, Panggang sub-district.

'It's easy to find teak seed. You don't need to buy them. You just go into the forest to find young teaks, uproot them, and replant them on your own land,' says Mr Tumino, a farmer of the people's forest in Pijenan, Giri Sekar. The village sits to the southwest of Gunungkidul, close to the Imogiri Royal Cemetery. Giri Sekar, together with other neighbouring villages, is surrounded by teak forest in state-owned areas. This enables them to find young teaks easily. When the forest was dense in the 1960s–1990s, old teaks bred many young trees in the forest understorey.

Trespassing within the forest is forbidden to the public, but the locals simply ignore the prohibition and enter the forest areas to fetch young teaks. The locals' voluntary initiative to plant teaks grew when the government introduced its reforestation programme in the 1970s. Later on they did not need to wait for the government's encouragement for tree planting as they had become keen to plant themselves. 'Teak planting has become a local self-sustaining initiative. They don't need to wait for a command from on high. Since the government abolished the regulation to ban the public planting of teak in 1965, the late regent Darmakum urged his people to plant teak which had proved to have many benefits, and the local forestry office at that time also distributed young teaks to people for free,' said Mr Tumino.

There is no historical record that precisely indicates when the Gunungkidul locals began to plant teak. The fact is that teak trees have long been found in the forest areas in Gunungkidul. The locals have used teak timber to build houses and there are old household tools made of teak timber found in the neighbourhoods. 'For as long as we have known, the only tree in the forest is teak, from which we build houses and furniture. Other kinds of timber are not good...'

Innovation is required to improve profitability for the forest farmers. The innovation must lie in the business model for people's timber. The business of people's timber has several objectives:

- To improve the quality of forest plants and timber products,
- To increase business bargaining power within the market, and
- To create or transform raw materials into products of higher value.

In other words, the people's forest is entering a new phase. Local farmers are establishing cooperatives as business units for the people's forest. Apart from being an effort to encourage farmers to engage in the people's timber business, the establishment of cooperatives is also aimed at developing forest management units that will be entrusted to manage the sustainability of timber production by the local people themselves. Moreover, there have also been increasing calls for forest certification. Certification schemes involve efforts to guarantee that a management unit is capable of managing forest areas sustainably – and can help improve the image and brand of producer groups. Ideally this would also involve a special price (premium price) for products from sustainably managed forests. In the early days of the initiation of certification, there was information that the rise in prices of certified sustainable products could reach 15 per cent. However, the reality has been different and it has proved difficult to achieve such price premiums. The choice of certification system also determines whether or not the certification can provide benefits in the form of premium prices.

11.2 About Wana Manunggal Lestari Cooperative (KWML) as a business

11.2.1 The vision

The Manunggal Sustainable Forest Cooperative (KWML) business was established 26 September 2006 with legal document number 518.026/BH/IX/2006. Its secretariat office is located at Jalan Playen Dlingo, VI, Dengok village, Playen sub-district, Gunungkidul District.

The KWML cooperative is a business unit that handles the timber trade of products of people's forest management. The raw material comes in the form of logs from the people's forest which is collectively managed. The step-by-step collective management is implemented in accordance with an administrative system starting from sub-village, village, sub-district to district level. Forest management units are managed at sub-village level by forest farmers, at village level by associations of farmers, and at district level by the cooperative.

The idea for the collective business began with the establishment of the people's forest management unit, which was supported by three institutions: Aliansi Relawan untuk Penyelamatan Alam (Volunteer Alliance for Saving Nature, Arupa), Small Home of Rural Empowerment Activists (Shorea) and the Centre for the Study of People's Forestry at the Faculty of Forestry of Gadjah Mada University. An invitation to take part in the management unit began in 2004 in three villages in Gunungkidul, where each village represents a particular geographical zone: Kedungkeris (Nglipar sub-district) represents the north zone (Batur Agung); Dengok (Playen sub-district) represents the central zone (Ledoksari) and Giri Sekar (Panggung sub-district) represents the southern zone (Pegunungan Seribu). Farmers in each of the three villages established groups of forest farmers at sub-village level and then founded village-level associations.

In 2006, the multipurpose cooperative of Wana Manunggal Lestari (KWML) was established to accommodate all farmers from farmer groups in the three villages. The cooperative was designed to implement a single business unit for all of the people's forests in that region (see Box 11.2).

11.2.2 Business inputs

KWML inputs (in terms of land and labour) come from all farmers who possess people's forest land in the cooperative's territory. Active members are those who are members of farmer groups and people's forest associations, and they have to pay principal and mandatory dues. Meanwhile, passive members are those who possess land but do not belong to farmer groups or people's forest associations (see Table 11.1).

11.2.3 Main activities

The KWML business in Gunungkidul undertakes a series of activities carried out in the field to produce teak logs. It begins with land preparation and ends with logging or harvesting and trading of teak logs (see Figure 11.3).

The various activities include land preparation, seed procurement, planting and maintenance, harvesting and trading.

Box 11.2 To organise was a choice

Wana Manunggal Lestari cooperative is now entering its eighth year since its establishment. It opened its first office in a house next to sub-village office of Dengok V. Now, KWML has had its own office building, where it runs training courses and operates a sawmill business. This achievement is partly due to the cooperative's chairman Sugeng Suyono. A retired civil servant from the Office of Agricultural Affairs, he has been heading the cooperative since it began in 2006.

'To be honest, I want to step down to give way to a new leader. But to take care of a cooperative means assuming a responsibility, albeit I should now bow out,' he said, answering why he has been in the office that long. 'To take care of such an organisation is a choice. You need passion, otherwise you should leave. With thousands of members, you need to have thousands of thoughts. It's very complex,' he said.

The cooperative founding fathers, including Sugeng Suyono, shared a dream to establish a cooperative. To elevate their bargaining power was something that they wanted to fight for. They wanted fair and better prices and easier supplies of raw materials. 'Being a cooperative, we should not lose face when making a deal with traders. However, the trader should also have a fair price from us. A cooperative allows farmers to supply raw materials in greater volumes to meet larger orders,' he said.

The cooperative was initially established without far-reaching dreams. Being a communal business based on social solidarity, the cooperative was created to improve its members' prosperity. Until its establishment, the timber trade had not brought fair benefits to farmers. 'We have a heap of homework. We will only be able to sigh with relief when the cooperative succeeds in controlling timber production, purchasing farmers' timber with a higher price, and providing a consistent supply to industry,' he said.



Sugeng Suyono, chairman of Wana Manunggal Lestari cooperative

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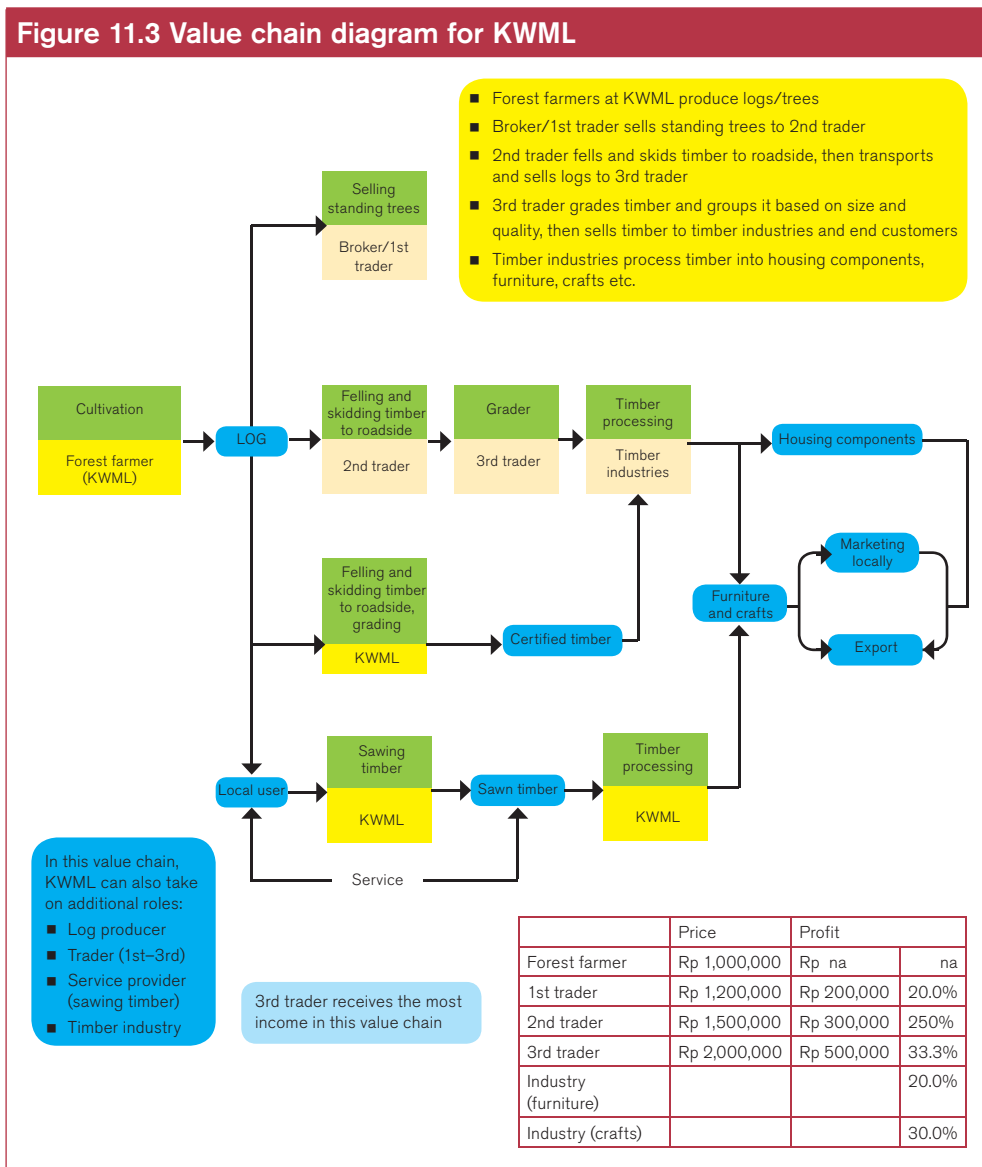
Table 11.1 Farmer associations/groups and numbers of members, KWML

Village	Farmer association/group	Members
Giri Sekar	Sekar Pijer	474
Dengok	Ngudi Lestari	951
Kedungkeris	Margo Mulyo	228
Tepus	Tani Maju, Rejo Mulyo, Sidomulyo, Sari Bumi, Sido Subur	596
Nglegi	Slamet Manunggal, Sido Makmur, Ngudi Rejeki, Lestari, Sedyo Mulyo, Margo Rukun II	392
Banyusoca	Klepu Bakti, Guyub Rukun, Milo Raharjo	685
Total		3,326

Land preparation: this includes land clearance, tilling and weeding. Since many farmers plant trees in inter-cropping arrangements, land preparation for people's forest management in Gunungkidul is carried out in conjunction with the preparation of seasonal crops. The young trees are planted and mixed with agricultural crops according to the desired pattern and spacing. Using a trees-along-the-border (TAB) pattern, timber is only developed on the edge of the land, which also functions as a boundary marker between farmers. This pattern is widely practiced on relatively fertile lands in the central region (Ledoksari zone).

The improvement of timber prices which resulted from an increasing industrial need for timber for raw materials has caused a shift in the pattern of development of people's forests. In an effort to increase timber productivity, people started to cultivate homogenous woodlots in dense and regular patterns. This planting pattern allows for more special treatment in land preparation: land clearing, tillage, mounting stakes, making holes for planting and fertilising. In addition to chemical fertiliser, the management of people's forests in Gunungkidul also utilises manure or compost.

Figure 11.3 Value chain diagram for KWML



Seed procurement is done in response to farmers' need to plant quality seeds. In the past, farmers collected timber plants by digging up and transplanting young trees from the neighbouring forest. This method produces a model with a heterogeneous people's forest with varied age classes and planting densities.

The demands of the industry for better-quality timber and the interests of farmers in greater productivity led local farmers to pay more attention to the origin of seed. In addition to developing their own seedlings within local nurseries, farmers of people's forests also began to use quality seeds that they obtained from the market, such as Jati Unggul Nusantara (JUN, a superior fast-growing teak species), golden teak and super teak. In KWML, Umar is known as a provider of quality seeds. Many farmers – including Sugeng Suyono the KWML chairman — have obtained seedlings from the timber nursery that Umar has developed.

Planting and maintenance: this generally occurs at the beginning of the rainy season in October to December. Farmers plant on vacant land or land boundary strips in accordance with the desired planting pattern. The seeds or young trees are inserted into the holes that have been prepared in advance.

In planting areas, farmers not only rely on new seeds but also allow the coppice emerging from previously harvested tree species to grow. This is especially favoured as such coppice produces quality timber and grows fast. Tree maintenance then involves a series of activities to provide an enabling condition for plant's good growth. This involves weeding, pruning, replanting and thinning.

Harvesting and trading: unlike state-owned forest management, this does not involve a predefined cycle or rotation cutting. Farmers simply sell the standing trees whenever they can get a good price, as long as the trees have reached 15 years of age and 15cm in diameter. A larger scale clear-cut method is only used by farmers who are economically better off and have larger areas of teak ready to cut.

Farmers tend to sell trees that are still standing because this is easy and inexpensive. They only need to inform local traders who then come and fell the trees for them. It would require more effort for a farmer to sell ready-harvested logs. They would be responsible for felling, post-harvest treatment and transporting. If they failed in selecting the right quality of standing stock to be harvested or applied inappropriate post-harvesting treatments, they would suffer considerable losses. One of the main resultant challenges for KWML is how to avoid premature harvesting of trees and side selling by member farmers (see Box 11.3).

11.2.4 Technology and skills

In addition to tree growing, KWML also undertakes a number of processing activities that require greater technology and skills. Timber processing is conducted by individuals or business units outside of KWML from logs into semi-finished and finished products. Semi-finished products are usually components that need to be processed further whereas finished products are ready for use. Final products range from furniture, such as tables, chairs, cupboards, beds, doors and window frames, to wooden handicrafts such as candle holders, wooden benches and ashtrays. All products are made to order in the region.

Box 11.3 The issue of premature harvesting

Premature harvesting involves immediate felling of immature trees by farmers when they are under pressure to acquire quick cash. This happens when they have to pay for medical services, family parties, children's tuition, or home maintenance. Premature harvesting is widely practiced among farmers in Gunungkidul.

'Timber is a saving bank for us. We'll sell it anytime we need quick cash,' said Suradal, a people's forest farmer in Kedungkeris village, Nglipar sub-district. 'There are certain periods when many of us need quick cash at the same time, which drives down the timber price,' he added.

Timber traders benefit considerably from this situation. For example, people tend to hold parties in the 'spiritually-blessed' months according to Javanese lunar calendars. Meanwhile, during the new school year they are required to pay upfront for their children's tuition. The timber price always drops during these 'critical' occasions. Traders do not have to roam around town to find timber as farmers who are desperately seeking cash voluntarily go in search of traders. The result is a net loss of revenue to farmers.

KWML's own business units are in the small-scale category and initiated by individual farmer members and by the institution itself with external support. These business units develop in several villages within KWML's working area. In general, KWML's timber processing comprises of two types: processing logs into sawn timber (primary industry/sawmill), and processing finished products (continued industry).

KWML's sawmilling activities: to increase value of its timber, KWML opted to develop its own capacity to process timber from logs into beams or processed timber, which increases the timber's value up to 50 per cent. In January 2014, KWML established a sawmill plant with support from the Embassy of Japan in cooperation with Shorea. KWML's sawmill is located in Dengok IV sub-village in Playen. The location is strategic, being on the edge of major roads and easily accessible from any direction. It has equipment that includes ben saws 48 and 32, a jet saw, a diesel motor drive and drying kilns. Currently KWML's sawmill only provides a sawing service where the cost is calculated on the volume of raw materials, some IDR 140 thousand (US\$10) per cubic metre. The sawmill earns IDR 5 million (US\$380) a month.

Joint business group and craftsmen: in some villages within KWML's working area, people have established joint business units (KUB) for furniture manufacture and handicrafts. The people of Dengok village have KUB Asyik and Lumintu Craftsmen Association. In Girisekar there is KUB Wira Sejati, and in Kedungkeris there is KUB Mitra Usaha Lestari.

KUBs and craftsmen are categorised as secondary industries whose product results from the processing of raw materials produced by primary industry (sawmill). KUBs and craftsmen produce furniture, sills, doors, shutters and handicrafts. KUBs and craftsmen have obtained working tools either individually or with support from outside agencies. But the various KUBs have managed principally to acquire circular saws, drills, planers and sandpaper by applying to Bank Negara Indonesia (BNI, a government-owned bank of the

Industry and Trade Office of Gunungkidul). This support was channelled through KWML, further enhancing the perceived utility of the cooperative.

KUBs and craftsmen still earn low incomes, as they depend on limited orders and the product quality is not as good as that of other competing groups – a fact they are struggling to address.

11.2.5 Business partners

KWML have developed a number of business partnerships that have stood them in good stead. For example they have developed a number of preferred client relationships with furniture groups and craftsmen from within their membership and outside such as KUB Asyik, KUB Mitra Usaha Lestari, KUB Wira Sejati Jeruken, Kelompok Pengrajin Kayu Lumintu, PT Jawa Furni Lestari, and the Hara Group. In addition to these direct business relationships the cooperative has developed a strong partnership for assistance with timber management with the district government and the national forestry department.

Over a number of years, KWML has benefitted from technical assistance and capacity building from NGOs and the local university (Arupa, Shorea, Java Learning Center (JAVLEC), The Indonesian Ecolabelling Institute (Lembaga Ekolabel Indonesia, LEI) and the People's Forest Research Centre, University of Gadjah Mada (Pusat Kajian Hutan Rakyat, PKHR UGM).

Finally, KWML has managed to attract donor support and sponsorship from both the UK government's Department for International Development (DfID) the Japanese Embassy, and the Indonesian Department of Trade and Industry (BNI).

11.2.6 Customer groups and product types

The main customer groups for KWML are the many traders who operate in the area. At least three models can be described for their dealings with these traders in Gunungkidul. The first model (Figure 11.4) is when farmers offer timber traders specific volumes of timber to obtain the best price. This occurs when farmers do not have immediate cash income needs. Traders offering the best price will win the deal and make the transaction.

The second transaction model (Figure 11.5) happens when farmers have an immediate need for cash and only a limited timeframe, where farmers only approach a single trader, often someone they have a special relationship with, such as personal trust, debts or kinship.

The third model (Figure 11.6), unlike the previous two, is based on timber traders who roam the villages daily looking for timber as a commodity. When they find the desired trees, traders will approach the farmer/owner of the tree to negotiate a price. This third pattern puts traders at a disadvantage and will increase the log price. Farmers without an immediate need for cash tend to be reluctant to sell their logs, which makes the negotiation tough. Traders tend to immediately agree with the farmers' price, otherwise the traders will have to pay an even higher price (and make a loss).

Figure 11.4 Transaction model I

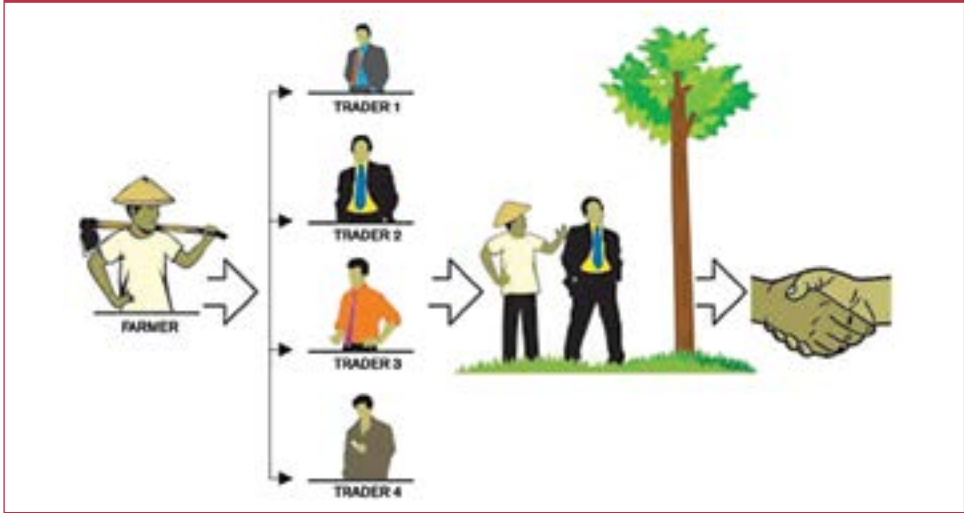
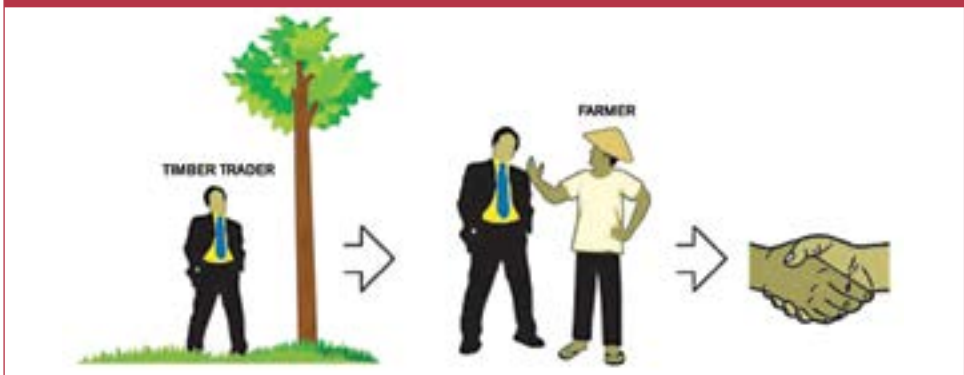


Figure 11.5 Transaction model II



Figure 11.6 Transaction model III

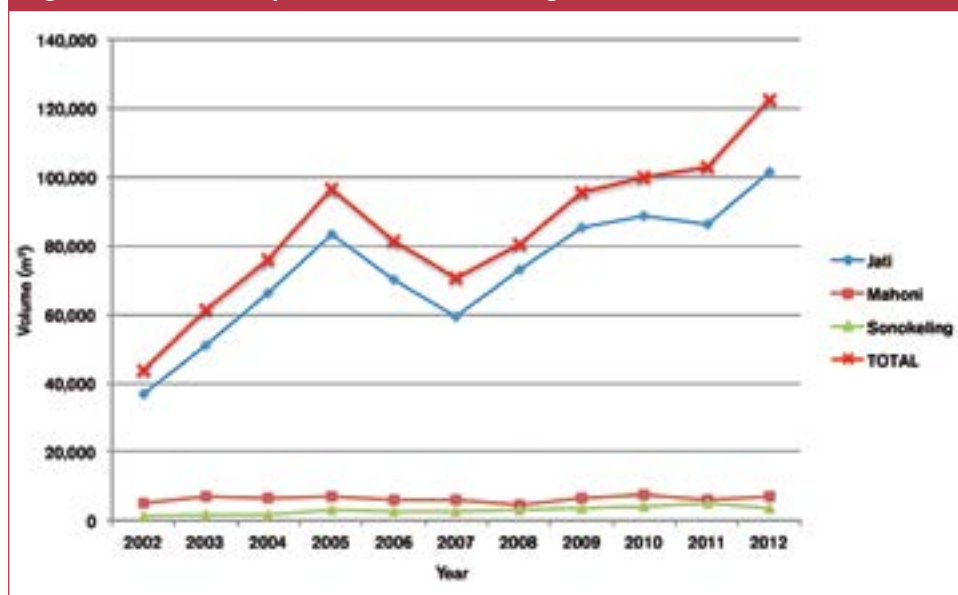


As noted in Figure 11.3, KWML is trying to encourage sales through the cooperative that follow the first transaction model – which will increase revenues to farmers. It is also trying to establish its own processing industry to further add value.

In terms of KWML products, sales in Gunungkidul mostly take the form of logs. Two thirds of logs from people's forests in the district are exported to other districts: Jepara, Klaten, Yogyakarta (Bantul and Sleman). The remaining logs are used to supply the local industry to produce a variety of processed products.

Teak is the main commodity of timber trade in Gunungkidul. During 2002–2012, teak production accounted for 86 per cent of all sales in this district, followed by mahogany (7.4 per cent) and rosewood (3.5 per cent) (see Figure 11.7). Teak is mostly traded in diameter class (KD) 3 with a diameter of 20–29cm. In 2012, the teak trade of KD3 reached 62,100m³ or 61.5 per cent of the people's teak production. Furthermore, the proportion of teak KD2 with a diameter of 14–19cm was recorded at 21.4 per cent, followed with KD4 with a diameter of 30cm at 10 per cent, and KD1 with a diameter of 7–13 cm at 7.1 per cent.

Figure 11.7 Timber production in Gunungkidul, 2002–2012



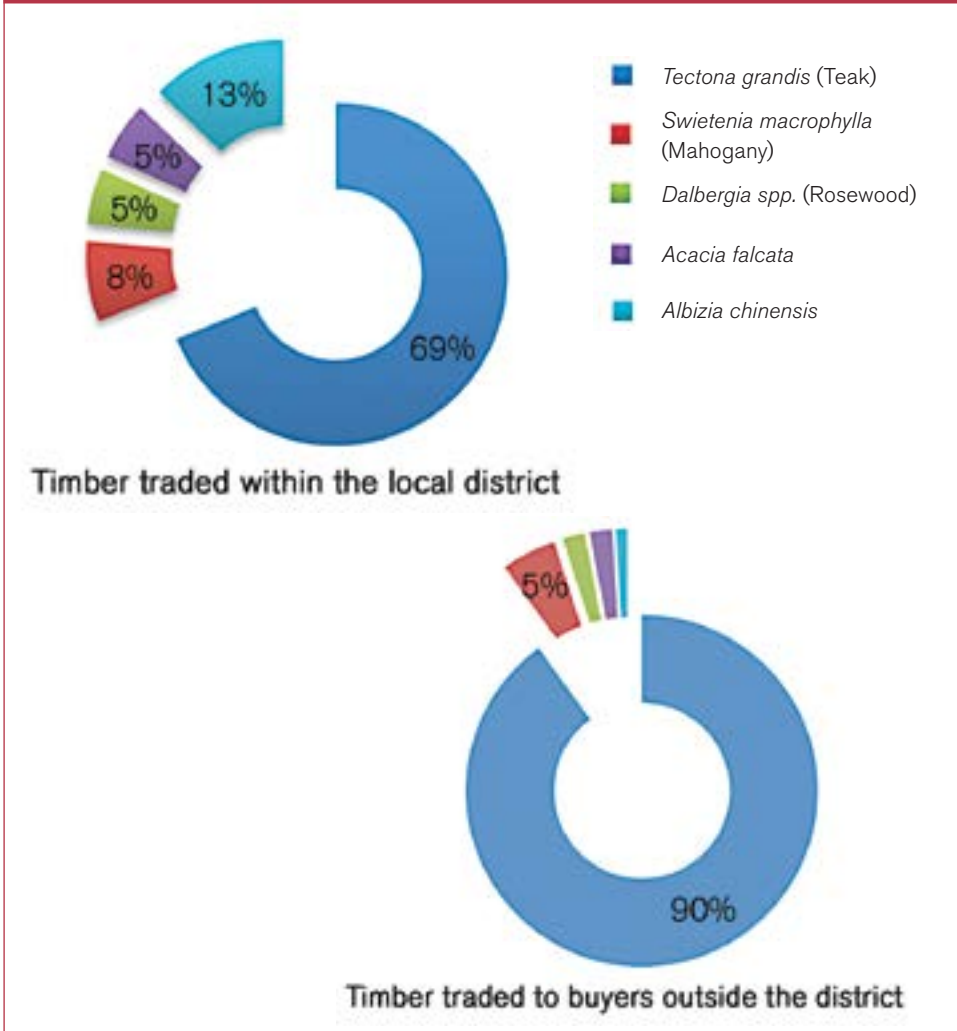
Adapted from Pitoyo (2012) and Taufiq (2014)

Teak's dominance is even higher when it comes to local trade outside the district (Figure 11.8). Teak dominates at 90 per cent of all types of timbers, while in the local area only at 69 per cent. This shows that the teak wood from Gunungkidul is greatly desired by consumers from outside of the area. The rest includes mahogany, rosewood, *Acacia falcata* and other species.

11.2.7 Differentiation in the market place

In September 2006, KWML obtained a certification of sustainability from PT TUV Rheinland Indonesia¹ in accordance with the standards of the Indonesian Ecolabelling Institute (LEI Standard 5000-3). The certification covered an area of 815 hectares in three villages: Girisekar (Panggang), Dengok (Playen) and Kedungkeris (Nglipar). The certification for the cooperative did not necessarily result in significant changes in the pattern of people's timber trade. Moreover there was no increase in the price or premium price obtained the way that farmers had expected.

Figure 11.8 Teak's dominance in people's forest timber trade in and outside of Gunungkidul



Adapted from Taufiq (2014)

1. PT TUV Rheinland Indonesia is a private organisation in the field of testing, inspecting and certification services and is a member of TUV Rheinland Group with headquarters in Germany.



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KWML Chairman Sugeng Suyono and guests from the International Institute for Environment and Development (IIED) and the Center for People and Forests (RECOFTC)

About two years later, in April 2008, the Hara Group (a business furniture association partner from Jepara, Yogyakarta and Surabaya), in collaboration with Maisons du Monde from France, made a commitment to buy certified timber with a higher (premium) price. A memorandum of understanding (MoU) between KWML and the Hara Group lasted for three years until 2010. During that period, the cooperative was obliged to provide certified sustainable timber.

Between KWML and Hara there were only three transactions. The first was a trial by PT Jawa Furni Lestari – one member of Hara Group – for the process of chain of custody certification (CoC). The second was also conducted by PT Jawa Furni Lestari for the production of furniture. The third transaction was a trial by another group member Hara in Surabaya (East Java).

PT Jawa Furni Lestari also made 15 direct and individual transactions with KWML, with an average volume of 5m³ each. Of the six members of Hara Group, only PT Jawa Furni Lestari (which had a chain of custody certification of LEI-standard), really demonstrated any interest since it had the opportunity to sell its furniture products with a sustainability certificate – LEI standard ecolabelling. The premium price that PT Jawa Furni Lestari provided ranged from 15 to 17 per cent.

Certified sustainable timber trade by KWML ceased when Maisons du Monde stopped its order to Hara Group, and the production of furniture in PT Jawa Furni Lestari declined. The market for certified sustainable timber is still limited, and massively under developed. At present, branded products with sustainable certificate by the Forest Stewardship

Council (FSC) still dominate the European market. Almost all industries of the Hara Group now require only the FSC-certified timber that has had a wider market reach.

11.3 Who controls Wana Manunggal Lestari Cooperative (KWML)?

11.3.1 Origin of the value proposition

The origin of the value proposition has occurred in a number of sequential steps. In 2004, support from DfID and local NGOs (Arupa, Shorea and PKHR) helped develop the model of a management unit for the people's forest. In 2006, KWML was established with a limited number of members, forest farmers in three villages.

The business model has developed significantly over time, however. There are now 3,588 forest farmers belonging to KWML in seven villages. These involve 18 groups with private forest covering 1,281 hectares and with a standing stock of timber of roughly 10 cubic metres per hectare. KWML also has two certifications for forest management from PHBML at 1,153 hectares (four villages/groups) and VLK at 1,237 hectares (six villages/17 groups).

11.3.2 Control over forest resource access

Resource access is based on private farmer's rights. The cooperative manages the overall people's forest management unit consisting of a number of village-level management units with PHBML LEI certification and VLK certifications. With the certification of sustainable community-based forest management by the Indonesian Ecolabelling Institute (LEI PHBML), KWML acquired its PHBML certificate in 2006 with registration number 824-111-06003 by certification agent PT TUV Rheinland Indonesia (see Table 11.2).

Table 11.2 Forest area covered by PHBML LEI certification

Village	Area (ha)
Dengok, Playen	332.60
Kedungkeris, Nglipar	219.25
Girisekar, Panggang	557.27
Semoyo, Patuk	44.20
Total area	1,153.32

In addition, the certification of timber legality verification (VLK) allowed KWML to obtain a VLK certificate in private forest areas totalling 594 hectares on 10 October 2011, with registration number VLK 00043 overseen by the timber legality verification agency (LVLK) PT Sucofindo.² The area initially included three villages (Dengok, Girisekar and Kedungkeris). By the time KWML was next assessed in 2013 (PT TUV Rheinland Indonesia, 2013), it had expanded to 642 hectares and three additional villages (Banyusoca, Tepus, and Nglegi). This brought the total area to 1237 hectares (see Table 11.3).

2. In June 2009 the government of Indonesia issued the Minister of Forestry Decree No. P. 38/Menhut II/2009 on the standards and guidelines of performance evaluation of sustainable forest management (SFM) and timber legality verification for permit holders or private forests. The new regulation is known as the Timber Legality Assurance System (Sistem Verifikasi Legalitas Kayu or SVLK).

Table 11.3 Forest area covered by VLK certification

Village	Area (ha)
Dengok, Playen	207.95
Kedungkeris, Nglipar	113.57
Girisekar, Panggang	272.95
Tepus, Tepus	105.19
Nglegi, Patuk	299.09
Banyusoca, Playen	238.33
Total area	1,237.08

Box 11.4 The bigger picture: JP Taufiq, Forestry and Agriculture Office, Gununkidul

'A lot of things need to be considered when it comes to planting trees,' says Taufiq. 'Planting is not necessarily all about the harvest. The farmers follow a traditional way of life: they cultivate the land, plant and maintain the trees, and bow and hide their faces behind their huge round hats to show their faith and loyalty.'

He explains that the people's forest has benefits in terms of economic growth. 'It also is capable of supplying the raw material of timber to local industry at low cost. This in turn helps the Indonesian industry to produce with lower costs in the market while maintaining their competitive margins.'



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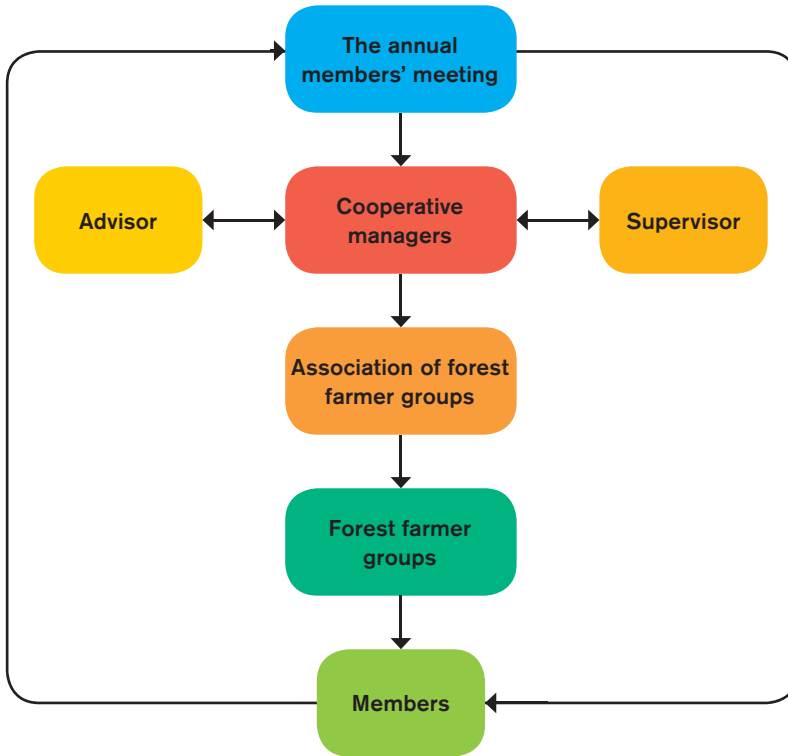
In general, there are at least three segments of people's timber-based business: farming, timber trading, and forest product industries. Being timber producers, farmers obtain benefits from standing stocks of timber. But the timber trading segment is also important and includes traders, sawyers, haulers, timber graders, and transport services. Meanwhile, there are two types of forest product industries: sawmills and processed-timber products producers such as furniture and household components such as window frames.

11.3.3 Control of the business

The organisational structure of KWML is shown in Figure 11.9.

The cooperative's decision-making authority belongs to the cooperative members at the annual meeting. In carrying out cooperative activities, the members' meeting mandates the cooperative managers committee to appoint a cooperative chairman for a three-year term, and this person can be re-elected again in subsequent terms. To oversee economic activities, the cooperative appoints and assigns a business unit supervisor. The financial benefits from timber production and timber products trade for every annual production period are distributed to members during the annual meeting.

Figure 11.9 Organisational structure of KWML



11.3.4 Staff selection and roles

Timber trade begins with farmers who want to be part of the cooperative and who sell standing trees either individually or together in farmer groups. This is an easy and low-risk approach. When a deal is reached, traders – rather than farmers – are responsible for felling trees and associated risks (e.g. broken trunks or felling trees in the wrong direction which may result in damage to neighbouring trees, buildings, electric wires or phone lines). And if a deal with a timber trader fails, farmers simply let the trees remain standing. Simple as it may seem, timber-harvesting is complex and involves a number of important roles. The measurement of the trunk (bucking) is one example. To decide the desired size of timber, farmers and traders must consider e.g. the appropriate size standard (e.g. the Indonesian National Standard), the consumers' preferences, and the effectiveness and efficiency of the extraction and transport. Obtaining legal papers for timber harvesting and transport is also not simple. If KWML or traders make a mistake, they will waste time, effort and money. And once a deal is reached, traders also risk the possibility of hollow trunks.

The timber trade in Gunungkidul involves a series of traders – and it has not been possible yet to replace them easily through KWML. For example, farmers sell standing trees to neighbouring traders who later transfer the timber to another trader ('Trader I'). Trader I

might not necessarily fell the standing trees himself, but instead sell to another ('Trader II') using a broker (although there are occasions when the farmer sells directly to the broker).

Furthermore, Trader II might offer the trees to a pooling trader ('Trader III') who generally fells and transports the timber, unless the volume is too excessive to handle himself. In such cases, Trader II also can harvest and transport the timber. To be effective and efficient, traders do not fell trees as soon as a deal and payment is made. They let the trees that have been purchased stay intact to grow for months, waiting until a sufficient number of other trees have been sold in the village or nearby locations to make up a reasonable order and justify the harvesting and transport operations.

'Trader III' traders usually have their own log yards where they sort the timber according to diameter class and type. The log yards are visited by larger-scale traders, both local and from the outside region, to negotiate on price. Local deals are usually made by local industries that produce furniture, sills, doors, windows and handicrafts. There are also individual local buyers who buy logs for building materials.

In addition to logs, 'Trader III' traders also sell processed timber (sawn) using the services of a nearby sawmill. Currently, sawmill services cost from IDR140,000 to IDR150,000 (US\$10–11) per m³. In addition, pooling traders also use the services of mobile sawmills.

11.3.5 Delivery options

Delivery is a risky business. There are times when timber traders go bankrupt. Simple as might it seem, timber trading is complicated and full of speculation. Once a timber trader buys trees from farmers, he is exposed to risks. He also needs to figure out how to assemble orders to sell on and to do so in the most profitable manner.

Timber traders must also be cautious about the costs involved in felling and transporting trees. Cost efficiencies (by grouping harvesting and transport options) can prevent losses and at the same time give greater profit. Generally, large-scale traders have more cost components and face higher risks, but also have the greatest opportunity to make profits. Local brokers spend less – costs are limited to communication and transport to the farmers. These dilemmas also face KWML in its decisions about whether and how best to take on the role of some of these traders. Table 11.4 summarises some average costs in the Gunungkidul region.

Cost component	IDR per m³	US\$ per m³
Cutting (labour)	35,000	2.7
Cutting (assistant labour)	30,000	2.3
Hauling (labour)	25,000	1.0
Grader	20,000	1.5
Timber transporting	150,000	11.4
TOTAL	260,000	18.9

Apart from cost efficiencies, traders' profits also depend on the price of timber at the farmer/forest owner level. Local brokers prefer to deal with trees of larger diameter, which provide a greater profit. The price of KD3 teak, for instance, is around IDR820,000 (US\$62.5) or twice as much as KD1 teak. The price range gives room for the brokers to optimise their profits (see Table 11.5).

Table 11.5 Price ranges for timber in Gunungkidul

IDR		KD1	KD2	KD3	KD4
Teak	Buying price	260,000	660,000	1,300,000	1,980,000
	Range	390,000	490,000	650,000	820,000
	Selling price	650,000	1,150,000	1,950,000	1,300,000
Mahogany	Buying price	-	-	740,000	1,300,000
	Range	na	na	510,000	650,000
	Selling price	-	-	1,250,000	1,950,000
Rosewood	Buying price	-	-	1,220,000	1,540,000
	Range	na	na	630,000	710,000
	Selling price	-	-	1,850,000	2,250,000
Acacia	Buying price	-	-	420,000	740,000
	Range	na	na	430,000	510,000
	Selling price	-	-	850,000	1,250,000
Albizia	Buying price	-	100,000	340,000	660,000
	Range	na	350,000	410,000	490,000
	Selling price	-	450,000	750,000	1,150,000

Note: IDR13,100 = US\$1

Adapted from primary data and Taufiq (2014)

However, the internal rate of return (IRR) occurs inversely. The smaller the diameter, the greater is the rate of return on capital that can be obtained. For example, teak with KD1 is purchased from farmers/people's forest owners for IDR260,000 per m³, which can be sold for up to IDR650,000. So the rate of return on capital for KD1 teak reaches 150 per cent. Meanwhile, KD4 teak obtained from farmers/forest owners for IDR 1.98 million per m³ can be sold on the market at a maximum price of IDR 2.8 million. IRR on KD4 teak is only by 41 per cent (see Table 11.6).

Larger traders have higher profit levels, both in absolute terms and in proportion to the price of traded timber. Assuming the timber price at farmer/forest-owner level is IDR 1 million per m³, usually the first trader can make a profit of IDR200,000 per m³ or 20 per cent. The second trader usually raises the price by IDR300,000 per m³, making a profit of 25 per cent. The third trader, usually a pooling trader – gains a further 33.3 per cent or IDR500,000 per m³ (Table 11.7).

Table 11.6 Internal rate of return on capital in Gunungkidul

	KD1	KD2	KD3	KD3
Teak	150%	74%	50%	41%
Mahogany	na	na	69%	50%
Rosewood	na	na	52%	46%
Acacia	na	na	169%	69%
Sengon	na	350%	121%	74%

Adapted from primary data and Taufiq (2014)

In Gunungkidul in 2012, there were 206 units of furniture and housing material industries over 18 districts. According to Taufiq (2014), such industries could reap a profit of 20 per cent on total production expenses which included the purchase of raw materials, labour, energy and accommodation. Meanwhile, woodcraft business units had a higher level of profit, reaching 30 per cent. Craft industries use less expensive timbers like sengon, pulai or tebelopuso.

Table 11.7 Profit margins for different traders in Gunungkidul

	Price by IDR	Profit	
Farmers/forest owners	1,000,000	Na	na
Trader I	1,200,000	IDR 300,000	25.0%
Trader II	1,500,000	IDR 200,000	25.0%
Trader III	2,000,000	IDR 500,000	33.3%
Furniture industry/housing materials			20.0%
Handicrafts			30.0%

Note: IDR13,100 = US\$1

Adapted from primary data and Taufiq (2014)

11.3.6 Customer research

As noted above, KWML has both regular business partners and a series of personal and institutionalised customer relationships with individual traders. With a high demand for timber currently in Java there is little need for extensive market research. Nevertheless, there is interest in securing further overseas buyers linked to certified timber (with potential interest in pursuing FSC certification in the future) and these responsibilities lie with the KWML management team.

11.4 How has Wana Manunggal Lestari Cooperative (KWML) overcome key challenges?

KWML faces the general challenge of acting as the management unit coordinator for the people's forest which is in turn characterised by fragmented locations and personal ownership. Each owner has his or her own rights over their privately owned land. They have their own preferences over whether to cultivate the land for forest, agriculture or any other purpose. The challenge for people's forest development is therefore how to develop these individually owned lands in a communal manner. This requires area arrangements so that the forest can be managed as a unit. These are implemented by dividing the working area of people's forest into several units.

Sustainability unit: this organises activities to keep the ecological, social and economic sustainability intact at the village level. This unit is established in accordance with village administrative areas. The unit is managed by an association, a forest management organisation at the village level. They apply limits on harvesting so that sustainability can be maintained.

Management units: this organises technical forestry activities, such as planting, maintenance and harvesting. This unit is managed by a group of farmers at sub-village level where the units are established.

Area units: these are the smallest units that are managed by the head of a family of land owners engaged in agroforestry practices. The family head is the owner or manager of the land as indicated by the title base, a land certificate or other document recognised by the National Land Agency.

To be able to manage these forest resources as a group, a key tool is the tree inventory that calculates the volume of timber owned by the management unit. Inventories of standing trees are conducted in each village and each block by measuring the circumference of the tree's stem and the tree's height. There is an agreement that only trees with a diameter of over 15cm or a circumference of approximately 50cm are measured. Trees with smaller diameters are simply counted. The measurement notes are recorded in a form showing the identity of the area owner, name of the sub-village, land use, the individual tree's number, type, circumference, height and volume.

11.4.1 Challenges to do with the value proposition

In order to distinguish itself in the market, KWML has made considerable progress with forest certification. The cooperative has experience in certified wood trading with PT Jawa Furni Lestari and the Hara Group that exported their certified products to Europe. Although this ended in 2010, the cooperative is trying to link their business to timber industries that produce certified products. The cooperative is also considering other certification schemes – like FSC – that have broader markets.

What certification has meant in practice is that audit assessments have been undertaken. These start from the formulation of the institutional profiles and documents of management units, as well as any application documents. The documents are submitted to the certification

body or verification agency. Application documents consist of three books. Book I contains the application for certification and the profile of the management unit, as well as a general description of the institution and potential to be certified. Book II contains a general description of the people's forest management unit to be proposed for certification. Book III contains supporting information to endorse the feasibility of the proposal for certification.

To obtain a certificate of people's forest management and timber legality, KWML needs to be audited for being a people's forest management unit. In the PHBML certification process, an audit of KWML was made by PT TUV Rheinland Indonesia in 2006 and a further surveillance audit in 2011. Meanwhile, its certification of timber legality was assessed by PT Sucofindo in 2011. The LEI PHBML certificate obtained by KWML was the first certificate obtained by a management unit in the form of cooperative. Meanwhile, the VLK certificate obtained by KWML is the first in Indonesia obtained by a management unit in terms of the Timber Legality Assurance System (Sistem Verifikasi Legalitas Kayu or SVLK) implementation in Indonesia.

In addition to developing certified timber, KWML has also moved to develop its own processing capacity for quality wood furniture and crafts. This has been further enhanced by cooperative members now planting quality teak seeds.

11.4.2 Overcoming legal challenges to do with resource access

People's forests are gradually substituting state-owned forests in the supply of Javanese timber. It has been developing in southern Yogyakarta since the 1970s. Locals planted teak in combination with other short-living plants (herbs and vegetables). This planting pattern was popular as it offered the locals both short- and longer-term livelihood strategies, and this agroforestry model developed rapidly in the area.

Now, after more than three decades, the potential of the people's forests in Yogyakarta has reached an area of approximately 104,634 hectares (almost seven times the total area of state-owned forest in the province), with the largest area in Gunungkidul (50,143 hectares). A study by the Community Forestry Communication Forum (Forum Komunikasi Kehutanan Masyarakat, FKKM) indicates that the people's forest in Yogyakarta contributes on average to over 50 per cent of household revenue. It also contributes to reforestation – the rate of reforestation has risen from 5.4 per cent to 39.2 per cent over the last three decades.

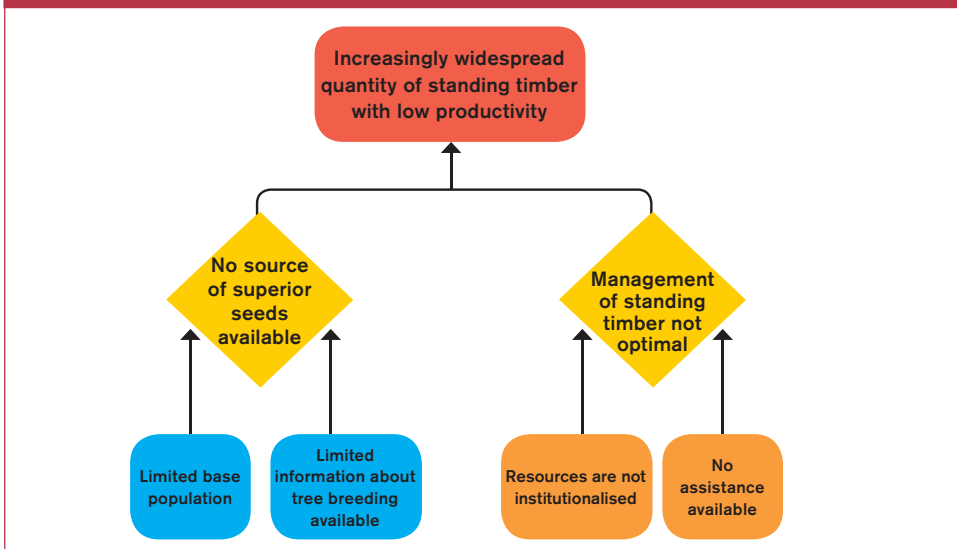
Nevertheless, people's forests are still far from being successful. The most critical point is the limited availability of planting materials, especially quality seeds. This causes low production, especially when compared with the state-owned forests managed by Perhutani (a state-owned company) and other state-owned forests managed by private management. People's forests also lack quality management institutions, as they still rely on household management. The KWML cooperative still only primarily functions as a hub for information exchange instead of planning, management and development issues.

To encourage the development of the people's timber enterprises, the government needs to introduce new approaches. The people's forest has become an inseparable part of the national timber industry and intensification is inevitable and urgent. This will close the gaps between the traditional and industrial methods of production and timber consumption.

Mishandling will bring the people's forest to the brink of destruction in the same way that state-owned forests were, and farmers will be unable to escape poverty.

In 2007, an initiative to improve trees in the people's forests in Gunungkidul was made by JAVLEC and the Faculty of Forestry of UGM. The collaborative research effort aimed to develop a technology package to develop quality teak nurseries/seed stands and demonstrate the potential of people's teak forests with intensive silviculture applications. Seed stands were established as a source of superior teak production for commercial and domestic needs. It also helped produce quality local facilitators able to transfer knowledge to public wider exposure through group discussions. Figures 11.10 and 11.11 show interventions used to increase the productivity of people's forests by JAVLEC and UGM.

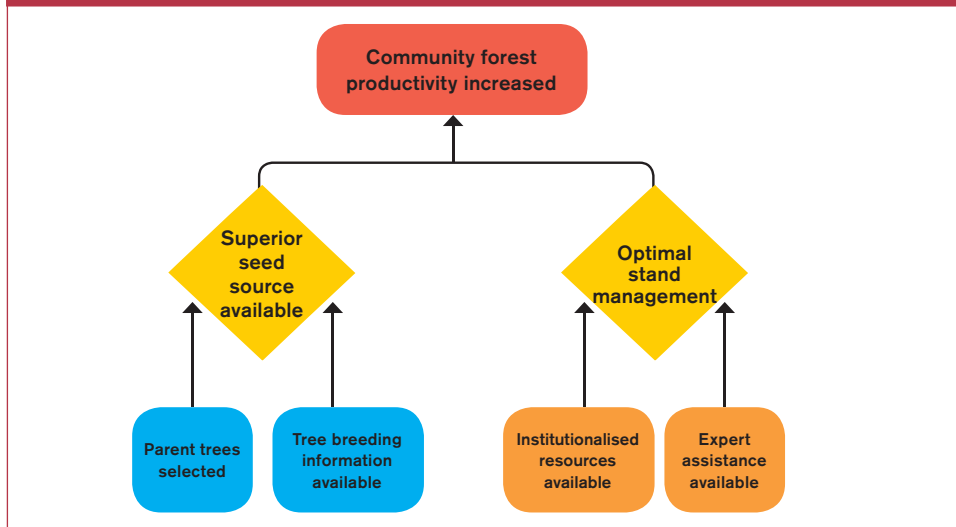
Figure 11.10 Forest productivity problems



Another key challenge is premature harvesting. There is no certainty of harvesting schedules, tree volume, and timber flow in premature harvesting – which causes irregularity in management. Since September 2012 the Ministry of Forestry has established a loan facility that delivers services for people's forest development (Ministry of Forestry, 2012). Loans for the development of people's forests – referred to as Hutan Rakyat (private/people's forest) or HR loans – are part of a revolving fund from the Center for Forest Development Funding (P2H Center). The recipients are required to return the loan with interest and other liabilities after a certain period.

The facility includes loans for HR establishment/enrichment, maintenance, agroforestry and allowing for harvest delays. The delayed harvest loan is a service to encourage farmers to suspend harvesting until the trees are mature so that the trees have a higher economic value. The interest rate follows that of the Central Bank (BI) for a nine-year tenor. Unfortunately, farmers of KWML have been unable to access these loans to date – a subject that is still under negotiation.

Figure 11.11 Forest productivity improvements



11.4.3 Overcoming ownership and benefit-sharing challenges

The cooperative is considered by its members not yet to have reached its optimum role. For example, the cooperative needs to strengthen its position in terms of obtaining timber from farmers. Lack of capital is the crucial issue. KWML does not have adequate access to banks or other financial resources. This lack of capital is why farmers would rather sell their timber to intermediate traders than to the cooperative who could then sell larger volumes at higher prices. Farmers often need quick cash, and profit often comes second, however slight it may be. This is why the number of intermediate traders keeps growing despite the cooperative's presence.

The second challenge is the trade network at local, regional and national levels, connecting the sub-districts with the surrounding districts (see Figure 11.12). A number of actors are involved in the timber trade. While the local area consists of 3–8 overall actors, the regional area only has three actors: large-scale traders or pooling traders, timber retailers and industry. The pooling traders are passive actors who maintain some intermediate traders in the local area, and from whom the timber is pooled before being transferred to a higher level of market (national scale). Timber retailers are active actors that are present in all areas at local and national levels. They play double roles. On the one hand they can function as intermediate traders. On the other, they can also act as large-scale traders or as pooling traders who move around at regional and national levels. Meanwhile, actors in industry are those engaged in processing. They transform logs from the people's forest into a variety of derivative products.

At the national level, there are also few actors – timber retailers, industries and exporters. The latter are those who make timber transactions at the international level. Exporters transfer the people's timber from Gunungkidul to Europe, South Africa and America. But exporters do not rely solely on processed products made entirely from people's timber due to limitations in quality and quantity.

It appears that the structure is imbalanced and weighs against local cooperatives such as KWML. More than 50 per cent of actors are at the local level, and only a few control regional and national arenas. This means that local actors are at the mercy of regional and national actors who enjoy the most profit.

Low profits at the local level, especially for farmers, are caused by this limited access to regional and national markets despite the four-decade-long operation of the people's forest in Gunungkidul. Farmers are still entrapped in local markets, while others benefit from regional and national markets. There are financial investment and capacity gaps that have prevented KWML from penetrating wider markets directly.

11.4.4 Overcoming labour challenges

KWML's personnel still lack administrative and technical skills in dealing with post-harvest management. Some shortcomings in human resources hinder the cooperative from developing in particular.

- **Orderly administration:** lack of timber documentation (planting, harvesting and administration).
- **Specialised skills in making products:** products made by KWML and KUBs are still of low quality when compared to similar products manufactured by other industries. This will affect competition in the market. Improvements can be addressed through training and apprenticeships for KWML personnel in related industries, and local government and facilitators provided both in 2009–2012.
- **Marketing:** KWML has very limited marketing experience which has resulted in products often remaining unsold. There is a need for trained personnel or to recruit product marketing experts.

11.4.5 Overcoming marketing challenges

In general, KWML members sell their own logs. They do so through a local trade network. The function of brokers is usually only to connect farmer producers to intermediate traders, who conduct transactions directly with farmers. The first intermediate trader usually buys the standing trees and re-sells them to the next intermediate trader at a higher price, and so forth. The standing trees are only felled when there is no further intermediate traders who are willing to buy. The problem is that individual transactions between farmers and traders (i) often favour the traders and (ii) fail to build up a capital reserve within the KWML cooperative which would then allow it to act as an intermediate trader itself.

A second area of sales that KWML has been developing is furniture production and handicrafts. They are competing with small-scale timber processors who pool timber from producers and process it into construction components that locals can buy at a relatively cheap price. This market segment involves local actors who directly link farmers with nearby consumers. KWML is working hard to raise the standard of its products in this market segment. However, they are now facing increasing difficulties in maintaining raw material supplies. Industries with stronger market power are penetrating deeper into the supply of timber resources, edging them out. They are failing to compete against external competitors with stronger capital.

Figure 11.12 Actors in the timber trade and distribution of economic values



In summary, members of KWML expect that cooperative will help timber farmers to improve their profit, an achievement that has proved a challenge to deliver so far due to the strong hegemony of intermediate traders' whose number is growing steadily. That is not to say that the cooperative has failed – it is still working hard to find solutions to these marketing challenges.

11.5 Key lessons

11.5.1 Keeping down costs

KWML has also learnt a number of key lessons about business. For example, the cooperative does not pay full salaries to all those in management to ensure low overheads. At the moment, the cooperative still has a role as both a social organisation and a business enterprise. Only the business units that have to generate profit – such as the sawmill unit – are offering full salaries.

In addition, KWML has trained a staff member to produce legal documents required for the timber trade. Previously, the cooperative had to pay IDR100–200,000 for a single document. But this cost has now been substantially reduced.

Thirdly, with its eco-friendly label, the cooperative has received much supports from other parties – such as the Japan Embassy, BNI and government – to build a sawmill and purchase chainsaws and other equipment and tools for timber processing.

11.5.2 Retaining customers and willingness to pay

In terms of attracting customers, KWML has focused on sustainable forest management certification. This is a marketing tool for broadening its customer base and potentially obtaining a premium price. In 2008–2010, the cooperative used certification to get a higher price for its timber. In addition, the cooperative has also invested in a showroom for displaying its processed products, both furniture and crafts, from KUBs.

KWML has also pursued the possibility of green procurement. Through the District Office of Forestry in Gunungkidul a commitment was made to include 'eco-friendly' as a requirement in their procurement process. Such green procurement will start with the District Office of Forestry and may in the longer term benefit KWML members.

11.5.3 Success factors

It has been a long road to establish KWML as a community forest enterprise. Several factors have been critical to its success to date. First has been the realisation that the process of private forest transformation – from subsistence cultivation to timber industrialisation – takes time. This transformation is not yet complete. Forest farmers are still tree growers but not yet entrepreneurs. Their mindset is not easy to change, especially given the complexity and competitiveness of the timber business. Nevertheless, KWML has advanced in timber management and now has two certificates for sustainable forest management and timber legality assurance although it has not yet succeeded in securing longer-term deals at higher prices.

A second success factor is that KWML has been a successful platform for community learning about forest management. Communities, especially forest farmers, have also learnt how to develop an organisation that involves for example systems for decision making and the consolidation of resources. In forest management capacity building, members have been trained in land mapping, forest inventories, timber volume estimates, nursery management and so on. Some forest farmers now have the knowledge and skills required for negotiating prices when trading which will also stand the cooperative in good stead going forward.

A third success factor is that the development of KWML – and also its business – has received support from others. NGOs and UGM have provided technical assistance on organisational development, forest management and forest certification. Government and donors have provided assistance and facilitation to legalise the organisation, build its secretariat, purchase tools and equipment, and other types of support. This underlines how the organisation of forest-farm producer groups can bring benefits – even if these take some time to translate into profits.

Finally, KWML and its private forest areas in Gunungkidul may also become a learning site for other community-based forest management enterprises. Many parties – local, regional, and international – have visited KWML related to their research. Important and interesting lessons have been gleaned for the development of forest and local producer organisations in the future – towards developing sustainable community forest businesses which can increase income and combat poverty.



Laos: Keoset Organic Coffee Producer Group

Coffee and forests: the hopes, fears and actions of organic coffee farmers in Laos

by Buakhai Phimmavong

In a remote mountainous region in Laos, the villagers of Keoset have successfully formed a business as an informal organic coffee producer group. Specialising in organic shade-grown coffee, since 2010 this farmer-led enterprise has been true to its mission 'to use the land to preserve the forest'. This chapter describes what the group has learnt in balancing pitfalls – from limitations in production to setbacks in establishing a brand – and opportunities, such as building on strong social capital and having a loyal buyer prepared to help them build their capacity.

12.1 Context in which the Keoset group operates

12.1.1 The enabling environment

This case study describes a community forest business. Although the group has no formally registered name yet, the Keoset Organic Coffee Producer Group is found in Xiengkhouang Province in the northeast of Laos bordering with Vietnam (see Figure 12.1). Xiengkhouang is divided into eight administrative districts with 570 villages with a total population of 240,900. The provincial capital is Phonesavanh. Xiengkhouang is 90 per cent mountainous and blessed with cooler weather than other parts of Laos. The province was heavily bombed during Vietnam War (1964–73) and unexploded (and unfound) ordinance remains a major constraint for agriculture development. Agriculture is the main economic activity contributing 53 per cent to the province's GDP and growing by 4 per cent yearly. It has received Kip 164.08 billion (US\$ 20.5 million) in foreign aid that was largely spent on agriculture, healthcare and education. Khoun is one of the province's eight districts, and is officially classified as 'poor' (Khoun District Planning and Investment Office, 2010; 2012).¹ Over 40 per cent of villages lack a school (or one nearby), a dispensary or pharmacy. Over 60 per cent have no access to a road or clean water (DOS, 2015).

Nestled high in Khoun's forests is a remote cluster of villages known as Keoset. Keoset is mostly mountainous with about 330ha of irrigated paddy fields at the foot of the mountains. The Hmong people, with land rights certified by the village authority, own more than 50 per cent of the paddy field area.

Keoset is a 2.5-hour drive from Phonesavanh. The first 50km is paved, but a 20km stretch of narrow dirt road is almost inaccessible during the rainy season from June to September, although the road leading to Keoset is being widened by a hydropower company. The Keoset cluster has five villages: Tannue, Tan Tai, Piang, Pakhing and Pong. Tan Tai and Piang have the province's (if not the country's) premium coffee farms. Farmers who occasionally trek (or drive

1. Over 51 per cent of the population live below the poverty line, i.e. living on less than US\$1.25 per day.

Figure 12.1 Map of Laos showing Xiengkhouang Province

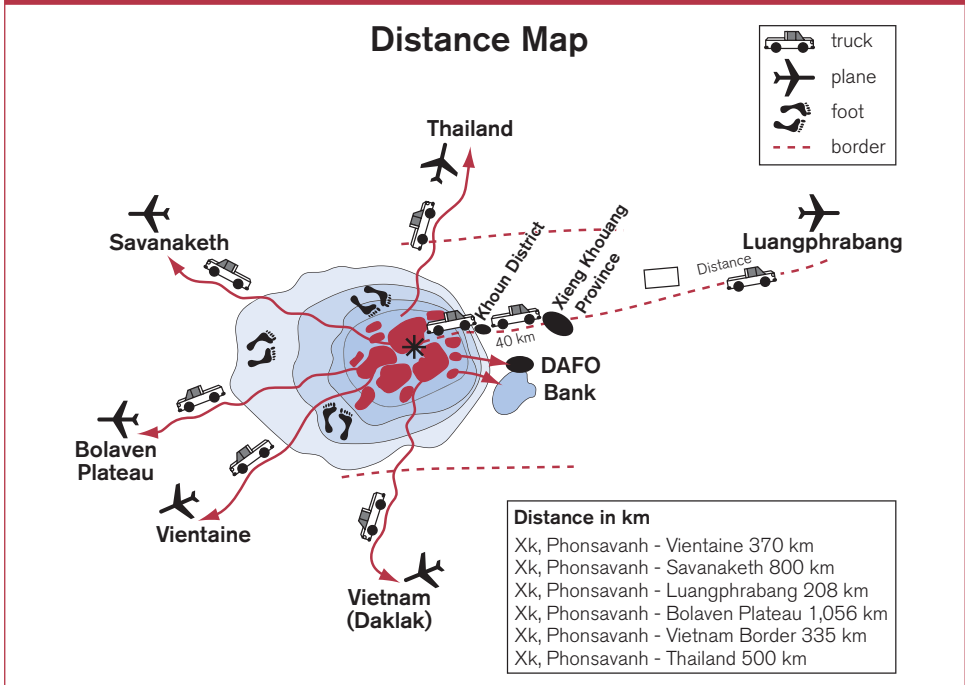


by tractor) outside of the village cluster link Keoset to the outside world. This is how individual farmers sell their produce to the district towns. Keoset's remoteness (and the poor roads) is a challenge for traders who would rather 'watch from a distance' than visit and buy Keoset coffee.

Keoset has 2,585 inhabitants; 81 per cent are Hmong and 19 per cent are Lao Loum, Laos's major ethnic group (SADU, 2011). They subsist on agriculture: coffee, Kai Noi sticky rice (a local rice variety and a Xiengkhouang speciality), vegetables, peanuts, livestock (e.g. cattle, pigs and poultry) and non-timber forest products (NTFPs) such as bamboo shoots, mushrooms, fruits and herbs.

In recent years, coffee has become the second main source of income for the villagers. Although previously neglected, coffee now provides an income to 90 farming households.

Figure 12.2 Distances from Keoset



© Chindaly Phimmavong, hand drawn, Vientiane 2014.

In the five villages, about 200 coffee farming households exist. However, of the planned 128ha available for coffee, only 36.1 ha have been planted.

Tan Tai and Piang villages lead the other three villages in coffee plantation and production. Together, they have 35ha planted against a planned 95ha. Farmer groups in both villages are much better organised than in the three others. They showcase farmer leadership to improve local livelihoods, and how to use land and simultaneously conserve the environment (watershed area).

Coffee is grown under natural forest. The more coffee is planted, the more forest is conserved. The model prevents deforestation and clearing for other land uses (e.g. shifting cultivation). Farmers from other districts and provinces visit and learn from these two villages. The Provincial Agriculture and Forestry Office (PAFO) and District Agriculture and Forestry Office (DAFO) actively promote coffee as a commodity using Keoset as a commercial model.

The government of Laos's poverty reduction strategy is to transform the largely traditional, subsistence rural economy into a modernised, market-oriented agribusiness system. It wants to eradicate shifting agriculture, alter community access to land and forests through land allocation, and relocate upland to lowland villages while aggressively promoting new income-generating opportunities, such as cash crop production through contract farming (Cavallo *et al.*, 2008). Keoset communities could potentially benefit by having access to new crops with a higher income and at the same time helping them to preserve the natural forest.

Figure 12.3 Map of the Keoset village cluster



Source: World Bank (2015)

The change introduced by these policies, however, is exacerbated by rapid hydropower, mining and plantation development that reduce the availability of fertile lowlands. Imposing these changes on rural communities over a short time period can overwhelm the capacity of poor households to manage the transition. Abrupt transitions can be disastrous for local people's livelihoods, particularly among the ethnic minority communities in the upland areas where poverty is most felt. However, relocation is not currently scheduled for the Keoset communities.

The pioneering success of the Keoset Organic Coffee Producer Group inspired both PAFO and DAFO to focus on and support coffee growing in that area. DAFO provided seeds from Paksong and training on nursery management. It formed another 25 coffee production groups in 17 other villages in Khoun District. Similarly, PAFO has a five-year plan (up to 2020) of expanding coffee plantation to Phasai and Pek districts, from 200ha in Khoun and 75ha in Phasai to a total of 700ha by 2020. Both districts have similar geographic features to Khoun.

Being farmer-led, the agencies liked the Keoset Group's self-organising ability. They are now extending the farmer group-forming experiences to cattle fattening, rice, and vegetable production. They intend to strengthen farmer groups' bargaining power for buying inputs, accessing new markets, negotiating better prices and sharing technical and financial services with one another. Other development projects (e.g. Australian Centre for International Agricultural Research (ACIAR) and the Agro-Biodiversity Initiative (TABI)) also support these initiatives.

12.1.2 The operating environment

The Keoset coffee business operates in what might be described as a nurturing environment. It has supportive extension and technical assistance programmes. Prompted by the sudden resurgence of interest, the provincial government singled out coffee as a priority commercial product for expansion.

On the competition front, being small has advantages. The Keoset Organic Coffee Producer Group's supply of coffee is too small to affect the balance of trade of major coffee competitors. It can potentially make progress as a small, niche producer without engaging in the fierce coffee supply competition in national and regional markets. Even before Keoset began, coffee for Xiengkhouang Province came from Paksong, the coffee production hub in southern Laos, supplemented by imports from Thailand. Nevertheless, trader agents (from Vientiane, Paksong, China, Vietnam and Thailand) are watching for developments in coffee production within the province. Unknowingly, the government's push to promote coffee may also increase competition, both for land and production between the different areas. This might affect other inputs as well. Hired labour, who are not household members (largely non-monetised) will become more difficult to find.

The materials required for coffee plantation, like plastic bags for growing seedlings in and shading for the nursery, can be purchased in Phonesavanh. However, for the villagers, visiting the town is still a difficult trip to make.

In Khoun, there are four small major bank branches. Two specifically serve the agriculture sector: Nayobai Bank (Policy Bank) and the Agriculture Promotion Bank. Both banks cater only to individuals or formally registered groups. However, they do not provide equipment or working capital loans to an unregistered group like the Keoset Organic Coffee Producer Group. Group members cannot borrow money for a joint investment as a group – the group has no legal status to use as collateral with the bank.

The group has not yet been registered for several reasons. Firstly, it was formed only two years ago. Working and managing the production and the business collectively is new to the villagers. Secondly, under the current enterprise law, there is no legal entity like farmer groups. The group could register as a cooperative but since the government has only recently recognised and promoted the 'new' form of cooperative (which is different from the 'old' form before the economic reform), the registration process remains unclear and complicated. Thirdly, the farmers themselves, who are mainly risk averse, also want to experiment with the group business first before rushing into bigger risks that a registered enterprise would face.

However, their informal status is the biggest barrier preventing the group from accessing a loan. Currently, hundreds of informal production and commercial groups like Keoset's have no access to loans from commercial banks apart from loans to individual members.



Young coffee trees under shade

12.2 About the Keoset group as a business

12.2.1 The vision

The Keoset Organic Coffee Producer Group has a bold mission: to be a farmer-led and community forest-based organic coffee enterprise model in the province, based on a shared vision to use the land to preserve the forest. Currently, the group produces premium-quality, shade-grown, sun-dried Arabica coffee beans and sells them to one organic coffee buyer, Saffron Coffee in Luang Prabang, for domestic and export markets (e.g. US, China, Vietnam, Thailand and Cambodia).

The farmers founded the business in 2011. It operates in two of the five villages in the cluster and consists of 90 farming households in Tan Tai and Piang villages. It includes 549 members, half of whom are women. The two villages are an hour's drive apart. Each has a management committee for the coffee business, normally consisting of farmers/members. Despite the distance between them, both villages have an agreement to sell to buyers at the same agreed price, maintaining the same quality of coffee farm and coffee beans. Mr Somboun, the village head of Ban Piang, explains how the coffee came to the village:

Coffee in Keoset was born out of a technical collaboration between IFAD [the International Fund for Agricultural Development] and the PAFO in 2001. Both found that the villages offered optimum conditions for Arabica coffee. IFAD gave the farmers free seeds from Paksong District on the Bolaven Plateau in Champasak Province, where coffee is planted for commercial purposes, and encouraged them to plant in about 80ha of land in five villages. Unfortunately, IFAD's support was unplugged after only a year. Unfazed, the farmers continued growing coffee. In 2005, the farms were bearing red cherries. They didn't know what to do with



Shelling machine

them – more so, how to proceed after picking? They dried the cherries according to what they heard. They did not even know who would buy them and under what conditions. With no traders in sight, they threw the entire harvest away.

In 2008, a Vietnamese trader advised the farmers on how to process coffee and agreed to buy well-dried shelled coffee beans for 6,000Kip/kg (about US\$0.75) if it was delivered in town. The farmers rejected the offer and did not harvest the coffee because of the costs of labour and transportation to town. Frustrated, many shared the same thought: 'We cannot eat coffee. We cannot drink all the coffee we produce. It is just for others to consume. Rice is better. If we cannot sell the beans, we should keep them for ourselves!' This taught the farmers the importance of: (a) market information, and (b) technical guidance and best practices. So a few continued but most abandoned their coffee farms in favour of other crops (e.g. rice).

In 2010, the Swiss Agency for Development and Corporation (SDC)-funded SADU project revived the coffee plantations.² What remained was 30 hectares of unhealthy, abandoned and overgrown plantations in Piang and Tannue villages. The farmers reported that they

2. Smallholder Agricultural Market Development in the Uplands (SADU) is small-scale agro-enterprise development project in Laos. SADU pilots new approaches to enable smallholder farmers to engage in market systems. Activities are conducted in Xieng Khouang Province (Paek, Khoun, Phou Khouth and Nong Het districts) and in Luang Prabang (Xieng Ngeun, Paxeng and Phontong districts).

had received no technical support since IFAD left and that the coffee market remained unknown. So SADU used a three-pronged intervention, building:

- DAFO's capacity to provide extension supports
- farmers' capacity, and
- market linkages between producers and traders.

This gave the farmers new hope, production techniques and practices, and connected them with the outside world.

Mr Somboun led the farmers to join the project activities. One involved a tour to Katouat village's organic coffee plantation in Paksong District (Champasak Province). This inspired the Keoset farmers. They learnt that coffee could be a major income source, how best to plant and trade coffee, and that they should work together as a group rather than individuals (Katouat's organic coffee group has only 15 household members). The tour came at the right time. Before, the farmers sold coffee individually at whatever price they were offered: now they decided to form a group and mobilise more families to grow coffee. They agreed to work together, to share techniques and information, and to sell individually but at the same price.

Table 12.1 Projected household income (US\$)

Item	Unit	Qty	Unit cost (US\$)	Total (US\$)	Assumption
Sales in 2013	Kg	100	2.3	225	Each family harvests 500kg cherries (1kg of dried coffee beans requires 5kg cherries)
Cost of goods sold					
Maintenance					Done by family members
Harvesting	Day	5	3.8	19	Includes 250kg harvested by family members and 250kg by hired labour, harvesting 50kg/day x Kip 30,000/day or US\$3.8 x 5 days = Kip 150,000 or US\$18.8
Shelling	Kg	500	0.0125	6	Shelling = Kip 100/kg x 500kg per family = Kip 50,000 or US\$6.3
Drying, soaking and storage					Done by family members
Total costs of goods sold				25	
Total profit				200	
Profitability				89%	



Group members selecting beans

The 'business' model started as an informal group seeking to improve their bargaining power and learn, produce and sell together in a more informed and organised way. Business sales in 2011 were Kip 99 million (US\$12,375). Saffron, owned by American David Dale, has patronised the group since Dale was introduced by the SADU project to the Keoset group. Over the past three years, Saffron has provided continuous help to ensure moisture content testing, roasting, transportation and distribution services. The group learnt that fulfilling the buyer's requirement is the decisive factor that keeps their business going.

The Keoset group maintains bookkeeping of the group's income and expenses. But so far, the farmers have not calculated overall profits. However, they all agree that they gain a significant income from coffee. It has become a second source of income, even surpassing income from rice and cattle. Piang villagers report that their coffee business has changed their quality of life. Now they can send their children to school and do not have to sell their cattle or property when they need 'quick cash.' From the known facts, a profit calculation was made (see Table 12.1). It shows that without calculating real costs, the profitability (including labour) from coffee is very high, ranging from 85 to 90 per cent.

Each village has its own group management board (consisting of a head, two deputies and board members). The board in Tan Tai has 24 members (with 16 women) and in Piang, 16 members (with 10 women), all of whom serve on voluntary basis.

Box 1. Bounmi's story: the benefits of joining a coffee producer's group

Sitting on a wooden bench outside the hall in her village, Bounmi has a broad smile etched across her face. She has just finished taking part in a producer meeting facilitated by SADU, which brought together as many as 90 producers from five different villages in KS Kumban, Koune District, Xiengkhouang Province – and Bounmi has good reason to join them.

The purpose of the meeting was to discuss the next steps in establishing a semiformal producer group which, among other things, will enable coffee producers like Bounmi to undertake coffee processing activities.



Bounmi (46) started producing coffee in 2003. For the first few years, yield was low as the trees needed some time to mature. Bounmi initially planted a total of 650 coffee trees. However, she later extended production to a second site, planting 300 more trees. Eight years later, yields harvested are much higher. Today, Bounmi's plantation consists of approximately 800 trees. She intends to plant a further 700 trees over the course of the next year. In addition to producing seedlings in nursery beds for her own use, Bounmi sells seedlings to her neighbours and other villagers.

Prior to 2003, Bounmi's income was generated primarily through paddy rice production. Although this is still her mainstay – Bounmi currently cultivates as much as 4,500m² of rice – she hopes in the future to expand both the area planted with coffee and production, to the extent that it becomes both her main crop and main source of income. The additional income derived from coffee production has enabled Bounmi to buy a buffalo, which she uses to plough her rice field. She also recently purchased some poultry (50 animals).

The adoption of coffee production and processing has had a positive impact on Bounmi's household's livelihood security. She has four sons, aged between 14 and 23 – the youngest of whom has just completed the fourth grade of secondary school. Bounmi believes that the income she has earned from coffee production is one of the reasons why she has been able to keep him in school.

Source: extract from Delnoye and Phelan (undated).

12.2.2 Business inputs

As in other Mekong countries, Laos forests are under threat. The business conserves (and revitalises) forests by planting shade-grown plants like coffee. This sustains an ecological balance while providing good livelihoods for subsistence farmers. Growing coffee organically in the forest environment is one of the best ways to limit or even stop slash-and-burn agriculture, which both causes long-term local and global environmental concerns. Forest-grown organic coffee can provide a good livelihood while conserving the community's environmental health. An excellent guide to the forests of the province has been initiated (Lehmann *et al.*, 2003) which describes the morphology and ecology of the most common tree species of Xiengkhouang. It also describes the uses of different tree species, opening a window into the country's rural economy. In Laos, where most of the population lives in rural areas, forest products are collected in times of food shortage and rural people depend on this natural 'supermarket'. According to the handbook, numerous NTFP products are collected and sold at local markets and significantly contribute to the local economy.

The forests of the Xiengkhouang mountains are appropriate for growing Arabica coffee trees. The forest canopy protects the crop from frost that would destroy them in unusually cold seasons. This makes the Keoset coffee production worth expanding and planting on a commercial scale while conserving the natural forest.

In the two Keoset villages, each member household has on average three hectares of coffee plantation. Annual land tax is relatively low at Kip 10,000 (US\$1.20) per piece of land, regardless of its size and is collected by the village authority. Those interested in planting coffee reserve an area with the village authority, which manages land allocation and use. Since most villagers are related to one another, the process for requesting land use is simple. The authority then checks whether the land requested is currently in use. Land-use rights can be easily transferred if it is not in use by the present right holder. Most land has not yet been commercialised, except for e.g. paddy fields. In other areas in the country, this has changed where land values have increased due to an influx of investors. Land for growing coffee will become limited if villagers choose to plant other crops if an investor proposes a contract farming arrangement or if land is taken as a concession of a big investment project. As yet, the group has not planned any response to such a potential challenge and land titling has yet to reach this area.

The start-up investment for the coffee farmers is not high. Farmers produce their own seedlings and do not need fertiliser. Members buy black plastic bags for the seedlings and thin plastic sheets for sunlight protection from Manivanh Agriculture Supply Shop in Phonesavanh. DAFO brings the materials to the village, free of charge, every time they visit. Under SADU project support, four villagers went to study coffee planting techniques for a few months in Paksong and have since become village extension workers.

The business is still too small to borrow from Phonesavanh's mainstream banks. Instead, it relies on savings from other crops to fund coffee production. In 2011 after intense discussions with the SADU project, Tan Tai Village developed an informal credit union. The coffee buyer pays Kip 500–1,000 (US\$0.06–12)/kg coffee into a revolving fund. The rules are simple. The fund lends to members in need of working capital (e.g. for hiring labour) and charges 1 per cent monthly, on a par with commercial rates. The fund is now worth Kip 7.3 million (US\$912). At monthly meetings, members inform, update and discuss; collect and check each other's production, sales and cost statistics; decide on loan requests submitted prior to the meeting; and prepare future plans. Every member can request a loan. The revolving fund addresses a pressing and common need for cash and members are generally happy with this service. However, it is yet to be replicated in Piang.

12.2.3 Main activities

All major business activities take place in the villages. To get 1kg of dried coffee beans, the villagers need 5kg of coffee cherries. Each farmer selects and plants quality seeds in their nursery for two years before transferring them to the forest plantation. Each individual household performs all other activities. They select which seeds to plant, and weeding, growing, picking, sun drying, storing and shelling to selecting and selling beans. The work is shared equally between men and women in the household.

Table 12.2 Coffee and rice production cycle

Particulars/ month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Seedling	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Land preparing					Green	R						
Planting					Green	R	Green					
Maintaining, weeding							Green	R	Green	Green	Green	Green
Harvesting										Yellow	Yellow	Blue star
Shelling	Red	Red										Red
Soaking, washing	Red	Red										Red
Drying	Red	Red										Red
Storage	Red	Red										Red
Selling	Red	Red										Red

Legend: Coffee  Rice  Frost in 2013 

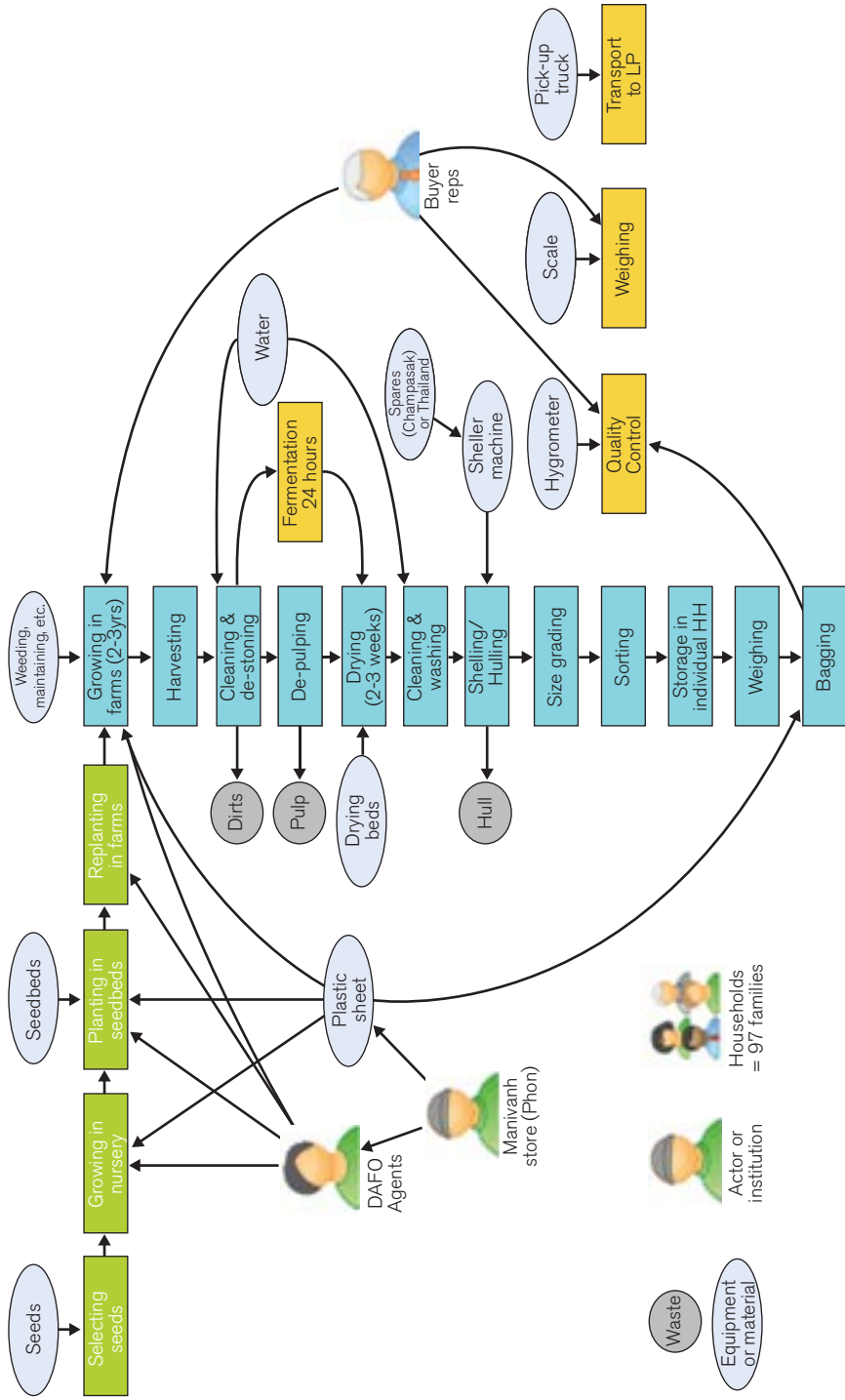
Seedlings are cared for throughout the year. Planting starts in July, weeding from July to December, and harvesting from December to February. Produce is sold in January and February. Although coffee production is labour intensive, most farmers rely on household labour.

However, labour demand peaks during the planting and harvesting seasons, when costs spike. If temporary labour is unavailable, farmer households must put in more hours, and Keoset members have a tradition of helping each other. The average rate for labour is Kip 30,000 (US\$3.75) per day up to Kip 50,000 (US\$6.25) during the planting and harvesting seasons. This rate is common elsewhere in Laos.

The coffee group offers a shelling service to members, charging a fee of Kip 100/kg (US\$0.012). There are no transportation costs as Saffron collects the coffee at various village collection points providing there is at least 0.5–1 tonnes of coffee at the price the group head has negotiated and members have agreed upon.

The value chain diagram for coffee production is shown in Figure 12.4. The chain shows household activities (e.g. preparing seedlings, seeding, weeding, growing, picking, sun drying, storing, shelling, selecting and selling) and buyer activities (re-drying, roasting, blending, tasting, quality checks, packaging and marketing). Two years ago, with help from DAFO and SADU, the business experimented in roasting and selling the roasted coffee at the Phonesavanh market. This was discontinued due to low demand and the lack of an entrepreneur to undertake the venture. Moving into new product development is not easy and requires massive investments in marketing, collection and storage facilities, as well as capacity building in management, organisation and entrepreneurship.

Figure 12.4 Value chain diagram for the Keoset group



As yet, the group has not been formally registered. Partly it is because Laos still lacks a legal framework for this type of business. Being small, the Keoset group's business is comfortable with its informal 'cooperative' structure. Despite being informal, the business (and its activities) is recognised and fully supported by the authorities. The group is still hesitant to register as a cooperative because the official requirement of registered capital of Kip 100 million (or US\$12,500) seems too high to them.

12.2.4 Technology and productivity

The scale of coffee production in both areas is still considered low. Currently, Keoset farmers can achieve 0.6–0.7 tonnes/ha of primarily processed beans while farmers in the south achieve 1.3–1.5 tonnes/ha of similar varieties but planted in open areas. Efforts have been made to improve this. SADU collaborated with DAFO to provide seedlings, study tours, group management and production-related technical training, and to link the group with potential buyers. An international expert also assessed the coffee and local growing conditions and trained farmers on the job. According to him, the coffee quality in Keoset is unique. In addition, four selected farmers were given two months of practical training on commercial coffee growing on Bolaven farms. They also attended the Xiengkhouang Agricultural Fair in 2011, where they met their sole buyer.

To support post-harvest processing and adding value to the coffee, SADU and DAFO have complemented the business's 30 per cent equity with coffee-shelling machines, one for each village. Each machine has a 0.5 ton hourly capacity. It collects a service fee of Kip 100/kg (US\$0.012) which is added to the revolving fund. The machines were selected to cope with a high volume of coffee cherries during the harvest season, however, this capacity is too high for what the business can usually consume and repairing the shelling machine is a real challenge, as parts are not available in the province. Table 12.3 shows that the business only uses 24 per cent of its annual available capacity.

Scaling up is also a challenge. The business is plagued by the low productivity of its members. Total annual production volumes were 4.5 tonnes in 2011, 6.7 tonnes in 2012, and 5.1 tonnes in 2013 (poor harvest due to frost). Scaling up will need good practice

Table 12.3 Actual capacity use estimate

Average output in 2 villages (tonnes/ha)	0.7
Tan Tai and Piang households	90
Ha/household (average)	3
Production per year (tonnes)	189
Shelling machine capacity (tonnes per hour)	0.5
Number of machine (units)	2
Annual available capacity (tonnes)	189
Total potential output (in days, assuming a 4-hour working day)	47.25
Actual capacity used (in %, assuming: 200 days/year)	24

and investments in quality control, post-harvest activities (particularly storage) and marketing. This will require a combination of information (on highland coffee production), extension (using this information in practice, correcting when necessary, monitoring and habit formation), group reflections (group learning and discussion events) and systems installations (procedures, checklists and designation of enforcement personnel).

The distance between the farmer's coffee farms and their residence is a major but often-unnoticed practical productivity-limiting factor. The farther the residence from the farm, the more time is wasted walking to and from the plantations. This can be exacerbated if the farmers have to carry seedlings, tools and produce or in bad weather. The community needs to influence the building of a rudimentary road network to enable the use of simple transport modes (e.g., animal-driven carts, bicycles, motorbikes, tractors, etc.). For the time being, they collectively widened the path to the plantations so that they can access them by tractor.

12.2.5 Business partners

As mentioned above, the buyer sends a truck to collect beans when the volume reaches the minimum of 0.5 tonnes. Over the past three years, Saffron has been a loyal partner. It provides moisture content testing and advises farmers on how to avoid frost damage. Saffron also performs other functions in the value chain such as further grading, roasting, packaging, transportation and distribution. The group learnt that fulfilling the buyer's requirements is the decisive factor that keeps their business going.

12.2.6 Customer groups and product types

The Keoset Organic Coffee Producer Group is remote from the dynamic national, regional and international coffee markets. However, with proper partners, the business could create its own high-end brand and target consumers in both the Vientiane and Phonesavanh markets. However, Saffron might not be interested in selling any coffee brand other than its own.

As their sole buyer, Saffron has a limited reach locally, with only two main sales outlets. One Saffron coffee shop is in Luang Prabang (a World Heritage tourist destination) and the other (Common Grounds) is in Vientiane (close to the Mekong River). Saffron has a large mountain coffee operation (plantation to roasting) in Luang Prabang and exports roasted coffee (as premium organic mountain coffee from Laos) to the Mekong countries and USA. The Keoset group gave Saffron a new source of premium coffee, and yet the coffee from Keoset is not specifically referred to on the company's website. Under this arrangement, it will never stand out as an individually recognised brand.

Initially, Saffron assisted the business with proper production and processing techniques as well as ways to comply with its quality requirement: dry and organic, shade grown and fully-washed during the processing. With compliance, Saffron is willing to buy 10–15 tonnes per year. Although the Keoset business can only provide Saffron with around 5 tonnes of coffee, the relationship is strong and Keoset members trust Saffron as a buyer.

12.2.7 Differentiation in the market place

The Keoset coffee's distinctive value lies in being organic and shade-grown in natural forest and its premium highland roots. For Saffron, buying from Keoset is a better alternative to coffee from the Bolaven Plateau in the south. The quality fits Saffron's requirement even though the volume is still small. In fact, in 2013, Saffron paid a higher price to Keoset than Bolaven farmers. For the group, its proximity to Luang Prabang is both an advantage and disadvantage. Having only one buyer makes its coffee somewhat 'invisible' (and vulnerable) in this market. Yet the business is well positioned to supply Luang Prabang and is the only producer who can meet Xiengkhouang's taste for good coffee beans.

Two years ago, SADU-DAFO supported an experiment for the Keoset business: tapping Phonesavanh's retail coffee market. The business and the project bought a coffee roasting container on a 50–50 per cent cost-sharing arrangement. The project supported the Keoset group with coffee roasting training, logo design and printing, packaging and a one-year pilot, selling the roasted coffee to tourist hotels and restaurants. The product did well in the local market and created good brand recognition. However, the Keoset business could not sustain the operation. Due to its remoteness, delivery was difficult and expensive and it was hard to sustain the gas supply chain for the roaster. The brand needed to be visible for longer and the seasonal supply did not fit the customers' expectations of a steady and consistent supply. Finally, DAFO took over selling the coffee but eventually stopped to focus on its government functions.

12.3 Who controls the Keoset group?

12.3.1 The origin of the value proposition

While it is true that a development project discovered the land's suitability for coffee plantation, the resulting social capital has come from within the Keoset coffee producer's themselves. They own the idea and have mobilised and sustained the communities and the villages' interest, co-opted PAFO and DAFO's support, strengthened the trust for the extension initiatives, attracted a loyal buyer, and propagated a shared vision 'to use the land to preserve the forest'.

The business owes much to Mr Khampan, the former group head and a strong role model. He continuously provided subtle but firm leadership in mobilising the villagers to build and sustain the group's trust in the processes and provided encouragement and guidance to ensure the groups' ownership of decisions made. It would have been difficult for the business to have reached this far without him.

12.3.2 Control over forest resource access

In spite of its achievements, group members have little control of its physical assets. Farmers have land-use rights but the ownership rests with the provincial government (although they continue to be supportive).

Xiengkhouang Province has a long and porous border with Vietnam. Depending on what the central government allows, the province enjoys almost free border trade compared to

other provinces. In Xiengkhouang's case, control is selectively applied for large commercial agricultural products, for instance maize and cattle. Using farmer voices, the SADU project has advocated for a trading system that focuses on openness, favouring producers, and competitiveness. Since 2011, the provincial government has adopted a policy to reduce taxes, remove checkpoints in each district and establish a single service window. This has led to more income for the producers in general. With its small volume, coffee is traded without access control. However, a written concrete policy on natural resource management such as land allocation particularly for coffee plantations does not exist yet.

12.3.3 Control of the business

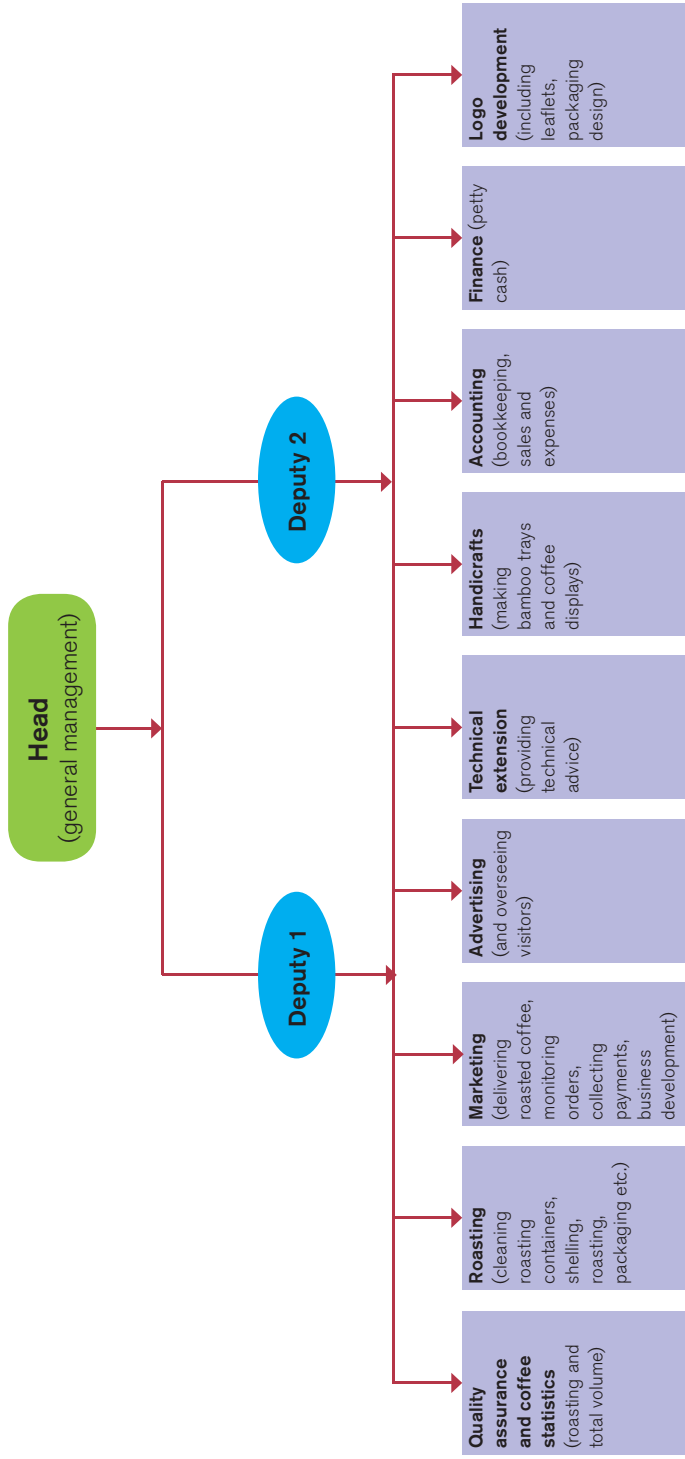
The Keoset Organic Coffee Producer Group is owned by its members with both men and women working in the village coffee management structures (see Figure 12.5). For each post, there is a volunteer in charge of responsibilities. The board members meet frequently before and during the harvest depending on the needs and whenever there is a visitor to their coffee groups. Women handle many important functions. For example, Mrs Chandee is one of two deputies who head Piang's group. Other women handle finance, marketing and quality assurance.

The members jointly own and contribute to a group revolving loan fund. They also have ownership of the various processes involved in the business: agreeing the sales prices, overseeing quality assurance during the planting and processing stage and managing the shelling machines. There is no financial dividend mechanism in place yet because the revolving fund is still being built up and the loan interest collected is re-invested in the fund. While sales are handled jointly, payment for the coffee is made to individual members directly by the buyer. After that, the individual members pay a contribution to the group fund based on their volume of coffee sold.

Active member participation in meetings drives the group's decision-making processes. Participation creates a strong bond and solidarity between the management board and members. For instance, to select board members, candidates are chosen based on their competencies and willingness to take on responsibilities. Candidates become board members following a vote by the members. The same consensual and participatory processes shaped the management structure shown in Figure 12.5. Interviews with farmers reveal that they are satisfied with this structure that allows equal benefits to all members. They also practice an open feedback approach. For instance, if a person does not perform well nor not follow the standard, the group will ask why and then discuss how the situation can be improved. This applies equally to the group committee and members.

Conflict among members is rare as having so much land available to grow coffee means that competition among them unnecessary. In fact, some members share land with one another. They also support each other to improve their quality of life. They recognise that they depend on each other as a community and the family ties between them remain strong. Disagreements are easily resolved by mutual discussion and consent. The social capital that unites them is strong. Especially significant is the role of the technical extension worker who enables the business to access best practices and issues relating to coffee.

Figure 12.5 The Keoset group's organisational structure



12.3.4 Staff roles and selection processes

The board members of the two villages discuss important issues in a series of meetings and jointly make any decisions required. They meet more regularly before and during the harvest season to discuss price and quality etc. Otherwise they meet once every month or two whenever there is an issue to discuss. Meetings normally take place in the village meeting hall.

The procedures for consensual decision making originated from SADU. Each board member has his or her tasks and responsibilities clearly spelled out in writing. The board also refers to organisational charts in the meeting room.

When choosing candidates for the management board, members are consulted for their opinions. Prior to selection, the proposed candidates are approached to see if they would be willing to take on the role. If not, the group identifies alternative candidates. So far, the management board members have participated in the formal technical training and study tour supported by SADU. Since then, skills have been transferred from member to member as on-the-job training.

The business is yet to recruit a full-time manager. All current board members and executives serve on voluntary basis. In line with Lao culture, all financial decisions by the board are delegated to female executives who are generally considered to be better than their male counterparts in money matters.

12.3.5 Delivery options

Both the buyer and the Keoset coffee producers decided that the best means to transport the coffee from the village to Luang Prabhang was by the buyer's truck. The decision was made collectively among the members. The only other option is for passengers to take the produce by bus. However, buses are slow, unreliable and unsafe for moving coffee beans on long journeys. The group also prefers not to allow someone to accompany the truck to the buyer's storage and decide on the volumes, prices and quality there. Making all decisions related to sales in the villages is so far the most acceptable approach for the members.

12.3.6 Customer research

For now, the business relies on Saffron to inform them what its markets want. In turn, Saffron relays the information via occasional calls to the group head. Generally, the business knows why Saffron and the markets it serves prefer their coffee: good aroma, big beans, organically grown, etc. Yet this simple arrangement is not problem free. In 2013, the buyer and the group had a small argument about the coffee moisture content. Saffron always insists on properly dried and hardened beans but the business had been unable to comply following the harvest. In response, Saffron provided a moisture metre to enable them to regularly check the moisture before delivery. The issue has been made clear to the group and solved.

12.3.7 Marketing and promotion

On its own, the business is not ready to promote its own brand. It knows that this will be expensive, time consuming and require better marketing and management skills that it has yet to acquire. It is also aware of the risks in maintaining only one buyer. The buyer blends their coffee with others to create the Saffron brand (and taste). The longer this continues, the longer it will take the Keoset coffee producers to launch their own brand. Currently, its members are looking for more market intermediaries and buyers in their own networks. They continue to ask for information from the local authorities. They foresee an increase in the harvest from the new plantation and realise that relying on one buyer alone is always dangerous. With the support of the provincial authority, their products have been showcased at several agriculture fairs in the province. However, so far, no new buyer has been identified.

12.4 How has the Keoset group overcome key challenges?

Overall, the Laos coffee industry is a mix of smallholders and large estates. Management systems range from high-input intensive systems to smallholders with zero inputs and low yields. Large estates have their own brands, blending recipes, processing facilities, marketing, administration and distribution networks. Laos now has one large company producing instant coffee and a few good brands of roasted coffee (Winston *et al.*, 2005). Unfortunately, the Keoset group remains invisible among the players. It is in a remote mountainous and forested area, with no financial assets (though lots of social and human capital), limited contacts with the market, one buyer and low productivity. But it has lots of experience and is eager to learn. It has the passion to survive the coffee business – despite the odds.

12.4.1 Overcoming challenges to do with the value proposition

Currently, the business is keen on scaling up production rather than altering its coffee's value proposition. Business activities are evolving, based on these key lessons:

Failure is good: the coffee roasting experiment in collaboration with SADU-DAFO – complete with training, logo design and printing, packaging, and a one-year pilot – failed. However, this made the business aware of the challenges it faces. In fact, it has enhanced the business focus on niche markets suited to its low productivity. The leaders believe that increasing supply (or productivity) will strengthen the business enabling it to re-enter the retail market at some future time.

Deal with supply: for the past three years, the business has yet to meet its sole buyer's volume target. It needs to increase productivity of individual farmers. Keoset members find this difficult. They need various actions over sufficient time scales and to be well coordinated between members to make progress. They have carried out an exercise on identifying the business's productivity influencing factors.

Frost is an enemy: last year's poor harvest due to frost warned the business about climate change. Frost killed many coffee trees, especially those on lower ground and in open areas. Keoset members need to take Saffron's guidelines seriously and plant the coffee trees at least 80 metres above the lowland under big trees. DAFO's advice is the same (MONRE, 2015). But compliance is not easy in a diverse organisation.

Understand the supply chain: over time, dramatic changes in planting and post-harvesting techniques will have to be introduced, learnt and installed. The business will need centralised collection points, storage and quality assurance. It needs to discuss community warehouses, minimum economic orders, bulk purchases and central seedling depots among many other topics. The members realise that the business can achieve greater efficiency and savings by batching materials orders. Most activities will take time and must start soon. However, all these issues have not been discussed yet.

Quality assurance and compliance: the business management are aware that consistent coffee bean quality is difficult to maintain. This is especially true if most activities are performed individually by each household. Quality checklists (in local dialects), measuring tools and trained inspectors (voluntary or otherwise) should be initiated.

Organisational development: Keoset's business needs to be more entrepreneurial. It should avoid too much reliance on 'free' (or volunteer) services as they can be unreliable in times of need. The group should introduce/hire a full-time manager and collectively undertake non-routine activities (such as finding potential business partners, hiring agents, attending fairs and exhibitions or dealing with quality compliance). This will involve more capacity building and technical training. The leaders are aware that these cannot happen overnight. It might take them another two or three years to see how the collective business performs and then consider the option of registering as a cooperative. The existing organisational chart (a remnant of the failed SADU-DAFO experiment) should now reflect the business' most recent activities, for example revolving funds, human assets capacity building and business developments.

12.4.2 Overcoming legal challenges

Presently, all Keoset members have enough forest land to plant and grow coffee (and other crops) despite the fact that some areas of the plantation have been damaged by the road widening by the hydro power company. The farmers have accepted that damage without requesting compensation. They understand that the forest land belongs to the state and if the land is used for public infrastructure, it is the state's right. They also consider it is their contribution to the country's development. No specific legal or regulatory barrier prevents access and use of available land. Conserving the forest will deter outsiders (from other communities) from encroaching. A potential land conflict will become more serious if existing coffee plantations are taken by other infrastructure projects or a large-scale investment for other industrial crops.

12.4.3 Overcoming ownership and benefit-sharing challenges

So far, the business ownership structure is akin to an agricultural cooperative. Everyone is an owner and entitled to vote on every important issue. But so far, the business as an entity has not made any profit, and so group benefit sharing has not happened yet. Even the interest gained from the loans of the revolving fund have been re-invested into the fund, rather than redistributed. At some stage, the business may be registered and begin to take on new roles, but at this stage the fragile social capital needs to be built up.

12.4.4 Overcoming labour challenges

The Keoset business members know they need two types of capacity intervention. Of foremost importance are their human assets. Since 2010, SADU and Saffron have been helping them to build their capacity in planting techniques and producing good coffee. The group now has extension workers, a buyer and links with other coffee producers in Paksong. The buyer is also a good and reliable source of technical information and both farmers and buyer benefit from a good yield. The leaders admit the urgency of continuous training (technical, organisational and entrepreneurial).

Secondly, they need physical connectedness, meaning rudimentary road networks in the forest for basic transport. They farmers widened the access roads to the new areas so they could transport seedlings there and the coffee bags back to the villages by tractor. Moreover, several inter-provincial roads are being constructed by the government, which will make the Keoset business significantly less isolated.

12.4.5 Overcoming delivery challenges

The Keoset business is comfortable with the current 'buyer picks up' delivery arrangement. Owning a truck is not an option. It would require a big investment and complicated logistics (e.g. hiring a driver, assurance that the coffee volume and quality to be delivered is 100 per cent acceptable to the buyer and gasoline supply arrangements).

12.4.6 Overcoming marketing challenges

The business has only one buyer and still cannot meet its requirements in volume and quality. It will take three to four years before the harvest can happen in the newly planted areas. What the farmers can do now to ensure a good harvest in future is to apply the right techniques from the beginning such as planting the seedling under big trees to avoid loss due to frost, and weeding to help the small plant to grow healthily. Done well, the group feels that the market is sufficient for the moment. However, it is also watching for other possibilities such as friendly links (and eventually, production-sharing arrangements) with other community producer groups in Paksong, Vientiane and Luang Prabang.

Keoset business managers know that expansion will need a good partner with perhaps an even wider reach than Saffron's. Due to the limited budget and knowledge about marketing, the business makes use of all means within their resources. For instance, they managed to attend agriculture fairs in the province without too much expense. Unfortunately, no potential alternative buyers have been found yet. They maintain regular contact with farmers in the south to keep informed about coffee prices as well as about potential buyers.

12.5 Key lessons

The Keoset business story reveals many significant lessons. Here are some:

12.5.1 Keeping costs down

The business does not yet accurately track labour and other costs and does not have a strategy to reduce them (although it has begun to discuss joint input arrangements). This is an important next step.

The business started coffee production with negligible fixed investments. As shown in Table 12.1 its operations are still largely non-monetised (e.g. seedlings are provided free, farm work is a normal daily activity in family life) and so costs are already 'artificially low'. Having one buyer who handles the pick-up and DAFO staff to purchase the plastic bags and deliver them to the village without any extra costs makes the situation tolerable.

12.5.2 Retaining customers and willingness to pay

Having one good customer with a kind heart makes marketing easier. It effectively means that the business has a reliable marketing partner. The Keoset business's secret in building the trust of the buyer lies in their commitment to developing social capital. Social capital is the invisible glue that enables a group of strangers with fragile structures to achieve superior performance. The Keoset business members include women bound together by strong social bonds and family ties. Trust and willingness to listen and to help one another are important values.

12.5.3 Success factors

Firstly, the realism of the business members has proved important. They are aware that they are some way off from having the sort of infrastructure used by the large coffee estates. They are aware of their current priorities to scale up and improve various technical practices. They are also aware that while coffee may have been the hero of the livelihood story so far, continuing to ensure organic production and forest conservation may allow it to become the star. That maintains their competitive edge. Community control and forest conservation cannot be taken for granted. In part they provide a strong rationale for continued subsidies offered by the state and technical assistance from NGOs.

Secondly, the high social capital and ability to trust one another is key. This might be tested if another buyer suddenly joins them. Likewise, the trust (considering that the group cannot use their plantation as partnership equity), patience and learning curve required of any potential partner will be steep. Potential partners should include social enterprises (and fair traders) with social entrepreneurship and marketing strengths.



Mexico: Unidad Comunal Forestal Agropecuaria y de Servicios de Ixtlán (UCFAS)

Locally controlled forest and farm enterprises developed by the Ixtlán community

by Azaharel García and William Lozano

Mexico's forest laws now mean that 80 per cent of its forests are under community control. Yet not enough community forestry enterprises have become successful businesses. In this case study, the authors describe how UCFAS has bucked the trend. It has developed a business model which is both environmentally sustainable and delivers real socio-economic benefits to the communities involved. Despite its commercial success, like many CFEs, UCFAS still relies on access to funds and partnerships – but despite these challenges, the model is one that other community forestry enterprises could learn much from.

13.1 Context in which UCFAS operates

13.1.1 The enabling environment

Mexico, ranked among the twelve megadiverse countries in the world, is home to a wide variety of flora and fauna. This biodiversity is especially rich in the country's forests which cover more than 65 million hectares of Mexico's territory. But the forests also have great social and economic potential. Approximately 80 per cent of Mexico's forests are under the legal jurisdiction of *comunidades* and *ejidos*.¹ During the last 25 years, this local control has led to reasonably successful, commercial community forest enterprises (CFEs) based on timber and non-timber products. Mexico's context is rather unique because of the extent to which *comunidades* and *ejidos* control forestry.

The state of Oaxaca is home to several successful locally controlled forestry businesses, all complemented by the state's strong ties with indigenous communities and its willingness to offer support through social development projects. Mexico's agrarian governance institutions are partly responsible for this new-found success, having created an institutional support platform which gives priority to more entrepreneurially oriented institutions (Bray, 2010).

1. '*Comunidades*' and '*ejidos*' are legal terms used to designate common property in Mexico. The difference between the two lies more in their historical origin, rather than practical differences on the ground. A *comunidad* is an ensemble of shared land that local farmers have communally used over many years, with its own organisational rules all legally restituted after the Mexican Revolution. An *ejido* is a farmer settlement with a socialist composition established in the Mexican Agrarian Law of 1915, later ratified in Mexico's Constitution of 1917. In legal terms they are both treated the same, and mostly have similar organisational structures with general assemblies and commissariat representatives. Ixtlán is officially registered as a *comunidad*.

A change of policy during the late 1980s and early 1990s gradually gave back local control to communities who had been forced to give up resources in favour of Mexico's private sector. In practice, this meant more responsibilities for local communities in terms of planning and decision making, but also less funds and training from government institutions. Results were mixed. Some regions were even being left behind. However, some communities took this opportunity to develop unique models of CFEs. These models began to flourish when they found ways to assimilate traditional practices, utilize agrarian reforms and build on innovative entrepreneurial thinking (Bray *et al.*, 2006).

Mexico is one of few states, if not the only, to have embarked on a massive effort to support common property within a capitalist economy. Though still an ongoing process, the emerging models have been internationally recognised for their sustainability, productivity and social organisation. The mix of tradition and technological advances has placed Mexico in the vanguard of community forest management. Various elements contributed to the emergence of CFEs: devolution of forest lands and rights to communities, local movements and policy support and the establishment of common property regimes (resulting in social, economic and environmental benefits).

At present, more than 3,000 communities throughout Mexico have forest management plans. Yet only 20 per cent of those really possess entrepreneurial traits – suggesting that there is much to be learnt still from examples of success in-country (Bray, 2010).

Certification by the Forest Stewardship Council (FSC) for sustainable forest management and chain of custody has also been a newly employed marketing asset on behalf of these enterprises. Although CFEs have contributed greatly to local development by generating employment and building community assets, only a few really stand above the rest when it comes to being competitive in a globalised and open-market structure (certification not necessarily resulting in the latter). According to federal statistics, illegal logging still constitutes around 30 per cent of Mexico's annual authorised volume.² Microeconomic causes like job migration, lack of local opportunities and alienation/intra-community disagreements tend to push marginalised individuals into disloyal practices that can undermine collective business (Sastre Merino, 2008).

Investment in the community forestry sector has been 'hit or miss'. Perceptions of high risk and low returns discourage investors. This situation can only be mended through restructured policy that finds ways of reducing perception of risk by investors for the existing social scenarios. In general terms, communities still find themselves in marginalised circumstances and just above the poverty line (Váldez, 2009).

This being said, Mexican CFEs have several features that still make them important examples for any other community forest regime elsewhere in the world looking to gain success and stability. A selected few CFEs in Mexico, a hundred maybe, have reached an entrepreneurial maturity that has translated into significant benefits for their respective

2. According to the National Forestry Programme 2014–2018, an average of 76.8 per cent of all timber in Mexico is legal (for the period 2003–2012). The remaining 23.2 per cent is illegal. The value of this illegal timber for the ten-year period is US\$3.5 billion.

communities while still maintaining a social and ecosystem equilibrium. Forests are usually the only productive assets available to these *comunidades* and *ejidos*, which is why local leaders (commissariat representatives and enterprise managers) must then take full legal advantage to manage these common properties so as to provide as much income, employment and social capital as possible to fellow *comuneros* and *ejidatarios* (while still conserving their assets).

A study of the most experienced communities in forest management demonstrate positive conclusions when it comes to sustainable community management in Mexico; the quality of life they have achieved has led them to leave behind any trace of subsistence economy unsuitable in certain conditions such as in forest ecosystems (Ortega, 2004).

Oaxaca, one of Mexico's most biologically diverse regions, boasts over 6 million hectares of temperate, tropical and dry forest, 1.6 million of which are wood exploitation sites. Oaxaca's *comunidades* and *ejidos* hold over 80 per cent of the state's forests, though not all have officially registered use and exploitation permits. The authorised exploitation volume is over 9 million cubic metres, with a productive potential of 6.1m³ per hectare a year. However, according to the Secretariat of Environment and Natural Resources (SEMARNAT, 2015) statistics, Oaxaca produces a third of its calculated potential, 2.2m³ per hectare a year, with a value of US\$20 million³ in forest products (Madrid, 2009). The forest resource is divided between 283 forest *comunidades* and *ejidos* of which 137 have use and exploitation permits. Of these, 85 are defined as community enterprises. The state of Oaxaca is also home to more than 50 per cent of Mexico's indigenous population, making it one of the states most affected by poverty and marginalisation. The forest exploitation sites represent an important source of social and economic stability for the resource-managing communities.

Wood production is the main income generating activity for Oaxaca's forest owners. Timber harvesting accounts for 10 per cent of the state's GDP, and involves 40,000 community workers (Madrid *et al.*, 2009). As locally managed settlements contribute to the region's overall economic development and help alleviate poverty caused by marginalisation, the relationship between the communities and the natural resources surrounding them has grown to be interdependent, helping incentivise sustainable and durable management practices (Wiersum, 1997; Peredo and Chrisman, 2006; Antinori and Bray, 2005:1530; Donovan *et al.*, 2008).

Given its particular history, Oaxaca is a state with a long tradition and knowledge of forest management. The traditional knowledge of forestry harvesting practices underpins great potential for a state so rich in raw materials and resources. Unfortunately, ethnic marginalisation and unsuccessful policy schemes have now placed Oaxaca amongst Mexico's lowest ranks in forest competitiveness. The State Forestry Competitiveness Index results of 2014 (ICOFE, 2014) exhibit an eye-popping contrast between the southern state's high forest-management potential and the substandard execution of its forest policies. According to the recently published index, Oaxaca ranks amongst the lowest in sophistication of production, socio-political conditions and forest sustainability indicators.

3. Exchanged rate as of September 2014: US\$1 = MXN 13.22.

All previous elements evidence the state's urgent need for training, technology and political schemes that could reconfigure the socio-economic disparities (ICOFE, 2014).

It is in this context that we find the Ixtlán community. Ixtlán is a town in the municipality of Ixtlán de Juárez located in the Sierra Norte region of Oaxaca, 60km from Oaxaca City, capital of the state. Ixtlán comprises just fewer than 400 families (4,500 inhabitants) who collectively possess, manage and benefit from 19,000 hectares of land where forestry and agriculture employs 51 per cent of the community's economically active population (EAP). Business and services employ 25 per cent of the community's EAP, all concentrated at the head of the municipality.

Every *comunero* (community member, right-holder) has access to the land. However, the community collectively decides, during general assembly meetings, who will be in charge of managing and working the lands and how it will be done, so as to guarantee its best use (details of how communities were granted control over these lands is explained in Section 13.2).

The Sierra Norte region is occupied by a high percentage of indigenous citizens, Ixtlán being mostly from the Zapotec lineage. The *comuneros* maintain their dialect and deeply respect and honour their indigenous heritage. The indigenous organisational mechanism, *tequio*⁴, brings under control any lack of community involvement threatening to undermine social and economic improvements and instead promotes collective planning, operating and monitoring to achieve forest development and a stronger sense of unity.

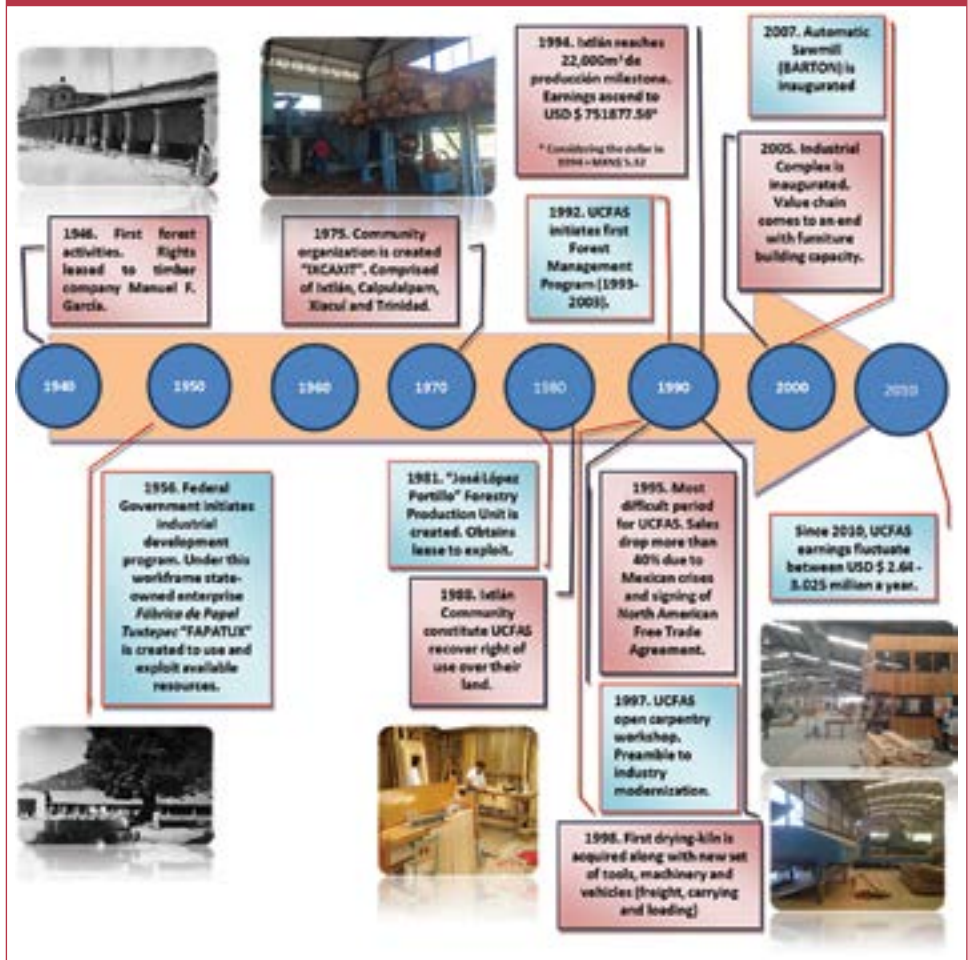
13.1.2 The operating environment

In terms of the operating environment, it is important to note that this is not static. When taking a look at the timeline (Figure 13.1) one can realise the different phases the Ixtlán community has had to go through to ultimately take full responsibility for their forest's development. The period from 1956 to 1981 corresponds to the most important stage prior to the creation of the Communal Unit for Forestry, Agriculture and Services (UCFAS). Early in that period, the state-owned Fapatux, a paper production project, used and exploited the forest while employing community workers in the process. This resulted in the acquisition of important knowledge in forestry for the Ixtlán community and their familiarisation with industrial processes, machinery and handling of heavy equipment. However, these also corresponded to overexploitation of raw materials and hence heavy deforestation in the Sierra Norte region. The subsequent tax concession periods (instituted in the 1980s by former president José López Portillo to stimulate industrial development) followed a similar pattern, despite the emergence of the community organisation IXCAXIT (Community Industries of Ixtlán, Capulalpam, Xiacuí and Trinidad). This was a time when the government had transferred forestry responsibilities to the private sector. The rights of use were then owned by private companies called Forestry Production Units, new models

4. *Tequio*: a community work mechanism based on indigenous organisational traditions. Though it has evolved and adapted to fit actual needs, the main purpose of the mechanism is maintaining social and collective benefits through comuneros contributions (labour) in specific areas of need. Related actions could include road clearing and forest control (clearing, cutting and cleaning).

set up by government policies to increase productivity. Tension grew in the area and in every involved community (Ixtlán and neighbouring/associated communities) as they saw the forest surrounding them, their home, being over-exploited while community members still experienced a lack of community development. They had no significant progress in improving their quality of life despite the employment opportunities available through private-sector workforces.⁵

Figure 13.1 Ixtlán de Juárez timeline



5. Examples are the concessions with state-owned enterprise Fapatux and later with the private enterprise Forestry Production Unit. Although local comuneros were employed, management positions were usually given to personnel close to these companies.

At the start of the 1990s, agrarian political reforms were advancing agricultural expansion at a period when deforestation had reached its peak. Forest legislation, however, was now placing communities at the centre of forest development and environmental protection. Although forest communities were granted extended autonomy and responsibility to manage their own resources, reduced government intervention also meant less financial support, less training and the suspension of technical assistance programmes, all of which had been a constant over the prior decade. Investment and public spending were practically absent, hence leaving the forest and agricultural sector in difficult circumstances. Yet, for some communities this was seen as a unique moment to be seized by local right-holders. The only *comunidades* and *ejidos* able to take advantage of structural changes were those who had benefited from successful concession periods (periods in which the private sector obtained leases to use/exploit the land and employed local labour) during the 1970s and 1980s: in other words, those with natural resources, forestry experience and timber infrastructure.

Right from the moment they took back control of their land in 1988, Ixtlán started taking advantage of acquired knowledge and expertise from past concession leases. They already had (through the formal transfer of rights) the machinery that had originally been acquired by Fapatux, a state-owned enterprise who had made use of the lease for more than twenty years prior to the Ixtlán community's right-of-use recovery. The *comunidad* were now looking to gain economic autonomy and stability. To start growing, they developed a well-laid-out forest management plan.⁶ This is how the Communal Unit for Forestry, Agriculture and Services (UCFAS) began. It was only subsequently that community productive activities were divided between several autonomous sub-enterprises, UCFAS being one of them. During the early 1990s, renewing inefficient equipment was given priority. Consequently, the community started investing in additional and more modern processing tools to ultimately increase the aggregated value obtained from their timber harvest.

The *comunidad* of Ixtlán has now been participating in forest management programmes for the last 20 years. They have reached a point where they are now their own forest technicians and are requested to provide such services to neighbouring communities. Their progress has been exemplary as they have been able to adapt and evolve into a market-oriented business. Usually, the collective property of local communities has been linked to a subsistence economy. With the example of Ixtlán we have proof that collective business models can be productive as they are able to supply increasing demands in specific sectors while still meeting the social and environmental standards implied in their collectively designed resource-management programmes. Their ongoing economic, social and environmental success while managing and exploiting the forests has rewarded them with evidenced international recognition.

6. New forestry laws demanded that communities designed forest management plans. The mid 1980s witnessed a breakthrough for emerging CFEs which now had the possibility of contracting their own forest technicians to receive specialised assistance for their activities.

13.2 About UCFAS as a business

13.2.1 The vision

UCFAS was formally established in 1988. Its vision is threefold:

- To obtain aggregated value for their timber harvest production through the use of industrial processing
- To generate more and better employment for the community and the region's inhabitants, and
- To achieve economic stability – remain profitable, strengthen production with every passing year, and reinvest obtained wealth in community development projects – and continue to grow the community's potential even as they face challenges in the form of market competition and globalisation.

The social nature of the business is reflected in a number of core values: honesty, hard work and respect for others and the natural environment surrounding them.

The main products produced by UCFAS include:

- Solid wood beams, planks and boards (sawn, chipped and peeled),
- Engineered wood products (handles, broomsticks),
- Indoor furniture (home, office and school), and
- Recreational goods.

The company also provides associated services such as the primary and secondary processing of *Pinus patula* (Mexican yellow pine) timber.

The current scale of the business can quickly be seen by mentioning a few statistics. UCFAS has a turnover estimated at US\$2.8–3.2 million a year and employs 200 permanent and 80 temporary staff members (depending on contracts and seasons). UCFAS now produces:

- 15,000 board feet (BF) of sawn timber per day,
- 120,000 BF of dried timber per month, and
- 5,000 furniture items per month.

13.2.2 Business inputs

UCFAS launched their first commercial activities in 1988. But those activities were preceded by considerable inputs of time and energy by community representatives. The first steps came after a decade of non-renewed concession rights to the private sector. There was a genuine battle on behalf of the community to control their own resources – and the equipment that had formerly belonged to those concessions. A series of legal proceedings were undertaken by UCFAS, commissariat (following a community decision during a general assembly meeting) to achieve legal community status. Agrarian property is regulated by Mexico's Federal Law of Agrarian Reform, which currently prohibits any sort of territory transfer to a private property regime. The Agrarian Reform Secretariat, along with the National Agrarian Record, the Agrarian Attorney's Court and PROCEDE (Common Land Rights Certification Programme), all regulate and resolve property issues that may

occur. UCFAS gradually advanced through the bureaucratic process while establishing its productive domain – in part through the development of a forestry management programme. In Mexico, forestry use and exploitation permits have to be accompanied by forest management programmes (FMPs), all of which must be approved by SEMARNAT before they can be executed. Since their first FMP, UCFAS has legally remained a *comunidad* with forestry use and exploitation permits.

The inputs in terms of forest management planning should not be under-emphasised. To ensure substantial collective development, employment and environmental sustainability, UCFAS wished to emphasise their capacity to manage their forests. Ixtlán's first FMP (FMP 1, 1993–2003) was launched after a year of receiving external assistance (from the company Troquelados Internacionales Americanos (TIASA) SA de CV) to comply with legal and institutional requirements. Some 19,000 hectares are covered under the FMP 1, of which 6,832ha were destined for selective logging purposes and 12,168ha were meant for conservation, studying and monitoring. At first, the focus was on increasing timber-product value (mainly through producing beams, planks and boards from *Pinus patula* wood) and setting entrepreneurial standards while the managers got a feel for the business they had in hand.

The proximity between forests and processing centre is important when taking into account Ixtlán's geographically marginalized context. The *comunidad* of Ixtlán has ultimately separated out resource management responsibilities into three main sub-enterprises. UCFAS, the main focus of our case study, has already been mentioned. However, it cannot function on its own. The Technical Forestry Services⁷ (TFS) of Ixtlán and the Forestry Union of Santo Tomas Ixtlán (Unión Forestal Santo Tomás Ixtlán or UNFOSTI) both precede UCFAS in the value chain. Their relationship is carefully managed by the community structures described in Section 13.3. They work hand-in-hand to provide the raw materials upon which the UCFAS business is based – with as much balance and efficiency as possible. The *comunidad* has emphasised enterprise cooperation and having these businesses in close vicinity helps reduce timeframes and transportation costs, ultimately making the transition in every step of the value chain more efficient and manageable.

TFS came into existence after 1994 and is responsible for forestry management planning, procedures and objectives. UNFOSTI was created in 2008 to reduce UCFAS's timber harvesting responsibilities and management costs and is now in charge of extracting natural resources from Ixtlán's forests (as well as loading and delivery). Each of these enterprises acts as an independent, but closely coordinated business partner – and each tries to maximise its own efficiencies and social impacts within a broad integrated business scheme controlled by the Ixtlán organisational structure (explained in detail in Section 13.3).

7. Technical Forestry Services are a result of Mexico's 1994 Forest Law in which *comunidades* and *ejidos* can now act as their own forest technicians (provided they have the necessary knowledge and expertise) instead of employing personnel from outside the community.

13.2.3 Main activities

Currently, Ixtlán's forestry value chain (see Figure 13.2) involves around 200–230 employees (30–40 per cent are *comuneros* and around 120 belong to UCFAS alone) depending on demands and seasonality. Within UCFAS, activities include sawmilling, residue processing, storage and kiln management, furniture assembly, sanding and varnishing, drying, finishing, loading and delivery. The reduced direct involvement of Ixtlán *comuneros* (e.g. 30–40 per cent) is a function of increasing economic opportunities in new areas financed by the spillover from profits generated in the timber business. The community's success has enabled a change of aspirations and an emergence of new economic activities for fellow *comuneros*.

Over time, the Ixtlán community has developed efficient and sustainable resource management systems that will secure timber availability over the long term. This system is based on community agreements overseen by TFS. The main feature is that the forest remains a collective resource, directly controlled by the general assembly and the community commissariat. Use and exploitation of resources is only done by special workgroups who specifically follow the guidelines available in the FMPs. Thanks to this, forest segmentation does not occur, nor does individual appropriation. Group and family conflicts are thus reduced (community organisations and organisational structure are explained in Section 13.3) (Rainforest Alliance, 2001).

13.2.4 Technology and skills

When first operating, Ixtlán continued making use of a sawmill acquired during the twenty-five year concession operation of Fapatux (the machine was acquired in 1974) that had been in operation from 1956 to 1981. At first, UCFAS continued with a primary conversion process, producing beams, boards and planks. The community no longer had to pay high salaries to managers and executives from the private sector, thus reducing their overall costs.

After ten years in business, UCFAS started diversifying their array of products as well as their prevailing clients. In 1997, a carpentry workshop was opened to serve as a precursor for bigger projects. The interest was in adding further value to their overall offer, and exploiting their timber harvest as much as possible – making use of all the residues. Modernisation gradually took place. UCFAS soon accumulated enough capital and finally took on bigger investment plans with the help of the commissariat's economic input. The community acquired their first drying kiln (manufactured by Nardi and imported from Italy in around 1998–1999) and complemented their purchase with new tools and freight vehicles (a Caterpillar wheel loader) to assist in the sawmilling area. The 1990s had served as an important transition phase, marked by acquired know-how in forest management, business administration and community development. Their production had become very efficient and profitable, giving room for gradual growth.

The UCFAS industrial complex, inaugurated in 2005, now incorporates a sawmill area, a drying-kiln area and a furniture factory into one single facility. The effort represents the culmination of experience, investment, patience and proper planning and management of a community enterprise. With the complex running, the community was now in full control of a vertically integrated forestry enterprise. Ixtlán had become what is classified as a Level V

Figure 13.2 UCFAS value chain map



category community according to PROCYMAF rankings,⁸ the maximum reachable level, or what is also called a community of finished products. Since then, a few add-ons have been made: in 2007, a state-of-the-art automatic sawmill (manufactured by Barton, Spain) and two new drying kilns (both from Italian firm SECEA) were acquired at a fair in Valencia.⁹

Combining hard work, experience and good regional leadership, the phrase 'one of a kind' comes to mind when considering UCFAS's turnover of US\$2.8–3.2 million a year since the industrial facility was opened. The Ixtlán community has managed to create and incorporate a series of integrated enterprises so as to ensure a comprehensive built-in control of the whole production process: proper forestry planning (TFS), selective logging, loading and transportation (UNFOSTI), primary and secondary transformation (UCFAS), added forestry services and ecotourism.

UCFAS now possesses three sawmills (though they do not work simultaneously) and three drying kilns to operate before manufacturing takes place. For the latter, the furniture factory is employed. Ixtlán is currently designing their third forest management programme (FMP 3, 2015–2025), a process somewhat different from the previous ones since institutional requirements and paperwork to obtain SEMARNAT approval have recently been augmented.

13.2.5 Business partners

One of the key areas in which business partnership has been needed is that of forest certification. Ixtlán has been in possession of a Forest Stewardship Council (FSC) certification seal since 2001 (the seal is granted to the community as a whole as opposed to the timber enterprise on its own). The recognition symbolises responsible forest management practices that comply with FSC's international standards. Interest for forest certification began during the 1990s, and straight away, communities started demanding programme management evaluations from external experts. This is how Ixtlán teamed up with the NGO CCMSS, the Mexican Civil Board for Sustainable Silviculture (Consejo Civil Mexicano para la Silvicultura Sostenible). CCMSS approached Ixtlán and suggested certification as a tool to increase value and market interest for their products. With CCMSS's counselling, UCFAS applied for a Smartwood/FSC certification programme.

Ixtlán was granted an FSC Certification Seal under forest management and chain of custody categories in 2001 (see FSC and Smartwood, 2006). Since then, the community has been a proud representative of a reduced (but increasing) certified community crop in Mexico and has paved the way for other neighbouring settlements wishing to attain such standards.

FSC certification became a major lobbying tool for UCFAS. While Mexico's general public demand for certified wood is still bland, Ixtlán managed to use certification as a value proposition that differentiated them from their main competitors. The Oaxaca government

8. PROCYMAF: Conservation and Sustainable Management of Mexican Forestry Resources Project (Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México). A federal government project from CONAFOR implemented to reduce poverty and marginalisation in forest areas of Mexico.

9. To acquire this new machinery, a technological study was made prior to the fair. Selection criteria were, in order of importance: technical features, price, and technical support (i.e. language made service more accessible).

had promised and campaigned in favour of forest sector development and the broad acquisition of certified wood. UCFAS along with other associated communities established a buy-sell agreement with the State Institute of Public Education in Oaxaca (IEEPO or Instituto Estatal de Educación Pública de Oaxaca) based on three concepts: community enterprises, certified management of natural resources and employment generation in rural environments.

Another set of business partnerships have been the relationships with local government institutions. As proof of commitment on behalf of the State of Oaxaca, and not without strategic pressure from UCFAS and their allies, the local government agreed to exclusively purchase wood produced by certified communities. Long-term partnerships with government have allowed UCFAS to promote their cause at regional and national levels. They are now in business with several other institutions that are looking to make the transition to legally certified wood. Current contracts include a school furniture line with IEEPO, a shelter furniture line with the National Commission for the Development of Indigenous Peoples (CDI, or Comisión Nacional para el Desarrollo de los Pueblos Indígenas),¹⁰ and a furniture line with the National Commission for Social Security (CNS or Comisión Nacional de Seguridad).

13.2.6 Customer groups and product types

The main customer groups for UCFAS fall into two categories: government and the wider public. In terms of government, UCFAS supplies furniture to IEEPO, CDI, and CNS. The total value of contracts with government institutions is estimated around US\$2.5 million.

Regarding the wider public, UCFAS has a special relationship with its customer TIP Muebles, an associated community furniture brand charged with handling the home furniture line from UCFAS. TIP Muebles has seven retail stores in four states of the Mexican Republic (the brand has also reached placement in some department stores). The home furniture line is mostly aimed at middle to low socio-economic sectors, specifically young couples and young professionals wishing to support environmental sustainability and socially marginalised sectors. Profit from TIP Muebles is estimated around US\$700,000.

13.2.7 Differentiation in the market place

Although FSC certification has not often added value to Mexican timber products, UCFAS has strategically been able to make the most of their distinction of being FSC certified. Wholesale and retail clients looking for certified wood (a tendency most noticeable in the big cities) have approached UCFAS, which is a sign of recognition of environmentally driven practices and management qualities.

As noted above, government institutions are UCFAS's biggest clients, and their initial commitment was both driven by the strong social and environmental credentials of UCFAS – but also helped link the community business to long-term buyers and providing the solvency to keep producing.

¹⁰. A contract was recently renewed, and now covers the whole country. Initial contracts had a regional focus, mostly in the states of Oaxaca and Chiapas. It is currently UCFAS's largest contract.

Nonetheless, Ixtlán's vision has not stopped there. Realising that any dependence on government institutions could hinder them in the long run, the community wanted to diversify and start influencing the general public. A niche for certified wood products had to be found and exploited. Coordination and integration with other forestry communities was seen as the best solution to tackle market opportunities. In 2007, Ixtlán and two other neighbouring communities from Oaxaca (Pueblos Mancomunados and Santiago Textitlan) came up with an enterprise-integration plan which became Oaxaca Integrated Community Forestry (ICOFOSA, or Integradora Comunal Forestal de Oaxaca SA de CV), a community joint venture with the ambition of expanding its client base, sharing risks and influencing market structure.

TIP Muebles, was the brand registered by ICOFOSA to promote their new furniture line and satisfy an increasing demand for certified products.¹¹ Seven TIP Muebles retail stores have been opened since the start of the project (four in the state of Oaxaca, one in Veracruz, one in Puebla and one in Mexico City), a solid proof of success which has brought further optimism to the joint project. The stores offer ICOFOSA additional space to showcase the communities' products and create awareness amongst the general public. The offer is meant to be clear: competitive prices, quality certified wood and especially a social, economic and environmental contribution is implied when purchasing products from properly managed forests. According to Alberto Belmonte, chief executive of TIP Muebles,

If you buy furniture from TIP, you are securing forests for our future generations. You are helping my fellow comuneros stay in the community, instead of them migrating to the cities or the United States. All comuneros become shareholders, which helps strengthen ties with our natural resources and pave the way for community's development
(Belmonte, 2014).

ICOFOSA is now responsible for satisfying client needs while being able to share costs and risks implied in the process. With shared experience and knowledge, ICOFOSA can make a substantial effort to understand market tendencies and customer needs. Clients look for a good price/quality ratio, an area ICOFOSA is willing to explore without leaving behind what identifies them most positively: sustainably managed forest products from organised indigenous *comunidades*. Sales have incremented gradually and are now well distributed between government institutions and the general public. ICOFOSA has been able to deliver when presented with large contract opportunities, which has favoured renewals, extensions and confidence.

In 2011, UCFAS sales were split as follows: 14 per cent corresponded to the IEEPO contract (worth around US\$756,429.65/year); 39 per cent of sales corresponded to the CDI contract (now worth US\$1.5 million/year); 7 per cent to the CNS contract (worth of US\$226,929.00/year); and 40 per cent to ICOFOSA-TIP Muebles (spillover is around

11. ICOFOSA has been a smart way of securing sales for all its associated communities. The way it works is that every community equally contributes to the Integradora fund pool. The investment pool is then used to purchase part of the furniture production from all three communities at a wholesale price. TIP Muebles then sells the purchased furniture at strategic points in the country at a retail price.

US\$1.6 million a year).¹² Since ICOFOSA's creation, nearly US\$4.54 million has been invested in machinery, infrastructure, training and community development. Approximately 70 per cent of investments are provided by community funds; the rest have been government and non-government contributions (the exact figure was not provided by the community due to privacy policies).

Certification and community integration plans have been successful ways of exploiting available markets and are good examples of Ixtlán's entrepreneurial vision; however, in UCFAS' opinion much can still be improved to expand yet further. UCFAS has started to use social networks to further promote their products; they also organise an annual fair where they promote their products and the progress they have made in forest management and community development. Additionally, an industrial designer entered the UCFAS team a few years ago to add further distinction to their products. They now have unique designs in every line they manage, with a variety of colours, finishes and combinations to comply with customer demand. From a production standpoint, their 26-year experience and modernised industrial complex keeps their business flowing all year long. They are currently able to produce 5,000 furniture items a month: to this can be added all the pre-manufactured wood products and sub-products that are constantly in demand. We conclude that being part of a commercial consortium has helped Ixtlán strengthen their voice which has ultimately translated into a more diversified client portfolio.

13.3 Who controls UCFAS Ixtlán's business?

13.3.1 Origin of the value proposition

The Ixtlán community's vision of how to develop the value proposition (furniture that secures forests for future generations) has evolved over time. Nevertheless, this value proposition would not have had the same level of development if it were not for the support of some key collaborating actors.

The World Wide Fund for Nature in Mexico (WWF Mexico) has offered assistance to Oaxaca's indigenous *comunidades* for the last 24 years. Shortly after opening their office in Oaxaca (1990), Ixtlán was already amongst those benefiting from the foundation's support. WWF guidance during Ixtlán's progress included: legal documentation-related assistance for FMPs, technical support (experts were put in contact with the community) in forest management issues, advice on complying with certification requirements, ideas and suggestions when coming up with new diversification projects and especially initiating and maintaining strong ties between the *comunidades* and government institutions (incentivising support and collaboration). All these initiatives helped Ixtlán build up to their 2005 integral, sustainable and multicultural development plan. The plan's objective was to improve Ixtlán's existing productive activities, while finding a way to diversify in other areas so as to create more and better employment opportunities. The development plan, originating from within the community, gradually started attracting and incorporating public and private actors into a single multilaterally coordinated project, innovative in terms of

12. These numbers are important since they prove Ixtlán's diversification plans have been successful. In 2005, sales to government institutions amounted for 100 per cent of total sales. Since then, dependence on government contracts has been gradually but surely decreased.

planning and objectives. These contributions have enabled the community to reach a level of organisational maturity that has become the backbone of its development and their main lobbying tool for attracting investment from new sources. In a sense, the project evidences one of Ixtlán's most obvious weaknesses: its dependence on external financing.

13.3.2 Control over forest resource access

In terms of access and use of resources, several government institutions control the process. The law clarifying the circumstances and purposes in which a forest should be used and how forestry activities should be undertaken is the General Law of Sustainable Forestry Development. Management of resources and respect of federal environmental laws is monitored by SEMARNAT (responsible for granting permits) and CONAFOR (responsible for promoting forest management and providing subsidies to that end) and PROFEPA (Procuraduría Federal de Protección al Ambiente or Federal Ombudsman for Environmental Protection, responsible for enforcing environmental law).¹³ In the present case, the Ixtlán community as a whole is granted the use and exploitation permit, though as we have explained, the responsibility ultimately falls to the community sub-enterprises and their respective personnel (a scheme which was agreed collectively in the general assembly).

Within the community, access to resources is governed by a system of traditional customs and habits. Community leadership positions are elected via a common law system in the community general assembly (Ixtlán's comprises 384 legally recognised *comuneros*). General assemblies are called upon once or twice a month depending on community activities and needs. The objective of these assemblies is to debate and reach collective agreements to do with the path the community will undertake in the short, medium and long term. Representatives (general managers) of each sub-enterprise must participate in these meetings and give an overall review of the activities undergone during the month. Day-to-day decisions made prior to the assemblies must be presented to ensure the community agrees with the decisions that were made. Transparency is the main objective that is assured in the assemblies. Activities and their impacts and progress are publicly expressed and conveyed to the community to promote trustworthy behaviour in every possible aspect.

The strength of Ixtlán's organisational structure lies in the social unity they have achieved throughout the years they have been in activity. Any decision that might affect every day communitarian life, its social organisation or the management of their resources must first go through the hands of the assembly. Indigenous thought processes, values and worldviews cannot be disregarded just for the sake of business. Understandably, years of community assemblies have had to take place before a full project could be set up and running.

The *tequio* is one of the main tools utilised to strengthen social ties and maintain tradition within the community environment. Whenever a particular need arises, a *tequio* is called for community members to attend, participate in and contribute to the specific task at hand. Most *tequios* are labour-related and involve economic and environmental resources important to the community's development. In the case of forestry, tasks could include: cutting, clearing and helping in harvesting activities. The tasks are obligatory and must be done without expecting any economic retribution in exchange.¹⁴

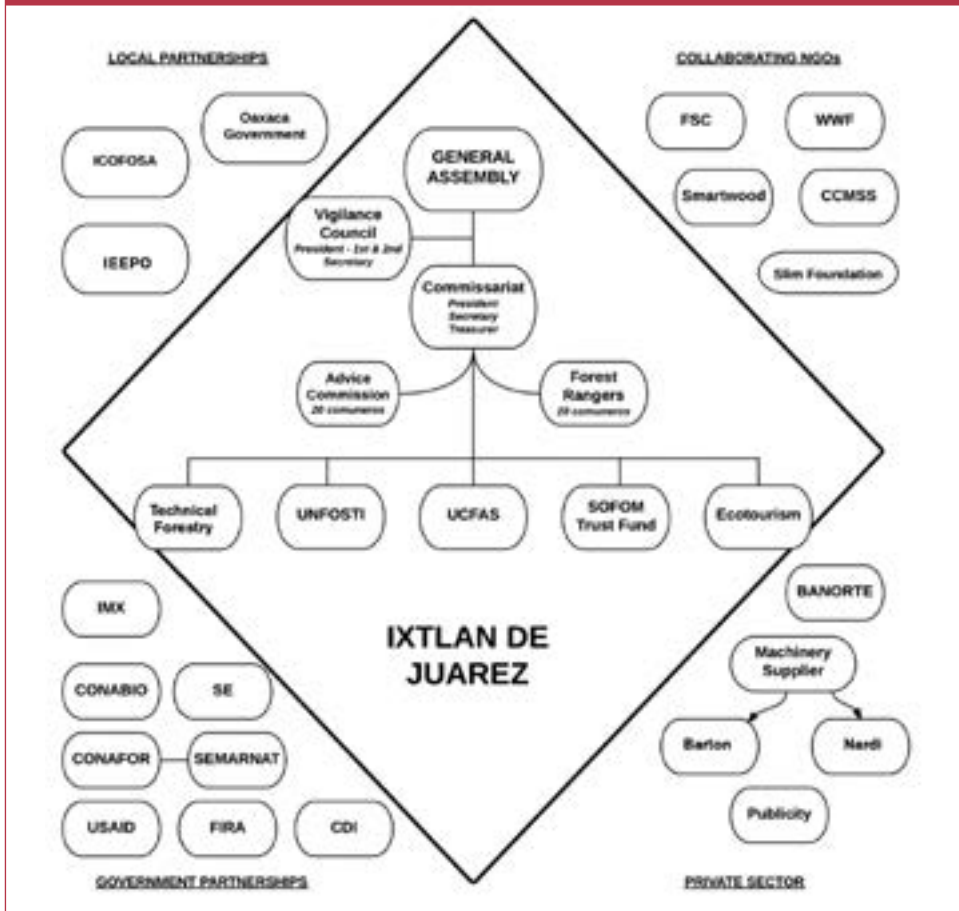
13. More information can be found in Herrera (2014).

14. Failing to attend a *tequio* may result in fines and up to 24 hours in detention (García Tamayo, undated).

13.3.3 Control of the business

The commissariat is the executive branch of the community as a whole; their duty being to implement agreements reached in the general assembly. They represent, manage and administrate the community's resources. They are also in charge of calling and organising the *tequios* and the assemblies. When assemblies are taking place, their duty is to inform fellow *comuneros*, and suggest proposals or solutions upon which the community will vote. Since the commissariat is in charge of managing community resources, they are also represented on the enterprises' administration boards. Community success largely falls on the commissariat's shoulders. They must be well informed about everything that is happening within the community and be in contact with other neighbouring communities. Members of the commissariat are chosen in the general assembly for terms of three years and a community's progress will often depend on how smoothly the transition is made from one administration to the next.

Figure 13.3 Ixtlán's organisational map



Key: SE: Secretariat of Economy; IMX: Mexican Institute of Innovation (Innovado en México); CONABIO: National Commission for the Knowledge and Use of Biodiversity (Comisión Nacional para el Conocimiento y Uso de la Biodiversidad); FIRA: Agriculture-Related Instituted Trust Funds (Fideicomisos Instituidos en Relación con la Agricultura); BANORTE: North Mercantile Bank (Banco Mercantil del Norte).

Source: Hernández Miguel (2011)

There is also a vigilance council, which works as a monitoring board (comparable to a system of checks and balances). It is in charge of watching over every community enterprise and keeping in contact with the commissariat. Whenever an issue is detected, the vigilance council must make sure the issue is brought to the commissariat's attention so it can be discussed at the next assembly. Transparency and free flow of information is vital to maintaining a solid and cohesive social structure which is why the vigilance council's responsibility is important when monitoring and surveying each activity.

In addition, there is an advice commission, which works hand-in-hand with the commissariat. Their mission is to assist, analyse, propose and suggest alternatives to do with decision making, planning and execution.

Forest rangers, as their name suggests, are in charge of protecting the community's natural resources and territorial limits. They show leadership when battling plagues and forest fires. During assembly meetings they point out forest conditions and needs.

The whole communitarian structure includes a total of 46 positions or charges (all positions are elected for three-year terms in the general assembly). These positions are distributed between the commissariat of communitarian property, the vigilance council, the advice commission and the forest rangers. Communitarian positions only receive a small economic compensation for their administrative work, mainly used as a symbolic remuneration (Sastre Merino, 2008).

13.3.4 Staff selection and roles

Within the CFE, particular staff roles are partitioned between the various enterprises controlled by the community.

Technical Forestry Services (TFS) is responsible for forestry management. It is the enterprise in charge of planning, directing and executing forest management activities. Staff are responsible for designing forest management programmes and advising on how the forest is managed or how it should be managed in the future.

Forestry Union of Santo Tomas Ixtlán (UNFOSTI) which was created in 2008 is responsible for sustainably logging, extracting, supplying and commercialising timber products. The enterprise pays the commissariat for use and exploitation rights. UNFOSTI charges US\$95/m³ for prime-quality logs and USD \$68/m³ for secondary-quality logs. UNFOSTI's preferential client is UCFAS, who they supply and deliver to directly, though they also have business with other neighbouring *comunidades*. Before its creation, UCFAS was in charge of logging and activities related to the extraction and supply of timber.

UCFAS is responsible for primary and secondary conversion processes. Staff process all the timber they purchase from UNFOSTI. They have a state-of-the-art, fully automated sawmill that processes 90 per cent of the timber they purchase (the other 10 per cent is sawn manually with another sawmill when specific measures are demanded).¹⁵ UCFAS

15. The automated sawmill is seen as an extremely rare machine amongst CFEs. Only one employee is needed at the control station to maneuver the equipment. Though some argue that around 4 to 5 jobs can be lost after purchasing an automated sawmill, the increased production was a factor that enabled the installment of the furniture factory, an area where 40 to 50 jobs are needed.

possesses three drying kilns, capable of handling a total of 80,000 BF. The sawn-dried beams, boards and planks which go unpurchased then go through a secondary processing within the furniture factory to gain a final added value.

SOFOM Trust Fund is an enterprise-related investment fund. It helps finance productive development projects for Ixtlán's *comuneros*. Examples include: convenience stores, opening local businesses and *comuneros* activity-diversification projects.

Ixtlán Ecotourism is an enterprise charged with promoting the community's ecotourism project. They have a specially managed forest area available for wilderness backpacking, trekking enthusiasts or incoming visitors who wish to stay in log cabins and enjoy a more nature-driven experience.

In total, there are four community enterprises, each with their own staff and management structures. All of these enterprises are proof of Ixtlán's productive diversification plan so as to reduce pressure and dependence on forestry. Diversification plans have given birth to quick-growing projects such as a community gas station and other potentially fruitful ones such as a water-purifying station (with the possibility of producing bottled water). The strategy has been well accepted amongst *comuneros* since it represents employment opportunities and economic development for the whole region.

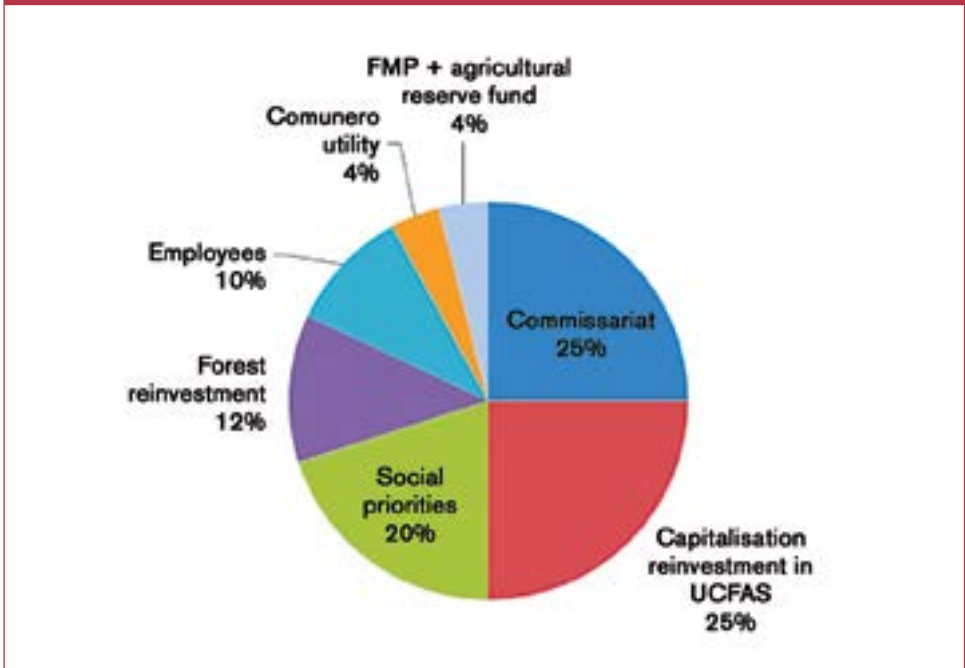
In terms of remuneration and profit distribution, the assembly decides how benefits generated from every community enterprise will be distributed. The commissariat is responsible for executing the distribution amongst *comuneros* and employees. Distribution is based on a specific social scheme in which priority is given to infrastructure projects, improvement of public spaces and assisting senior, sick and disabled *comuneros*. A large percentage of the profit is always set aside for resource conservation purposes and organisational improvements (sub-enterprise investments). In general terms, depending on needs, profit availability and urgencies, UCFAS's particular benefits are distributed as shown in Figure 13.4¹⁶ (due to community privacy standards, exact figures and additional information were not provided).

The commissariat receives a portion of the profit – which is in turn distributed amongst *comuneros*. Depending on community needs, the share could be destined to support other socially driven priorities.

Another portion of the profit is reinvested into UCFAS to help capitalise the business. Along with the commissariat's share, this is usually the biggest percentage. Benefits are used for reinvestment purposes and for the launch of future projects in which external aid is not necessarily guaranteed. A third area of profit distribution is to social priorities. This responds to social needs within the enterprise or the whole community. Examples include building of schools, road paving and drinkable water and drainage networks etc. Another area of profit distribution is for forest reinvestment. These funds are destined to help in forest tasks that were previously not contemplated or could not be resolved without

16. UCFAS is the community's biggest utility generator, though in general terms the same scheme applies to every other community enterprise.

Figure 13.4 UCFAS profit distribution



Source: Sastre Merino (2008)

additional funding for technicians (including those of TFS or UNFOSTI). Examples are collective forest trimming and cutting, fighting pests and disease outbreaks, and forest fires. Profits are also distributed to UCFAS employees – to whom 10 per cent is set aside for all workers, whether they are *comuneros* or not, and in addition to salaries (although there is a special bonus for workers who are also UCFAS *comuneros*).

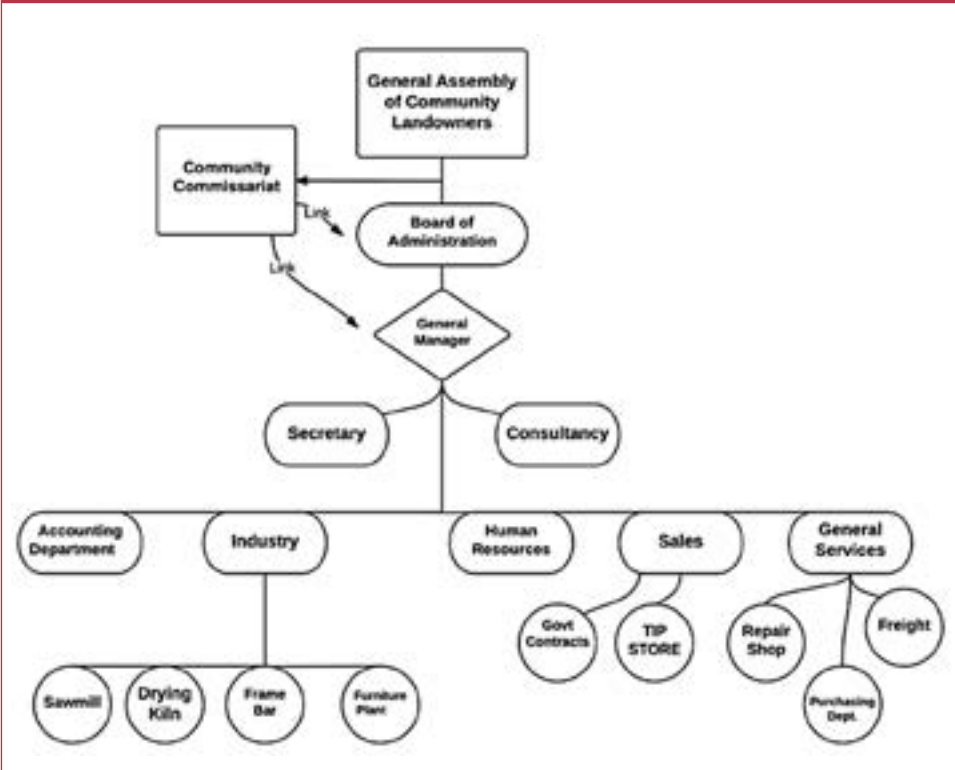
Finally, a portion of the profits is reserved for the FMP and agricultural fund programmes which involve investigation and management. Ixtlán must renew its certification process, its forest management programmes, and its use and exploitation permits amongst other agricultural responsibilities. These funds are designated to achieve these purposes. Every community sub-enterprise is autonomous as it possesses its own organisational layout.

Figure 13.5 shows Ixtlán's emphasis on hierarchically structuring every enterprise in order to achieve better synergy in every productive process.

In terms of employment and work conditions, *comuneros* are hired as 'family' workers with a basic salary that is around US\$7.5 – 60 per cent higher than the region's minimum salary.¹⁷ This being said, most *comuneros* have two or more jobs, the second being generally as hard labourers or working-class employees.

17. The National Commission for Minimum Wages (CNSM) statistics suggest that 79 per cent of the region's employees receive up to two minimum salaries. As of 2014, the minimum salary is US\$63.77 Mexican pesos in the Oaxaca region (CNSM, 2014).

Figure 13.5 UCFAS organisational chart



Source: Sastre Merino (2008)

Very few women have been involved in forestry-related work, up until very recently. Forestry work used to be exclusively for men. Since opening the furniture factory, women's participation has greatly increased in the last decade and now represents 60 per cent of UCFAS's workforce. As the commissariat president explained (Belmonte, 2014) women are considered more trustworthy when linked to labour responsibilities. They are also considered to be more particular and meticulous when performing manufacturing tasks. In the sawmill area, 25 per cent of workers are women (5–7 workers), compared to the furniture factory where 80 per cent of workers are women (32–40 workers).

In UCFAS, as in many other CFEs, decisions are taken based on risk management, which means that investment possibilities are balanced against available financial assets and the confidence within the community. Social factors are an important issue and tend to impinge regularly on decision-making processes made by managers. To deal with such issues, UCFAS has an advisory council at their disposal which helps to fast track the decision-making phases. The degree of manager professionalisation and the experience needed to cover this role has become more demanding in recent years. Important positions have to be able to adapt to stressful situations and manage uncertainty when taking decisions. This being said, Ixtlán's nature obliges managers to juggle two mentalities

when setting out their plans: the business-entrepreneurial aspect must complement the communal benefit system. In other words, it is a tradition-matches-business efficiency integration process.

Since 2004, general managers do not need to be *comuneros* to be eligible for the position. Changing this mentality was important for UCFAS. At first, tension grew within the work environment since outsiders were the ones taking important management positions and receiving the bigger salaries. Emphasis was put on training incoming managers and integrating community coexistence traits into their thought process. This model of organisation will be maintained in the long run, adapting to paradigm changes for the sake of progress.

13.3.5 Customer research

Since Ixtlán's involvement with ICOFOSA, logistical operations and marketing strategies are coordinated between the three neighbouring communities. The managing representatives of each community along with their advisory services meet regularly to decide on the best strategies to ensure good coverage (i.e. good reviews of their furniture) in the media, social networks and department stores.

Innovation and entrepreneurial vision are two of the main attributes Ixtlán and their fellow comunidades have struggled to achieve when not receiving guidance from external actors. Finding new ways of promoting both their cause and their products takes time since they lack the preparation and know-how to break into and influence the market. This is the main reason ICOFOSA was created: to share risks, costs and finding a way to enter different market segments instead of competing with one another and reducing their capacity to compete.

What is special for this group of enterprises is the strong link between the Ixtlán community and their enterprises. The bond enables collective planning and collective solutions that have so far surpassed any threat. When speaking with some of Ixtlán's present authorities, **organisational strength** is normally the element being underlined as the grounds for success. Cohesion has allowed Ixtlán to be flexible and keep goals compatible with community expectations.

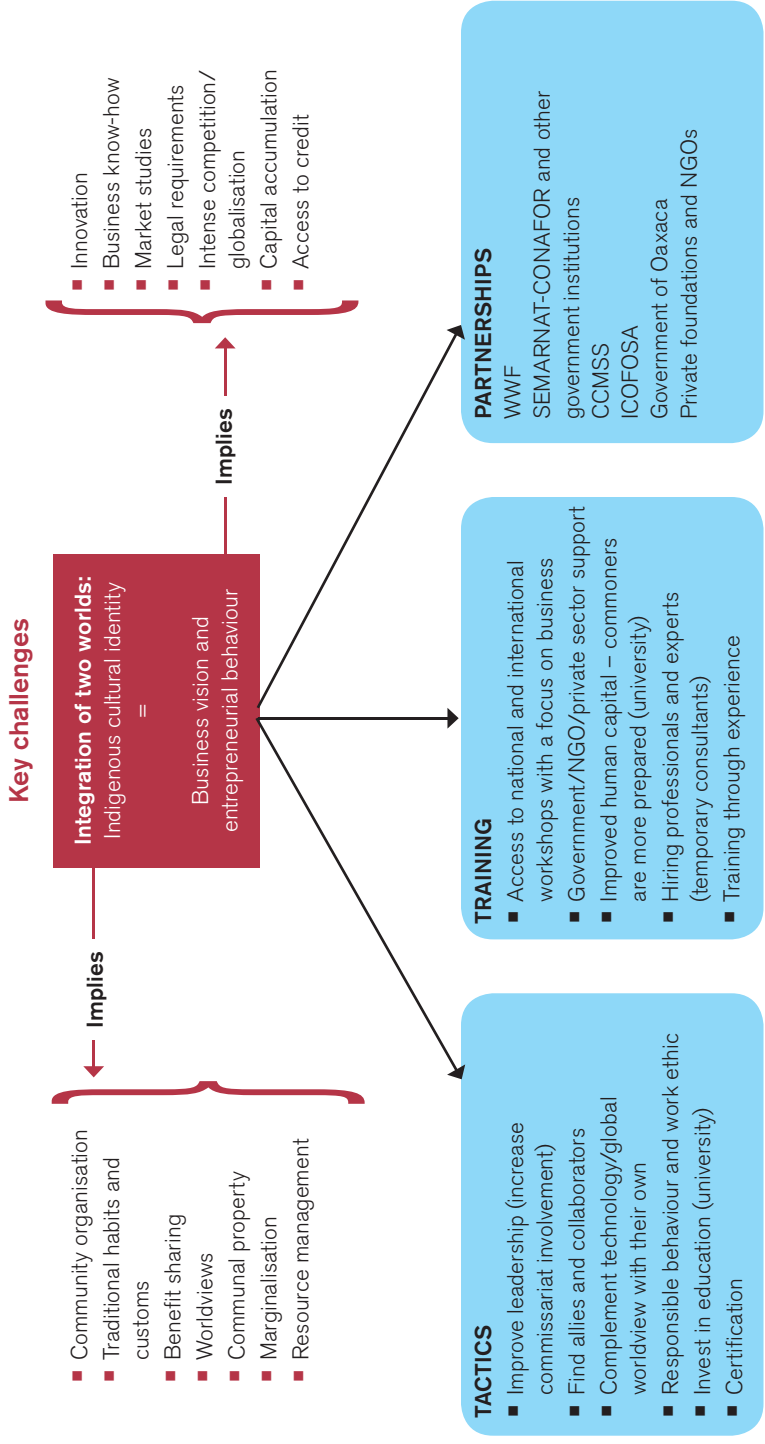
13.4 How has UCFAS overcome key challenges?

In discussions with members of UCFAS, the following map of challenges was developed (Figure 13.6)

13.4.1 Challenges to do with the value proposition

At the heart of the challenge for UCFAS was the integration of two different worlds – the indigenous cultural identity of the communities and the business and entrepreneurial mindset. Through the process of business development, Ixtlán became a globalised community. Success required being in contact with other established enterprises from different domains. In this sense, it was important that they adapted to business habits dominating outside their community. Ixtlán has emphasised the importance of computer

Figure 13.6 UCFAS key challenges



science, networking, digitalised administration and building up their business capacity through training and education. Up until very recently, breaking into international markets was an idea that had not even occurred to UCFAS. After making a series of market studies and receiving advice from chambers of commerce, they have been actively looking for fitting partnerships. Playing a part in a globalised world is a jump Ixtlán is looking forward to making, without leaving behind the traditional features that differentiate their business.

13.4.2 Overcoming legal challenges to do with resource access

One of the challenges to do with resource access has been the over-exploitation of pine in previous decades. Pine is the main timber resource sawn, dried and manufactured. Given that situation, an alternative was for UCFAS to exploit oak production. The oak population has expanded in the last decade over all of Mexico due to pine over-exploitation and unsuccessful forest management methods. Ixtlán has yet to acquire the adequate machinery to fully exploit, transform and merchandise oak products. The community is now constantly in contact with universities and research projects to find alternative processes for oak industrialisation. With improved technology and market studies, demand for oak products could soon be satisfied.

13.4.3 Overcoming ownership and benefit-sharing challenges

Though Ixtlán has financially contributed to most of its major projects, a percentage of external support has always been present – and this has raised the challenge of resource dependency. Ixtlán is a unique case in the sense that few other communities have received as much support as they have (US\$2.5 million were provided in 2000–2005) – but with this fortune has come the challenge of remaining independent.

A valid question could be raised about the success of other communities if they were to receive the same amount of help for such a prolonged period of time. Where would Ixtlán be if it were not for the support it has received from so many different sources? To this day, Ixtlán still renews application forms, on a yearly basis, to access support from different government institutions. Their case is so well known and the Mexican subsidy system so uneven that their request has been granted every year (instead of the subsidies going to more needy communities). Ixtlán's challenge going forward will be losing their 'resource-needy' label and becoming an example for all communities in every phase of their business. Being a well-established, autonomous and independent community enterprise is more a matter of will and focused thought processes than a matter of capacity.

13.4.4 Overcoming labour challenges

Improving human capital and leadership skills has been a constant challenge. The UCFAS focus was on employing more qualified personnel and complementing that with specially designed personnel training programmes.

The University of the Sierra Juárez, a project financed by local and federal governments, has been able to respond to Ixtlán's need for human development, training and education amongst their population. The investment in future generations is justified if Ixtlán is to

achieve a stronger sense of unity and improve living conditions. Available courses include forestry and silviculture, computer studies, biology and environmental science, business and management. With young *comuneros* having access to specialised education, it is believed their capacity to lead and take part in community projects will improve. With this, Ixtlán hopes to rely more on their own *comuneros* with key enterprise positions instead of reaching out to professionals from outside the community.

13.4.5 Overcoming marketing challenges

One of the key challenges facing UCFAS has been to inculcate entrepreneurial behaviour amongst its management and staff. Better mid-term and long-term planning has been an opportunity that UCFAS has focused on. Employees and *comuneros* receive frequent training to ensure proper commitment and knowledge when operating machinery and related tools.

Important staff positions are always filled with a trial period, and must be backed up with high performance and improvement in production. Failing to achieve performance goals results in staff rotation or employing new personnel to comply with enterprise standards. The commissariat and UCFAS management are strengthening their link so that decision making is made according to a structured work plan that looks to facilitate administrative transitions.

13.5 Key lessons

Ixtlán possesses a combination of unique features that have enabled the communities involved to create a strong identity in their ongoing projects. Though it is difficult to replicate all of them at once, we do wish to highlight some important factors that have been evident for their success.

13.5.1 Keeping down costs

A key factor in keeping down costs has been the fact that Ixtlán has vertically and horizontally integrated their organisation and value chain through autonomous but interlinked community enterprises. Each group has their own annual operation plan where prices, business forecasts, direct and indirect costs are reflected. Every enterprise has their own administrative team which really keeps down management costs and helps distribute control to the rest of the community (this reduces conflict between *comuneros*).

A second important factor has been the effort to take control over the complete value chain. Being in possession of a complete value chain reduces production costs compared to other enterprises in the furniture sector, which in its turn enables the Ixtlán enterprises to set competitive prices and achieve a wider margin which can then be invested in further marketing strategies.

13.5.2 Retaining customers and willingness to pay

A fact to highlight here is the close synergy between the social project to enhance the lives of community members (rural community management and sustainability), and the commercial objectives of the various community enterprises (timber and furniture

production and sales). This good working relationship (based on strong social cohesion) between the community and their enterprises and between one enterprise and another has been very important in developing relationships with customers.

Overall harmony would not have been possible without the commissariat's and advice council's supervision. They are in tune with both the community's needs and what is required for enterprise progression. It is clear that economic benefits from the enterprise have to be present if progress in the social project is to be felt. *Comuneros* do not necessarily want the money going into their pockets: what they really want is their livelihoods and environment to advance, for it to fit their needs and the life they want to live. The responsibility lies with themselves and their representatives, the commissariat and boards working with them. This selflessness has to be proven with commitment and contribution by all *comuneros*.

For each staff member to be part of the success of the community/enterprise, they have to be willing to work along the same path. This is precisely the product they are selling: rural community management and sustainability, which just happens to be represented by timber and furniture, the main resource available to them and which they are committed to preserve.

13.5.3 Success factors

The Ixtlán community's economic success has improved conditions both within the community, the municipality and neighbouring ones. It has prospered infrastructure and urban development in such a way that fundamental services are available to a most of the community. Clean drinking water, drainage networks, paved roads, proper streetlights and the conservation and maintenance of all public spaces are all founded on profits from the timber business and benefit every *comunero*. The positive effects have had ramifications and have contributed to a livelier municipality with a new set of productive activities available to every citizen.

The commercial sector is the most obvious beneficiary of this success: shops, small businesses, banks, schools, access to Internet and cable TV. All of this forms part of a pathway to better infrastructure, technology and modernisation. People going to and fro on the streets and in public spaces give much-needed life to an improving urban landscape. The immediate impression of Ixtlán is that of a quality of life which sits well above Mexico's rural average. Their willingness has connected them with other similar *comunidades* and together, they have been transformed into commercial allies. They have realised that it is preferable to work together, sharing the same voice with familiar backgrounds, than to compete with both each other and other market actors.

In general terms, much more work is needed to improve forestry competitiveness and sustainability in Mexico. The current line of work that has been made with the creation of CFEs still feels recent. *Comunidades* and *ejidos* are still seeking a market niche and still heavily depend on access to funds and partnerships. Many CFEs are still struggling in their infancy, though precedents of success are now available for everyone to observe.

Stories now exist, of *comunidades* with enough organisational capacity to proceed transparently and equitably towards success. Records now exist of *ejidos* that have reached market maturity and have developed enough skills to pass on to future generations. Investing in such successful business models also gives returns in macro-environmental progress, a healthier environmental landscape that assists in conserving biodiversity as a whole. Who better to serve as guardians of sustainability than the local forest-farm producers looking to make a living from their precious resources? All they need from the local community and formal government authorities is a fair return for the efforts they are increasingly willing to put in.



Nepal: Himalayan Bio Trade Pvt Ltd

Community-based handmade paper: a socially and environmentally responsible international business

by Bhisma P. Subedi, Sudarshan C. Khanal and Puspa L. Ghimire

Himalayan Bio Trade Pvt Ltd (HBTL) is helping to put handmade Nepalese paper on the international map. According to its main client Aveda, a USA-based company which purchases the paper for its Holiday Gift product lines, 'Improving lives is a gift... our purchase of lokta bark paper is helping fight poverty in Nepal.' HBTL's quality paper-based products come with strong social and environmental credentials. It works in collaboration with community-based forest enterprises and community forest user groups to generate income and sustainably manage forest resources.

14.1 Context in which Himalayan Bio Trade operates

14.1.1 The enabling environment

Nepal embraces very unique geographical regions that contain the tropical plains (the Tarai) on the Indian border in the south, an extensive section of mid-mountains, and the trans-Himalayan sections bordering Tibet in the north. As a result of this topographic and climatic variation, Nepal is rich in biological diversity and hosts a wide range of unique and valuable natural products, upon which rural communities rely for food, medicines and other products, such as handmade paper. Nepal has documented over 7,000 species of flowering plants, many of which are important for both subsistence and commercial purposes (GoN, 1988).

Handmade paper has been produced traditionally since at least the 12th century AD in several locations in the hill regions of the country (Biggs and Messerschmidt, 2005). The production of handmade paper is done by using local resources, techniques and human resources and almost 100 per cent of total value addition takes place within the country both in rural and urban areas. This industry has an opportunity with targeted interventions to generate significant employment opportunities at the rural level where people lack basic services such as health and education facilities, and there is a high rate of migration for employment abroad because of very limited income-generating opportunities.

The raw material for handmade paper, lokta (*Daphne bholua* and *D. papyracea*) and other natural fibres such as argeli (*Edgeworthia gardneri*) grow abundantly on the southern slopes of Himalayan forests between 1,600 and 4,000m. Lokta is available in about 3 million hectares of forests in 55 districts of Nepal, of which 25 districts have an abundant supply (Subedi et al., 2002; Subedi et al., 2014). The Department of Forest Research and Survey under the Ministry of Forests and Soil Conservation has estimated the total stock of lokta bark in the country is 110,481 tonnes, which can support the sustainable production of over 950 tonnes of paper every year (Subedi et al. 2006). It is more than six times the volume of around 150 tonnes of handmade paper produced in the country in 2014 (Gurung, 2015).

Table 14.1 Nepal country profile

Area	147,181 sq. km
Population	26.5 million ¹
GDP per capita	US\$694.1 ²
Population below poverty line	25.16% ³
Literacy	57.4% ⁴
Unemployment rate	46% ⁴
Percentage of people relying on agriculture	66% ⁴

Over the past three decades, government policies and plans have recognised and taken into account the potential of sustainable management and use of forests and their products for the betterment of the poor and poorest. In the late 1970s, the government of Nepal devolved management responsibility of some national forests to local communities, and allowed the forest-dependent communities to harvest, use or sell forest products from these forests. The Forestry Act of 1993 and Forest Regulations of 1995 promoted the transfer of legal rights from the central government to local communities to manage and use specific forest areas. Presently 18,133 community forest user groups (CFUGs) across the country, representing about 35 per cent of the total population, manage about 1.7 million hectares, which is about 29 per cent of total national forests (DoF, undated).

The overall government policies of community-based natural resources management and addressing rural poverty have been complemented by some organisations which promote sustainable management and use of natural resources to improve people's livelihoods. One such organisation is the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) which since the mid-1990s has been facilitating bringing forests and meadows under improved community management and establishing natural resource-based enterprises at community level. Its outcomes are noteworthy in the meaningful improvement in the quality of life for tens of thousands of poor people and the environmental conservation of thousands of hectares of forest and meadows. For example, in 2014 in Nepal alone, a total of 84,553 economic entities generated NRs730 million (about US\$7.3 million) in additional monetary benefits through 1,181 economic entities producing and marketing natural products.

In this context, considering the availability of resources, traditional skills and knowledge, inexpensive technology and huge untapped potential, the handmade paper industry can benefit significantly from the targeted interventions to strengthen its competitiveness and contribute to poverty alleviation.

1 CBS (2012)

2 World Bank (2014)

3 CBS (2011)

4 CIA (2014)

14.1.2 The operating environment

Handmade paper made from lokta and other natural fibres is known for its strength, durability and resistance to insects. Until imports of paper crafts from Tibet and mass-produced modern paper from India began in the 1930s (Biggs and Messerschmidt 2005), handmade paper was used for government records, religious texts and literature in Nepal for many years. With the introduction of modern paper and the proliferation of industries producing paper on a mass scale, handmade paper has become a niche product with increasing demand from socially and environmentally conscious international consumers and some domestic consumers. According to handmade paper entrepreneurs, typical customers are people with a taste for handmade products who are also environmentally conscious and inclined towards purchasing products made by poor people in developing countries.

The major international markets for Nepalese handmade paper and paper products are the United States, France, Germany, the United Kingdom and Japan with an export value of nearly NRs550 million (about US\$5.5 million) in 2012/13 (Subedi *et al.*, 2014). According to the Nepal Trade Integration Strategy 2010, the European Union contributes to about 60 per cent of the total export of Nepalese handmade paper (MoCS, 2010). The top export items to the EU are office paper, writing pads, files, folders, binders and envelopes.

There are no reliable data on domestic consumption, however conversations with Nepalese paper entrepreneurs show that the domestic market is less than 10 per cent of the total global market and this volume has not grown over the past decade. Organisations in Nepal valuing environmental and social aspects have been using certified paper for business cards, notepaper and folders. On an individual level, although not on a large scale, some people use Nepalese paper for wedding invitations.

On the global level, handmade paper is a large international industry with supplies worth over US\$1.2 billion (MoCS, 2010). The major competitors in handmade paper at the global level are China, India, Thailand and the Philippines; China accounts for more than one fourth of the world's total exports and is the largest exporter. According to the Nepal Trade Integration Strategy 2010, Nepal's export value is less than 0.5 per cent of total worldwide annual exports of handmade paper. Among these big international players, Nepal's handmade paper and paper products are in continuous demand. It is because of the country's unique story of lokta paper and its production by community-owned enterprises – along with the durability and quality of the paper. It differentiates the value proposition of Nepal's paper products from others in the market.

On the domestic level, the number of registered handmade paper-production enterprises is increasing, and the latest government record shows that there are 487 enterprises in the country (DoCSI, 2013). While the number of enterprises is increasing, there are issues of overharvesting and limited or lack of replantation activities by these enterprises, often decreasing the total stock of lokta and other natural-fibre plants. Hence, it has remained important to maintain or increase the total stock of raw materials for the sustainability of the handmade paper industries in the country.

Over time, there has been increasing interest shown by big companies that value community development and biodiversity conservation. They are procuring community-produced goods as part of their corporate social responsibility policies. By demonstrating that both social and environmental factors are valued in their businesses, Nepal's handmade paper enterprises could make a compelling sales pitch to these larger companies. In this regard, Himalayan Bio Trade Pvt. Ltd (HBTL), a handmade paper enterprise in Nepal, has emerged as a unique pioneering endeavour of community-private partnership with the facilitation and support of ANSAB. It sought Forest Stewardship Council (FSC) certification⁵ to provide its customers with independent assurance that the forest products have been made from raw materials harvested in a well-managed and responsible manner.

The FSC-certified handmade paper business emerged as a hybrid model that incorporates sustainability of the raw materials to the handmade paper industry. It has considered the triple bottom line of ecology, economy and equity in order to develop a socially and environmentally responsible handmade paper business in the country.

14.2 About Himalayan Bio Trade as a business

14.2.1 The vision

The FSC-certified handmade paper business in Nepal involves four community-based paper production enterprises and a national-level processing and marketing enterprise – Himalayan Bio Trade Pvt Ltd (HBTL) – that were established through ANSAB's programme in 2000 (see Annex 14.1). Since its establishment, HBTL has been providing a marketing platform to community-based natural products enterprises and has remained as a committed lead firm in FSC-certified handmade paper and essential oils. It has a goal to link communities with high-value markets to create benefits for the indigenous, smallholder farmers of the remote Himalayan forests. HBTL's mission is to support the creation of quality products from sustainable forest resources in Nepal (see Box 14.1) and to provide income and employment benefits to forest communities.

Box 14.1 HBTL's paper product lines

- Sheets of Lokta handmade paper (natural and dyed)
- File/folders
- Journals/notebooks
- Wrapping paper
- Stationery
- Lampshades
- Shopping bags
- Boxes
- Paper flowers
- Visiting/business cards

5. Forest Stewardship Council (FSC) certification is an international gold standard for responsible forest management.

HBTL embraces socially and environmentally responsible approaches to its business practices and markets its natural products sustainably harvested from community-managed forests and processed by community-owned enterprises in domestic and international markets. During its establishment, the company provided marketing assistance to a consortium of community-owned enterprises collecting and processing non-timber forest products (NTFPs), especially handmade lokta paper and a few essential oils, to sell on the domestic market. HBTL's paper product line is presented in Box 14.1.

HBTL's operations are in profit. The company's revenue was about US\$600,000 in 2014, of which FSC-certified handmade paper covered about US\$250,000. An increase in revenue was reported after HBTL was granted FSC certification in 2005 and its handmade paper acquisitioned by Aveda, a major US-based natural beauty products company. FSC-certified product sales have risen from 2007 due to the acquisition of Aveda as a client. The company has sold 2.1 million sheets of FSC-certified paper over eight years.

HBTL's operations have been run by a managing director, a technical and export manager, and an operations manager since its establishment, and presently it involves 27 full-time staff. Depending on the size of orders they receive from buyers, the company employs additional part-time staff and staffing levels can reach up to about 50 staff members in the peak season.

14.2.2 Business inputs

The four community-based forest enterprises (CBFEs) source lokta bark from the 35 FSC-certified CFUGs in two districts. Out of the four CBFEs, the Kalika Handmade Paper Enterprise was added to the certification pool in 2013 (see Annex 14.1 for a list of CBFEs and CFUGs). HBTL has a guaranteed buy-back arrangement with the enterprises, which have agreements with the CFUGs to supply them with lokta. During the initial years of the handmade paper business, the CFUGs providing lokta resources to the CBFEs, with technical support from ANSAB and district offices, incorporated the provision of use and management of lokta for the enterprise activities in their CFUG management plans. According to these management plans, the CFUG members are involved in harvesting raw materials for handmade paper. The other CFUGs providing raw materials to the new Kalika enterprise have also incorporated enterprise activities in their management plans.

The community members and CFUGs have made financial investments in the CBFEs. The lead firm has arranged finance through equity investment from the individual investors and the communities, and bank loans.

14.2.3 Main activities

The main activities of the FSC handmade paper business are harvesting and primary processing of lokta, and paper making at community level in two districts – Dolakha and Bajhang. Secondary processing, product development and trading of the final products in Kathmandu provide employment to a total of 5,545 people, mostly from rural communities.



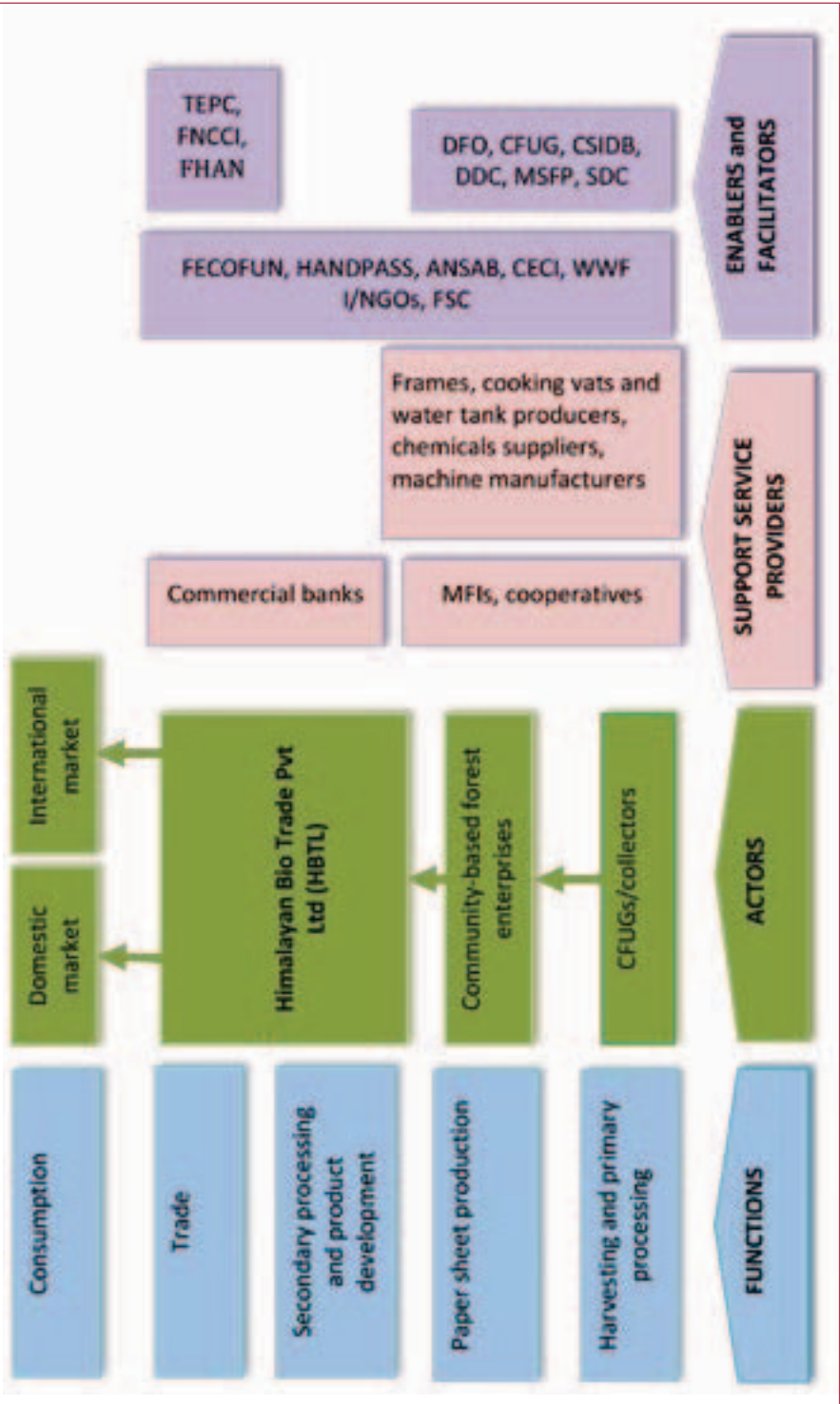
Lokta collection



Women cleaning the lokta bark

Figure 14.1 presents the value-chain map of FSC-certified handmade paper in Nepal. Among the four enterprises providing handmade paper to HBTL, the major business volume is concentrated in two enterprises – Everest Gateway Herbs in Dolakha and Malika in Bajhang.

Figure 14.1 Value chain map of FSC-certified handmade paper in Nepal



14.2.4 Technology and skills

HBTL organises the FSC-certified handmade paper business in Nepal. It starts at community level with the harvesting and primary processing of lokta plants and ends with the final consumers. Some are at the domestic level but most are international, mainly through Aveda. CFUGs manage the forests from where lokta plants are harvested by their members as per the CFUG operational plan and FSC-certification principles and criteria. The community members harvest and debark the lokta plants manually by using sickles and *khukuri* (a Nepalese knife similar to a machete), after which they dry the lokta inner bark (*bast*) in the sunlight. The community members also transport the dried lokta bark to their nearest paper-production enterprises.



Women carrying raw lokta

At the four enterprises in Dolakha and Bajhang districts, paper production involves traditional paper-making process. The lokta is soaked in a water tank to soften and is cleaned to remove any black spots and impurities. The cleaned lokta is cooked in a 100 litre drum in a mixture of water and caustic soda. The cooked lokta is then washed with clean water to remove the caustic soda and other unwanted materials. The clean lokta is then beaten with a wooden mallet or beater machine to make a smooth and homogeneous pulp. The softened pulp is then moulded in 20 x 30-inch wooden frames by spreading the thin pulp to make flat sheets of paper. The frames are dried in the sun, after which the paper is taken out of the frame. The paper is then graded by manual inspection and stored at the enterprises before being transported in bulk to HBTL.



© ANSAB

Man handling baked lokta for cleaning



© ANSAB

Handmade paper made from lokta pulp. The paper sheets are dried in the sun on wooden frames



Staff at a community enterprise manually inspect the handmade paper for quality control

At the HBTL central facility in Kathmandu, further value-addition processes take place to prepare the product for trade in domestic markets and to export to international markets. The paper is graded by manual inspection into different groups according to quality, which are in turn used to make products for different consumer groups. On its premises in Kathmandu, the company has small-scale drying, printing and paper-cutting facilities to make products such as stationery, greetings cards and office items. For processes such as paper dyeing, calendaring (flattening) and die cutting that involve cutting a high volume of paper into the same custom shape or form, and other treatments such as adhering the paper onto cardboard or performing large volumes of silk screening, the company outsources to other companies in Kathmandu which are equipped to handle these more technical processes, and which have facilities for processing in volume.

14.2.5 Business partners

HBTL has developed an annual purchase agreement with the four community enterprises for the acquisition of FSC-certified handmade paper sheets, and these enterprises deliver the paper to HBTL using vehicles hired by them. These enterprises are members of the Sustainable Bio Trade Group which has been awarded FSC chain of custody (CoC) certification, in which HBTL is a group manager. For the final marketing of the paper on the international market, Aveda has remained the main user of the paper from HBTL, mainly for packaging their products. HBTL sells paper sheets to two other paper companies, Howard Packaging and Johnson Printing and Packaging, both located in the United States and which use the paper to produce packaging gift boxes for Aveda. The association with Aveda has proved to be a major turning point in HBTL's development as a commercial enterprise.

HBTL's relationship with Aveda goes back to 2002 when ANSAB developed a partnership with Aveda following the design and implementation of the Certification and Sustainable Marketing of Non-timber Forest Products Private Public Alliance (PPA) project funded by USAID. Section 14.3.1 provides details of the PPA project and its alliance members. During the project, Aveda provided much-needed private-sector guidance on the demands and requirements of the international natural products market, and expressed its willingness to support sustainable livelihood generation for rural communities, while purchasing high-quality products from Nepal. ANSAB and Aveda worked closely for the next five years with HBTL on FSC-certified handmade lokta paper, covering issues such as product quality, design, price, packaging and shipping; and in 2007 Aveda began purchasing FSC-certified paper to package their Aveda Holiday Gift line of products.



© ANSAB

FSC-certified handmade paper is used to produce gift packaging for Aveda, a major US-based natural beauty products company

14.2.6 Customer groups and product types

FSC-certified paper products include sheet paper, notebooks, stationery sets and folders (mostly purchased by offices at the national level); photo albums, greeting cards and shopping bags (mostly purchased by international tourists visiting Nepal); and interior design products in a vast array of colours, textures, patterns and prints (mostly purchased at the national level). At the international level, Aveda has remained the only and most important purchaser of paper from HBTL.

As HBTL does not have retail outlets besides its outlet at the office, consumers at national level deal directly with their office in Kathmandu for paper and paper products, from where consumers either collect their order themselves or the company delivers the products to its consumers as per demand. For Aveda, the company works on a demand basis and delivers the product through couriers.

14.2.7 Differentiation in the market place

Since its establishment, CBFEs and HBTL have integrated a socially and environmentally responsible approach to their business practices while bringing high-quality products to consumers. While the CBFEs produce papers of standard sizes for selling to the lead firm, HBTL's paper products are available in a range of sizes, colours and designs that can be customised with printed logos and graphics as specified by different users.

14.3 Who controls Himalayan Bio Trade?

14.3.1 Origin of the value proposition

Since its establishment in 1992, ANSAB has been generating and implementing community-based, enterprise-oriented solutions that conserve biodiversity and improve livelihoods for the poorest of the poor. To integrate different farm and forest products from rural communities, bring them to market and make these businesses commercially viable, ANSAB designed and tried out several options. Two major options involved:

- Participation of community members themselves in marketing their products, and
- Involvement of private traders to collect and market the products.

However, neither of these two options was the best for marketing the products so as to provide fair benefits to the local community. In the first option, the marketing costs were high and the community members were unable to secure reasonable prices because they lacked marketing knowledge and skills, and there were several dynamics in the market influencing price. In the second option, the major challenge was trust between the community members and the private traders. Communities are not always assured a fair price as private traders are motivated by profit and are not necessarily responsible to the community.

ANSAB realised the necessity of another option, that of involving a responsible marketing entity, and so it established HBTL as a lead firm with shareholdings in community enterprises and private investors, which could overcome the deficiencies of the former two options. HBTL would become the marketing platform to promote certification and sustainable marketing of Nepalese NTFPs, including lokta, while contributing to responsible forest management in Nepal. ANSAB itself managed HBTL for the initial two years and then handed over management to a member from Dolakha district, someone who was both trusted and selected by the community-based enterprises from both districts. In the two years of his association with HBTL, he showed both leadership and entrepreneurial skills, while ANSAB remained as an advisor to the company.

After HBTL was established, ANSAB designed and coordinated the Certification and Sustainable Marketing of Non-timber Forest Products Private Public Alliance (PPA) project with funding from USAID in 2002. This project brought together the domestic NTFP producers, domestic and foreign NTFP buyers, certifying bodies, government programmes and donor agencies assisting the NTFP sector. This pilot PPA project carried out much-needed initiatives for FSC certification such as the development of interim standards within the framework of FSC standards, a group certification model, and awareness-raising and capacity-building efforts. Based on evidence of social, environmental and economic sustainability from field assessments, the Rainforest Alliance/SmartWood certified 11 community forests in a group in 2005. The certification now covers 35 CFUGs in a certified pool comprising about 17,000ha of forests in Bajhang and Dolakha districts. Most of the certified CFUGs manage lokta in their respective community forests, and five handmade paper manufacturing companies including HBTL promoting responsible business practices have obtained the FSC CoC certification.

14.3.2 Control over forest resource access

The long history of community control and access over forest resources in Nepal has been an enabling environment for community-based forest enterprises development. The Forest Act 1993 and Forest Regulations 1995 have given CFUGs rights of making key management decisions over their forest resources, thus empowering communities to access and manage their forest resources and create viable enterprises. To access lokta in the forest for the enterprises at local level, ANSAB has provided technical support in forest-resource inventories, boundary surveys, sustainable harvesting and preparation of forest management plans in order to handover the community forest to the users. This has led to improved forest management and conservation with improved sustainability of supply of lokta.

However, due to extreme poverty, parts of the community were not included in the organisation of the CFUG (even if membership fees are low, for those living in extreme poverty the fees are still too high) and for that reason could potentially act as a threat to the sustainable management of the forest resources. To address this issue, ANSAB organised marginalised members of the community into sub-groups within the CFUG who were allocated patches of degraded land to plant natural fibres and NTFPs for handmade paper as part of their livelihood and income-generating activities. Specific management plans were developed together with these groups to ensure the sustainability of harvesting and management of the resource.

Adherence to the FSC principles and criteria is another important factor controlling use and extraction of the resources of the FSC-certified enterprise. Certification evaluates the harvesting plans and overall natural resource management of the areas, including social factors and impact and biodiversity conditions. FSC audits the groups and enterprises annually to verify that sustainable harvest protocols and responsible business operations are being followed and to assess forest conditions. FSC has 10 principles and 70 criteria for forest stewardship. Box 14.2 lists the 10 FSC principles. The FSC certification has helped these entities to ensure that they follow internationally recognised guidelines for sustainable forest management and socially responsible businesses.

Box 14.2 FSC principles for forest stewardship

1. Compliance with laws
2. Workers' rights and employment conditions
3. Indigenous peoples' rights
4. Community relations
5. Benefits from the forest
6. Environmental values and impacts
7. Management planning
8. Monitoring and assessment
9. High conservation values
10. Implementation of management activities

Source: FSC (2014)

14.3.3 Control of the business

HBTL has a key role in controlling and managing the business. It serves as a lead firm for both FSC-certified handmade paper and FSC-certified essential oils. A general assembly (constituting of representatives from four handmade-paper and two essential-oil industries and four individual investors) is the apex body that decides the company's overall plan and critical organisational level issues. The managing director is authorised to take day-to-day decisions and ensure the smooth operation of the company for generating profits. He receives regular support from the management committee comprised of the technical and export manager and operations manager to discuss issues and make overall decisions. These two managers supervise, motivate and mobilise the staff in six different sections, marketing the products to domestic and international markets (see Figure 14.2). The technical and export manager oversees international trade while the operations manager oversees domestic trade. The company involves 19 women (including the operations manager) out of its 27 full-time staff. In the governance of CFUGs and local community enterprises there is a good representation of women. While women members do not participate directly in the general assembly, its representatives come from the CBFs which are also members of the CFUGs which do have women members on their executive committees.

Figure 14.2 Organisational structure of HBTL



Regarding financial investment, four individual investors and the community enterprises have provided equity investments, where major investment is provided by the individual investors. With this investment, community enterprises receive a dividend. In addition, HBTL staff and the enterprises at community level receive a fixed or waged salary. This investment, the ownership structure and benefits were discussed in a series of meetings with the executive members of the CFUGs, members of the community enterprises and individual investors, and was finally decided by the general assembly.

14.3.4 Staff selection and roles

While the general assembly decides the overall plan and critical organisational level issues, the managing director makes the final decisions in consultation with the managers who are more familiar with the daily needs of the enterprise. He is also involved in negotiations and partnership development. Additionally, he is involved in communications for development support from donors and development organisations in line with the company's mission of promoting rural community livelihoods while managing their natural resources sustainably.

The company has developed a standard recruitment procedure for hiring qualified staff. Only on a few occasions has recruitment be done through a headhunting process, for example, when HBTL requires experts and people familiar with the business and sector. For all staff, the company has provided training to enhance their skills and competences on different aspects of the supply chain, production and marketing. At community level, staff for the handmade paper enterprises are recruited by the enterprises themselves and most of the recruitment is informal. This is especially because all employees are also members of the CFUGs. HBTL has been providing training to these staff for specific tasks such as harvesting raw materials, primary processing and paper making.

14.3.5 Delivery options

As the company's handmade paper is a niche market, HBTL itself delivers products to its clients based on orders received. As the business transaction volume at national and international levels is not large, with only a few client companies, the company has no need for a wholesaler/dealer.

Customers can buy products directly from HBTL's office in Kathmandu or they can contact HBTL for delivery. HBTL uses its own employees for transportation to domestic consumers and works with shipping companies for speedy and safe delivery to its international consumers.

The managers – technical and export, and operations – are responsible for choosing the delivery options, which are decided in consultation with the managing director. Delivery to international markets is managed by the technical and export manager, while for the domestic markets delivery is managed by the operations manager.

14.3.6 Customer research

The two managers are responsible for finding out what customers in their market segment want. At the domestic level, HBTL has started to make paper products customised according to the needs of individual buyers, offices and tourists. For international markets, there are only a few buyers purchasing HBTL products, and HBTL is mostly focussing on meeting the specifications required by these companies.

The managing director and the managers, although mainly the technical and export manager, are the main players responsible for promoting the products to potential customers. The managing director focuses on reaching out to existing business connections and meeting with potential customers to negotiate and finalise contracts. The technical and export manager plays a more active role in reaching out to others and promoting the company's value proposition. While the managing director and the two managers participate in strategic meetings, company staff members attend trade fairs and expositions to showcase their products. The technical and export manager participates in relevant trade fairs, sometimes at international level, which has been useful for enriching his knowledge in technology and services for an expanding consumer base. Participation in trade fairs has also helped in finding new customers, and HBTL has established connections with some buyers in Europe for FSC-certified essential oils. The managers have also been responding to consumers' feedback.

14.4 How has Himalayan Bio Trade overcome key challenges?

14.4.1 Challenges to do with the value proposition

There are several challenges the handmade paper business in Nepal has faced. There are several general challenges, such as political instability and weak enforcement of laws and policies resulting in weak governance and an increase in transaction costs, thus affecting the overall business climate. However, HBTL also faces challenges specific to the subsector, such as having only a limited area of FSC-certified forest (which effectively caps its FSC-certified paper production), transportation hurdles, inadequate access to finance and a dependency on the weather for drying its paper. At the lead-firm level, at the beginning of the business, there was poor understanding of western preferences for paper products. The handmade paper business has addressed some specific challenges such as ensuring a supply of raw material sourced from community forests, the regular supply of paper from CBFs to HBTL, product development as per demands from domestic and international markets, and optimal financial access.

The partnerships developed with the CFUGs for the establishment of enterprises at the community level to source raw materials has resolved the challenge of raw material scarcity. However, as the FSC-certified paper production is effectively capped, HBTL has been working closely with the Federation of Community Forestry Users Nepal (FECOFUN), which is the FSC group manager of the CFUGs, to increase the area of FSC-certified forests in the country. In 2013, 13 CFUGs were added to the certification pool managing over 2,800ha of forests. The enterprises at community level have a storage facility where they can maintain stock before transporting the paper to HBTL in bulk.



Workers cleaning baked Lokta

The business has faced a major challenge related to access to finance, as there are no or very limited financial products from banks or financial institutions in this subsector or for enterprises like them. Because the enterprise owners are community groups, it has been difficult to get enough collateral for larger loans. In addition, the individual members in the group entity are not capable of making large investments. Although it is not possible to bring in enough investment at the community level, the good relationship that HBTL has with its community members and the production enterprises with clear ownership and benefit-sharing mechanisms has been helpful in generating finance for the establishment of production enterprises. Furthermore, developing partnerships with ANSAB and other development partners/programmes such as the German Agency for International Cooperation (GIZ) has been helpful in accessing development money for building the capacity of the communities. These partnerships and programmes have also helped HBTL to participate in international trade fairs and expositions, which has been helpful for understanding buyer preferences at the international level.

14.4.2 Overcoming legal challenges to do with resource access

Legal access to the forest resources has been secured through effective partnerships with CFUGs who enjoy full legal ownership and management rights in these community forest areas. HBTL has been closely working with the CBFEs at community level with an agreement to source paper from them. The agreements provide a guaranteed buyback of paper from these enterprises with fair prices. In some cases, HBTL has also provided financial support to the enterprises in advance, which has helped them to produce paper in large quantities. The community-based paper production enterprises in turn have

agreements with the CFUGs to supply lokta bark to them. The CFUGs are facilitated to revise their operational plans to include lokta harvesting and form monitoring committees involving CFUG and CBEF representatives to ensure the sustainable sourcing of raw materials. In partnership with development organisations and programmes, HBTL has also sought grants for the community for planting lokta in their forests.

In order to maintain the FSC-certification status of CFUGs, HBTL has been providing FECOFUN with some financial assistance during the FSC annual audit.

14.4.3 Overcoming ownership and benefit-sharing challenges

The paper business in Nepal involves clear ownership and benefit-sharing mechanisms between the communities and private sector involved in the chain. With the benefit-sharing deal, the community-based enterprises are producing paper sheets and selling to HBTL, which is selling the paper and paper products at domestic and international market generating revenue. The enterprises receive money on the basis of the total quantity of paper they supply to HBTL and the unit price for the paper is fixed at the beginning. This structure has helped increased participation of the actors and helped avoid any issues relating to ownership and benefit sharing.

14.4.4 Overcoming labour challenges

Using a community–private partnership model, the business includes community members involved in production activities with a structured shareholding and benefit-sharing mechanism. This has helped to increase motivation among the community members to become involved in lokta harvesting, primary processing and paper making at the local level. Furthermore, the community members who are organised into subgroups in Dolakha district are involved in planting lokta and argeli on the land allotted to them. They perceive a clear link between their benefits and responsibilities, which are detailed in the subgroups' management plans.

To improve labour capacity in terms of product quality and consistency and enterprise operations, HBTL has provided training and technical assistance to all staff involved in the chain, and on-the-job training at the company premises in Kathmandu. These trainings and technical assistance have been developed by HBTL, building on the skills and managerial capacity-building training provided by ANSAB.

Regarding infrastructure, the community enterprises have access to roads and means of transport. Major suppliers at the community level such as Everest Gateway Herbs in Dolakha district also have storage facilities where the paper can be stored before being transported to Kathmandu in bulk. However, a major challenge to these enterprises at the community level is the dependency on weather for drying the paper. HBTL has been in communication with some development partners for the development of solar-powered driers that can be used indoors.

14.4.5 Overcoming marketing challenges

One of the major delivery challenges for FSC-certified handmade paper is the total volume available for transportation, which is usually small as per buyer demand. It also needs to be segregated during transportation to maintain its certification status, and so volumes for export cannot be combined with other non-certified products to reduce transportation costs. At the national level, the company has established a mechanism with the community enterprises, whereby they transport paper themselves to HBTL. At the international level, HBTL makes its own arrangements for transportation. Besides delivering to Aveda, there are cases when HBTL has been paying more for shipping than for the paper itself. HBTL is now coordinating with its buyers to buy the products in bulk to reduce transportation costs.

One of the major success factors in finding and keeping customers at international level is Aveda's involvement in the chain. Nepal is the signature country for the Aveda Holiday Gift line in its 1,800 stores worldwide, featuring moss-green lokta-bark paper with red Rhododendron-flower paper (the national flower of Nepal). Aveda has also been travelling to Nepal to photograph for the Aveda Holiday Gift campaign, capturing the social and environmental aspects of lokta management in the country. Aveda's association has also featured the FSC-certified paper and essential oils in major fashion magazines in Europe, United States and Japan and on FSC's website, where it has been promoting the products to international consumers.

HBTL has found some successes in finding customers through showcasing their products at expositions and trade fairs, mainly FSC-certified essential oils for the European market. With the current handmade paper enterprise model of community development and natural resource conservation, some development organisations have been using FSC-certified paper for business stationary. HBTL's relationship with development organisations has also been fruitful because of the professional networking undertaken by them. For example, besides Aveda's association with HBTL, ANSAB has also been arranging visits to HBTL for delegates interested in community enterprises and community-based products, where they can purchase products and also build a basis for new business partnerships in future.

To distinguish its projects in the market, HBTL has been promoting the social and environmental values of its business and the benefits it brings to local communities. It has upgraded its website (www.himalayanbiotrade.com) with the help of international volunteers from the Centre for International Studies and Cooperation (CECI) Nepal. The website now includes product information for every product made by the company. HBTL's association with Aveda has been helpful in developing its capacity to understand the demands and requirements of an international natural-products market, which has helped the business to meet international marketing practices such as product quality, design, price, packaging and shipping.

14.5 Key lessons

14.5.1 Keeping down costs

Currently, financial returns go towards running costs including salaries of the company staff. HBTL uses the remaining revenue to reinvest in business expansion. The business uses different strategies and activities to reduce the costs of developing and managing the handmade-paper business in Nepal. Major strategies include the process of upgrading within the value chain along with the effective mobilisation of resources for different activities in partnership with communities and development partners.

The group certification model has remained an important process for upgrading the business and has proven to be an efficient strategy for the incorporation of many smallholder forest managers and businesses to be certified under a single FSC certificate. In group certification, all the costs involved in certification – such as report writing, travel costs of auditors, consulting with the public about the forest management – are shared amongst the members. So the cost per member is much less than if the individual groups applied to have one certificate each. In Nepal, group certification of CFUGs with FECOFUN and group CoC certification with HBTL have remained the most cost effective tools for the smallholders and small businesses to become FSC certified.

Another process upgrade at the industry level is the development of HBTL as the lead firm that has consolidated the production enterprises and the marketing of their products. This has also helped the community enterprises to reduce their marketing costs. Furthermore, HBTL also has another FSC-certified product line in essential oils, which are produced from the same certified forests. This has helped HBTL to diversify their products.

Partnerships with communities, government and development partners, and resource mobilisation for different activities have helped to improve facilities at CBF level and participation in trade fairs and expositions. These activities have been helpful for HBTL to improve the efficiency of its operations and marketing of its products. Furthermore, the two group managers – FECOFUN and HBTL – have been seeking help from organisations including ANSAB that are promoting FSC certification in Nepal to develop and increase the number of national auditors – which brings the certification cost down as the current audit is performed by international auditors, whose travel costs have to be borne by the prospective forest user groups and enterprises themselves.

14.5.2 Retaining customers and willingness to pay

The Aveda Holiday Gift campaign has captured the social and environmental values of the business and this has been a major factor for building HBTL's customer base and their willingness to pay at the international level. In addition, some individuals and development organisations, who value the social and environmental motivation of the business, are using the product because the business involves communities with a clear benefit-distribution mechanism and sustainable forest management.

14.5.3 Success factors

The design of the entire value chain development activities with a clear vision has been the main factor for the success of the handmade paper business in Nepal. The lead firm, HBTL, along with other appropriate actors and stakeholders, the unique community-private partnership with support from public and NGO partners, and FSC certification have also been helpful for commercial success.

Developing a committed responsible lead firm with a clear role and partnership

structure: since its establishment, HBTL has remained a committed lead firm. It has a clearly stated vision, goal and practices. It has consolidated community-based handmade enterprises by purchasing their paper and selling to domestic and international markets with some value addition. It has also built producers' capacities by providing training and introducing improved technologies in order to obtain quality produce and decrease production cost. Furthermore, using a community–private partnership model with a clear ownership and benefit-sharing mechanism has helped increase participation of actors in the chain at producer level while benefitting the poor, women and marginalised groups with significant income increases.

Using socially and environmentally responsible approaches to business practices while bringing high-quality products to the consumers:

the approaches used by CBFs and HBTL have helped the business gain recognition from different organisations and create multiple social and environmental benefits with a one-time investment supplemented by a development partner. The company has established its reputation by managing to maintain consistent quality of its products while promoting sustainable forest management and providing income and employment benefits to forest communities. There are now several development organisations through which HBTL can access funds for capacity building and participate in international trade fairs and expos.

Developing an international market through FSC certification:

FSC certification provides an assurance to responsible domestic and international buyers that the handmade paper products from Nepal are legally sourced from responsibly managed forests. This was the main reason Aveda became a client. In addition, the Body Shop, another leading global personal-care product-manufacturing company as well as major fashion magazines in Europe, US and Japan have featured Nepal's forest-based products which have FSC certification and other certification such as organic certification, Cradle to Cradle certification (an ecolabel that assesses a product's safety to humans and the environment and its design for future life cycles), and wildlife-friendly certification. In this way, certification has provided the Nepalese handmade paper business with a powerful marketing tool to communicate with consumers about the environmental and social practices adopted by the business. It remains an important milestone towards establishing an international market presence.

Mobilising resources from programmes and agencies for ensuring a sustainable raw material supply, commercialisation and creating a favourable policy

environment: external support has transformed these producers into enterprises through organising them and building their capacity to sustainably harvest raw materials, develop enterprises and participate in the value chain. The PPA initiative that brought FSC certification into practice in Nepal provided the handmade paper business with an opportunity to enter the international market. Similarly, Aveda's continuous involvement with the PPA project and HBTL has provided much-needed private-sector guidance on the demands and requirements of the international natural products market. Different civil society organisations, NGOs, government programmes and business membership organisations including FECOFUN and Nepal Handmade Paper Association (HANDPASS) have played positive roles in facilitating access to critical services including business development services, and improving the policy and regulatory environment in the sector.

Annex 14.1 FSC-certified lokta handmade paper enterprises

National-level processing and marketing enterprises	Community-based forest enterprises (CBFEs)	Community forest user groups (CFUGs)
Himalayan Bio Trade Pvt Ltd	Malika Handmade Paper Enterprise	<ul style="list-style-type: none"> ■ Shri Binayak Pimidanda ■ Ranada ■ Lataun ■ Hemantabada ■ Binayak ■ Lahare ■ Sallipatan Trisakti ■ Martinaula ■ Pariban ■ Daya ■ Mastamandu
	Everest Gateway Herbs	<ul style="list-style-type: none"> ■ Kalobhir ■ Thulonagi ■ Balemdamji ■ Kyanse Setep ■ Hanumanteswhor
	Bhimeshwor NTFP Production and Processing Deudhunga Multipurpose Cooperative, Ltd.	<ul style="list-style-type: none"> ■ Bhitteeri Pakha ■ Charnawoti ■ Suspa ■ Bolde Setidevi ■ Dhande Singhadevi ■ Jharani ■ Majhkharka Lisepani ■ Simpani
	Kalika Handmade Paper Enterprise	<ul style="list-style-type: none"> ■ Jutte Bhadmaya ■ Liche ■ Naulipata ■ Gaunapatal ■ Chaukidanda ■ Khatkhate Janaurda



Nepal: Himalayan Naturals Pvt Ltd

Charcoal-briquette enterprises in Nepal: a green and fair value-chain development model

by Bhisma P. Subedi, Sudarshan C. Khanal and Puspa L. Ghimire

With the cost of firewood and liquid petroleum gas steadily rising in Nepal, an alternative source of energy is gaining popularity with both domestic and commercial consumers in Kathmandu. Charcoal briquettes are a cleaner, more efficient and cheaper option – and there is one business which is driving the expansion of the market for its products while generating much-needed income for local communities. This chapter describes how Himalayan Naturals works with community forest user groups, community enterprises and private investors to produce and market high-quality and sustainably produced charcoal briquettes, and discusses both the successes and challenges the business has faced.

15.1 Context in which Himalayan Naturals operates

15.1.1 The enabling environment

Nepal is one of the most progressive countries in the world when it comes to community forestry. Over the past three decades the government of Nepal has gradually devolved management responsibility of national forests to local communities, allowing communities to harvest, use or sell forest products from these forests. The Forestry Act of 1993 and Forest Regulations of 1995 enabled the transfer of legal rights from the central government to local communities to manage and use specific forest areas. Presently the land under community forest management amounts to 1.7 million hectares, about 29 per cent of the total national forests (DoF, undated).

The devolution of rights to local communities has resulted in an increase of trees on farms and in community forest areas and has significantly improved Nepal's forest coverage and condition (FAO, 2009a; 2011). A recent national-level study found that Nepal's farm-forestry sector has a huge untapped potential for generating economic value of legal and sustainable products and services (Subedi *et al.*, 2014). Nepal's economy is primarily agrarian with the agriculture sector accounting for 37 per cent of the total GDP and employing about two-thirds of the total labour force. The forestry sector alone, if its full potential is harnessed, could generate economic value worth NRs373 billion (about US\$3.7 billion), a many-fold increase from the present value, and could create 1.38 million full-time job equivalents in Nepal (*ibid*).

The population of Nepal is almost as diverse as its biological heritage. More than 125 ethnic groups are spread out across the mountainous areas in the north, throughout the middle hills, and in the Tarai in the south. More than 123 languages are currently spoken in the country. These groups have developed and managed to adapt their livelihood strategies over time as environmental and socio-economic conditions have changed. This has given, over a long history of time, a multitude of artefacts and practices contributing to cultural wealth.

However, despite its richness in biological and cultural diversity and with a high proportion of the population economically active, Nepal is one of the world's poorest countries with a GDP of US\$694 per capita and almost one fourth of the population living below the absolute poverty line (CBS, 2011; World Bank, 2014). The country has undergone numerous and significant political changes since the 1990s. It has resolved a decade-long insurgency and although the nation was declared as a federal democratic republic in 2008, it is still in a post-conflict political transition phase. In this situation, the overall economy has been impacted, and Nepal has a slow-growing or stagnated economy, often reflected in the mixed progress in the development of infrastructure in the country.

Over the past two decades, the country has made significant progress in information and communication technologies (ICTs) including the Internet and mobile phones. About 80 per cent of the population of Nepal uses telecommunications and 72 per cent uses the Internet. Communication costs have reduced and are quite reasonable for businesses. This has helped to improve other business development services. For example, commercial banks have developed and provide innovative banking services such as mobile banking.

The electricity coverage in the country is low, providing access for less than half of the population. Because of load shedding almost throughout the year, which lasts for more than 12 hours a day during the winter and dry seasons, there is an intermittent supply to those with access to electricity. Road infrastructure is increasing, although most rural areas in the hills do not have adequate road infrastructure to reach services such as hospitals located at the district level. While the Tarai has a relatively high road density (22km/100km²), difficult terrains and lower road density in the hills (8km/100km²) and mountains (2 km/100km²) make transportation difficult, so that expensive air transportation is sometimes needed. These underlying conditions necessitate the need to work with locally available farm-forest resources to improve rural livelihoods and income-generating activities.

In this context, a number of NGOs have emerged to support communities in the sustainable management of their forests and for developing forest- and farm-related enterprises. One of these organisations, the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) has been working with local communities since the mid-1990s to establish forest and non-timber forest product (NTFP) enterprises. In particular, community-private partnership business models, help to link community enterprises with other actors further up the value chain to facilitate market access and value addition. In this context, ANSAB designed a project in 2007 with an objective of transforming natural resource-dependent rural communities into commercially viable and sustainable entities in nine mountain districts of Nepal. This project identified forest-based biomass energy as one product with the most potential, along with natural fibres, essential oils, soapnut and timber.

15.1.2 The operating environment

Energy in Nepal is supplied mainly by traditional sources, such as firewood, animal dung and agricultural residues, and followed by commercial sources, especially petroleum products, electricity and coal. Alternative energy sources include biogas, solar power, wind power and hydropower. Out of the total energy consumption of about 400 million GJ, nearly 78 per cent comes from firewood. Close to 90 per cent of energy is consumed for residential purposes,

especially cooking and heating, where firewood contributes to around two-thirds of the total household energy demand (WECS, 2010). Apart from residential use, firewood is also used by commercial consumers, such as agro-processing enterprises, hotels, restaurants and brick kilns. Brick-making industries and restaurants also use coal and consume about two-thirds of over 500 billion tonnes of coal imported to the country each year (TEPC, 2014).

In recent years, prices of firewood in urban areas have become very high and are now almost comparable with that of liquefied petroleum gas (LPG). Because of the increased cost and indoor air pollution associated with firewood, households have been increasingly using LPG for cooking purposes; almost all households in urban areas use LPG. Similarly, commercial users in urban and semi-urban areas are switching to LPG because of the limited supply of firewood and its increased cost. The government has subsidised the cost of LPG, and has recently formulated a policy of discriminating between costs for domestic and commercial consumers by using different-coloured LPG cylinders. While domestic consumers can buy LPG at subsidised rates, the subsidy is lifted for commercial uses. Once this policy is implemented, as the cost of LPG will become very high, commercial users will seek less expensive alternatives. Similarly, as small and cottage enterprises are more cost sensitive they are less likely to use or shift into using LPG.

Brick kilns and restaurants use coal, which emits more pollutants in the atmosphere and increases the country's dependency on imported fossil fuel. Charcoal provides an alternative for these industries as a clean and efficient fuel, while providing a source of income for small and cottage enterprises and helping the national economy. However, there are only a few small charcoal-making enterprises, which operate at the local level and do not regularly produce briquettes. They are not well integrated into the value chain and lack a supply chain, distribution network and distinguished market.

The raw materials for briquette-making enterprises are plants and plant parts not used for other purposes. Biomass obtained during forest and agriculture operations, such as rice husks, sawdust and veneer by-products can also be used for making briquettes. The raw materials are turned into char, which is then ground into a dust, mixed with clay and then formed into briquettes using moulds. The briquettes are then left to dry in the sun. For charcoal-briquette enterprises, community forest user groups (CFUGs) are the primary suppliers of raw materials with timber enterprises providing sawdust and veneer by-products on a small scale. Raw materials for making charcoal briquettes are available in significant quantities in forests. A recent estimate conducted by ANSAB shows Nepal has the potential to produce 34,764 tonnes of charcoal from community and private forests alone, by applying a minimal rate of conservative harvesting in these forests, which could easily reach up to 89,289 tonnes with optimal harvesting in these forests (Subedi *et al.*, 2014). This volume is 1,086 times greater than charcoal production levels in 2013 as estimated by FAO (2015).

The charcoal-briquette business is in the infant stage of commercialisation. There are several small-scale briquette projects in different parts of the country that have been supported by NGOs and donors since the 1980s, and which have been successful at the local level in building the capacity of local communities in briquette production. However, these charcoal-briquette businesses never became commercial ventures as they were not well integrated

into the market and, due to a lack of any sizeable market for charcoal in the country, there were doubts about expanding production. Financial lending to briquette-making and other farm-forestry enterprises is negligible. Banks and financial institutions have very limited knowledge of the sector and lack appropriate loan products. This in turn adds to the capacity constraints of these enterprises, which include their informal and unorganised nature of business, financial illiteracy, an inability to produce enough collateral and the reputation of the sector in general.

The Himalayan Naturals charcoal-briquette enterprise emerged as a unique pioneering community-private partnership to take advantage of both the raw materials available at community level and the latent demand for clean and highly efficient fuel at the final consumer level. Its base was formed in 2007 when ANSAB designed and piloted a project for developing a value chain based on community-based briquette production using otherwise-wasted biomass harvested from sustainably managed community forests. The objectives of the initiative were to increase the demand for community-produced charcoal briquettes in targeted markets of Kathmandu; enhance the production capacities of rural processing enterprises to meet the new demand and increase their revenues; integrate the processing enterprises in rural areas to meet the new demand with the development of a marketing platform in Kathmandu; and finally, to support local communities in their aspiration to meet their economic needs whilst taking into account ecological and equity concerns.

15.2 About Himalayan Naturals as a business

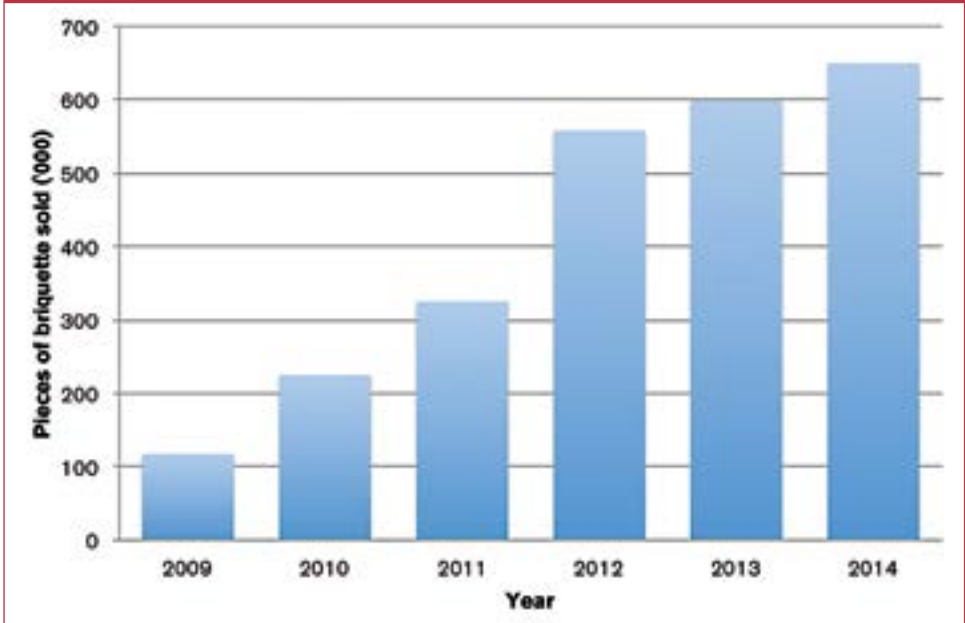
15.2.1 The vision

The business consists of 23 community-level briquette enterprises operating in 11 districts, and a lead marketing firm – Himalayan Naturals Pvt Ltd – operating at the national level. The initial set-up included shareholdings of community enterprises and private investors under the company name Himalayan Green Energy Pvt Ltd (HGEPL). This was registered later as Himalayan Naturals in November 2010 at the Office of the Company Registrar in Kathmandu. The company has remained as a committed lead firm in charcoal briquettes, consolidating the production and selling the products to urban markets while providing technology to the producers and accessories to end users.

Himalayan Naturals has a vision of promoting the livelihoods of rural communities while providing sustainable, cost-efficient, safe and environmentally friendly natural products to consumers in Nepal. To achieve this vision, the company's mission is to explore the market potential for community-produced natural products, while at the same time engaging with the entire value chain to improve product quality and organisation for production.

Over the past six years, sales amount to over 2.4 million briquettes and about 90,000 sets of stoves, mainly in Kathmandu. With an average of 117,000 briquettes sold in 2009, sales of charcoal briquettes reached 650,000 pieces in 2014 as shown in Figure 15.1. With this level of sales, Himalayan Naturals has been operating at a break-even point and has yet to make any profit. This is because it has been expanding its production lines such as pellets and commercial stoves and must also pay back loans from the bank. Revenues are expected to increase in coming years through increased sales of briquettes, pellets and stoves to urban markets.

Figure 15.1 Sales of charcoal briquettes by year



Since its establishment, the lead firm has been operated by a managing director, a production director and a production manager. It involves nine full-time staff at present, including a director of promotion and partnerships, a marketing director, an administration and accounts manager, a marketing officer, a sales officer, and an administration and accounts assistant. The two directors – promotion and partnerships and marketing – have recently joined the company and will use their expertise to expand the briquette business in the country. From the beginning, the company involved two other full-time staff members for market exploration and product marketing, who were originally overseen by the production director but are now managed by the marketing director. The company outsources experts for research and development and for technology as well as others. Last year, besides the full-time staff, 16 external experts were involved with the company.

The charcoal-briquette business currently supplies household customers. While the product is commonly used for baby massaging¹ the middle classes also use it for domestic space heating and barbeques. The business has the potential to expand to commercial consumers, such as cottage and small enterprises including different agri-food and forestry enterprises and hotels and restaurants in urban or semi-urban areas, which are switching to LPG.

1. This is a traditional practice in Nepal in both households and massage parlours, where briquettes are used to heat the room where the babies are massaged.

15.2.2 Business inputs

The raw materials for briquette making include weeds (eupatorium, lantana and ferns) or biomass obtained during regular forest operation such as cleaning, thinning or pruning. The production enterprises at community level source these materials from community forests. With technical support from ANSAB and district forest offices, the CFUGs have incorporated the use and management of residues from silviculture practices (including shrubs and twigs) in their CFUG management plan. According to these management plans, members are involved in harvesting raw materials for charcoal and charcoal-briquette production.

While the community-based briquette production enterprises have arranged finance through individual members in the community and CFUGs, Himalayan Naturals has arranged finance through equity investment from individual investors and the community, and through loans from the bank. As the bank loan is an overdraft and requires annual renewal at a high interest rate, it is hindering the company's profit. Himalayan Naturals is in discussion with banks and other financial institutions and hoping to qualify for deprived-sector lending, which has about half the current interest rate. There is also the potential for increased investment from the supplier communities, depending on the amount of products they supply to the company, as 2 per cent of their sales is reinvested in the company. Himalayan Naturals has also been supported by ANSAB and a few other development organisations in much-needed activities in infrastructure development, product research and marketing through their programme activities. Discussions with ANSAB and other development partners are ongoing about investing in a large production unit for manufacturing products for commercial consumers and reducing costs.

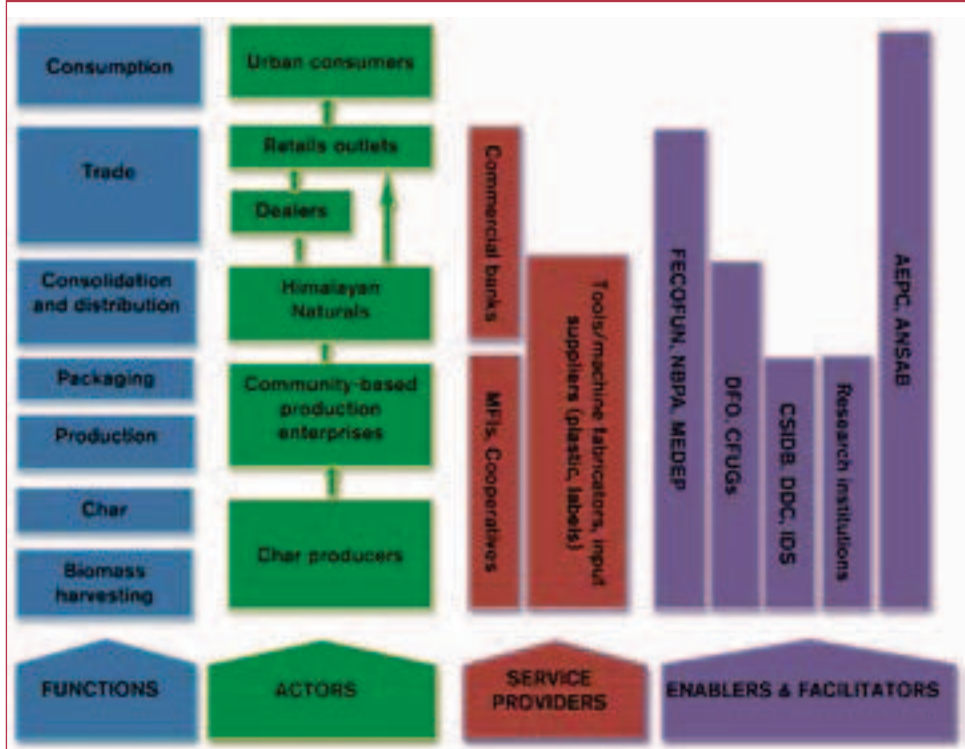
15.2.3 Main activities

The main activities of the charcoal-briquette business are harvesting the raw materials; production and transportation of char to the briquette enterprises; production, packaging and labelling of the briquettes at community level; transportation and marketing of the final product in Kathmandu. The business provides employment to about 200 individuals. Figure 15.2 presents the briquette value chain map. Of the total 23 community-based production enterprises working with Himalayan Naturals, over 90 per cent of the business volume is concentrated in six production enterprises in Sindhupalchok district (see Box 15.1 for the list of the six major enterprises currently working with Himalayan Naturals).

Box 15.1 Major briquette-producing enterprises currently working with Himalayan Naturals

Bolde Community Briquette Enterprise, Sindhupalchok
Chiple Community Briquette Enterprise, Sindhupalchok
Dovan Community Briquette Enterprise, Sindhupalchok
Pyukharkha Community Briquette Enterprise, Sindhupalchok
Sikre Community Briquette Enterprise, Sindhupalchok
Tamche Community Briquette Enterprise, Sindhupalchok

Figure 15.2 Charcoal-briquette value chain map



Harvesting raw materials for the briquettes is done by CFUG members who live close to the briquette enterprises, which the members use for producing char. The char is then transported to the nearby briquette-production enterprise. About 35 community members are involved in raw material collection, char production and transporting the char.

Briquettes are made in the community-based production enterprises. As stated before, major production activities occur in six production enterprises in Sindhupalchok districts. Presently, a total of 70 individuals (of which over 80 per cent are women), are involved in making briquettes. Packaging the briquettes employs an additional six community members.

Himalayan Naturals collects the briquettes from the production enterprises and then sells them in urban area, mainly Kathmandu. On behalf of the production enterprises, Himalayan Naturals arranges permits from the local district forest office to transport the briquettes to its warehouse



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Harvesting of raw material in the nearby community forest

in Kathmandu, from where they supply distributors and retailers. Himalayan Naturals also liaises with machine manufacturers (who supply the machinery required by the production enterprises) and accessories manufacturers (who supply the stoves which are sold with the briquettes). According to the managing director of Himalayan Naturals, because of the briquette business, an equivalent of about 50 people are employed in various retail outlets, 14 in stove and stove-stand production and seven in machine fabrication.

15.2.4 Technology and skills

The charcoal briquette value chain in Nepal is mainly organised by Himalayan Naturals. It starts at community level with the harvesting of raw materials and ends with consumers in urban centres, especially Kathmandu. CFUGs manage the forests from where biomass is harvested as per the CFUG operational plan. Charcoal is produced from this biomass by the members of CFUGs using the pit method of production, which is a low-cost method traditionally used by communities. It is then transported to their nearest briquette-producing enterprise.



Burning of raw material into char using the pit method before transporting it to the briquette-making facilities



The electric grinder used to produce char powder which is then mixed with clay and moulded into briquettes

© ANSAB

At the production enterprise facilities, the charcoal is ground using an electric grinder to produce a fine-quality powder. Briquettes of different size are produced by mixing charcoal powder with clay using a mixer that was specially developed after several rounds of experimentation. (Before ANSAB's intervention, grinding and mixing was done manually which was tedious and time consuming.) The mixture is manually pressed into moulds, after which the briquettes are left to dry in the sun.

Himalayan Naturals has a sales network of dealers, supermarkets, department stores, grocery shops and other retailers. It delivers its products to these stores and distributors using its own delivery vehicles. It also works with manufacturers who produce the stove accessories required for burning the briquettes. The stoves targeted at commercial customers (mainly small or medium cottage industries) are engineered with a fan to enhance fuel efficiency.



Women pressing the char mixture into the moulds to produce the briquettes, which are then left to dry in the sun

15.2.5 Business partners

Himalayan Naturals itself collects the briquettes from the production enterprises and delivers to retail stores in Kathmandu. These retailers are the business's main business partners and deliver the products to the final consumers, including the Bhat-Bhateni Supermarket and Departmental Store (BBSM), a leading retailer with eight chains in Kathmandu. During the early years ANSAB staff, with expertise in marketing, promotion and expansion worked with Himalayan Naturals to create a network of retailers. They approached different stores in Kathmandu and established a relationship with BBSM, which agreed to provide space in its store for briquettes, stoves and other accessories. Now the staff of Himalayan Naturals are in regular contact with BBSM and other retail stores for the sale of briquettes.

15.2.6 Customer groups and product types

Currently three products are available for household uses: small beehive briquettes (5 inches x 3 inches); large beehive briquettes (5 inches x 1.5 inches), and stoves. The company sells beehive briquettes together with very simple and inexpensive clay or metal stoves in the urban market, mostly Kathmandu. Consumers buy these products, as a package or separately, in retail stores.

The company has also been working to produce larger briquettes and stoves for commercial consumers. Large briquettes will be customised to meet the needs of commercial buyers, especially small dairy producers and food processors, such as ketchup, sauce, beaten rice, pickles and noodle manufacturers. Pellet production for both domestic and commercial buyers is also under consideration and the company is working on product development.

15.2.7 Differentiation in the market place

Since the beginning, Himalayan Naturals has taken a socially and environmentally responsible approach to its business practices while bringing quality products to its consumers. It has underlined the community involvement and use of otherwise unwanted weeds, sustainably harvested shrubs and biomass collected from regular operations in

community forests. Similarly, the company has placed an emphasis on customer-friendly products and accessories. Briquettes from Himalayan Naturals are sold in appealing plastic laminated packaging, so the product is clean to handle, which has made it acceptable to department stores. As per customer demand, briquettes are available in two different sizes and come with relevant accessories. Himalayan Naturals briquettes are currently sold through seven dealers and in over 50 retail outlets across Kathmandu, thus making these products easily accessible to customers.

15.3 Who controls Himalayan Naturals?

15.3.1 Origin of the value proposition

Charcoal briquettes are a promising source of alternative energy, are proven to increase earnings for the poor, reduce health risks for women and children, and reduce the propagation of invasive alien species (in areas where invasive species are a problem, briquette making has been used as an incentive to harvest these plants). But although there was a latent demand for briquettes in urban markets and the potential for mass production in rural areas, charcoal-briquette production was not a commercial venture. So ANSAB designed and tried out several options, including involving the community members in marketing their products, and working with private traders to collect and market the products. However, community members lacked the relevant marketing knowledge and skills, and there was no guarantee that the community received a fair price for their products from private traders.

To overcome these issues, ANSAB established Himalayan Naturals, which would act as a lead firm with shares owned by community enterprises and private investors. Once these entities and structures were established, ANSAB became an advisory partner providing essential support to the lead firm in the initial stages of marketing the product and in strengthening the business and organisational capacity of the community enterprises.

15.3.2 Control over forest resource access

The long history of community control and access over forest resources in Nepal has been an enabling environment for community-based forest enterprises development. CFUGs are able to make key management decisions over their forest resources, thus empowering the communities to access and manage their forest resources and create viable enterprises. The conditions are that CFUGs have to prepare their own constitution and submit it to the local district forest office for a certificate of registration. They also have to develop their own operational plans to manage and use the resources in a sustainable way, and detail social arrangements and responsibilities within their groups.

For the production enterprise to access forest resources, they had to develop a forest resource inventory, a boundary survey, and a sustainable harvesting and forest management plan. These were the conditions that needed to be met for the Forest Department to handover the community forest to the users. Technical support from ANSAB helped CFUGs prepare operational plans for the rotational harvesting and form monitoring committees involving representatives from CFUGs and the enterprise to ensure the sustainable harvesting of raw materials. Now all CFUGs from where production enterprises source raw materials have included such provisions in their operational plans.

15.3.3 Control of the business

Being the lead firm, Himalayan Naturals plays a key role in controlling and managing the business. The apex body of the lead firm is the general assembly which consists of six representatives from six community enterprises and five individual investors. The assembly decides the overall plan and critical organisational-level issues. The managing director is authorised to take day-to-day decisions and ensure the smooth operation of the company for generating profits and is advised by the board of directors, consisting of five individual investors. In addition, there are regular meetings between the management committee, comprised of directors of different departments (see Figure 15.3) and line managers. Directors of each department independently execute their own plans and supervise, motivate and mobilise their teams. Within the governance of CFUGs and local community enterprises there is a good representation of women. For example, the CFUG executive committees have women members. Although there are no women in the general assembly, its representatives come from community forest enterprises, which are also members of the CFUGs.

The production enterprises have made capital investments of US\$2,500–8,000, of which about 75 per cent has come from individual community members and the remaining 25 per cent from the CFUG. Himalayan Naturals has made an investment of about US\$100,000. This involves an equity investment of US\$25,000 from five individual investors; US\$12,000 from the six community enterprises; and bank loans of about US\$70,000 with the collateral provided by the company staff.

Twenty per cent of the company is owned by the six community enterprises, 10 per cent by the employees of these enterprises and the remaining 70 per cent is owned by the five individual investors and dividends are paid to the shareholders accordingly. In addition, individual staff members of Himalayan Naturals and the production enterprises receive a fixed or waged salary. Investments, ownership structure and benefits were discussed in a series of meetings with the executive members of the CFUGs, members of the production enterprises and individual investors, and were finally decided by the general assembly.

15.3.4 Staff selection and roles

While the general assembly decides the overall plan and critical organisational-level issues, the managing director makes any final decisions in consultation with the directors who are more familiar with the daily needs of the enterprise. He is also involved in negotiations and partnership development and seeking support from donors and development organisations in line with the company's mission of promoting rural community livelihoods while managing their natural resources sustainably.

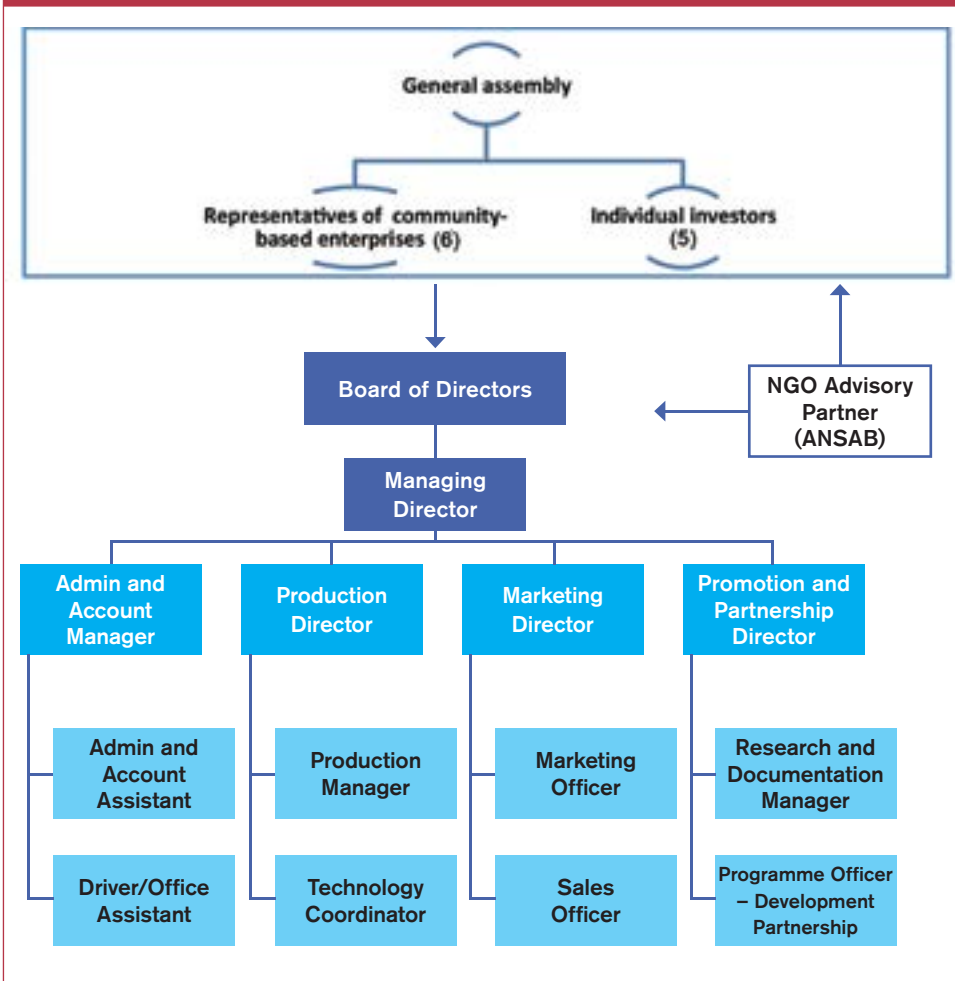
The company has developed a standard recruitment procedure for hiring qualified staff. As the enterprise has expanded, it requires staff experienced in business. The directors of marketing and of partnerships and promotion were recruited through personal networking by staff at Himalayan Naturals. For all staff, the company provides training to enhance skills and competences on different aspects of the supply chain, production and marketing. At the production enterprises, staff are recruited by the enterprises themselves and most of the recruitment is informal, as all employees are members of the CFUGs from where the briquette enterprises source their raw materials. Himalayan Naturals have also provided

them with training on specific tasks like collection, charring, grinding, binding, briquette making and packaging.

15.3.5 Delivery options

The managing director in consultation with the marketing and production directors chooses the delivery options. Besides delivering the products to retail stores and distributors using its own delivery vehicles, not many alternatives exist, because most consumers are located in urban areas while the producers are located in rural areas. As the business transaction volume is relatively small at present, there has been no need to consider alternatives such as assigning a wholesaler/dealer to cover one area. Another alternative would be for the community enterprises who supply the briquettes to Himalayan Naturals to deliver their products directly to the stores. However, quality assurance must first be ensured for this to be an option.

Figure 15.3 Organisational structure of Himalayan Naturals



15.3.6 Customer research

The initial customer research was carried out by the managing director. He designed the packaging materials with different pictures depicting the different uses of the briquettes for heating, cooking and massaging. He also worked on designing the website and social media. Currently, customer research, marketing and promotion are shared between the partnerships and promotion director and the managing director. The managing director focuses on reaching out to existing business contacts and meeting potential customers to negotiate and finalise contracts. The director of partnerships and promotion plays a more active role in reaching out to new customers and promoting the company's online presence.

While the managing director and other directors have participated in strategic meetings, the company staff have attended trade fairs and expositions to showcase their products. The managing director has also visited companies and participated in relevant trade fairs, sometimes at international level, which has been useful for enriching his knowledge of technology and services for expanding the consumer base. The directors have been engaging in social media, responding to customer feedback and organising demonstration kiosks in urban market centres.



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Burning of Himalayan Naturals briquettes using a clay stove at one of the demonstration kiosks in Kathmandu

At the start of the business the company developed some accessories such as stoves and tripods to meet different types of customer demand. Since then, the managing director has been involved in developing other accessories to drive customer demand for the product. Together with the technology coordinator he has designed a stove that can control airflow and which has given the users control over the rate of burning. To improve initial ignition of the briquettes, research is ongoing to develop complementary products such as ignition gel. The managing director has been pursuing development partners, technology developers and suppliers to collaborate on research and development for these types of products.

While the current briquette size is suitable for household use, there is scope to upgrade the products (pellets, briquettes) and accessories for market expansion especially to commercial users such as restaurants. The managing director visited China and India in 2014 to explore larger production units and technologies for large-scale production of briquettes.

15.4 How has Himalayan Naturals overcome key challenges?

15.4.1 Challenges to do with the value proposition

In these early stages of the charcoal-briquette business, the industry faces several challenges including political instability and the weak enforcement of laws and policies, affecting governance and increasing transaction costs. However, it has also faced specific challenges, such as raw material availability, the undeveloped and seasonal nature of market, inadequate financial access, and insufficient and under-developed infrastructure and technology. From the beginning, the charcoal business has addressed specific challenges to increase demand, source raw materials for briquette production, and develop optimal financial access and technology.

During the initial stage of the briquette business, ANSAB analysis identified a viable market opportunity to sell briquettes to the urban middle and upper classes and organised demonstrations in kiosks to build awareness of the product and its uses among biomass and LPG consumers in Kathmandu. Charcoal briquettes have now to a large extent replaced the use of wood charcoal for baby massaging in Kathmandu.

The production enterprises source their raw materials directly from the CFUGs. The partnerships developed with the CFUGs have resolved the challenge of raw material scarcity for briquette production. As the market has increased another challenge for Himalayan Naturals has been getting a large-enough supply of briquettes from the production enterprises due to the labour-intensive nature of production system. Several changes were introduced by advisory partner ANSAB to the traditional briquette-making practices and technologies, such as the improvement of grinders, adjustment of the ratios of charcoal, clay and binder, and the introduction of new mixer machines. These changes have helped to improve quality and efficiency for mass production. Furthermore, maintaining stock levels in the warehouse has optimised briquette production at community level in different seasons, helping to address the seasonal nature of the business.

The business has faced a major challenge related to access to finance, as there are no or very limited financial products available from the bank or financial institutions

in this subsector or for enterprises of its nature. Because community groups are part owners, it has been difficult to get enough collateral to take out a large loan. In addition, the individual members in the group entity are not capable of making a large investment. Although it is not possible to obtain enough investment at the community level, the good relationship of the company with the community CFUG members and the production enterprises and a clear ownership and benefit-sharing mechanism was helpful in generating enough finance to establish the production enterprises. Furthermore, the partnership between Himalayan Naturals with ANSAB and other development programmes has been helpful in accessing funding for developing infrastructure and building capacity with the communities.

15.4.2 Overcoming legal challenges to do with resource access

All the CFUGs that Himalayan Naturals and the community production enterprises source their raw materials from have secure tenure rights to their community forests. Resource access has been secured through the establishment of partnerships with the CFUGs. To ensure the continuous sustainable sourcing of raw materials, Himalayan Naturals has assisted the CFUGs in revising their operational plans for the rotational harvesting of the shrubs in the community forests. This has been facilitated through the formation of a monitoring committee involving representatives from the CFUGs and the enterprises.

15.4.3 Overcoming ownership and benefit-sharing challenges

From the start, Himalayan Naturals was developed as a lead firm with a clear ownership and benefit-sharing model for the communities and private sector involved in the chain. The community-based enterprises produce and sell briquettes to Himalayan Naturals, which sells the products to the urban market, generating revenue. Unit fees for the actors involved in each activity of the chain have been fixed and provided accordingly. Furthermore, there is an innovative provision for an automatic increase in shares for the supplier communities according to their total supply of briquettes. This structure has helped increased participation and as yet there have been no issues regarding ownership and benefit sharing.

15.4.4 Overcoming labour challenges

The clear ownership structure and benefit-sharing mechanism has helped to increase motivation among the community members to engage in harvesting raw materials, charring, briquette production and packaging at the local level. This has solved the issue of labour for production. For marketing the products, the company has dedicated personnel. Furthermore, to improve labour capacity in terms of product quality and consistency, with support from ANSAB the company has provided onsite training and technical assistance. There is also random quality testing of the products.

Regarding infrastructure, the areas where the briquette-producing enterprises are located have access to road and means of transport. There is also a warehouse for the maintenance of stock because of the seasonal nature of the business. The briquettes are produced during the summer as it is favourable for drying briquettes and also as the communities are less occupied with farming. Stock levels are maintained in the warehouse

ready for the peak consumption period (November to February, when temperatures in Kathmandu are at their coldest during the winter season). The company is also working in partnership with ANSAB and other development partners to access development funding so that they can invest in value-adding machinery for making briquettes.

15.4.5 Overcoming marketing challenges

Among the main marketing challenges are the multiple road checkpoints between the production enterprises at the district level and Kathmandu. These are transport verifications that vehicles have to pass. The government checkpoint system has been designed to control illegal harvesting and trade. However, these multiple checkpoints present an additional burden, often increasing the time and cost to the enterprise. The company has addressed this issue by coordinating with the district forest office, whereby the forest authority now seals the transportation vehicle at the point of origin and it is only re-opened at its destination. This has also helped the government to record the movement of the briquettes at district level.

Another main challenge was the undeveloped market. During the initial year of operation, ANSAB carried out extensive awareness-raising and marketing activities, for example by setting-up 40 one-day kiosks throughout Kathmandu to demonstrate the product and its multiple uses, producing appealing packaging for consumers, and creating a network of department stores ready to sell the product in the city. The organisation found that the demonstration booths in the targeted markets/neighbourhoods have had the most success in finding new consumers, showing the multiple uses of briquettes to the residents, disseminating marketing materials, providing a list of local retailers, and answering the public's questions. It is estimated that these efforts have increased product awareness among the total population in Kathmandu from a negligible percentage to about one-fifth.

Himalayan Naturals has also had some success in finding customers by showcasing their products at expositions and trade fairs and through social media. Community FM radios were also used for advertising the product. Although not on a large scale, a few development organisations are now using the briquettes to heat their offices; these organisations have learnt about the use of briquettes through expositions, trade fairs and staff networks. Some retailers have also been contacting Himalayan Naturals through social media, especially Facebook. The company has also been working in partnership with national retailers and distributors to move its products into the national market. They have developed distribution agreements, and provided them with credit sales agreements to retain them as customers.

15.5 Key lessons

15.5.1 Keeping down costs

The charcoal-briquette business involves different strategies and activities that have reduced the cost of developing and managing the business. Major strategies have included upgrading production processes and technology at the community level and developing products for commercial customers. Another important strategy was the mobilisation of resources for different activities in partnership with communities and development partners that would

otherwise have been difficult to obtain from private sector investment. This included initial one-time investment in infrastructure, the building where processing takes place, and machinery. Mobilisation of resources was possible once the communities understood the multiple social and environmental benefits of the business, which could be achieved through a one-time investment that was supplemented by the development partners.

At the community level, briquette production (including packaging) is finalised and ready for transportation to market centres. Involving community members in raw materials collection, charring, briquette production and packaging has optimised the number of actors involved in the chain thus reducing the cost of the final product. Furthermore, as the community members are themselves involved in production activities, it has reduced the amount of time needed for the production enterprises to recruit and train workers. The production enterprises in Sindhupalchok district have built storage facilities at the production sites, so that they do not need to rent land or space for storing char or the finished products.

Several changes made to the traditional charcoal briquette-making practices and technologies have helped to improve the quality and efficiency of mass production. These have included the improvement of grinders, adjustments to the ratio of char to clay, and the delivery of new mixer machines to the production enterprises.

Partnerships with communities, government and development partners have mobilised resources for different activities. For example, the costs of technological upgrades were contributed by ANSAB. Similarly, finance for the storage facilities in Sindhupalchok was provided by ANSAB, the government's Micro-Enterprise Development Programme (MEDEP) and other forestry programmes. Now, Himalayan Naturals has been seeking assistance from development partners and projects for larger production units that require a large upfront cost.

15.5.2 Retaining customers and willingness to pay

The easy handling of the briquettes due to the packaging and accessories has contributed to the success of the product. In addition, the social and environmental values of the business have been major factors for attracting customers and maintaining their willingness to pay. Because the business involves communities with a clear benefit-distribution mechanism and sustainable forest management, some individuals and development organisations, who value social and environmental causes, are using the product.

Currently, any profits go towards paying off running costs including salaries. Himalayan Naturals uses the remaining revenue to repay loans and reinvest in business expansion. Beyond this, any profit that is left is redistributed to the employees and the community members according to their percentage of shares. For example, employees receive 10 per cent and members of the production enterprises and CFUGs receive 20 per cent of the profit. Of this 20 per cent, 75 per cent goes to the individual shareholding members and other 25 per cent goes to the CFUG members. Seventy per cent of the total profit goes to the private investors. The community enterprises themselves coordinate the distribution of the profit to community members, in the presence of the production manager if needed.

15.5.3 Success factors

Having a clear vision for the design of the entire value chain and related development activities has been the main factor for the success of the charcoal-briquette business in Nepal. Activities include the lead firm working with other appropriate actors and stakeholders, the unique community–private partnership with support from the public sector and NGO partners, and strategic analysis and inputs from ANSAB incorporating two decades of participatory action research in the natural resource-based enterprise subsector. All have contributed to the commercial success of the charcoal-briquette business in Nepal, and Figure 15.4 presents the current business model in Nepal. This section discusses other major success factors in more detail.

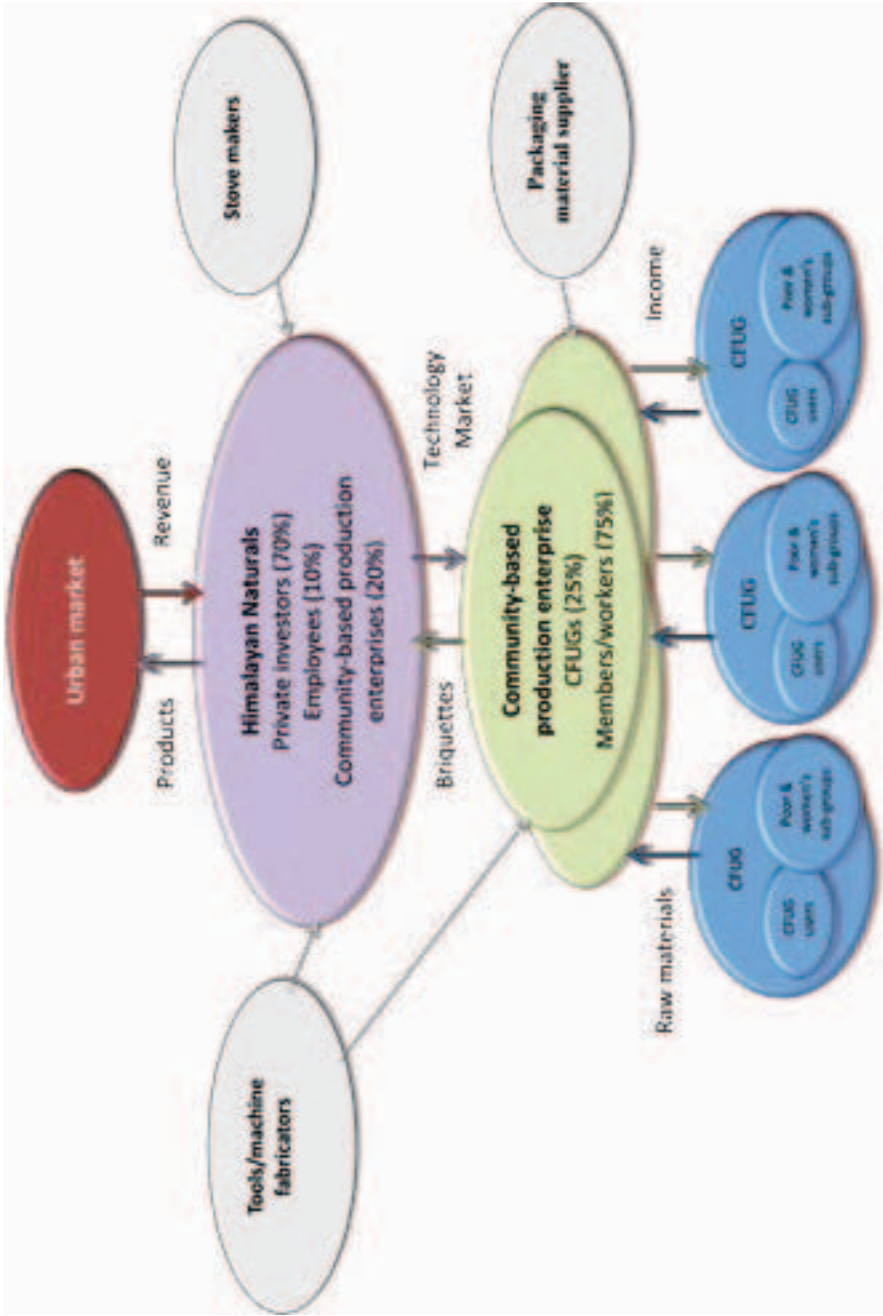
Factors that influence the success of new production and marketing enterprises:

there are a number of important factors which influence the success of any enterprise and determine the context. These include the availability of the natural resources and characteristics of biodiversity (commercial value, production and production capacity, threats); local communities (property rights, production of goods, benefits and services, and institutional and technical capabilities to manage biological resources and enterprises), and enterprise (market, technologies, financial and other business development services). The minimum requirements for the operation of a successful enterprise are presented in Box 15.2. These were taken into consideration while establishing the production enterprises at the community level and the marketing company at national level.

Developing a committed responsible lead firm with clear roles and partnership structure: since its establishment, Himalayan Naturals has had a clearly stated vision, goal and set of practices. Its role as a lead firm has been to consolidate charcoal briquette-producing enterprises at the community level and sell their products to an urban market. It has also been building the capacity of the producers by providing training and introducing improved technologies to improve quality and decrease production costs. Furthermore, it has helped increase the participation of actors at the producer level of the chain while providing the poor, women and marginalised groups with a significant income.

Support from development programmes and agencies for commercialisation, sustainable raw material supply and creating a favourable policy environment: support from organisations such as ANSAB has transformed these charcoal producers into enterprises. It has helped them to organise and build their capacity to sustainably harvest raw materials, develop their enterprises and participate in the value chain. Marketing activities in the initial years have built a market for charcoal briquettes in Kathmandu, and at the same time capacity building helped the production enterprises to meet their consumers' requirements. Capacity-building activities provided to selected members of the local community have improved their leadership qualities and entrepreneurial skills and have helped to initiate enterprise activities at the community level. Different civil society organisations, NGOs, government programmes and business membership organisations including the Federation of Community Forestry Users Nepal (FECOFUN) and the Nepal Briquette Producers Association (NBPA) have played positive roles in facilitating access to critical services, developing a market for business development services (BDS), and improving the policy and regulatory environment in the sector.

Figure 15.4 Organisational structure of Himalayan Naturals



Box 15.2 Minimum requirements for the establishment and running of a successful natural resource-based enterprise

1. Raw material availability: a long-term biologically sustainable supply of the targeted natural product in sufficient quantities is necessary for the enterprise activity to be financially viable.
2. Legal access to and control over the natural resources: collectors should be able to manage natural products harvesting and incorporate the enterprise activity into their overall forest management plans. Enterprise activities must comply with a range of legal requirements.
3. Equitable distribution of benefits: if community members do not feel the benefits are being distributed fairly there will be less incentive to protect the natural resources. The overall raw material source could become threatened as well as the commercial activity and the ecosystem's biodiversity.
4. Appropriate processing technology: is the technology compatible with the prevailing infrastructure and human resource conditions at the chosen location? Conditions to be considered include: transport and storage facilities; equipment/machinery availability; power or fuel required for the processing activity; and technical skills available.
5. Good management: people with knowledge of, and experience with managing proposed activities should be available to run the enterprise or they should be closely involved in its operations.
6. Commercial sustainability (also known as economic or financial viability): commercial sustainability is a simple concept. Sell the product at a price and volume that covers all the costs associated with the natural product enterprise with enough money leftover as profit.
7. Access to capital: start-up capital and ongoing working capital is needed for the enterprise.
8. Available and accessible market for the products: is there a market for the available quantity and quality of product? Is there adequate demand at the expected selling price? Who will buy the products?



Thailand: Doi Chang Coffee Farm (DCCF)

A family-run coffee enterprise in northern Thailand

by Alyssa Cheung

Coffee production is gaining popularity in northern Thailand and there is an increasingly competitive and international market for high-quality Arabica coffee. This case study explores an emerging coffee enterprise, Doi Chang Coffee Farm (DCCF) in the mountains of northern Thailand. Run by an ethnic minority family, the enterprise cultivates and processes coffee beans in a designated watershed protection forest where rights to land ownership and use have historically been restricted for upland ethnic minority groups. Understanding how a community enterprise like the Doi Chang Coffee Farm is overcoming this challenge is important. Many other communities in the region face similar obstacles and can benefit from the lessons learnt here. Most importantly, this chapter highlights how communities can benefit from their forest resources through proper planning, coordination and cooperation with key external resource people.

16.1 Context in which Doi Chang Coffee Farm operates

This case study explores an emerging family-run Akha¹ coffee enterprise, Doi Chang Coffee Farm (DCCF), in the village of Ban Doi Chang, located in northern Thailand's mountainous Chiang Rai province. The enterprise engages primarily in cultivation and processing of high-quality Arabica coffee beans, which are sold as green beans for domestic consumption and export. Within the village itself there exist over a dozen small-scale, family-run coffee enterprises. A few privately owned, externally controlled, large-scale commercial coffee companies also operate within the village.

DCCF was selected for this case study for several reasons. First, the increasing popularity of coffee production in northern Thailand and the growing market for high-quality Arabica coffee has placed DCCF in the position of entering an increasingly competitive and international market, which has revealed important successes and challenges faced by a growing enterprise.

Second, its location in a designated watershed protection forest in northern Thailand provides an important angle through which to look at the establishment and success of community forest enterprises where rights to land ownership and use are restricted. Ban Doi Chang, like much of northern Thailand, is home to numerous upland ethnic minority groups who have historically lacked Thai citizenship, though many have gained Thai identification cards and citizenship since the 1980s when the Royal Thai Government began setting up development projects in the area to replace widespread opium production with cash crops.

1. The Akha people are an indigenous hill tribe who live in the mountains of Thailand, Burma, Laos and Yunnan Province in China.

Despite receiving citizenship, many people still face restrictions on the use of land and forest resources, which communities still depend on for subsistence and income. This is because forest land is administered by the central government through the Royal Forest Department (RFD), with little to no formal ownership granted to communities. Much of the land is declared as protected areas or national parks and is under strict protection with many restrictions on natural resource usage.

Understanding how a community enterprise overcomes this challenge of limited rights to land and resource ownership and use is important because many other communities in the region face similar obstacles and can benefit from the lessons learnt in this example. Most importantly, however, the case study will highlight how communities can benefit from their forest resources through proper planning, coordination and cooperation with key external resource people.

16.1.1 The enabling environment

Doi Chang Coffee Farm (DCCF) is located in the village cluster of Ban Doi Chang village in Chiang Rai province. The main village cluster in which DCCF is located is Doi Chang, with the other two being Ban Pa Sang and Ban Pha Daeng Lisaw, 5 and 10km away from the main cluster, respectively. The village is approximately 75km from Chiang Rai city, easily accessible by a well-paved road (Roongwong, 2013).

Located at 1100–1700m above sea level, with an average yearly temperature of 18°C, Ban Doi Chang is an ideal place for cultivating high-elevation Arabica coffee. The area experiences three main seasons: winter (November–January), summer (February–April) and rainy (May–October), with temperatures ranging from 8–30°C depending on the season. Much of the village is located on hilly terrain, with slopes ranging between grades of 8–35 per cent. The soil is loam and sandy loam, high in organic matter and allows for adequate drainage. In total, the village area covers approximately 20,000 rai, or 3,200 hectares (European Union, 2010).

The area's topography and abundant rainfall in the rainy season allow most of the agricultural land to be irrigated by stream water flowing down the mountains. Water flowing down from Doi Chang feeds many brooks and streams, in particular the Huai Krai stream, a main year-round water source for the village. Many natural wells of varying sizes are spread across the village and also provide water throughout the year (European Union, 2010).

The village is bordered by Lam Nam Kok National Park and is located in a watershed protection area, in the Mae Suai River watershed, which is a tributary of the Mae Kok River that runs through Chiang Rai province. This classification places the land under the administration of the Department of National Parks, Plants and Wildlife Conservation and the Royal Forestry Department (RFD), meaning that villagers have no legal tenure over the land and face restrictions on land use (ICEM, 2003). However, the forest areas have been divided for various uses in agreement with the villagers and forestry officials. These include a use forest (for villagers to collect non-timber forest products (NTFPs) for personal use), a cemetery forest and a watershed protection forest (6,500 rai). Villagers are not allowed to fell trees in these areas and cannot encroach on these areas for expansion of agricultural land (Roongwong, 2013).



View from the entry point to Ban Doi Chang, overlooking the village

Outside these areas, but still within the village, villagers can use plots for permanent agriculture and living. According to the village headman, the villagers may use this land (including felling of trees) for building, growing crops, raising livestock and other uses, so long as they do not cultivate opium or other illegal drugs. Most people plant fruit trees and Arabica coffee (*caturra*, *catimor* and *catuai* species), their main source of income. Many farmers plant coffee interspersed with various types of fruit and nut trees, including macadamias, longan, peach and cherry blossom, which they use for personal consumption or as seasonal, limited income sources. These primarily agricultural areas do not contain naturally forested areas (except on very steep slopes) as they have been used as areas for cultivating crops for many decades.

Although lacking legal ownership over land, villagers are able to transfer land use informally, under the supervision of the village headman. According to him, any buyers and sellers of land should come to an agreement over the plot boundaries and price before writing a contract that must be signed by the headman. Neither the RFD or government officials are involved in this process, as it is considered informal without any legal transfer of land ownership. There have not been any reported problems so far with this process. Most of the land transactions occur between people already living in the village, although larger companies that are owned by non-community members, namely Wawee and Bluekoff, have also bought land within the village for coffee production (Pisailert C., 2014).

Demographically, the village has seen a number of shifts since its founding in the mid-1850s, though its population has, since the beginning, consisted of a mix of upland ethnic minorities settling in the village from other areas. A group of Hmong are believed to have been the first settlers in the area, followed by a group of Lisu (or Lisaw, another upland ethnic group) from Kengtung in Myanmar in 1915. A few decades later, in the 1960s, a group of Chinese fleeing conflict from the northern border areas were granted permission to settle in Chiang Rai, with some settling in Ban Doi Chang. Families of Akha background, another upland ethnic minority group, then came to settle in the village starting in 1983 and now make up the majority of residents (Roongwong, 2013). Most of the small-scale coffee enterprises are owned and run by Akha families, including Doi Chang Coffee Farm, although a few coffee enterprises are run or being developed by Lahu and Lisumi families in the village, though with little success so far.

The current population of the village consists of approximately 6000 people comprising 750 households, 85 per cent of which are Akha, 12–13 per cent Lisu and 2–3 per cent Chinese. The population is made up of Buddhist and Christians. Nearly 1,000 residents do not hold Thai citizenship, since most have recently emigrated from neighbouring Myanmar (Pisailert C., 2014). Instead, they have either non-Thai nationality identification cards or no form of identification at all. According to the village head, those without Thai identification are not allowed to leave the district unless given special permission from government officials.

Ban Doi Chang has seen a number of infrastructure and quality of life improvements in the past two decades, due in large part to the recent coffee boom. The village has access to electricity (from 1997), running water and in some cases, Internet access (there is an Internet café as well as WiFi at several coffee shops). A paved road, built in the last 10 years, connects the village to Mae Suai town and Chiang Rai city which has greatly increased village access to outside resources and markets, as well as allowing for an influx of tourists to the area (Pisailert C., 2014). There are at least eight guesthouses and four restaurants, along with small shops selling snacks, toiletries and sundries. A healthcare facility exists, though it is poorly equipped. The village has two primary and secondary schools, but otherwise children must go outside of the village to continue their education.

Most of the farmers and enterprise heads have access to a number of knowledge and technological resources. All farmers spoken to for this case study owned cell phones and pick-up trucks or motorbikes, which were used to transport supplies, labour and coffee cherries between their homes, farm and processing facilities. The technology for processing coffee at various stages – wet-processing pulping, hulling, sorting and roasting – ranged greatly: some used second-hand equipment for low-quantity processing while others had high-quality, imported machines able to process coffee in large quantities.

Above the village sits the Chiang Rai Highland Agricultural Research and Development Centre which provides tree and coffee seedlings, technical knowledge and workshops for the community and surrounding areas. Nearby university research centres and staff, from Chiang Mai and Chiang Rai, sometimes come to deliver workshops on agricultural techniques. For questions about financial resources, a representative of the Bank for Agriculture and Agricultural Cooperatives (BAAC) comes to the village fairly regularly (about once a week) and is stationed at the centre of the village.

Previously, like many other upland ethnic groups in northern Thailand, the villagers of Ban Doi Chang cultivated opium until the 1970s, when the Royal Thai Government collaborated with the United Nations to start a 1973 pilot project for crop replacement and community development aimed at replacing opium with other cash crops (Angkasith, 1991). The King's royal project and other development projects like the Thai–German Highland Development Project aided in this effort in the early 1990s and sought to replace illegal opium cultivation with other cash crops such as coffee, tomatoes, ginger, red kidney beans and cabbage. The Thai–German project targeted coffee as the main income-generating crop, as it was seen as having high market potential with rising market prices (McKinnon, 1989). Although the villagers faced many initial challenges with technical knowledge and finding adequate markets to sell their products, a number of factors related to improved leadership



Small store in the village (left) and coffee farmers waiting in line in their pick-up trucks to weigh coffee cherries to be sold

and outside assistance helped transform coffee into a profitable livelihood for the villagers. This development will be discussed in the next section.

Currently, almost everyone living in the village is involved in coffee cultivation or processing. They derive most of their income from coffee-related activities, although some earn money from tourism, guesthouses and selling fruit, macadamia nuts and other crops such as corn. The village headman, coffee enterprise heads and coffee farmers all report an increase in the standard of living since coffee became the main source of income, less than a decade ago. Although no official record of all the coffee produced annually by the village exists, the headman estimates that approximately 2,500 tons of coffee cherries were produced last year on agricultural land in Ban Doi Chang. The number is expected to increase in the next few years as many newly planted coffee trees will reach fruiting age and begin bearing fruit (Pisailert C., 2014).

In all, the ideal biophysical and geographical conditions allow the villagers of Ban Doi Chang to produce a high-quality, high-value crop which has led to an increase in standards of living. The improvement of infrastructure has expanded villagers' access to outside markets and technologies and proximity of the village to neighbouring Myanmar has produced an ample source of extra labour (for better or worse).

16.1.2 The operating environment

The coffee business in Ban Doi Chang has undergone a number of changes in the past twenty years and which has consequently had a significant impact on the current operating environment. From 2001–2011, the existing coffee-processing enterprises were organised into a network. From 2001–2006, the network saw little activity, but from 2006 onwards they began acting more formally as a coffee-planting network selling to the Doi Chaang Coffee Company (DCCC). This would later change in 2011, when an agreement between the planters' group and the DCCC was broken off. The following sections cover the initial formation of the enterprise network and its subsequent dissolution into the current operating environment today.

Formation of Doi Chaang Coffee Company and Doi Chang Coffee Planters' Group,

2001–2011: as mentioned previously, Arabica coffee was first introduced to the village by development projects in the 1980s and 1990s as a cash-crop replacement for opium. Despite its potential as a high-value product, coffee failed to provide substantial income for the villagers, because they lacked the technical knowledge about how to properly cultivate and process the coffee cherries. Additionally, villagers were unaware of the market price of coffee, lacked direct linkages to external markets and were often taken advantage of by middlemen, who bought their coffee far below market price. Only about 25 per cent of the 40 villagers who were part of the coffee piloting project continued to cultivate coffee, with a combined total of 500–600 rai of land, while most other villagers relied on growing and selling other more profitable crops such as chayote and tomatoes to make a living. The farmers who continued to farm coffee maintained small-scale coffee processing operations, using hand-operated machines to process the coffee growing in the village into parchment beans (Pisailert *et al.*, 2014).

The village headman at the time, Ardel, had been doing business outside of the village when he heard that coffee prices (for green beans) were fetching high prices in China and around 70–80 Thai Baht (THB) per kilogramme in Chiang Mai, much more than the THB17–20/kg that the villagers were receiving for their beans at the time. Seeing the potential of coffee and also frustrated at the current situation, he approached an outside businessman, Wicha Promyong, for advice and assistance in 2001. With his experience and connections to outside resources, Wicha helped the village to organise and plan the expansion of the village's coffee-production activities, which included improving cultivation techniques for better-quality coffee as well as finding a way to better link the farmers to the outside markets.

In 2003, Wicha, Ardel and five other founding members (seven people were legally required for this process) registered the Doi Chaang Coffee Company Original Ltd (DCCC) with a start-up capital of around THB300,000 (US\$10,000) (Ritpreecha, 2008).

The purpose of the company was to help consolidate the sales of coffee beans produced in Doi Chang and help the products reach external markets, bypassing middlemen who paid villagers too little for the green beans. This would in turn let the individual coffee-processing groups focus on producing high-quality parchment coffee and guarantee the purchase of their product by the DCCC. A few years after Wicha joined, DCCC also purchased a roasting machine and began roasting its own coffee for domestic sales, while still exporting green beans (Pisailert *et al.*, 2014).

At the start, the company needed initial financial capital for investing in storage facilities, machinery and paying processing groups for their coffee parchment. Similarly, coffee-processing enterprises needed money for investing in processing equipment and facilities to produce higher quantities and better-quality coffee parchment to sell to the Doi Chaang Coffee Company. Although they tried to scrape together enough money from annual sales of coffee and existing assets from the villagers, they did not have enough to properly invest in the company. Even grouping together individual loans of THB150,000 per individual (US\$4,600) was not enough to cover investment costs, so the villagers sought out other alternatives. DCCC managed to secure a large bank loan, but this fell through for unspecified reasons, placing the DCCC in great need of financial capital (Pisailert *et al.*, 2014).

On BAAC's recommendation, in 2006 a group of remaining coffee farmers, most of whom were related to Ardel or close friends, decided to group together their individual processing enterprises and register as an enterprise group, known as the Doi Chang Coffee Planter's Group. This would allow each enterprise head to take out larger loans of about THB3 million/group (US\$92,500) for initial investment. This special arrangement was agreed to by the bank with the condition of a signed agreement between the Doi Chang Coffee Planters' Group and the Doi Chaang Coffee Company stipulating that the company would buy all the parchment (quantity unspecified) produced by the planting group each year at a price of THB100/kg of parchment coffee.

The individual coffee enterprises that made up the Doi Chaang Coffee Company, of which there were 12 in total, were required to have seven members each. The loan of THB3 million (US\$92,500) given to each enterprise group was placed under the responsibility of these seven people. In reality, however, the head of the enterprise group took management responsibility over the money while the other registered members of the enterprise were simply nominal members. Several enterprise heads took advantage of this and formed two groups registered under their names, so that they could receive twice as much money in loans (THB6 million or US\$185,000). For example, the current head of the Doi Chang Coffee Farm, Mr Noppadol Pisailert, registered both Doi Chang Coffee AAA and Merawan under his name. The collateral for the loans, in addition to the signed agreement between the company and the planters' group, needed a Thai identification card and proof of the coffee-enterprise operation (demonstrated by existence of machinery or site for processing) (Pisailert N., 2014).

Each enterprise had their own group of farmers from the village who supplied coffee cherries regularly for processing. Over the years, as the price of coffee rose and Doi Chaang Coffee Company was able to sell more coffee, more villagers recognised the profitability of coffee and began growing the crop and supplying to these enterprises. Each enterprise group as of 2008 had 60–100 farmers supplying to them. Although farmers tended to stick to one enterprise, they sometimes shifted around depending on the capacity of the processing enterprise: enterprise heads communicated with each other and sometimes told farmers to sell elsewhere if they were overcapacity (Pisailert C., 2014).

The planters' group worked with DCCC to help gain European Union and Fairtrade Labelling Organizations International (FLO) geographical indication certification that would help DCCC stay competitive against other coffee brands exported to places such as Europe and North America. DCCC covered the costs of the inspection processes, but needed the group as signatories to receive the certification (Pisailert *et al.*, 2014).

From the beginning of the agreement, the enterprises were asked to lend start-up funds to the company, up to THB1 million (US\$31,000) per enterprise, to cover its initial costs, which DCCC said would later be returned to the enterprises. In the first few years, the enterprise heads sold their coffee parchment to DCCC, though were told that they would only receive credit for their product, with actual payments coming in subsequent years when DCCC was able to make a profit. At first, the enterprise heads agreed to this condition and were still able to cover their running costs and pay the coffee farmers they bought from because of the substantial loan they had received from the bank a few years prior.

However, after 3–4 years, the enterprise heads had not received full payment for their coffee parchment, all of which they had sent to DCCC and were under increasing financial pressure. Their loan money was running low and they still needed to cover operating costs. Although DCCC had covered the cost of interest for bank loans, they deducted this amount from the total money owed to each enterprise.

In addition to the financial disagreements, DCCC and the processing groups had had a few issues with the quality of coffee, addressed through group meetings and reinforcement of the policy that coffee that was below the standards of the company would be rejected.

In 2011, DCCC broke off the agreement with the Doi Chang Coffee Planter's Group and began buying coffee cherries directly from the farmers, instead of only parchment from the processing groups. The details of this dispute are unclear, but the effects of this falling out have changed the operating environment for coffee growers in Ban Doi Chang.

The operating environment, 2011 to present: since severing ties with DCCC, Ban Doi Chang has seen a drastic shift in the coffee business environment. Doi Chang Coffee Farm is certainly not unique as a producer of green bean or roasted coffee in the village. Approximately half of the enterprises that were once part of the planters' group have continued operations albeit at a smaller scale, as they look for new markets and reconsider their financial situation. Additionally, a number of enterprises that were never part of the planters' group and thus not directly affected by the agreement with DCCC, continue to operate. New enterprises are also springing up: when our research team visited the village in January 2014, four enterprises were in the process of developing facilities and looking for potential customers, with plans to expand into larger operations. Lastly, there are large-scale coffee producers such as Bluekoff, a company owned by an outside investor and DCCC itself, which produces approximately 800–1,000 tons of coffee/year (Doi Chang Coffee Company, 2013).

Despite the high density of coffee-processing enterprises in the village, there is not intense competition between the enterprises, as demand is high for high-quality Arabica coffee and most enterprises are focused on improving the quality of their individual coffee and less concerned about each other's activities.

Similarly, the enterprises do not seem to compete intensely over customers, as the enterprises cater to a wide range of markets both domestically and internationally. The demand for coffee is quite high and many of the enterprises find their customers through personal connections. Information is shared about potential customers or markets between enterprise heads who are relatives or close friends.

Financial loans for villagers in Ban Doi Chang have become more difficult to attain since the falling out between DCCC and the farmer groups. The loans given by the BAAC to the planters' group enterprises have not been paid back fully yet and according to the farmers, the bank is reluctant to give out similarly large amounts of money for coffee investment. Some of those looking for loans have turned to other banks which offer much less money and enforce more restrictions on the loans. For the farmers who were once part of the planters' group, they also struggle to secure additional loans and have frequent meetings with the bank to discuss loan payback plans, interest rates and access to further loans.

Due to the success of DCCC and the increase in income it has brought other coffee farmers in the village (up to THB30,000/rai/year or US\$925), almost all of the households in the village have shifted to cultivating coffee, providing an ample supply of coffee cherries for the approximately 11 coffee-processing enterprises now operating in the village (Ritpreecha, 2008). The amount of coffee-cultivated land continues to expand and the supply of cherries is expected to increase, as many of the trees planted in the past few years have matured and are finally beginning to produce fruit. There is not intense competition over coffee-cherry supply. Some enterprises require that the farmers selling to them supply a certain amount to an enterprise and can choose where to sell their surplus cherries, while others such as DCCF have a fixed number of members that supply exclusively to the enterprise. DCCC does not require its farmers to become members; they will buy cherries from farmers as long as the coffee comes from within the village.

In terms of resources, the most limited seem to be water for processing coffee and labour for coffee farms. Because most of the processing operations, as well as many of the villagers, share water that flows from upstream, there are frequent water shortages during the main coffee-harvesting season (November–February). As the total volume of coffee processed increases due to expanded cultivation of the crop, more water will be needed to process the coffee. Already some villagers have expressed concern that often there is not enough water for daily use.

Coffee farmers at the village have also reported great difficulty in finding available waged labour to help harvest coffee during the peak season, since so many people are needed for an ever-expanding area of coffee production. Most of the enterprises who hire longer term, contracted labour have not reported difficulties in finding people to work at the processing facilities.

16.2 About the Doi Chang Coffee Farm as a business

16.2.1 The vision

The coffee enterprise, Doi Chang Coffee Farm, is a family-owned and operated enterprise that aims to produce and sell high-quality, single-origin (coming from a single-known origin), strictly hard bean (grown at high altitude), Arabica coffee beans to domestic and international markets and provide income for the enterprise and its 65 member farmers. At the start, the enterprise supplied only parchment coffee, but now engages in producing green bean coffee for bulk sale, coffee-blossom tea production and small quantities of roasted and bottled cold-brewed coffee for individual consumers. The enterprise also provides other limited services, such as an educational farm tour (for prospective customers) and a newly built guesthouse for visiting customers, aimed at trying to attract the attention and approval of foreign importers, especially those from Korea.

When founded by Noppadol Pisailert in 2006, the enterprise was called Doi Chang Coffee AAA Group (AAA) in Ban Doi Chang. AAA was officially established as a subset of the Doi Chang Coffee Planter's Group, a network of 12 coffee enterprises in the village that supplied parchment coffee to Doi Chang Coffee Company Original Ltd. The legal formation of the AAA enterprise was motivated in large part by the loan deal offered by BAAC as an initial investment for a multi-enterprise coffee business based in Ban Doi Chang.

When the enterprise first began supplying parchment coffee to DCCC, AAA operated by buying coffee cherries from an established group of 7–8 farmers who sold their cherries exclusively to AAA. These farmer enterprises (close family members or friends of Noppadol Pisailert) processed the cherries on site in facilities within the village and subsequently sold all parchment coffee produced to DCCC.

In 2011, the agreement between the DCCC and the Doi Chang Coffee Planters' Group was broken off over claims by the DCCC that the quality of coffee supplied to them was consistently below standard. AAA (and its farmer members), like the other enterprises, was forced to look for new markets and customers to buy their parchment coffee. AAA has since expanded to producing green-bean coffee, as well as some roasted coffee and pre-bottled, cold-brewed coffee for customer sampling.

The enterprise currently uses the name Doi Chang Coffee Farm (DCCF) as its brand name on domestic and exported coffee, although its legal name, used for registration, remains the same (AAA) (see Table 16.1).

Since its foundation, the enterprise has been owned by Noppadol Pisailert and operated primarily by immediate and extended family members living in the village. A few years ago they began employing contracted wage labourers who had emigrated from Myanmar and in 2012 started working with a Korean marketing director, who split her time between working in the village and in Korea, to help expand the business overseas to Korea, where coffee demand is growing rapidly. Currently the full-time staff includes Noppadol Pisailert, his sister, two nieces, his brother-in-law, 12 Burmese labourers and a Korean marketing director, with occasional part-time assistance from other relatives.

In terms of production and profits, in 2006 the enterprise produced less than 50 tons of parchment per year, but has since expanded to around 300 tons of parchment-coffee production in 2013. Because the business is still in an expansion phase and must work to pay back loans, DCCF has not yet turned a profit, though revenues are expected to increase as DCCF is currently engaging with a number of large-scale purchasers.

Table 16.1 Basic information about Doi Chang Coffee Farm

Name of enterprise	Doi Chang Coffee Farm (registered under the name AAA)
Founded	2006
Where	Doi Chang Village, Chiang Rai
Owner	Noppadol Pisailert
Main products	Single-origin, strictly hard-bean Arabica coffee. Mainly parchment coffee but also green beans (wholesale) and small quantities of roasted coffee and bottled cold-brewed coffee. Also coffee-blossom tea.
Production	300 tons of parchment coffee
Number of households supplying to DCCF	65



Coffee at different stages, from ripe cherries on the tree, to being washed and pulped and finally dried and sorted for sale as parchment or green bean coffee

16.2.2 Business inputs

The natural inputs that DCCF deals with directly are primarily ripe coffee cherries, sourced from Ban Doi Chang, and naturally flowing water to carry out wet-processing of the cherries. To ensure quality and guarantee single-origin coffee, DCCF requires that the coffee cherries must come from trees on the village land and must be grown above an altitude of 1,200m. An initial inspection of the farm is done by DCCF before the farmer can join the enterprise. Most farmers plant their coffee trees intermixed with fruit trees that provide shade, a source of food or occasionally extra income. DCCF places great emphasis on quality of cherries and asks its farmers to only harvest ripe cherries. During the harvest season (November–February), the farmers bring in large bags of coffee cherries by motorcycle or pick-up truck in the evening to the processing facility. The cherries must be processed within 24 hours of harvest.

This arrangement is made possible by an agreement between the farmers and DCCF. As members of the enterprise, they consent to a verbal agreement that they will only supply to DCCF and abide by the rules of producing and harvesting high-quality, ripe, village-sourced Arabica coffee cherries. In exchange, they are guaranteed an above-minimum price for their cherries, on-time payments and a guaranteed buyer for all the cherries they supply. There is no legal contract signed, as this relationship is trust-based; many of the farmers who supply to DCCF are either related to Noppadol or are close friends and have sold cherries to Noppadol for many years.

The water used by DCCF comes naturally from the mountain above the facility and is routed using PVC pipes that the facility installed at a cost of THB50–60,000. The waste water is then flushed below the facility to a settling pond where it is treated before being released into the stream below the facility.

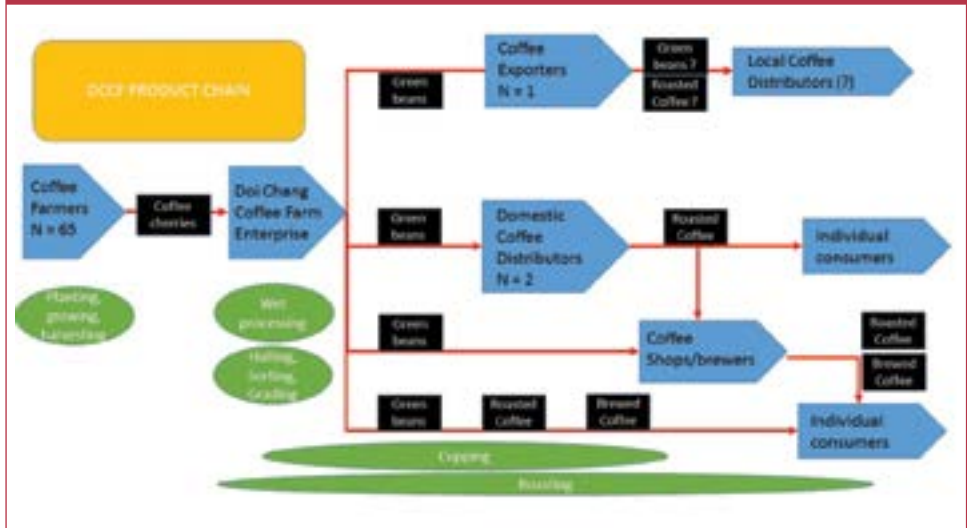
The enterprise currently has limited access to further financial credit. Noppadol, in addition to the THB6 million in loans he received after registering two coffee enterprises to his name, registered a third enterprise a few years later, under the name Roop Ruwam, which enabled him to take out an additional amount of money, though the amount was not specified. With all of the loan money invested in the facility and paying farmers, the enterprise must rely on money from coffee sold to continue expansion activities. BAAC, which offered the initial loans to the planters' group, will not lend more money to the enterprise groups because they still must pay off their previous loans. Noppadol reports that he is looking to agree loans with another farmer cooperative bank, which Noppadol does through formal meetings as well as informally by playing golf with bank officials.

16.2.3 Main activities

DCCF was registered officially as an enterprise in 2006. In 2012, they completed registration to export their coffee as AAA Doi Chang Coffee Farm. Both of these registrations were completed under the name of Noppadol Pisailert, the owner.

The main activities that the enterprise is involved in occur primarily in Ban Doi Chang. The coffee farmers cultivate the coffee on land in the village cluster and transport the coffee cherries to the processing facility of DCCF, located at the top of the village. There are 65 farmer households in total that sell their cherries to the enterprise.

Figure 16.1 Value chain map for Doi Chang Coffee Farm



Once the cherries reach the processing facility, they are washed, processed, dried and stored as parchment coffee in a warehouse on site. For processing to green beans, the parchment coffee is hulled, sorted by machine and hand, and graded on site. In charge of the processing facility are Noppadol and his sister, Miyo, chief executive officer of DCCF and manager of the day-to-day operations of the enterprise. The site employs 12 long-term, contracted Burmese Tai-Yai labourers, who live in Ban Doi Chang with their families. DCCF officially registers them every year with the Department of Labour Protection and Welfare. They work on the processing site, doing routine maintenance, operating the machinery, transporting beans, drying them and storing them. Miyo, her two sisters and Jamby (director of marketing) help unload the coffee cherries delivered by the farmers into the initial soaking tanks and also record the data into a logbook kept by Miyo.

At the processing site there is also a small open-air coffee shop, where visitors and tourists can sit and try coffee produced by the processing facility. This is run by Jamby, Miyo and her two nieces, as well as other family members who help out from time to time.

In June 2014, DCCF opened up a small office and coffee shop in Suwon, South Korea. The office is responsible for handling operations in Korea, including importing of DCCF coffee from Thailand, roasting and sales within Korea. Jamby spends part of her time there, especially during the initial phase of setting up, though it is not clear who or how many will be employed as full-time staff at the office and coffee shop.

16.2.4 Technology and skills

The business carries out the following activities:

- Buying and wet processing of coffee cherries into parchment coffee,
- Storage of parchment coffee,
- Hulling, sorting and grading of parchment coffee into green beans,

- Marketing of green beans to domestic and international customers, in bulk and smaller individual sales (including shipping samples),
- Roasting and packaging coffee,
- Brewing coffee in small quantities for visitors and potential buyers, and
- Holding limited farm tours for potential customers (Korea Barista School).

Buying and wet processing of coffee cherries into parchment coffee: every evening, member farmers bring ripe coffee cherries picked that day to the DCCF processing facility, where the coffee cherries are unloaded into a large soaking tank for 24 hours. This also helps clean the cherries and filter out unwanted floating cherries and unwanted debris like sticks and stones.

During the harvest season, farmers come every day to unload their cherries. The daily quantity varies at different points in the harvest season and depending on the weather, but the annual quantity is upwards of 1,000 tons of coffee cherries.

After soaking, the cherries are put through DCCF's Penagos pulping machine, a high-quality and large-capacity machine they have had for a few years that helps to remove the fleshy outer layer surrounding the coffee bean. The pulped cherries are left to ferment in water for a day, before the remaining mucilage layer is washed off and the cherries are left to dry.

The de-pulped cherries (now known as parchment coffee beans) are sundried on tarpaulins laid out on cement, on site, for several days until they reach 7–11 per cent moisture. They are then packed and stored in a large warehouse that is also on site.

Storage of parchment coffee: the warehouse on site stores parchment coffee until it is processed into green beans, depending on what a customer orders.

Hulling, sorting and grading of parchment coffee into green beans: when customers order green beans, the parchment coffee is brought to the hulling machine which removes the parchment layer from the coffee. The resulting green beans are fed through a high-quality sorter, which sorts beans based on colour and defects. The machine is a Korean-manufactured SPARK Series made by Daewon GSI, worth THB1–2 million and capable of sorting 1–3 tons of beans per hour (tradeKorea.com, 2015). DCCF acquired the machine on a long-term borrowing agreement through Jamby, who contacted the company and asked to receive the machine in advance, with a promise to pay once DCCF had made enough money to purchase it. The good beans are then sorted by hand, to remove any remaining defective beans and to sort them into different grades: A, AA, peaberry and 'aged' or vintage coffee beans.² DCCF employs about 3–10 waged workers to help hand sort the beans.

Marketing of green beans to domestic and international customers in bulk and smaller individual sales (including shipping samples): DCCF markets its beans using

2. Coffee is typically graded according to the size and quality of the coffee bean. Peaberry coffee is unique for its round shape and is generally more expensive because it is found in smaller quantities in a coffee crop. AA is generally considered better than A coffee.

personal and business connections, advertising at coffee or food-related expositions and fairs (domestically and abroad), through social media and by letting customers try their coffee at their on-site coffee shop. They also rely on word of mouth from their existing customers to attract new customers.

Once the green beans are separated into different grades they are shipped (100–120kg of green beans) to potential buyers for testing. Individual buyers that buy in smaller quantities come to collect the beans themselves.

Roasting and packaging coffee: DCCF is beginning to sell its own roasted coffee, though the enterprise does not currently own any roasting equipment and must rely on outside roasters for production. For roasted coffee sold at the shop, DCCF relies on enterprises within the village or roasters in Chiang Rai town to help roast their coffee. They roast only small quantities for sale and use at the on-site café. The branding and packaging, which was designed by Jamby, has mostly been done in the village, though they have begun outsourcing printing and packaging as the demand for their roasted coffee has risen. The roasted coffee distributed by the DCCF Korea office and coffee shop is roasted in Korea by roasters that cater to local tastes.

Brewing coffee in small quantities for visitors and potential buyers: DCCF's coffee shops in Ban Doi Chang and Korea serve different coffee beverages made from DCCF coffee. The café in the village uses a high-end espresso machine (worth about THB100,000) to brew coffee for customers. Most of the customers are tourists and potential buyers who come to visit the enterprise's processing farm and site.

Holding limited farm tours for potential customers (Korea Barista School): DCCF has hosted two educational tours for Korean coffee roasters and experts, contacted through Jamby. The Korean Barista School programme is held to advertise DCCF coffee and introduce it to the Korean market, by showcasing the farms, facilities and processes that are part of producing DCCF coffee. The last tour happened in January 2014 and hosted 15 Korean roasters for five days: three days in the village and two in Chiang Mai.

16.2.5 Business partners

The main business partner that DCCF works with is KPB Marketing International Ltd, an organisation that purchase DCCF beans, roasts and markets the coffee and works to redistribute profits for DCCF. Beginning in mid-2013, the company also sourced beans to Golden Future Trading, a Hong Kong-based international coffee trader and distributor of high-quality coffee. On a smaller scale, DCCF also works with independent, small-scale roasters for producing roasted coffee because the enterprise does not currently own roasting machinery.

KPB Marketing International Ltd approached DCCF as a business partner after meeting at a food exposition in Thailand in 2013. After discussions between Noppadol, Miyo and KPB, they agreed that DCCF would sell its beans to KPB, which would transport, roast and market the beans and give back a portion of the profits directly to the DCCF farmers.

Independent roasters in Thailand and in Korea produce roasted coffee that is sold under the DCCF brand Adopa coffee, the Akha name of Noppadol. The roasters in Thailand are based in Doi Chang village, chosen for convenience and proximity, and in Chiang Rai town, chosen because they are generally more experienced and produce higher-quality roasted beans.

16.2.6 Customer groups and product types

The business caters to a wide variety of customer groups:

- Domestic distributors looking for bulk quantities of high-quality, high-value coffee,
- International distributors looking for bulk quantities of high-quality, high-value coffee,
- Independent roasters and coffee shops (Thailand and Korea), and
- Individual consumers (Thailand and Korea).

The products produced are:

- Green bean coffee of four grades/types: A, AA, peaberry and 'aged' or vintage coffee beans,
- Roasted, unground coffee of four grades/types: A, AA, peaberry and 'aged' or vintage coffee beans,
- Brewed coffee beverages, and
- Pre-bottled, cold-brewed coffee ('Dutch coffee').

The large-scale distributors, both domestically and internationally, purchase green-bean coffee that is ready for roasting. The Thai-based distributors are located in Bangkok, while the international distributor is located in Hong Kong. The companies purchase the beans on a yearly contract, the terms of purchase and price of the beans that DCCF will sell to the customer. Before purchasing, DCCF offers to send a sample of the beans to the company for testing. Alternatively, the company can visit the processing site and warehouse to inspect the beans themselves. If the company is satisfied, then DCCF will send the beans to the company. DCCF ships the green beans on a monthly basis usually.

Independent roasters and coffee shops look to buy green beans or roasted coffee in bulk, though still less than the larger distributors. Usually they learn of DCCF by word of mouth and visit the site to speak with Miyo or Noppadol and test the coffee. If they are located nearby, they will collect the beans, or else beans can be shipped by DCCF using an outside shipping service.

The rest of the roasted coffee, freshly brewed coffee and cold-brewed coffee, are aimed at serving individual consumers, but also allow any potential customers who visit DCCF to try the coffee. The brewed coffee and roasted coffee can be purchased at the DCCF café in Ban Doi Chang as well as at the Korea office and in a few coffee shops supplying DCCF coffee in Korea. DCCF is currently forming partnerships with cafés in Korea to serve and sell their coffee.

16.2.7 Differentiation in the market place

Doi Chang Coffee Farm places the most emphasis on producing high-quality, single-origin, strictly hard-bean coffee beans to distinguish their product from others on the market. The climate, geography and natural features of the village contribute to producing top-quality

Arabica coffee with a unique, appealing taste. Because Doi Chaang Coffee Company has helped build up the village's reputation as a 'world-class coffee producer in Thailand and internationally, it has helped other enterprises capitalise on this fame as a major marketing tool. DCCF relies on the quality of its product, vouched by customers and coffee experts who taste their coffee, to bring in new customers.

DCCF has also sent its coffee to be laboratory tested for certain qualities, a strong selling point to larger companies buying in bulk. The enterprise practices full transparency in their process and encourages potential companies and customers to visit the farm and facility to get a better understanding of their operations. The samples sent for laboratory testing are tracked and recorded for the quantity, moisture level, date inspected and person responsible for the latest inspection of all bags of coffee that are shipped out, providing a transparent and convenient system of accountability for ensuring product quality (Pisailert M., 2014).

As part of its marketing strategy, DCCF emphasises a unique background story to its product. It introduces the community behind the coffee: disadvantaged, poor Akha farmers who once planted opium, but now, due to determination and hard work, produce high-quality coffee to increase the standards of living for themselves and their community. Although not a novel situation in northern Thailand, the story contains emotional appeal especially among the socio-environmentally minded, emphasising the humble origins of the coffee and that buying the coffee is not just for the profit of a few, but for the improvement of a whole community who act as stewards of the environment.

The coffee and coffee products such as cold-brewed, certified 'Dutch coffee' are marketed as specialty products, aimed at consumers who are willing to pay higher prices for limited-supply, top-quality coffee. These products are sold in high-end coffee shops in Korea where willingness and ability to pay are higher among consumers.

To incentivise purchases, DCCF offers discounts to customers who buy coffee in bulk, ranging from 10 to 20 per cent for orders reaching up to 100kg and larger discounts for companies buying several tons of coffee per month.

16.3 Who controls the Doi Chang Coffee Farm business?

16.3.1 Origin of the value proposition

The idea for the business of processing coffee cherries into parchment coffee has evolved into more sophisticated business plans since coffee was first introduced to Ban Doi Chang in the 1980s and 1990s, beginning with the Thai–German Highland Development project. Noppadol continued to try and sell coffee from his family's farm, but it was not until 2006 when the village coffee planters' group was established that Noppadol formally registered the enterprise after discussions with the other coffee-processing enterprises, the village headman at the time (Ardel), the Doi Chaang Coffee Company and the BAAC. The business proposition of buying coffee cherries and processing them into parchment coffee for sale to the DCCC was devised by these individuals and groups (Pisailert C., 2014).

The decision was arrived at after discussion within the village of the heads of the coffee enterprises, as well as negotiations with the bank which were initiated and facilitated by Wicha and Ardel. Noppadol officially registered the enterprise with the signatures of seven other individuals and he and two other enterprise heads signed an agreement on behalf of the planters' group with the DCCC to sell their parchment coffee to DCCC at a set price of THB100/kg (US\$3/kg).

After the agreement ended between the planters' group and the DCCC in 2011, it was Noppadol who proposed to continue with the business and reach out to new customers while also expanding the business to include products beyond parchment coffee. At this point, the business needed to recruit additional help from family members and outside labour to continue operations. Miyo and Noppadol have worked together to bring in new people in the operation, including some family members and current marketing director Jamby, a friend of Miyo, who has been instrumental in growing the business and expanding its customer-base and conducting marketing activities.

16.3.2 Control over forest resource access

Department of National Parks, Plants and Wildlife Conservation is responsible for determining which protected areas of land and forest villagers may use and how they use it. The Royal Forest Department is responsible for administering other areas classified as forest. The laws governing use of the land in Ban Doi Chang are:

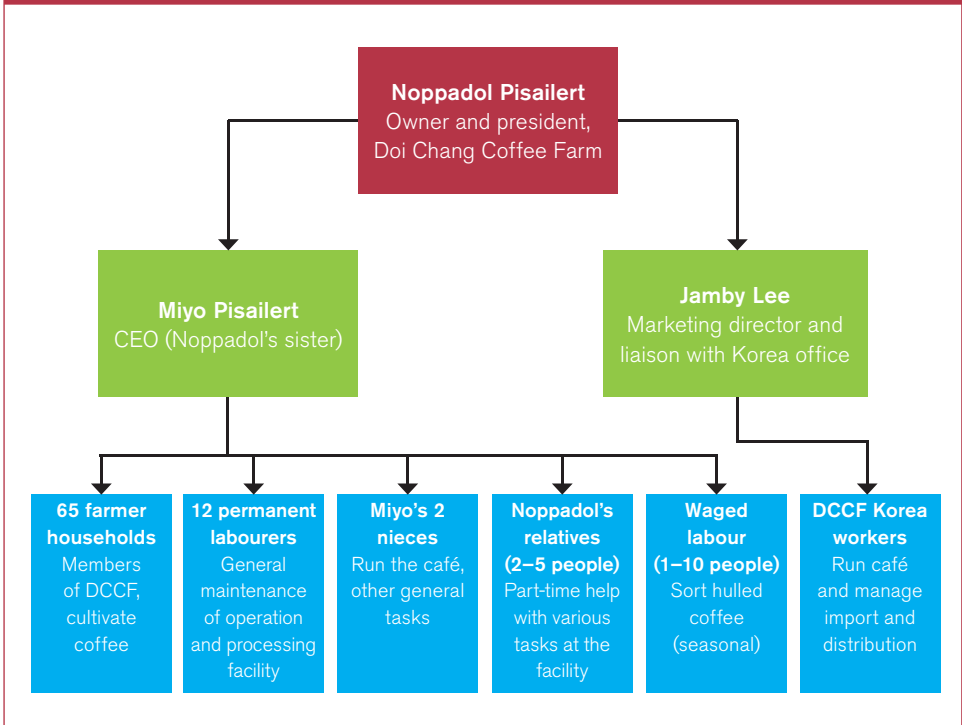
- **Forest Act (1994)** which covers forest clearing and non-timber forest product collection and use,
- **National Forest Reserve Act (1964)** which covers determination of national reserved forest and maintenance of those areas, and
- **National Park Act (1961)** which covers the determination of national parks and how they are protected and maintained (FAO, 2009b).

Through an agreement made with the RFD in 1968, the villagers have demarcated areas under the control of their village. These areas lie outside the protected area but fall within the domain of forest use, protection and agricultural land use by the village. Villagers are required to stay within these boundaries and may not expand activities beyond these areas, especially because the surrounding forest has been declared a Watershed Protection Forest. Villagers are not allowed to cut down trees or conduct commercial activities in the protection forest; nonetheless, some villagers have in the past felled trees for increasing farm land and as a result received warnings and fines (Pisailert C., 2014).

16.3.3 Control of the business

Noppadol Pisailert is the sole legal owner of the business and makes the final decisions about sales and purchases for the enterprise. Ownership formally belongs to him, though Miyo and Jamby play a role in decision making and management of the company, mostly through discussions as a group. The organisational structure of the business is shown in Figure 16.2.

Figure 16.2 Organisational structure of DCCF



Note: DCCF organisational diagram: arrows indicate management

Noppadol is mostly involved in contracts with customers, large purchases or investments, loans and negotiations with the bank and other decisions that impact the direction of the business. As a businessman with many years of experience and a number of contacts in the region, Noppadol has the most business experience in the enterprise.

Miyo oversees daily operations of the business and is the main contact person for existing and potential customers. Her other roles include, but are not limited to, monitoring the coffee processing activities, managing record-keeping of cherry purchases from farmers, ensuring quality of the coffee at all stages through inspection, and monitoring deliveries of parchment to buyers. She also maintains contact with farmers on a daily basis when they sell the beans and occasionally travels with Jamby to expositions and fairs to publicise their coffee. Neither Miyo or Jamby had any background in the coffee business and learnt most of their skills while working for DCCF. Both speak a limited amount of English, which helps them communicate with foreign customers.

Jamby oversees the branding, packaging and marketing of the coffee products, the DCCF Korea office and café, and running coffee tours for visiting customers from Korea. Together with Miyo she manages the social media (primarily Facebook)³ and online presence of the company.

3. See www.facebook.com/DOICHANGCOFFEEFARM

The financial capital comes from revenues and loans; Noppadol has invested in purchasing land, constructing facilities and a café and purchasing machinery to build up the enterprise. Benefits, incomes and wages are decided by Noppadol, who discusses decisions with Miyo. The permanent labourers receive a fixed salary and seasonal wage workers receive an hourly wage, while the 65 farmers receive a guaranteed price of THB20/kg (US\$0.61/kg) of coffee cherries. It is unclear how Noppadol's extended family members received benefits – except through the sale of their own enterprise products.

Additionally, DCCF has entered into a partnership with KPB International Marketing Ltd. Half of the profits KPB receives from the coffee will be given to the KPB Foundation, while the other half will be divided into three equal parts, with one part going to the DCCF farmers. This benefit sharing was decided by KPB, with consent from Noppadol and the farmers.

Noppadol, Miyo, Jamby and Miyo's two nieces do not receive fixed or waged salaries. Rather, benefits are shared between them as a family/group (including Jamby) with costs of living such as housing, food, transport and travel costs covered by Noppadol. The rest of the profit goes towards paying back loans and further investment in the company. This was decided informally and follows the family-oriented way of living and working that Miyo and Noppadol claim are characteristic of Akha families.

16.3.4 Staff selection and roles

Decision making within the organisation is shared between Noppadol, Miyo and in part by Jamby. Noppadol makes the final decisions, though Miyo and Jamby are more familiar with the daily needs of the enterprise and what help and who is needed to meet those needs.

Most of the staff recruitment is informal, especially because most employees are family members who have finished school and are currently living in the village. They are trained to do small specific tasks like operating machines or using the espresso machine to brew coffee for customers in the café.

The 12 permanent non-Thai workers were recruited and registered more formally through the Labour Department of Thailand and have been working for DCCF for 3–4 years now. DCCF has signed a labour contract with them outlining the duration of their work, which can be renewed every year, and their salary. They are given a place to live with their families in the village, though other expenses they must cover on their own. One man leads the group and coordinates daily tasks with Miyo. They receive basic training on how to carry out tasks and operate machinery, but otherwise their responsibilities are general maintenance and do not require much training. They are allowed to negotiate with Miyo and Noppadol their terms for working, but so far the labourers have not tried to yet.

The staff for the DCCF Korea office and café are recruited by Jamby because she is familiar with the language and country, though her decisions receive approval from Miyo and Noppadol.

16.3.5 Delivery options

Miyo and Noppadol are responsible for choosing the delivery options, which are decided in coordination with the customers. Many customers purchase coffee in person, although DCCF ships its coffee both domestically and internationally to customers who buy in bulk or who have requested shipments on a regular basis. Usually this is coordinated with the company or customer that is buying, with costs covered by the customer. Miyo and Noppadol decide through discussion with the customer. If the coffee beans must be shipped to Korea, Jamby helps to coordinate.

Not many alternatives exist besides shipping, because delivery must happen by shipment since most of the customers are located outside of the village.

16.3.6 Customer research

Jamby and Miyo are responsible for researching customers' needs and preferences. With a background in photography and design, Jamby has helped design the packaging and worked on the branding of DCCF products, including its logo and website/social media design. Miyo is the main contact person between customers and DCCF, communicating frequently and answering customer's queries. With customers from Korea, Jamby is the main contact person who works with local baristas.

Customers who buy DCCF coffee are primarily those who can afford higher-priced, high-quality coffee. With the wide variety of high-quality Arabica coffees available, DCCF seeks to differentiate its coffee through a number of means:

- Producing a variety of products beyond just green beans,
- Giving a story to its coffee which adds an element of novelty and appeals to the socially-conscious consumer, and
- Producing distinctive, high-quality coffee that satisfies its customers and maintaining a positive, transparent relationship with customers.

Currently DCCF is looking to roast coffee on-site for distribution in the area and within Thailand. They are also pursuing Fair Trade certification with KPB. However, DCCF claims that its main focus remains producing high-quality coffee and it will invest in improving existing processing activities. DCCF is hoping to obtain better machinery in the future, which can increase processing quality and capacity as the enterprise continues to grow.

Noppadol, Miyo and Jamby are the main players responsible for promoting the product to potential customers. Noppadol focuses on reaching out to existing business connections and meeting with potential customers to negotiate and finalise contracts. Miyo and Jamby play a more active role in engaging in social media and promoting DCCF's online presence. They also attend expos and fairs to showcase their coffee, which has resulted in two successful partnerships (Golden Futures Trading and KPB). As they expand their DCCF office to Korea, both are visiting roasters and coffee shops to learn more about the coffee environment in Korea and form partnerships with cafés who will supply their coffee.

16.4 How has the Doi Chang Coffee Farm overcome key challenges?

16.4.1 Challenges to do with the value proposition

The biggest challenge DCCF has dealt with has been ending their agreement with DCCC, which left DCCF without a place to sell its coffee and a need to redesign their business and find new customers. The conflict was never fully resolved and tensions still exist between DCCF and DCCC. However, DCCF has managed to find new customers.

Another consequence of the conflict was that DCCC began purchasing cherries directly from farmers. Many farmers reported that selling to DCCC was easier because they could sell their cherries without any restrictions on quality of beans and most cherries were accepted. As a result, many farmers started to sell to DCCC, often preferring them over the smaller enterprises. DCCF, however, managed to retain its member farmers and receive supplies of high-quality cherries. Its close relationship with its farmer members and minimum guaranteed price with on-time payments ensures a steady supply of coffee.

16.4.2 Overcoming legal challenges to do with resource access

DCCF continues to struggle with access to financial capital since the 2011 DCCC conflict. Noppadol is still in debt and BAAC is reluctant to loan more money for further investment. Noppadol continues to meet with BAAC regularly and negotiate interest rates and further loan opportunities, but has not yet been successful in receiving any additional loans.

In the meantime, DCCF has sought other ways of improving their business and acquiring new machinery. This includes a negotiation with a Korean manufacturer, which let DCCF use a coffee-sorter machine worth several million THB, on the condition that DCCF would begin to pay for the machine once it turned a profit. DCCF hopes that with the machine it can increase its yield and improve the quality of its coffee to boost sales.

16.4.3 Overcoming ownership and benefit-sharing challenges

Since the DCCC conflict, there have not been any major ownership or benefit-sharing issues within the company. The benefit-sharing deal worked out with DCCC, in which DCCF would receive THB 100/kg compensation for all of its parchment sold, was never fulfilled by DCCC or resolved by either party.

The fact that DCCF is run by a cohesive family with benefits going to the family as a unit, combined with shared decision-making power and an understanding of roles and responsibilities within the enterprise, has helped to reduce conflict within DCCF.

16.4.4 Overcoming labour challenges

DCCF has managed to avoid labour shortages, especially during peak coffee harvesting season, by maintaining a full-time, long-term and legally registered staff of permanent labourers, with the approval and help of the Department of Labour. Other family members living in the village will occasionally help with small tasks if additional assistance is needed.

The enterprise has yet to encounter any major infrastructure challenges. DCCF has ample access to electricity, water, well-paved roads and means of transport and has not faced any issues related this. The village headman and local government are responsible for overseeing the development and maintenance of these systems of infrastructure.

Any potential issues would be reported to and addressed by the village headman, who is Noppadol's brother and also a coffee-enterprise head. The headman would coordinate with the other enterprises in the village and the local sub-district government for help with infrastructure improvement or repair.

16.4.5 Overcoming delivery challenges

The greatest delivery challenge has been in trying to ensure and monitor the quality of the beans as they are transported to customers. DCCF encountered a problem a year or two ago in which it sent a monthly shipment to a customer, only to receive a complaint that the beans received had a moisture content of higher than 7.5 per cent, the maximum moisture that the beans should have to ensure quality and readiness for roasting.

Because DCCF lacked a detailed system for documenting, inventorying and tracking its coffee shipments, it had no way to prove that the issue was the fault of the shipper and not DCCF and had to resend the beans, a loss of several tons of coffee for the enterprise. As a result, DCCF developed a rigorous system of monitoring each bag of coffee, individually labelled and tagged, using an electronic system. DCCF is now able to prove that its coffee is in good condition as it leaves the warehouse, preventing such mishaps and misunderstandings from happening again. DCCF has not reported any other problems with delivery since then.

16.4.6 Overcoming marketing challenges

DCCF has sought certification to ensure the quality and certify the source of their coffee, something that international consumers seek. Although DCCF has sent in coffee samples for laboratory analysis, it has not yet been able to obtain certifications for its coffee. However, in partnership with KPBB, DCCF is seeking the widely-recognised Fair Trade certification which it hopes to obtain next year, in addition to other international certifications that remain unspecified.

Because Doi Chang and DCCF coffee is known for being expensive, high-quality coffee, there have been instances where individuals will buy DCCF coffee, combine it with lower-quality coffee and resell the coffee under the DCCF brand, tarnishing the reputation that DCCF has established. However, customers of DCCF who are close to Noppadol and Miyo call and report this to them if it occurs. DCCF will verify that it is not their coffee and will contact the seller of 'fake' DCCF to discontinue their practice. Though this has happened a few times, it is not common and DCCF has managed to overcome this through building trusting relationships with its customers.

16.5 Key lessons

16.5.1 Keeping down costs

The main successes in keeping down costs include:

- Investing in **contracted, fixed labour**, which allows the enterprise to reduce the amount of time and resources needed to recruit and train new workers, especially during peak season when the village experiences labour shortages. The assistance of family members in the enterprise eliminates the need to pay a fixed salary for additional workers, with earnings being funnelled back into helping to build the enterprise.
- Keeping all **processing activities and storage on site**, reducing the cost and resources needed to transport coffee, labour and machinery between multiple sites. Additionally, DCCF owns its processing and storage facilities and does not need to rent land or space.
- Investing in **high-quality, efficient machinery** for wet processing, sorting and hulling allows DCCF to spend less resources, including water, electricity and time/labour on producing coffee.
- Negotiating **cost-sharing arrangements** with partners and customers so that they help cover costs, such as coffee shipments, which has transferred shipping cost burdens from DCCF to the customers, who arrange and pay for transportation of goods. DCCF has also sought the assistance of KPBB, which has the expertise and resources, to apply for Fair Trade certification, a time-consuming and expensive process.

The main running costs for the enterprise are electricity and labour, which costs DCCF approximately THB25,000/month and THB60,000/month respectively.

16.5.2 Retaining customers and willingness to pay

The enterprise has found that establishing a presence in the international and national coffee scene, primarily through expositions, has been the most effective way of reaching out to new customers. Having the opportunity to interact with potential buyers in person has been key.

Having a knowledgeable outside resource person such as Jamby, who can speak Korean and English and is familiar with the business context in the Korea, has been a key link for expanding DCCF's operations to Korea.

With regards to building willingness to pay, DCCF capitalises on its unique story of a family-run business supplying high-quality coffee that is produced by a hard-working community of upland ethnic minorities, while emphasising its commitment to business transparency and quality. Lastly, the enterprise is seeking certifications that will allow it to compete on the international market, which many international buyers request.

16.5.3 Success factors

The main factors contributing to DCCF's success so far are:

- **Experienced business leadership:** Noppadol's background in business has been key in helping DCCF expand its operations, negotiating business deals and partnerships and helping DCCF establish new customer contracts. He and Miyo make sure that the enterprise follows business regulations (legal registration of labourers and business activities) and stay organised with finances and inventories.
- **Cultivating a feeling of membership between farmers and DCCF:** farmers who sell to DCCF trust that they will receive a fair and on-time payment for their coffee cherries and in turn honour the agreement of supplying high-quality cherries solely to the enterprise, ensuring DCCF a steady supply of raw materials.
- **Active, ongoing promotion of product to potential customers:** the enterprise's ongoing efforts to promote its products has already helped the enterprise to build important relationships, expand its customer base and reach international markets. Although this requires a lot of time, effort and resources, DCCF has benefited greatly from this exposure.
- **Assistance from an external resource person:** while many local businesses get support from NGOs, in this case Jamby's knowledge of photography, design and social media has helped improve the branding and marketing of DCCF's products. She has helped in establishing business relationships with international customers who do not speak Thai, especially because Noppadol and Miyo's English language skills are limited.
- **Focus on quality of a high-value product:** DCCF's main emphasis is on producing coffee of very high-quality, which adds significant value to the product and is a major selling point attracting high-end coffee buyers.

Despite DCCF's successes, the two main risks are a lack of access to legal assistance and lack of capacity in risk management. The former is especially important with regards to seeking recourse when contracts are broken, as was the case for the enterprise when DCCC ended its agreement with the Doi Chang planters' group. Without legal expertise, the enterprises decided not to pursue legal action and instead suffered losses. Although DCCF maintains good relationships with its customers, any further broken contracts would leave DCCF vulnerable to significant financial losses.

Secondly, the enterprise has demonstrated little thought in risk management. Already in great debt, the enterprise is seeking even more loans to invest in the company, without a definite plan of action if they are unable to pay back the debt. Additionally, because the enterprise is based on the yields of high-quality coffee cherries, it is also very vulnerable to influences that may affect the crops, including climatic variations and disease. The enterprise does not have insurance or a well-thought out plan about how to mitigate these risks and the losses that will follow.

Despite these risks, Doi Chang Coffee Farm offers valuable lessons on the successes and challenges facing the development and growth of a locally controlled forest enterprise (albeit where the breadth of local control is exercised through trust-based relationships rather than in the formal management structure of the business). With strong leadership, cohesion and shared responsibility within the enterprise, strong and transparent relationships with customers and partners, ample assistance from external resource people for marketing and dedication to producing a high-quality and high-value product, DCCF has demonstrated its early success as a financially viable and socially and environmentally sustainable community enterprise. The enterprise's focus on continuing to market and reach out to international customers has helped it expand its business to a global market.

Nonetheless, as it expands, DCCF will need greater access to financial capital, as well as a clearer plan for repaying outstanding loans. Looking to the future, DCCF is unsure how it will handle long-term risks such as those posed by natural disasters or disease, which will greatly affect the coffee crop and the quality of their product. It appears that capacity building would be beneficial in terms of understanding risk and mitigating or dealing with threats to the enterprise, as part of long-term planning for the future.



The Gambia: Tumani Tenda Eco-Tourism Enterprise

Village self-support for revenue generation and livelihood development

by Abdoulie A. Danso

The Tumani Tenda Eco-Tourism Enterprise demonstrates how a community-initiated venture can become a successful enterprise. The eco-camp was established as a means of protecting the village's valuable community forest resources and generating income for the community. From its roots in the late 1990s, the eco-camp attracts tourists from Europe, USA and other African countries. Activities are based around village life, customs and traditions, from music and dance to batik making and oyster fishing. Almost everything the eco-camp needs is sourced from the village and its forests, including food, fuel and staff. Despite setbacks with the recent Ebola outbreak in West Africa and competition from other eco-camps, this community-owned enterprise continues to attract clients with its successful blend of social and environmental credentials.

17.1 Context in which Tumani Tenda Eco-Tourism Enterprise operates

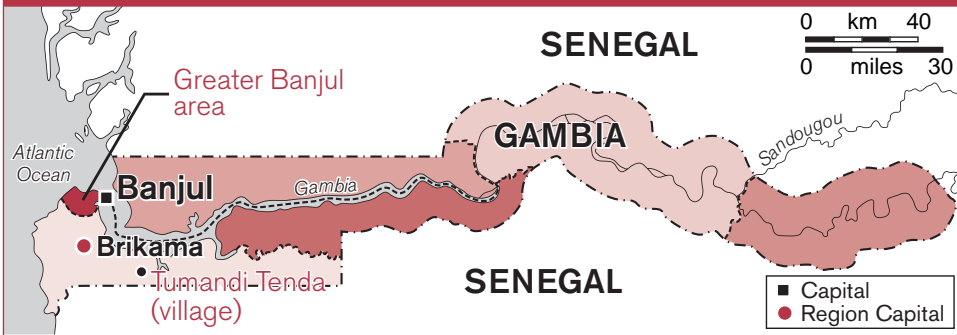
17.1.1 The enabling environment

The village of Tumani Tenda is located on the tributary of the River Gambia, 3km from the village of Amdalai on the main Trans-Gambia Highway (Kombo East district, West Coast Region), 25km from Brikama, the regional capital, and about 45km from the main tourism development area in the Kanifing Municipal Council (Figure 17.1). The village has a total land area of 0.46km² composed of settlements, farm lands and forest areas with a total population of 244 (130 men and 114 women) (GBoS, 2013). Over the past 10 years the population has nearly halved due to refugees returning to Senegal. During the rebellion in Casamance, Senegal refugees sought refuge in West Coast Region villages, which includes Tumani Tenda. About 90 per cent of the population is literate. Land tenure is governed by the customary land laws of the Gambia which grants rights of ownership, use, lease, and sale of land to the first settlers.

The first settlers of Tumani Tenda were the Sanyang Kunda family. The family gradually allocated land to new settlers for settlement and farming purposes, but always kept part of the land area under forest cover. These families were gradually granted full customary tenure rights (ownership) after a ten-year period of occupancy and use. The community was mainly made up of subsistence farmers who used the forest resources to meet their domestic needs.

In 1985–6, the Sanyang Kunda family allocated a portion of their land for use as a vegetable garden for the village due to the decline in crop yields, especially groundnuts. The vegetable garden area of 5 hectares was divided amongst different individuals from

Figure 17.1 Map of the Gambia



Source: Department of Surveys

the various families, each being responsible for his or her own activities and production. After harvesting, the produce was divided into two parts. One part was used for home consumption and the other part sold. Five years after the establishment of the vegetable garden, the European Development Fund (EDF) provided the community with fencing materials, seeds (tomato, onion, okra, lettuce, bitter tomato, cassava) and six concrete-lined wells within the garden.

As the pressure on land for settlement and farming activities continued to grow, coupled with the cutting of trees within the vicinity of the village, the villagers found it difficult to access construction materials especially for roofing within the immediate surrounding environment. In some cases, villagers would cross the tributary and travel long distances to collect the required building materials. As the demand of the community for forest resources and its other benefits continued to grow, individuals were obliged to collect building and construction materials from state forests.

In time, even in the absence of community by-laws, the villagers saw the need to protect the forest area and stop its further destruction. The village through the leadership of the elders raised and planted economic tree species such as rhun palms, mainly used for construction, which were protected from illegal activities and forest fires.

This activity continued over the years and eventually coincided with the introduction of the Gambian Forest Management Concept (GFMC) and a new Forest Policy (1996-2005) in 1995 that promoted community forest management (CFM) (DoF 1996, 1998 & 2002). The Forest Policy and the GFMC embodied a shift in priorities from the establishment of forest plantations and the general protection of state-managed forest parks to the sustainable management of natural forest by stakeholders such as local communities (Thoma and Camara, 2005) and This marked the start of a new forest management regime which recognised the role of local communities in meeting not just forest management priorities but also wider socio-economic development needs and overall societal benefits.

In 1996, the community of Tumani Tenda submitted a letter to Department of Forestry (DoF) expressing their interest in participating in CFM and was awarded a Preliminary Community Forest Management Agreement (PCFMA) in 1997. In the Gambia, CFM

contains a step-wise process during which the community will undertake a number of activities to prove their ability to manage the forest resource. These steps are the start-up phase, the preliminary phase, and final transfer of ownership. During the start-up phase, the villagers had no usufruct rights over the forest. They were however, allowed to collect forest products for household consumption and grazing for their animals. They were also allowed to keep any income realised from the sales of forest products (such as wood from branches) originating from the implementation of their forest management plan.

In addition to free collection of household fuel, during the preliminary implementation phase, the communities were entitled to all the proceeds from the sale of products from firebreaks or fruits and other non-timber forest products (NTFPs). The entire funds generated during this phase were for community and forest development uses only. The Forest Act (DoF, 1998) obliged local communities to spend 60 per cent of revenue on village development and 40 per cent on forest development operations or activities. During this phase, DoF ceased to issue exploitation permits to any external collectors for the proposed CF area, and the community had the right to deny access to non-community residents to the reserve.

According to the Forest Act 1998, during the final phase of implementation (where the final Community Forest Management Agreement is established), the community had the right to keep 85 per cent of the proceeds from the sale of forest products and pay the remaining 15 per cent to the National Forestry Fund (NFF), which is managed by the DoF. The community forest committee was also obliged to re-invest about 40 per cent (of the total 85 per cent) of their income retained on forest improvement or protection. The remaining 60 per cent was to be spent on community-based development projects. This legal provision on modalities of distributing the proceeds realised by the community forest enterprise was approved by the village development committee (VDC). For Tumani Tenda's community forest there have been no recorded incidences of money divided among the villagers. However, savings from CFM proceeds have been used to provide individuals in the community with credit, especially during the rainy season.

During the implementation phase, communities, especially women, could engage in branch wood commercialisation. To further assist women in this activity, the DoF reduced the tariff on branch wood by 25 per cent and allowed villagers free access to fuel wood and other non-timber forest products for domestic consumption. To ensure prudent financial management, the village committee opened a savings and current account with a commercial bank in Brikama. As a result, the community of Tumani Tenda developed a more vested interest in sustainably managing their forests as they recognised more and more the values of their forest as a livelihood support system.

This was more apparent after the introduction of the concept of FAO's market analysis and development (MA&D) approach in CF-managed communities Camara, 2007; (FAO, 2005). MA&D systemically takes into account environment, market, social/institutional and technological aspects in planning tree and forest products enterprises. This methodology supports forest-dependent communities towards the creation of economic activities through sustainable forest management principles. Through this methodology, the community identified eco-tourism and log production as the most promising products

and services to focus on for further enterprise development. These were selected through a process of pilot testing. During this process the community was guided by both field facilitators from the DoF and from a service provider, Natural Resources Consulting (NACO), which also provided support in the development of business plans for the selected products/services.

The introduction of the MA&D methodology has to a great extent given the community of Tumani Tenda the ability to independently identify and develop viable and successful tree- and forest-product enterprises, linking forest management and other sector-related activities to income/revenue generation opportunities such as the eco-tourism enterprise (Camara, 2007).

17.1.2 The operating environment

As part of the MA&D training, two enterprise development plans were developed for timber and firewood products as well as for lodge and eco-tourism services. However, as the community became more knowledgeable in how to carry out market analysis and business planning they decided to only proceed with the eco-tourism camp.

In time, other eco-camps were developed as community-based eco-camps in Berefet village, Foni Berefet district, West Coast Region and in Njawara village in Lower Baddibu district, North Bank Region. Despite being bigger with much more services to offer, Berefet camp is not considered a major competitor by the Tumani Tenda management team because it is not well established online (Tumani-Tenda has a website); the Berefet village eco-camp has suffered problems related to poor management; and the quality of services and products offered by Tumani Tenda is of a higher standard compared to the other camps.

The major competitors of the enterprise in the West Coast Region are Makasutu (15km), Besse Camp (5km), Sindola Hotel in Kanilai (60km), Njawara Cultural Camp in the North Bank Region (85km), Lamin Camp, and Jangjanbureh Camp (150km) in the Central River Region. All the above-mentioned competitors are operating and registered with the relevant institutions, with the exception of Njawara and Berefet. The camps located at Njawara, Berefet and Tumani Tenda are community-owned and administered by VDC while Makasutu, Lamin, Besse, Sindola and Jangjanbureh are individually owned enterprises.

The community-based ownership structure allows for certain benefits such as government subsidies and tax incentives (gratis licenses and sales tax). Community-based enterprises also receive free technical and legal advice and free promotion by the Gambia Tourism Authority (GTA). These tax exemptions allow the enterprise to significantly lower its operating costs compared to its competitors that are not community based.

During the early stages of development a decision was taken to involve an external technical advisor, Helge Linaae, to help with the establishment of the camp. Members from the Tumani Tenda community met Linaae during a market-research trip to a nearby tourism area in Lamin. Together with a team of 16 volunteers, Linaae started the construction of the camp and the establishment of the enterprise.

Labour is voluntarily contributed from the different clans in the village, each responsible for the management and up-keep of one of the accommodation huts. In total the camp is managed by 15 permanent staff (nine women and six men) that together make up the management team. Salaries are determined based on overall profit of the enterprise during the tourist season, usually ranging from 25–30 per cent. So far there have been no instances of staff not being paid. During the period when there are no guests or very few, the staff go about on their individual or family activities especially when there is less to do.

This approach has to a great extent helped lower labour costs and avoided competition for jobs. The running of the enterprise is also organised in such a way that all its needs and supplies (goods and services), are sourced from the village land. For example, vegetables for the eco-camp restaurant are grown in the village garden, fish is caught in the adjacent river, firewood is collected from the village community forest (CF) or the surrounding forest areas, and salt is collected from the river beds and processed in the village. Electricity and water is sourced from solar panels and water tanks installed by the enterprise on village land.

Access to credit is an issue, as most of the financial services offered by commercial banks or micro-credit schemes come with a high interest rate attached to them. Many villagers therefore opt for communal savings alternatives such as the village cash box, which consists of individual and village savings that can be accessed at a lower interest rate. Village savings are also the main source of credit for Tumani Tenda. It is also considered more beneficial as earnings on the interest rate will go straight back into the village savings fund (revolving funds). Whilst limited access to credit can be a constraint, it has meant that the enterprise is debt free and has been forced to adapt its business model to not rely on credit. Currently overall operational costs are met by profits generated from sales and from the use of communal labour.

17.2 About Tumani Tenda Eco-Tourism Enterprise as a business

17.2.1 The vision

The business name is the Tumani Tenda Eco-Tourism Enterprise. The vision is 'self-support for revenue generation and livelihood development of the village'. A mission has also been established to guide the aspirations of the enterprise. This is to establish a network of community-based tourism enterprises within the country to achieve sustainable tourism and to attract international clients interested in cultural exchanges and learning about village life and their environment (community forests and natural resource use). The business puts a strong emphasis on the importance of local ownership and control in that they should be the ones to present their way of life, culture and environment to tourists, as opposed to this being controlled and managed by external tour operators. Collaboration does take place with tour operators, however, this is negotiated and agreed upon based on achieving a balance between meeting basic market demands and maintaining the integrity of the business mission and vision. The idea of establishing a network of community-based tourism enterprises is also seen as a way of strengthening their own and similar enterprises' positions with tour operators for business negotiation purposes.

The enterprise was initially established in the context of a small but growing eco-tourism industry in the Gambia. It was set up to ensure that the needs, aspirations and demands of the entire community were met by the enterprise, following the existing community forest model of investing in community development. The enterprise mainly caters for the needs of tourists who have an interest in Gambian culture and wildlife and towards tour operators who offer these types of services. It has to some extent demonstrated the spirit of promoting the community-based eco-tourism network. For example, engaging in exchanges with other eco-camps to offer dancing and drumming lessons to guests also promotes learning exchanges between staff so that they can increase their knowledge and skills by visiting and receiving training at other camps.

The construction of the enterprise's infrastructure (houses, access etc.) began at the end of 1997 and was completed in 1998, followed by the official opening in 1999. The technical adviser, Helge Linaae, facilitated student visits from Scandinavia (Sweden, Norway and Denmark). The students were first trained in drumming and dancing at his eco-camp in Lamin, but then finalised their drumming and dancing at Tumani Tenda. Approximately 26 guests, including students and their trainers, were received every two to three months in the year. This early partnership is an example of the type of network Tumani Tenda has envisioned for the exchange of products, customers and staff experiences.

The number of tourists visiting Tumani Tenda has been quite steady, averaging 300–400 guests per year. Most tourists are international from Europe or the USA. Although the enterprise actively promotes its business through its website, and through the Association of Small Scale Enterprises in Tourism (ASSET) using brochures and leaflets, a large share of Tumani Tenda's customers are acquired through its regular visitors who promote the camp through recommendations and bring new visitors with them.

However, during the 2014–2015 tourist season the number of visitors dropped considerably by 50 per cent compared to 10 years ago when European and Scandinavian students and ornithologists in particular visited the enterprise. The decline in this year's tourist arrivals is not just felt at Tumani Tenda but as a whole the Gambia's tourism industry has suffered, and this is mainly attributed to the outbreak of Ebola in other parts of West Africa (Guinea, Sierra Leone, Liberia, Nigeria and Mali). The main airlines that used to fly directly to the Gambia from Scandinavia and also the rest of Europe were cancelled for the 2014–2015 season due to the Ebola outbreak. Table 17.1 illustrates the number of tourists hosted by the enterprise in the 2008–2014 tourist seasons for an average stay of seven days.

At least 50 per cent of the profits realised by the enterprise are reinvested in village development and forest management activities. Village development activities are identified by the VDC during the annual community action plan (CAP) meeting whereas forest management activities are planned according to the community forest management plan (CFMP). During the 2014–2015 tourist season the profit margin of the enterprise was estimated at 56.16 per cent of the total sales, and the annual projected income is gauged at GMD180,642. However, this was before the Ebola outbreak in West Africa.

Table 17.1 Guest count, revenue and expenses for 2008–2014 seasons (October to April)

Season	Guests	Revenue (GMD)	Expenditure (cost of sales and 25% compensation to staff inclusive) (GMD)	Net profit (GMD)
2008–2009	404	162,830.00	84,020.00	78,810.00
2009–2010	310	178,265.00	93,355.00	84,910.00
2010–2011	317	198,265.00	135,330.00	62,935.00
2011–2012	478	173,815.00	125,318.00	48,497.00
2012–2013	481	193,460.00	84,320.00	109,140.00
2013–2014	314	174,650.00	75,935.00	98,715.00

Activities funded so far from the proceeds of the enterprise include: support to the lower basic school in the village with teaching and learning materials, contributions to the construction of a mosque, the village solar energy and water project, payment of annual compound rates and taxes of the entire village, procurement of a mini-van for taxi services between the village and the regional capital (Brikama), support to the women’s vegetable garden programmes in the form of inputs (fertiliser, improved seeds etc.) and forest development activities from the local forest fund.



© NACO



Restaurant, Boat trip and fishing, Tumani Tenda Eco-camp, Price list for activities (clockwise from top left)

17.2.2 Business inputs

Tumani Tenda has enjoyed some early recognition for its efforts in promoting an environmentally sustainable business model. In 2000 the village received a personal donation from the president of the Gambia himself, and in 1996 they won an environmental management competition organised by the National Environment Agency (NEA). The latter awarded Tumani Tenda with a trophy and GMD70,000. This was the first investment that the enterprise received, although some restrictions were imposed on the way the money was spent. The NEA insisted that it should be spent on environmental protection and development of the community forest and vegetable garden. The community wanted to use the funds to invest in the construction of the eco-camp, but in the end most of the money was spent on procurement of materials for the village garden, community environmental protection and community forest activities. A small amount was reserved for the initial materials required for the establishment of the camp.

Apart from this initial investment, most of the financial capital has been raised through village (and some personal) savings (e.g. money generated from communal works or the outsourcing of labour to individuals during the farming season), and periodically through sales. This was possible due to the strong interest the villagers had in developing their own eco-tourism enterprise to be managed by themselves. However, as savings and the award money was not enough to complete the actual construction of the camp more funds were raised through the relationship with Helge Linaae and the other camp at Lamin. Labour and camp renovation materials collected from the community forest (for mending roofs etc.) was exchanged for money to complete the construction of the camp. In addition, Linaae managed to bring some of his guests to stay in Tumani Tenda, which provided additional revenue to finish the construction. Gradually, through these ad-hoc investments and improvements to the camp, Tumani Tenda arrived at its full capacity today which is 31 guest huts, a village restaurant and a vehicle to transport guests to and from attractions.

As mentioned, the environment for accessing different finance options is not favourable for the type of enterprise that the eco-camp is. The interest rates are too high with a short-term recovery period on loans and the other products offered by the banks and the microfinance institutions are not consistent with the inflow of tourists and the needs of the enterprise. For these reasons the management team took a conscious decision early on not to access facilities/opportunities offered by local banks and microfinance institutions in the form of loans and services, involve outside investors, or invite other shareholders to partner with the enterprise. Almost all the major operational costs of the camp in terms of materials and human (labour) resources are met at village level.

17.2.3 Main activities

All of the activities of the enterprise take place on village lands and are carried out by staff from the village, except for part of the marketing and promotion which is also done by business partners such as West Africa Tours and Gambia Tours. Table 17.2 outlines the accommodation products and services that are offered by the eco-camp.

To enhance the managerial capacities of the enterprise employees, the enterprise supports its staff to undergo on-the-job training at bigger hotels during the tourist low season.

Figure 17.2 Tumani Tenda Eco-Tourism Enterprise value chain

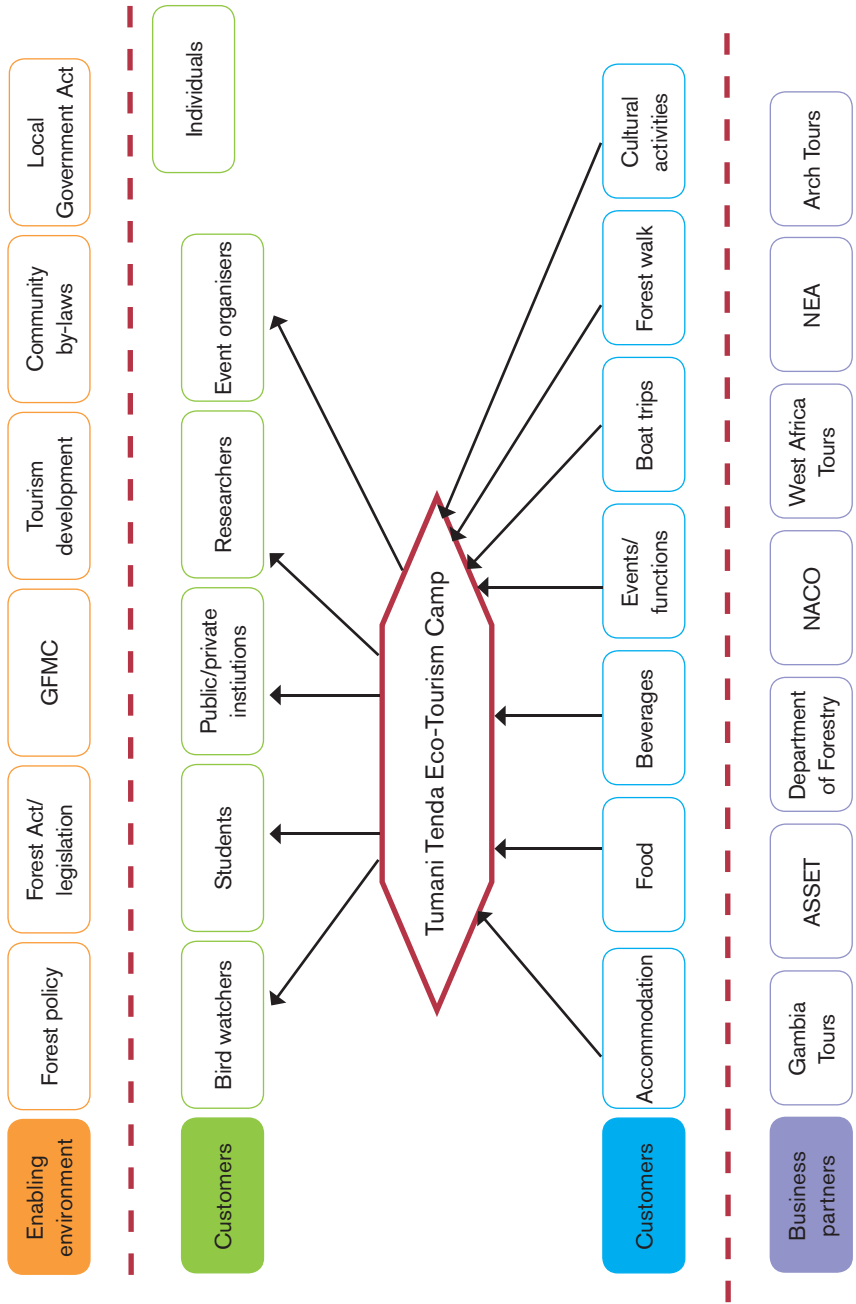


Table 17.2 Tariff of products and services, 2014–15 tourist season

Accommodation and products/services	Unit	Cost (GMD)
Bed and Breakfast	Per person	400.00
Lunch	Per person	300.00
Dinner	Per person	300.00
Village tour	Per person	50.00
Oyster collecting	Per canoe	300.00
Fishing lesson	Per canoe	300.00
Forest tour/forest walk of CF	Per person	50.00
Bird watching	Per person	50.00
Cultural performance (drumming and dancing)	Per group	1,000.00
Visiting the apiary (beekeeping site)	Per person	50.00
Tie-dye practical (make your own)	Per person	50.00
Tie-dye material	Per metre	50.00
Boat trip	Per boat	300.00
Garden tour	Per person	50.00
Traditional cooking lesson	Per person	50.00

17.2.4 Business partners

Table 17.3 shows which institutions are currently partnering with Tumani Tenda eco-tourism enterprise.

Two years after the establishment of the enterprise (1999), the management team set up a connection with ASSET (then called Tourism Concern) as their first partner, to promote the enterprise on their website and in brochures. This NGO helped promote and advertise the product at the national and international levels which resulted in new visitors from Europe and the USA coming to the camp. It also paved the way for establishing a link with Gambian tour operators (West Africa Tours and Gambia Tours) who after visiting the camp engaged in bilateral discussions with the Tumani Tenda management team on how to bring more business to the enterprise. During discussions with the operators, the management was advised on ways and means of improving the facilities and services offered.

In 2005 an anthropology researcher from the UK visited the enterprise with her husband, who was a graphic designer. The couple helped create the website¹ and as a result in 2012 the international online travel website Trip Advisor started to promote the Tumani Tenda Eco-Tourism Enterprise. This increased the international profile of the enterprise and resulted in increased sales, as more visitors and guests came to visit.

The publication and promotion efforts were further consolidated through a journalist from the UK who visited the enterprise to collect more information, and ended up writing stories about Tumani Tenda which were published in travel guides such as *The Lonely Planet, the Gambia and Senegal, the Rough Guide: the Gambia and Senegal* and *Bright Guide: the Gambia and Senegal*. Due to these publications, more and more visitors started arriving and as a result sales increased by 50 per cent during the six-month tourist season.

1. See www.tumanitenda.co.uk

Table 17.3 Current partners of Tumani Tenda eco-tourism enterprise

Partners		Roles/functions	Location
Business development service	Technical support/services		
Association of Small Scale Enterprises in Tourism (ASSET)	Technical support and marketing services	<ul style="list-style-type: none"> ■ Promotion of the enterprise through websites, brochures and leaflets ■ Training on hospitality services (guest relationships, food and beverages) 	Tourism Development Area (Senegambia)
Gambia Tours	Technical support and marketing services	<ul style="list-style-type: none"> ■ Acts as a tour operator bringing guests to the camp ■ Advises management team on service improvements 	Senegambia Beach Hotel
Arch Tours		<ul style="list-style-type: none"> ■ Not currently active but in past has provided similar services as Gambia Tours 	Bungalow Beach Hotel
West Africa Tours	Marketing services	<ul style="list-style-type: none"> ■ Acts as a tour operator bringing guests to the camp 	Fajara
NACO	Technical support	<ul style="list-style-type: none"> ■ Training services on MA&D and linking the enterprise to support and service institutions 	Abuko village
Gambia Tourism Board (GTB)	Technical support	<ul style="list-style-type: none"> ■ Advisory role on sustainable tourism, networking and linkages to the institution's certification scheme 	Kotu
Department of Forestry (DoF)	Technical support	<ul style="list-style-type: none"> ■ Technical and support services in sustainable forest management (forest management and enterprise planning) ■ Support on the legal transfers of CF (Preliminary Community Forest Management Agreement (PCFMA) and Community Forest Management Agreement (CFMA) conclusion) 	Banjul
National Environment Agency (NEA)	Technical support	<ul style="list-style-type: none"> ■ Conducts environmental impact assessments (EIAs) to ensure safeguard measures are adhered to as prescribed in the National Environmental Management Act (NEMA) ■ Updating the village community action plan (CAP) 	Banjul

17.2.5 Customer groups and product types

Most regular customers (tourists) come through local tour operators with whom they have direct linkages. However, individual customers such as frequent visitors to the country, NGOs and government institutions make their bookings directly with the enterprise without middlemen.

All business transactions are properly documented following a procedure where proof of payment needs to be established before any products or services can be delivered. This ensures business transactions follow a transparent process so that they can be reported to the VDC and the rest of the village.

Table 17.4 Customer groups and product types

Customer category	Products/services	Location
Researchers	<ul style="list-style-type: none"> ■ Biological diversity, tradition and cultural studies ■ Boat trips 	Europe, United Kingdom
Students	<ul style="list-style-type: none"> ■ Traditional and cultural dancing lessons ■ Purchase of batik and local products ■ Visit to mangroves, forest ecology and other interesting sites in the village ■ Fishing lessons and site-seeing (oyster collecting) ■ Boat trips 	United Kingdom, Scandinavia
Ecology	<ul style="list-style-type: none"> ■ Forest walks, birdwatching, vegetable garden ■ Boat trips 	United Kingdom, Scandinavia, USA
Event organisers (conference, seminars and training)	<ul style="list-style-type: none"> ■ Room, bar and restaurant services ■ Visit to the community forest, vegetable garden 	National and international organisations, NGOs and public sector institutions

17.2.6 What differentiates the value proposition?

The main strengths of the Tumani Tenda eco-tourism camp come down to the community and the community forest itself. All the eco-tourism activities can be found on village lands and visitors are able to learn about the community forest and mangroves and all the products that they generate, and experience village life and traditions. This is not the case for all the other eco-camps who may be able to offer accommodation but then activities and attractions are located further away. The nature of the business, managed by and for the benefit of the community, adds to the appeal of the enterprise and the willingness of customers to also support the community through their custom.

Another important factor is price competitiveness. All business inputs (food and beverages – local beverages are sourced from CF and trees on farms – energy, labour and credit) are all sourced from the village. This has made the cost of the services that the camp

offers low, which has made it possible for the management team to set competitive prices compared to other eco-camps.

Other products and services such as paddling lessons, batik making and oyster collecting were at first offered to guests free of charge. These are also now charged but at a much lower rate than at other camps.

The management team has also put in place a client feedback system to ensure the camp is informed about meeting the requirements of their customers and to assess needs for improving the standard of service provision. Initially, the service provision of the enterprise did not meet the expectations of the customers. In order to address this, the management team underwent additional training to improve the quality of service.

The Tumani Tenda Eco-Tourism Enterprise is also active in its approach to promotion and market research. Every now and then market surveys are carried out in the main tourism development areas and at the same time brochures and leaflets are distributed to potential new customers. Compared to the other eco-tourism camps that are community owned, Tumani Tenda has been quite successful in establishing both online and on-the-ground promotion of the business through strategic partnerships.

17.3 Who controls Tumani Tenda Eco-Tourism Enterprise?

17.3.1 Origin of the value proposition

The idea for the establishment of an eco-tourism enterprise emanated from the VDC meeting on how to spend the money won from the NEA competition. At this meeting, some members proposed spending it on food items e.g. rice and other items to be distributed between family members in the village. One group mainly represented by the village youth proposed spending it on the development of an eco-tourism camp. The latter was finally accepted by the entire village because eco-tourism was considered an environmentally friendly enterprise that would be compatible with long-term income generation and forest protection goals. At this time, Tumani Tenda was also frequented by tourists from the neighbouring Lamin eco-camp who would come and stay for a couple of nights as part of a boat tour of the adjacent river. This helped confirm the potential market for an eco-camp in the village.

17.3.2 Control over forest resource access

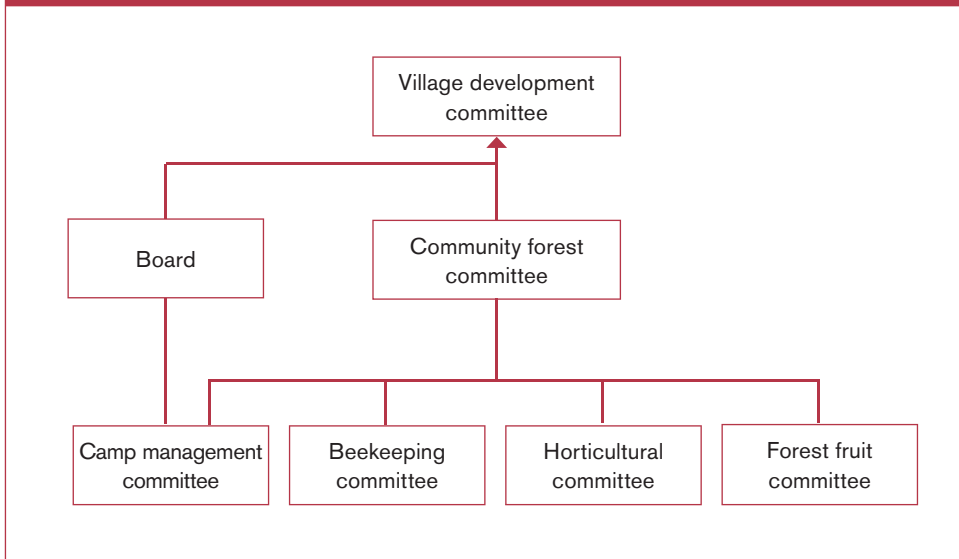
Access and use of the community forest and natural resources on village lands are regulated by the Forest Act and Regulations of 1998. This set of regulations requires communities to draw up a valid CFM plan and by-laws to specify management rules and conditions for access and use of CF products and services. For Tumani Tenda the CFM plan and by-laws were developed by the CFM committee in collaboration with the DoF and NACO. Exploitation of timber and non-timber forest products (NTFPs) for domestic use is regulated by the CFM Committee and granted upon permission, whereas harvesting for commercial purposes needs to follow the CFM plan and is regulated by the community by-laws and Forest Act and Regulations of 1998.

Monitoring and technical expertise for the development and implementation of the CFM plan are provided by the field staff of the DoF and NACO with the participation of the CFM committee and volunteers from the village clans (in the Mandinka language 'kabilolu'). The enterprise management team in collaboration with the CF committee provides technical advice for the implementation of the plan.

17.3.3 Control of the business

The control of the enterprise's management is not vested in one individual as it is a community-based enterprise owned and managed by and for the community (see Figure 17.3). Individuals have designated responsibilities and are accountable to the VDC. These include a management staff of six men and nine women. Management is accountable to the VDC through the enterprise board by presenting receipts issued in respect of services and products offered for a specific period. The transactions (vouchers, bills) are cross-checked by the VDC auditor and results communicated to the entire village through village meetings.

Figure 17.3 Tumani Tenda Eco-Tourism Enterprise institutional diagram



The board decides on the assignments of the various tasks to the individual staff and also approves all financial expenses through the VDC. Decisions related to the management of the enterprise are arrived at through unanimous agreement on a particular motion through VDC meetings. In the absence of that, the matter shall be put to vote by show of hands, in which case the decision shall favour the side with the majority of votes. In the event of equality in the number of votes, the VDC chairperson has the casting vote.

17.3.4 Staff roles and selection processes

The village development committee (VDC), community forest management committee and enterprise management board members are selected by the entire village in a village meeting involving people of different ages and sex. The enterprise management board

consists of 12 members (five women and seven men) drawn from the different clans existing in the village.

Staff recruitment is based on internal arrangements within the clans who each nominate one staff member to the VDC. The VDC then identifies competent villagers from the clan nominees to support the existing staff for efficient service delivery.

The enterprise management team comprises 15 positions selected from different clans within the village community. They are trained through the support of ASSET in their respective job responsibilities. The staff positions are as follows: one manager (M), four cleaners (F), three cooks (F), two bookkeepers (M & F), two fishermen (M), two bar attendants (M & F) and one birdwatcher (M). The staff training has been set up in such a way as to allow for greater versatility amongst the staff and everyone knows what the different roles involve. For example, the function of the manager could be performed by any of the bar attendants as much as the functions of the cooks could be done by any of the cleaners. That way different positions can easily be performed by any of the staff members. Over the years there has been no change in the number of established positions even if staff members have changed. However, the number of staff fluctuates depending on the guest count.

The enterprise operates without fixed staff salaries but only allowances are paid to the individuals at the end of the season. According to the enterprise manager, salaries are determined at the end of each season based on profits of goods and services sold to customers, not including tips, which are equally shared amongst staff. The management will produce an end-of-season report to the camp management board who will then call for a village meeting during which the villagers will decide how much to pay the staff as a percentage of the annual profit.

17.3.5 Delivery options

During the early stages of the enterprise development, the Tumani Tenda village was faced with two main options for a tourism business. On the one hand there was the conventional tourism business model that they had observed along the coastal areas and which was predominantly based on an individually owned and profit-maximising business model. And then there was the eco-tourism model which was closer to the Tumani Tenda village objectives. The idea was to come up with something that was focused on the particular environment and context in which Tumani Tenda was situated. This would also allow the enterprise to offer different types of products and services to that being offered along the coast. Together with collaborating institutions supporting the camp, the management team carefully selected a range of products and services that could offer a different experience to tourists and that were readily available at local level.

The different delivery options were carefully selected during the MA&D training at the early stages of enterprise development, but also in collaboration with the different partners and institutions supporting the camp. The initial steps of the MA&D training helped the management team select and prioritise a set of products and services to focus on, backed up by underlying market surveys. As the enterprise has become more established decisions on delivery options and services are now also influenced by orders and feedback of customers.

17.3.6 Customer research

The camp management in collaboration with the board, supported by the camp technical adviser ASSET and ground tour operators plays a crucial role in securing guests for the enterprise by targeting the wider market apart from the regulars frequently visiting the camp. The enterprise management team visits the main tourism area in Senegambia to scout for guests using their existing brochures and leaflets to introduce the enterprise to new customers. Products and services are also advertised on the webpage. ASSET, during their usual promotional tour to Europe and Scandinavian countries, promotes the existence of the camp and the products and services offered by the enterprise.

Management is responsible for understanding the needs of customers through discussions during visits and through direct email correspondence with previous guests. Guests are also asked to complete questionnaires before their departure to assess their level of satisfaction with the standard and services offered by the camp.

17.3.7 Marketing and promotion

The enterprise management team is responsible for finding marketing opportunities to promote the value proposition to potential customers. To do so and to reach out to both international and domestic tourism markets they have had to engage with a number of partners. The partnership with ASSET was crucial in helping the enterprise produce promotional materials such as bill boards, brochures, posters and leaflets that were brought to various trade and tourism fairs to attract customers. For example, a representative from Tumani Tenda participated in the International Tourism Trade Fair in Berlin, Germany in 2004, and in 2007 and 2008 the management team participated on the Senegambia Tourism Fair and Gambia Tourism Authority (GTA) Trade Fair respectively. These activities provided important promotion for the camp and resulted in an increased number of guests. The creation of a website and linking it to common tourist sites such as Trip Advisor further helped advertise the camp, and this was also initiated through partnerships.

These online and printed promotional materials are frequently updated by the enterprise management team, ASSET and tour operators. In addition, other institutions in the country such as the Gambia Hotel Association, ground tour operators, the West African Bird Study Association and the Department of Arts and Culture also collaborate with the management to attract customers.

17.4 How has Tumani Tenda Eco-Tourism Enterprise overcome key challenges?

17.4.1 Challenges to do with the value proposition

Some of the key challenges encountered during the pilot testing of the enterprise's strategies were inadequate technical knowhow and experience in eco-tourist enterprise development and management. To overcome these challenges, the management team, with the support of the VDC, forged alliances with support and service institutions to build the capacity of the initial promoters of the enterprise on entrepreneurial skills, food and beverage services alongside guest-handling approaches. This included the Department of Forestry and

NACO, which both supported the community in redefining the enterprise mission, goals and objectives based on results of conducted market surveys, and ASSET who helped train staff in specific skills and the enterprise to better understand the tourism sector.

At the beginning, the enterprise faced some challenges with freelance tour operators acting as middlemen between the enterprise and the tour operators and requesting additional payments for their services in bringing customers to the camp. This created conflict within the management team but was addressed by removing any association with tour operators which were not registered, or only working with those with the required level of reputation like Gambia Tours and West Africa Tours.

17.4.2 Overcoming legal challenges to do with resource access

According to the provision of the Community Forest Policy (CFP) communities that have been evaluated and have successfully completed the first phase of the CF Management Agreement (the Preliminary Community Forest Management Agreement or PCFMA) are awarded a final Forest Management Agreement (DoF, 1998). At the stage of the final agreement ownership of the forest resource is transferred to the community. The Tumani Tenda CF is yet to be awarded a final ownership agreement (CFMA) from the DoF. The major reasons impeding the legal transfer of ownership to the community are similar to that experienced by many communities in the country. Since the mid-2000s the transfer of community forests has been impeded by a number of bottlenecks due to the limited capacity of the DoF to initiate the process, including frequent changes to the ministerial portfolio that oversees the process and the designation of community forests documents (Hajjar, R. & J. Timko, 2014; Thoma and Camara, 2005).

The community forest management committee attempted several times to engage the Department of Forestry in pursuance of their CFMA but to no avail. The Forest and Farm Facility (FFF) support through the National Farmers Platform of the Gambia (NFPG) is currently facilitating the process of establishing a regional community forest task force to advance CF tenure-transfer processes. It is through this facility and process that Tumani Tenda is being targeted, amongst other villages, for the completion of the evaluation and final award of its CFMA status.

Another challenge experienced by the enterprise is related to its tax status. As per the Local Government Act (DLGLM, 2002), all profit-gaining enterprises are subject to tax payments. Initially, this posed a challenge to the enterprise when the municipal council tax collectors visited them for tax collection. A legal quarrel broke out between the enterprise and Brikama Municipal Council as to whether the enterprise should pay tax or not. The problem was that although the business was making a profit, it did not fit the 'normal' characteristics of a profit-making enterprise. As a community-based enterprise it had to abide by by-laws that require that the majority of the proceeds from the enterprise are re-invested in the development of the community and the management of the forest (as per the Forest Act regulations). For these reasons, community-based enterprises of this type are exempt from paying the same level of taxes as other profit-making enterprises. In the end, the enterprise management team forwarded the concern to ASSET for advice. Through the intervention of ASSET the matter was resolved and the enterprise is now awarded a tax-holiday status that exempts the business from tax payments.

17.4.3 Overcoming ownership and benefit-sharing challenges

In 2000 the Gambian president (HE Sheikh Professor Dr Yahya AJJ Jammeh) visited the village during his 'meet-the-people tour' where he awarded the village community some money for managing their community forest. This created some tension with the neighbouring villages who contested the customary ownership of the Tumani Tenda CF. The matter was once pursued in a court of law but later the contestants withdrew the case and followed an alternative method of resolving the conflict (District Conflict Resolution through District Elders). The conflict was resolved by tendering declarations signed by those neighbouring villages whereby they agreed to have no ownership rights and/or claim over the community forest. This document (statement of neighbouring villages) is legally binding and was accepted as claimants declared that they have no claim over the proposed area intended to be managed as a community forest by the community of Tumani Tenda.

In terms of benefit sharing, this is clearly stipulated and regulated in the by-laws established and agreed upon by the VDC and the entire community. Monetary benefits realised by the enterprise are invested directly in activities or events as indicated in the village by-laws. The entire community of Tumani Tenda benefits from the income realised from the sales of products and services through the VDC. These provisions have helped avoid any potential conflicts over ownership or benefit sharing within the community.

17.4.4 Overcoming labour challenges

Finding the initial capital needs to pay for the labour required to erect the camp structures as well as operate the enterprise posed challenges in the beginning. This was overcome by including an agreement on the governance of labour participation within the village by-laws, which stipulates that all households should contribute with communal labour to the enterprise. At the time few households benefitted from paid labour. It was reasoned that since the economic returns from the camp would be invested in village development for the benefit of all residents, regular salaries would be omitted and only compensation would be allowed for staff based on the profits made annually. This is also how it works today where staff members are sourced through internal arrangements between the VDC and household heads.

17.4.5 Overcoming marketing challenges

Marketing and promotion of services and products offered by the camp faced challenges in terms of the limited skills of the management team at the start of the enterprise to attract customers both nationally and especially internationally. As connections with tour operators were not well established, freelance tour operators were bringing in limited numbers of guests to the camp and requesting payment. However, this was overcome when the management team began working with business partners directly (tour operators), while also developing their skills in tourism management.

With the support from ASSET the camp started receiving more guests from Europe, USA, Scandinavia and African countries. The website also helped in overcoming some of the initial promotional challenges as did maintaining contact with visitors through emails.

17.5 Key lessons

17.5.1 Keeping down costs

To reduce overhead running costs, the VDC in close collaboration with the enterprise management team agreed to seek approval from the village on the use of communal labour. This way, labour could be secured as and when needed to maintain and develop the services provided by the enterprise and with no pressure on the business to pay salaries until profits had been secured.

The majority of the construction materials such as timber and thatch were sourced from the community forest at no cost. So were other local materials such as mud blocks, deadwood, thatch and fibres. Compared to similar enterprises, which have had to pay for both labour and construction materials sourced from outside the community, Tumani Tenda has been able to keep initial start-up and later maintenance costs low.

Procurement of organic vegetables produced from the village vegetable garden contributed to minimising transport costs that would otherwise have been incurred in procuring vegetables from the Brikama. It also guaranteed the timely availability of produce needed for the restaurant.

The investment in solar panels further helped reducing costs compared to using a generator to power electricity for use by the enterprise. This was also a conscious decision taken by the management team and the VDC members to meet the environmental standards associated with eco-tourism and to limit fuel consumption.

17.5.2 Retaining customers and willingness to pay

The continuous collaboration and linkages with other players in the hospitality industry explored by the enterprise management team has contributed to retaining customers' frequent visits to the camp. New marketing opportunities are explored through visits to the tourism development area in the greater Banjul area, and information gathered here is also used to refine the promotional strategy of the enterprise. Customer confidence has been maintained by dealing directly with registered tour operators rather than the middlemen or freelance travel operators whose behaviour in the past could have led to a damaging impact on the business's reputation.

The enterprise has managed to retain their customers' willingness to pay for the different services and products that they offer because prices are relatively low compared to that of other similar facilities up-country, and the business model, which is community-based and supports the needs and welfare of all community members, is valued by its customers.

Institutional market surveys to attract seminars, conferences and training events are performed regularly to encourage local patronage for the enterprise. Due to the relatively low prices offered especially for accommodation and other essential services by the enterprise, the hosting of such events has increased resulting in an increase in the earning capacity of the business.

Although the Tumani Tenda Eco-Tourism Enterprise has been successful in keeping its costs down and retaining its customers without external investment or credit, for the last 10 years little has been done in terms of expanding the business, despite there being demand for it to do so especially from event organisers. Other competitors are developing their own eco-tourism enterprises in the area offering high-quality accommodation. Even if these newcomers are not able to offer the same full eco-tourism experience as Tumani Tenda with its community forest and other activities, they are a competitor in terms of accommodation and restaurant facilities, especially if they can cater for larger groups. This could affect the business's ability to retain customers in the future.

17.5.3 Success factors

The business model of the Tumani Tenda Eco-Enterprise, providing affordable and quality services to a relatively high-value market, has been one of the main factors underlying its commercial success. The village of Tumani Tenda and its ability to offer a diverse set of cultural and environmental experiences to tourists, along with a strong collaboration with national business partners that have enhanced access to markets and to vital information, have been critical to the success of the enterprise.

Another key factor has been the organisation of the business and the governance of the village itself. Tumani Tenda is relatively unusual in that it is mainly inhabited by one homogenous tribe. This has facilitated village cohesion and decision making and this is reflected in an overall successful community with relatively low levels of internal conflict or management issues. The existence of decentralised structures at village level, such as the VDC, the CFM committees and the council of village elders have significantly contributed to reaching agreements and encourage popular community participation during the construction of the facilities of the enterprise.

Community trust in the enterprise was also vital to ensuring access to the village funds (cash box) which means it has been able to avoid expensive interest rates and be more cost effective. The choice to establish a community enterprise involving the community forest as part of the enterprise service provision was also a decision that helped the community ensure that profits could be channelled back into the business (as part of village and CF development), parts of which otherwise would have been spent on tax.

Finally, the technical support services of collaborating institutions such as the Department of Forestry, Gambia Tourism Board, National Environment Agency and NACO have increased the organisational and business capacity of the management team to improve its standards of service and product delivery.



Cashew Apples

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The Gambia: Kombo Cashew Farmers Association (KCFA)

Quality cashew is good business

by Abdoulie A. Danso

In the Gambia, cashew farming is a relatively recent activity. But as international markets and demand for cashew grow, more and more farmers are establishing cashew plantations. The Kombo Cashew Farmers Association (KCFA) was initially set up by a small group of cashew farmers to increase members' profits and improve negotiating skills and the quality of production. KCFA has also benefited from training from the International Relief and Development (IRD), US Department of Agriculture (USDA), and the Forest and Farm Facility (FFF). KCFA differs from other associations described in this compendium, although it negotiates prices and contracts with agents on its members' behalf, any profits are retained by its individual members, and not reinvested in the association or used for further community development. Despite this, both profits and capacity have significantly increased – a positive step forward for all involved.

18.1 Context in which KCFA operates

18.1.1 The enabling environment

The Gambia's economy comprises of agriculture, industry and service sectors accounting for 30 per cent, 15 per cent and 55 per cent respectively of the GDP (GoTG, 2009). Agriculture also contributes significantly to the foreign exchange earnings through exports to secure supplementary food and other essential supplies. It is estimated that 75 per cent of the country's population depends on extensive agriculture (rain-fed subsistence and cash-crops cultivation), livestock rearing and horticulture (fruit and vegetables production) as their main livelihoods, providing two-thirds of the total household income and 50 per cent of the required national food supplies (GoTG, 2009).

The livelihoods of 91 per cent of the extremely poor and 72 per cent of Gambians categorised as 'poor' are dependent on agriculture. Until recently, the main widely cultivated cash crop on agricultural land was groundnuts (peanuts). Other major crops cultivated then included millet, maize and sorghum. Growing these crops as the main cash and subsistence crops is promoted by government policies on agriculture and trade in respect of foreign exchange earnings and addressing food sufficiency and security. Rural villages and farmlands were surrounded by forest ecosystems some of which were rich in biodiversity. But the forests were gradually and steadily cleared for agricultural production and subsequently few were converted into cashew plantations.

Cashew growing is not a traditional farming system in the Gambia especially in the Muslim communities. More importantly, the planting of any cash-crop trees on any land is not encouraged by the customary land tenure agreements (due to a fear of losing ownership

rights of the land if it is leased to an individual or an outsider farmer for a fixed farming period). Based on the traditional and customary laws of the country, a piece of land is owned by those who first cleared and settled and/or used that land area for farming. Thus most farmlands in rural communities are owned by families but are under the direct responsibility of the family head who is usually male.

Cashew was first introduced to the Gambia in the 1960s as an agro-forestry crop, planted around forestry boundaries as a fire break. The planting of cashew on farmlands as a cash crop originates from Guinea Bissau and Casamance (Southern Senegal). Cashew was mainly planted by non-Muslim farmers (mostly the Manjagoë ethnic group) but only by very few Muslim farmers. Its introduction in villages in the Gambia started when it was planted as a live fence, and later, on small farms with trees planted in rows to allow the cultivation of other crops in between before it reached full maturity (agroforestry). The fruits (also known as 'cashew apples') were collected mainly for making locally brewed alcohol from the pulps while the nuts were of little or no significant economic value. It was for this reason that the Muslim community abstained from planting it based on religious factors and myths associated with the tree. Even today, Muslims who grow cashew are only interested in the nuts. Some allow non-Muslims to collect the pulp but some do not even allow this. A few individuals (mainly youth) collect and roast the raw cashew nuts for personal/household consumption.

Over the last two or three decades, farmers (especially smallholder, resource-poor farmers) in the West and North Bank Regions have shifted from depending on groundnuts as the main cash and export crop due to challenges such as the decline in soil fertility, unpredictable climate conditions (uncertainty about the start and end of rains), disease, availability of agricultural inputs such as fertiliser and quality seeds, and the decline in the world market price for groundnuts. They have adopted different coping strategies to minimise their economic losses. In some instances, individual farmers have converted less-productive farmland into cashew plantations to better secure their land ownership rights and to overcome the challenges of unlawful land grabbing and 'banking' (securing additional land areas in anticipation of better opportunities) by unscrupulous individuals. In a typical village where groundnut farming was a common practice, cashews are now grown. For example, according to the villagers of Bakary Sambouya (a village in Kombo Central District) 46 per cent of its total land area is currently covered with cashew plantations. As prices rise, cashew is becoming increasingly important as a cash crop for many smallholder farms (taking up to 10ha of the farm area).

With the increase in the number of cashew growers within villages, farmers (especially Kombo District farmers) have recognised the benefits of forming a group for the effective and efficient marketing of their products. This has led to the formation of cashew farmers' groups at village level and to the establishment of an association of cashew farmers.

18.1.2 The operating environment

More and more farmers are realising the full benefits of growing cashew crops, such as purchasing food or covering other family needs. New cashew orchards and plantations are being established, either through the expansion of existing ones, where families are reclaiming farmland previously temporarily leased to non-farm owners (mostly new settlers in

the village), or through cultivating land not suitable for growing other farm crops (as cashew can grow on a wide range of soil types).

Cashew nut production has increased, especially in the Senegambia sub-region, with more farmers shifting to cashew production as it becomes more commercial with better prices. Most farmers have learnt how to grow, harvest and sell cashew through trial and error with little information sharing and no external financial and technical support. Individual farmers operate independently from each other based on their different experiences (positive and negative) and depending on how long they have been involved in the production of cashew. As a result, poor-quality cashew nuts have been noted by buyers during marketing. To address this weakness, improving cashew farmers' knowledge and skills became paramount.

Within the context of improving the skills and knowledge of cashew farmers to produce quality cashew and to improve the incomes of its members, in 2009 the farmers' association signed a three-year memorandum of understanding (MoU) and secured technical assistance with the International Relief and Development (IRD and USDA, 2009). IRD is a USA-based organisation that supports cashew farmers in the improvement of the cashew value chain through building their capacity in cashew production, business and farm management. This was facilitated through the development of a training manual (IRD and USDA, 2014). The training helped the farmers' association to better understand the cashew value chain, develop better business practices and improve farmers' ability to better negotiate with cashew traders. It also supported the introduction and promotion of effective and improved cashew cultivation, harvesting and processing techniques, marketing strategies and value-added activities such as beekeeping and the use of cashew-apple products that engage more people in the cashew sector and maximise returns to the business.

The two-year training (2009–2011) first trained some members of the association as local cashew facilitators (LCF). They are responsible for first identifying individual cashew farmers interested in forming a village cashew farmers' group association. Second, the LCFs train group members in membership requirements such as paying registration fees to the village group and also annual fees to the association. The association also benefited from the hiring of a national consultant who helped organise and structure the association. This resulted in the formation of village associations called farmer field schools. In addition, the training helped the association to establish regular meetings every Sunday to discuss strategies for the marketing of their principal product (cashew nuts). This has resulted in the association engaging with major buying agents such as Comafrique, Sara Trading, Gambia Groundnut Council and Smiling Group International to establish agreements to supply them with quality raw cashew nuts.¹

Most cashew farmers do not have 100 per cent of the financing necessary for their business when establishing their farms/plantations. Some farmers set aside each year some of the profits from the sale of other crops such as groundnuts to use as their investment seed money. However, with the formation of the Kombo Cashew Farmers Association, a farmer may now acquire small credit/loan facilities from the association. Overall, access to credit is very limited.

1. Raw cashew nuts are cashew nut kernels in their shell which have not been processed.

Since 2000, the production of raw cashew and the quality of cashew nuts has increased significantly as the product continues to attract foreign exchange earnings to the country. Currently, total raw cashew nut production is very promising (10–15,000MT per annum). Some of the regular export agents buy from individual farmers through local agents/middlemen (called *banabana* locally). Other export agents secure cashew directly from association members through the coordinator responsible for negotiating prices on their behalf. Occasionally there are other seasonal buyers who are willing to offer a little bit more for the same produce/product. However, such differences in price are not significant (GMD1–2).

Buyers are willing to pay a good price for quality cashews, but many producers do not know what determines high-quality raw cashew nuts. Therefore, the farmers' capacity is being developed in this area (understanding of what 'quality' means and how to determine quality characteristics and its importance for the sustainability of the business), through trainings offered by IRD. Farmers are trained on evaluating raw cashew quality through visual inspection, nut-count testing (by weighing and counting a sample of the crop) and kernel out-turn ratio testing.² Buyers typically adjust their prices based on the quality of the raw cashew nuts. The reputation of consistently producing high-quality cashew guarantees the long-term sustainability of the cashew business.

Under the management of the association, the price of raw cashew nuts is determined by the executive of the association by conducting market research. However, as of 2012, the association has established links with Smiling Group International based in Sweden, whose website³ provides the association with information on the daily world market price of cashew with the view of promoting fair-trade products.

Additionally, since 2013, the Forest and Farm Facility (FFF) is supporting cashew producers in organising annual contact and collaboration fairs where producers are linked to other stakeholders along the cashew value chain. This has greatly influenced the association's negotiation power with buyers, based on better information on the value of quality products and prices in international and local markets. The organised fairs put together members of the value chain actors and provide the producers with opportunities to discuss appropriate methods of nut collection, drying and quality nut control as preferred by buyers.

The KCFA enterprise does not face any serious competition in the South Bank Region of River Gambia. However, there are three major groups in the North Bank Region of River Gambia (Soomoo Senela, Ndarr and Lower Nuimi cashew grower associations) who capitalise on customers from Northern Senegal and Mali. Customers from outside the Gambia (Senegal and Mali) pay for the nuts in foreign currency (CFA francs) mainly to those cashew producers in the northern region of the Gambia.

2. The out-turn of cashew nut kernels is equal to the amount of usable kernels after shelling the cashew nuts. Kernel out-turn ratio (KOR) is measured as the weight of kernels in lbs per bag of cashew nuts (176lbs) (CBI, 2014).

3. See: <http://smilingcashew.com>

18.2 About KCFA as a business

18.2.1 The vision

The Kombo Cashew Farmers Association has its headquarters at Bakary Sambouya in Kombo Central, West Coast Region. It has affiliated members in the Kombo, Foni and Kiang districts in the Lower River Region. There are 57 registered cashew-grower groups forming a network of farmer field schools affiliated to the association in the West Coast and Lower River Regions. The association is governed by a written constitution, by-laws and a well-defined structure. It was established to address some of the major challenges farmers faced in the production and marketing of their product (raw cashew nuts) in collaboration with development partners.



© IRD

Cashew association members

The association has no clear written vision statement, but from consultations it is evident that the association's vision is for cashew farmers to maximise returns from cashew production and improve their livelihoods through expanded farming activities and using value-addition techniques to improve the price for their product. With this vision in mind, the association's general assembly, which is its highest decision-making body, elects its members from the affiliated village cashew farmer groups (the farmer field schools) to serve on the executive committee. This helps to ensure that the aspirations and needs of the association members are achieved.

As cashew-nut production increases in the Senegambia sub-region, more farmers have shifted to cashew as it becomes more commercialised. It commands better prices and is usually paid on-the-spot in cash rather than on credit, as experienced by some groundnut farmers during the groundnut trading seasons.

Poor-quality cashew nuts meant that improving the association's members' knowledge and skills was paramount – and the partnership with IRD has been a key strategy for addressing this issue. The association offers its members technical advice and training such as best production practices, business recordkeeping, accessing and using market information systems, nursery management, transplanting and crafting practices, selection of best-quality cashew nuts and price-negotiations strategies. It also provides market logistics and soft financial loans with a 5 per cent interest rate during the rainy season to be paid during harvesting season. Loans help to facilitate farm-related activities and/with solving social problems. The association also negotiates and signs contracts on behalf of its members for the selling/buying price of raw cashew and arranges buying and collection points to reduce expenditure for the farmers.

The association's formation has increased farmers' understanding of the processes and procedures used in the business. Its membership has grown from three groups in 2009 to 1,575 in 2014. They produce high-quality cashew nuts, which has translated into an increase in supply of raw cashew nuts over the years and has significantly influenced the trend in sales.

It is evident from this study that, despite the association members benefiting from better fair-trade prices and technical support, the setting and functioning of this seemingly community-based enterprise is different from a typical community-based enterprise where members own, invest, manage and share common property and resources for the benefit of all. The purpose of this cashew farmers' enterprise is currently only limited to supporting members to produce quality products and to secure a better market price when selling their raw cashew nuts for individual profit and to access financial and technical support that targets the advancement of cashew farming through the application of best techniques and value addition (see Box 18.1). Therefore, the association's source of raw cashew is mainly from its registered members.

Through the association, customers/agents are guaranteed quality cashew nuts during the trade season based on the quality tests conducted by the association on behalf of the agents. After negotiating a price, the association also arranges the buying and collection of raw cashew nuts on behalf of the agents through their network of farmer field schools. The agents are also informed of the quantity of dried nuts available per farmer field school. The local cashew facilitators of the farmer field schools are informed of the price

Box 18.1 The aims and objectives of the association

- To foster mutual understanding and cooperation among the entire membership
- To search for suitable markets to enhance prices from sales of farm produce
- To increase the revenue base from cashew nut sales
- To increase recognition of the association
- To enhance socio-economic conditions and improve livelihoods of members
- To negotiate contracts which assist in strengthening the stance of the association
- To work with government ministries, projects, NGOs and other formal and non-formal groups in the country
- To enhance members' capacity and access to information

agreements, which they communicate to farmers. Farmers then transport their produce to the nearest buying point within their locality.

It is difficult to establish correct information on the trends of sales due to the absence of proper recordkeeping. However, based on this study, it is estimated that 75 per cent of registered farmers sell their cashew nuts through the association to major buying agents that have signed contracts with the association. Some members of the association do negotiate and sell their raw cashew nuts directly to agents, especially those who have accessed loans during the rainy season from the agents rather than from the association.

18.2.2 Business inputs

The Kombo Cashew Farmers Association secures all its raw cashew nuts from farmer field schools registered with the Kombo Cashew Farmer Association and located in various parts of the Kombo district. The farmer field schools were established in villages with a minimum of 20 and maximum of 25 registered cashew farmers who meet regularly to exchange knowledge and experiences as a group.

The local cashew facilitator (LCF) is responsible of coordinating the sales of raw cashew nuts of its members through the association. The association is in turn responsible of contacting buying agents, providing information on the quantities available of raw cashew nuts and negotiating and signing contracts on behalf of its members. The local facilitator liaises with the farmers, who deliver the raw cashew nuts to a specific buying point. The LCF oversees the weighing, screening and purchasing of the products from individual farmers. The cashew nuts are finally delivered to the agents' temporary storage sites where they undergo further screening, drying and bagging for export and/or processing.

Cashew plantations are traditionally owned by individuals or family businesses who are themselves registered members of the association. They conduct their own businesses as they see fit. Therefore, farmers who have invested in their cashew plantations/farms have done so using their own personal resources.

The association has very limited credit facilities accrued from annual membership contributions, fund-raising activities and after-sales commission. Other sources of credit include the village cashew growers' savings accrued from membership registration fees (GMD50–100) and annual membership fee contributions of GMD300 (although this sum is not regularly paid by all members – 10kg of raw cashew nuts can be paid as its equivalent). These savings operate as a revolving fund. The KCFA has not yet put in place measures for organising itself as a profit-making entity that can mobilise revenue from increased sales to develop business facilities (value adding) for its own and members' benefit. Its sole income is based on membership fees (GMD300 per year/member) which limits what it can do or offer to its members.

At the individual farm level, a farmer may take out a small loan with an agent or other middleman, depending on the level of trust and confidence between them. However, this form of credit is provided mostly during the rainy season when farmers are desperately in need of money and are particularly exploitative. In some cases, farmers must sell their cashews to their creditors for whatever price they are offered.

Figure 18.1 Kombo Cashew Farmers Association value chain

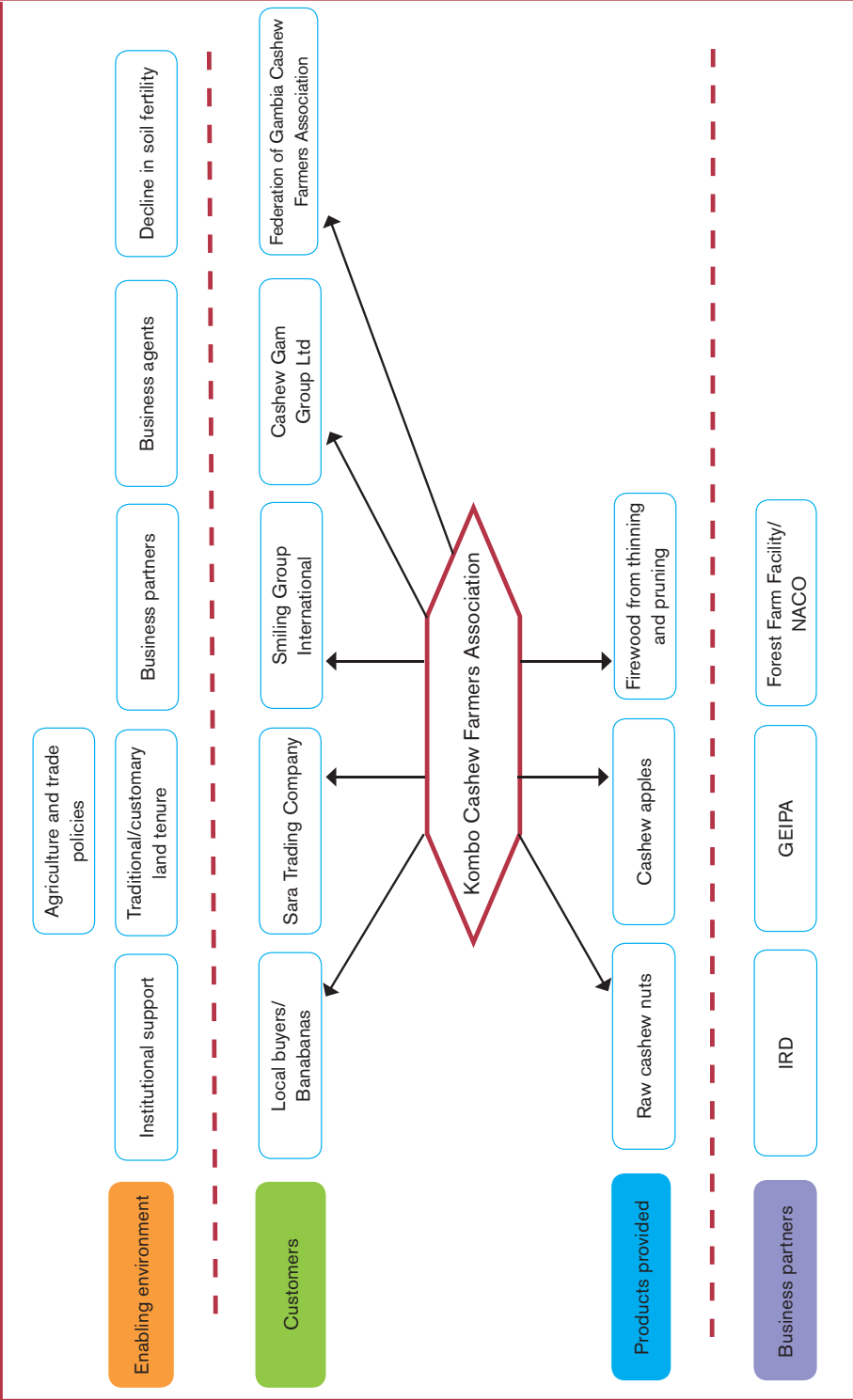
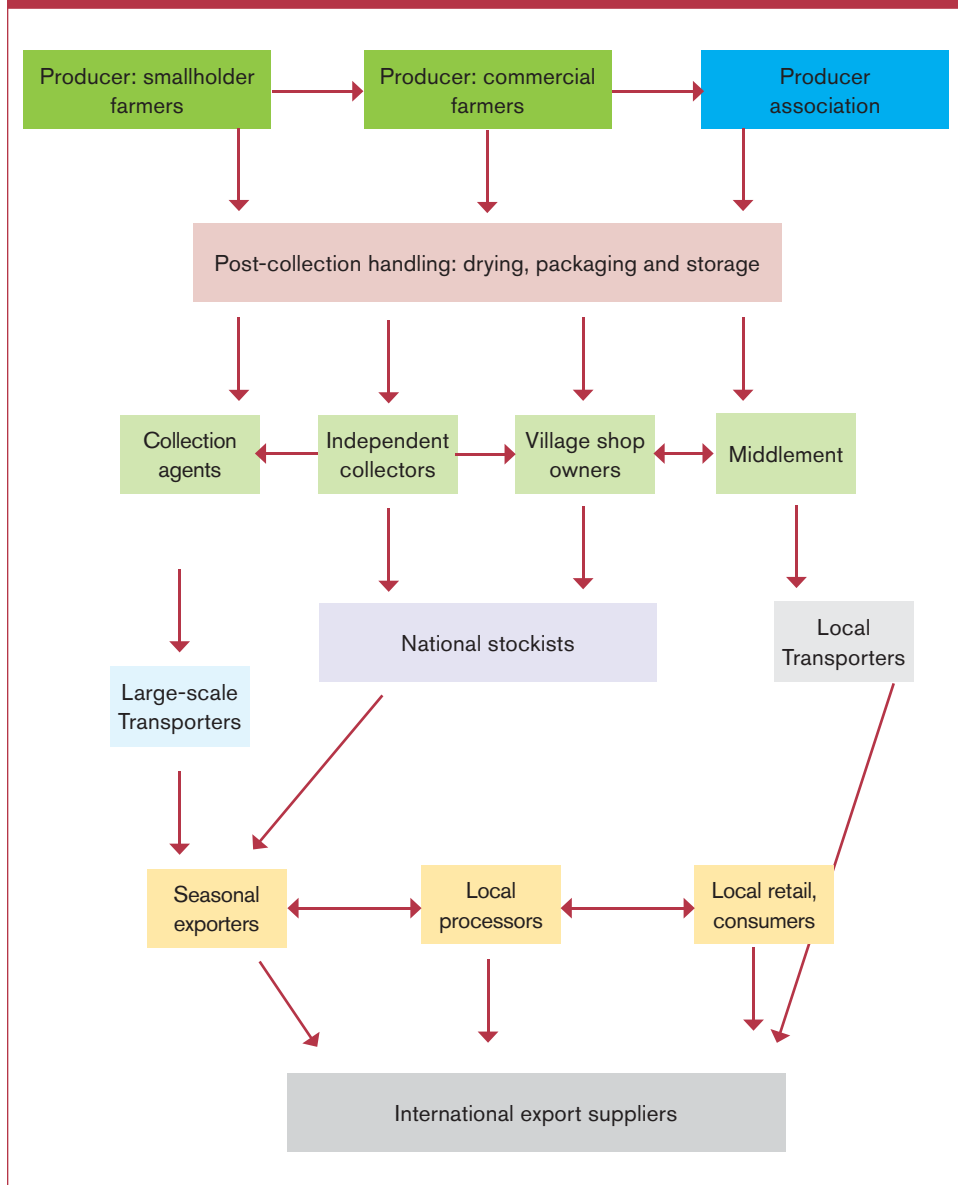


Figure 18.2 Cashew market flow map



18.2.3 Main activities

The association is not engaged in buying or selling products but limits its business activities to negotiating price on behalf of its members with designated regular agents. Its role is mainly to facilitate better market conditions and trade for its members. The negotiations do not mean that individual association members are limited only to selling their produce to agents the association has negotiated with: they may sell to any other agent they prefer. The association performs certain services (see Table 18.1) which help the farmers to produce better-quality produce and negotiate better deals for their products.



© IRD

Bagging and weighing cashews

Table 18.1 Services provided by KCFA to its members

Services	Type	Target	Outcomes
Marketing	Consultation with buying agents	Buying agents	Guaranteed market
	Market price negotiation		
	Facilitation of buying raw cashew nuts		
Technical assistance	Training on the adoption of best production practices	Farmer field schools	Production of quality cashew nuts
	Training on business recordkeeping		Tracking of investment costs and revenue
	Training on accessing market information		Price forecasting/ better price negotiation opportunities
	Training on nursery management		Production of quality products
	Training on planting/grafting/pruning/thinning		Establishment of high-yielding varieties
	Training on quality control of cashew nuts		Improved flowering and quality seed production
	Training on harvesting/post-collection handling		High-quality and value cashew nuts

18.2.4 Technology and skills

To improve quality and yields the association is training its members to use selected grafted seedlings and/or improved high-yielding varieties. Beehives have also been introduced within the cashew plantations to boost pollination and increase yields. Technology such as grafting is used by farmers to replace the tops of old cashew trees or seedlings with shoots of high-yielding varieties, taking advantage of the well-developed root system of the already-established stock to improve productivity of a poor-yielding plant. With survival rates of up to 80 per cent, grafted cashew trees usually start bearing fruits within two years – much earlier than trees grown from seeds, which would usually take up to five years to mature.

18.2.5 Business partners

After the creation of the Kombo Cashew Farmers Association in 2009, the association mainly sold its cashew nuts to individual businessmen acting as local agents to major exporters operating within the Senegambia region. Then in 2010–2011, the association linked up with Sara Trading Company (an Indian company based in the Gambia) which bought the raw nuts for export to India for the first stage of processing (decortication or de-shelling raw cashew nuts) before being sent to the USA for final processing and marketing. In 2012, the association signed a one-year contract with ComAfrica, another Indian company based in the Gambia.

The initial contracts with these two companies were limited to one and two years respectively, but some members of the association continue to do business with them on an individual basis. In 2013, the association linked up with the Smiling Group International (Sweden) through a local agent based in the Gambia. In 2014, the association explored opportunities for doing business with Cashew Gam Group, a Gambian-based company that processes raw cashew nuts for export to Europe and for local supply. More recently, in 2015 the association has developed a partnership with the Federation of Gambia Cashew Farmers Association, which has business partners based in Holland (see also Table 18.2).

18.2.6 Customer groups and product types

Table 18.3 shows KCFA's customer groups and product types. The customer groups include international cashew exporters with representatives established in the country, who deal mainly with raw cashew nuts for export. There is a local cashew nut processing company (Cashew Gam Group) which buys and processes raw dried cashew nuts for both export and local markets. The company also processes cashews for other agents such as Smiling Group International. Agents such as Sara Trading and the Federation of Gambia Cashew Farmers Association are focused only on purchasing raw cashew for export.

The processing of cashew apples is done on a small scale using low-cost facilities. These appropriate technology and small-scale processing units transform cashew apples into processed products such as dried apple cakes and cashew butter as well as local wine and spirits for local consumption.

Table 18.2 KCFA business partners

Name of partner	Service type	Role/function
International Relief and Development (IRD)	Technical	<ul style="list-style-type: none"> ■ Trained 12 members in cashew apple processing ■ Supports meetings and provides advice to members on best production practices ■ Provides technical equipment and trains members on their use such as cashew apple processing machine, chainsaws for pruning, weighing scales, cutters for cashew nut quality testing ■ Provides motorcycle for field supervision/visits ■ Trains association members in management
	Business promotion	<ul style="list-style-type: none"> ■ Facilitates farmer exchange visits e.g. to Senegal ■ Facilitates association members participation in trade fairs e.g. in the Gambia, Senegal and Benin
Gambia Investment and Export Promotion Agency (GIEPA)	Technical	<ul style="list-style-type: none"> ■ Facilitates business links with export agents and other business partners ■ Supports contract negotiations with business partners ■ Training in investment strategy ■ Trained two association members on cashew apple processing
	Business promotion	<ul style="list-style-type: none"> ■ Supports contract negotiations ■ Establishes links with potential export partners/agents
Smiling Group International	Technical	<ul style="list-style-type: none"> ■ Training in organisational management ■ Training in quality control within the cashew value chain ■ Training in environmental protection e.g. bushfire control and soil erosion control
	Business promotion	<ul style="list-style-type: none"> ■ Provides international market information on cashew prices
Forest and Farm Facility (FFF)	Technical	<ul style="list-style-type: none"> ■ Organises technical workshops for association members on best production practices and plantation management

Table 18.3 Customer groups and product types

Customer category	Product type	Location	Method of purchase of product type
Raw cashew nut export agents (Sara Trading Company and Federation of Gambia Cashew Farmers Association)	Raw cashew nuts	Gambia/India/America	Signs contracts with association based on negotiated purchase price then purchases dried screened nuts and pays cash before delivery in bags at decentralised cluster buying points at district level
Cashew nut processing agents (Smiling Group International and Cashew Gam Group LTD)	Raw cashew nuts	Gambia	Signs contract with association based on negotiated purchase price then purchases dried screened nuts and pays cash before delivery in bags at decentralised cluster buying points at district level
Local buyers/ <i>banabanas</i> Mostly village-based shopkeepers	Raw cashew nuts	In villages within cashew-growing cluster area	Local buyers purchase cashew nuts on behalf of agent(s) or for themselves usually for GMD1–2 more than the common unit price to resell to agent(s). No formal contracts, but may or may not be based on agreements supported by pre-financing opportunities especially in times of financial need
Firewood collectors	Thinned and pruned cashew plants and branches	Local community	Sold per cubic metre of firewood mostly for a negotiated price
Cashew apple collectors (for processing into local wine and spirits)	Cashew apples	Local community	Sold for a negotiated price as demand for cashew apples is low

18.2.7 Differentiation in the market place

There are other cashew farmer associations: three in Niimi district in the North Bank Region and one more in Kombo Central West Coast Region. They are the National Cashew Farmers Association, the Ndarr Cashew Senela Kafo Association of Lower Niimi, the Hakiliyema Cashew Growers Association in Upper Niimi and Soomoo Senela Kafo in Upper Niimi. These associations also benefit from IRD technical support, but unlike them, KCFA has a more cohesive membership and is relatively better organised as an association.

The majority of KCFA members are of a particular tribe, the Manjagoes, who are believed to possess certain spiritual powers to cast bad spells on their enemies. As a result, their properties and cashew farms do not suffer from any form of theft. This allows the

cashew fruits to mature on the plants before collection. More importantly, members' homes are established within their farmland, which is an added advantage in ensuring that their cashews reach full maturity so that quality cashews nuts can be harvested at the appropriate time. Members of the other associations do not enjoy the same level of social protection and their farms are more exposed to intruders during the harvesting season. As a result, they sometimes harvest prematurely to avoid the risk of theft, and this has an impact on quality and ultimately price.

KCFA is also linked with Fairtrade International, based in Germany, which gives them the advantage of selling their raw cashew nuts as a Fairtrade-certified product at the international level. Equally important is the fact that KCFA is the most recognised of the five associations in the country linked to IRD. This is due to their planned farming development activities and management capacity. KCFA is also better placed in the market in that it sells most of its products directly to major export/processing agents in the country, unlike the other associations which deal mostly with smaller buying agents and *banabanas* which leaves them more exposed to varying prices. KCFA's direct business links with the major export agents better positions them in terms of mobilising farmers and supply.

18.3 Who controls KCFA?

18.3.1 Origin of the value proposition

The business of farming cashew as an export crop was initiated by three farmers based in the West Coast Region in February 2009. All three were engaged in both groundnut and cashew farming. At that time, the price of raw cashew nuts was GMD5–8/kg.

The three eventually recognised the need to form a group of cashew growers and then formally started meeting every Sunday in one of the farmer's compounds, who later became the first president of the association. The group eventually started inviting and convincing other cashew growers to join the group. The weekly meetings attracted new members, as news of the group spread through individuals within communities during public gatherings such as ceremonies.

New members from other districts later joined the association in 2011. Eventually, individual village cashew farmers' groups were established. Before the existence of the association, the cashew trade was between individual cashew farmers and local petty traders and set at a very low price. To address the pricing problem, the individual farmers saw the need to form an association. In April, 2009 the KCFA was established with 200 farmer members from various villages (Bakary Sambouya, Manduar, Kitty, Darsilameh, Faraba Kairaba, Brikama and Kunkujang Jattaya) in Kombo Central, North and East districts, which today serve as the established buying points. There are eight buying points in Kombo and one in Foni district.

IRD's first intervention with the association was to address challenges identified in a needs assessment done in July 2007 by the Cashew Value Chain Enhancement Project. The assessment results were:

- Poor social organisation of farmers which limits their capacity to effectively manage the cashew value chain,
- Lack of relevant institutional support (policy, research, extension, and credit facilities),
- Low levels of business innovation and marketing,
- The opportunities to use innovative agronomic technologies for cashew production are either not available or not widely disseminated for use by farmers,
- Limited availability of and inaccessibility to improved varieties of cashew (yields 5–6kg/tree per annum versus higher-yielding varieties of 20kg/tree per annum),
- Poor-quality harvest due to inadequate knowledge of quality standards and improper post-harvest handling techniques (resulting in lower farm-gate prices), and
- Farmers and processors have insufficient value-addition capabilities – this reduces income from cashew and its multiple by-products.

This initial assessment was used as the foundation for the training manual developed under the cashew enhancement value-chain project to support KCFA build the capacity of its members (IRD, 2014).

18.3.2 Control over forest resource access

Cashew farms are traditionally individually or family owned, usually by those who first settled the land in a village. All family members have rights of access and use but under the direct supervision of the head of that family. Individuals can own land through inheritance or by purchasing it from others. The ownership is then customarily transferred through the village and district heads. It is also common practice now for some farmers to acquire title deeds to consolidate their ownership rights. However the land is acquired, the use and access rights of such individually owned lands are guaranteed and any business conducted on such land is done with the approval of the individual owner or head of the family. Currently, there is no documented information on cashew farms being managed by more than one family. Instead, at village level, individual cashew farmers form village farm groups (farmer field schools).

18.3.3 Control of the business

The Kombo Cashew Farmers Association is registered with a written constitution and managed by an executive committee. However, it is not as a profit-making enterprise. It does not buy any produce from its members for onwards selling, or keep any share of profits made from sales. It is only engaged in the negotiations for market access and price which members benefit from. The rights and responsibility for access to and control over resources rests with the individual farmers. However, these rights are supported and made more secure through the farmers' membership of the association, which in turn negotiates prices and contracts with buyers on behalf of its members.

Table 18.4 Investments and benefit sharing (family/individually managed cashew plantations)

Type of investments	Through what ownership structure	What are the benefits?	Who benefits?	How was it decided?
Provision of land, fencing materials, planting stock and labour	Customary/traditional and or legal through land registration/leasehold	Access to land, production quantity/ income from sales	Family members	As per tradition, the family head decides family matters

18.3.4 Staff selection and roles

The association has a constitution adopted in April 2009 that governs its functions. The constitution mandates the association to hold an annual general meeting of the general assembly that is attended by three members of each farmer field school representing their group members. The general assembly holds the authority to elect and dismiss members of the executive committee. All members of the association are members of the general assembly.

The members of the general assembly are mandated by the same constitution to:

- Amend or remove any part of the constitution,
- Elect a 15-member executive committee for a fixed term of three years with no member to serve more than two consecutive terms, and
- Execute the functions of the association.

The executive committee consists of the president, vice president, treasurer, assistant treasurer, secretary, assistant secretary, coordinator and four advisers. It is the highest decision-making body of the association acting on behalf of the general assembly.

Under the leadership of the president, the executive committee is responsible for:

- Convening executive and annual meetings of the general assembly,
- Managing the funds of the association,
- Recruiting new cashew farmers as members of the association,
- Representing the association,
- Mobilising resources to fund activities subject to review and approval by the general assembly, and Approving expenditure made by the president (although for any non-reliable ventures, it seeks the approval of the general assembly).

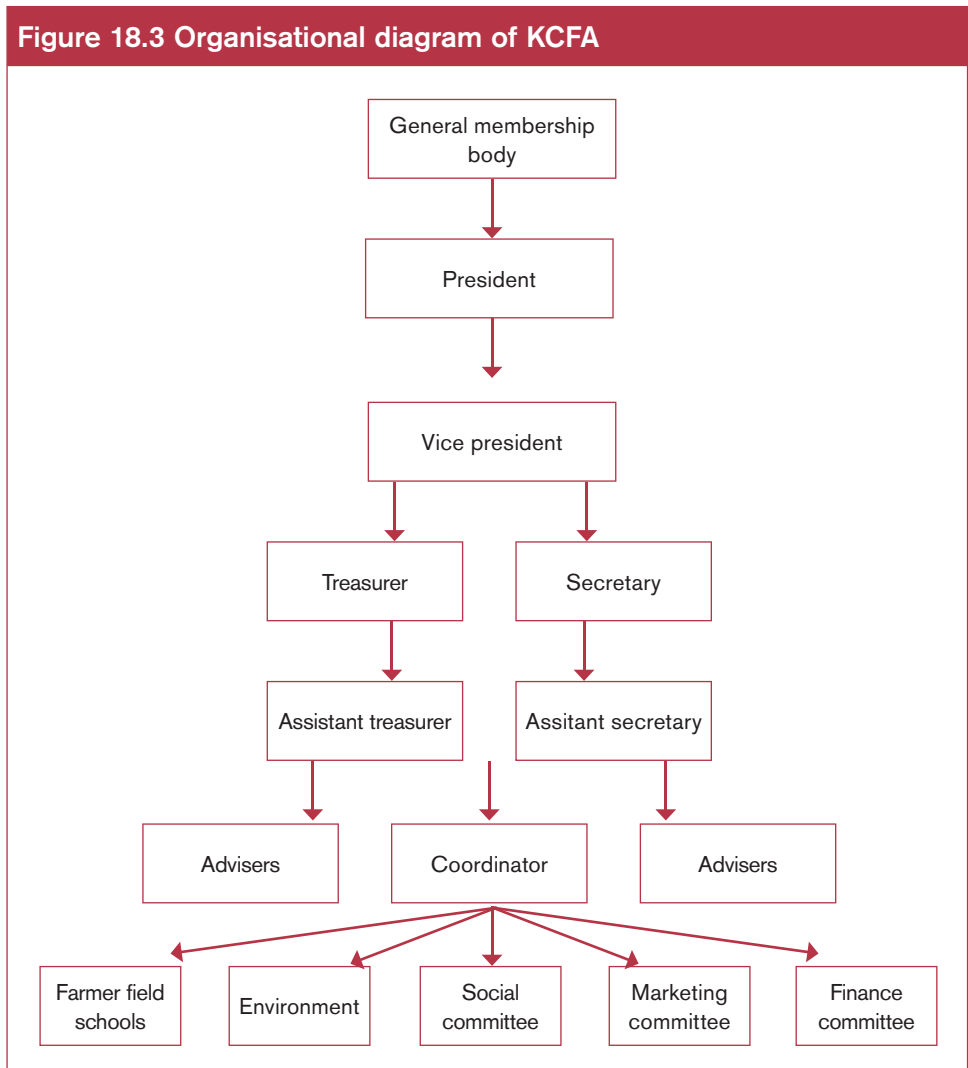
The secretary to the committee is signatory to the association's bank account and with the assistance of the assistant secretary, is responsible for taking minutes at the committee meetings, recordkeeping and correspondence. The secretary also presides over meetings in the absence of both the president and vice president.

The treasurer is responsible for coordinating all financial transactions of the association, collecting and banking members' contributions and other funds, withdrawing funds on behalf of the association when requested by the executive committee, providing financial records for auditing, providing detailed biannual financial reports to the general assembly and communicating relevant information to members and any notices of arrears every two months.

The auditor is responsible for auditing the association's transactions through the treasurer and bank accounts and reports the findings (including any comments from committee members) to the general assembly.

There are four advisers within the executive body who advise and assist the executive committee in decision making (although the committee are not obliged to accept their advice). There is a coordinator responsible for promoting the image of the association, media announcements and advertisements. The coordinator also communicates outcomes of general assembly meetings particularly if there is a high turnout and is the main contact for providing any information requested by others. The executive committee is empowered to select and form sub-committees on a wide range of issues either on a temporary

Figure 18.3 Organisational diagram of KCFA



or permanent basis for specific functions. These include the control sub-committee, constitutional review sub-committee, social sub-committee, environment sub-committee and fair-trade sub-committee.

The control sub-committee is responsible for monitoring and supervising activities of the executive committee members and other sub-committees to ensure that all functions are performed in accordance with the decisions of the general assembly and the constitution. The constitutional review sub-committee reviews the constitution on behalf of the executive committee.

The social sub-committee is responsible for proposing social activities to the executive committee in liaison with the treasurer. The environment sub-committee advises members of the association on good environmental practices, farm clearing and the establishment of fire belts to protect the cashew plantations from fires. The fair-trade sub-committee is responsible for the monitoring and supervision of the affiliated farmer field schools' members on Fairtrade standards and principles.

18.3.5 Delivery options

The association being a non-profit making enterprise is not involved in delivering products to its agents other than the raw cashew nuts. However, the nuts are properly dried, bagged and stored at buying points ready for the buyers to collect, which has made delivery easier for both the entrepreneurs and their customers, saving time and resources during the buying period. This has created an advantage over competitors in terms of quality and mode of delivery.

18.3.6 Customer research

A sub-group of the association, the marketing committee is responsible for grading and negotiating prices, terms and conditions for buying raw cashew nuts. It reports to the association at the general assembly meetings. Customer research is carried out by the executive committee. The partnership with Smiling Group International in particular has helped the association to gain access to up-to-date and reliable information on the price of cashew at national and international levels.

Other promotion activities have also helped to market the association and its products. For example, in 2012 and 2014 the association participated in the Cashew Week which promotes cashew products and is supported by the African Cashew Alliance (ACA) whose headquarters are in Ghana. Different cashew nut varieties were displayed and there were discussions on how to improve the production value chain. Participants ranged from public institutions (government) to non-state actors (NGOs, parastatal organisations and financial institutions) and the private sector (farmers, processors, traders and exporters). This has helped the association to establish new contacts with groups such as Smiling Group International and Gambia Groundnut Council based in the Gambia. Their new slogan is 'Quality cashew is good business'.

18.4 How has KCFA overcome key challenges?

The following sections explore challenges reported by cashew farmers and the strategies adopted by the association to address them.

18.4.1 Challenges to do with the value proposition

As a young association, KCFA has faced challenges in mobilising and increasing its membership coupled with a lack of communication facilities. The founding members embarked on an awareness-raising programme by informing and sensitising other cashew farmers through normal traditional discussions at informal gatherings such as naming ceremonies and other village/communal gatherings. Through this process, the founding members succeeded in gaining more members.

The association consists of members from different ethnic and religious groups. It has confronted and addressed issues of potential conflict by organising monthly meetings to discuss management issues with the participation of all. In this way, certain religious and cultural differences have become better understood as the meetings help to build members' confidence in one another which has ultimately led to members being committed to ensuring the effective functioning of the group.

Another challenge has been managing internal conflict which has been mainly related to leadership and resource-management issues caused by inadequate experience in these areas. Some members with little or no group-management skills were elected to certain leadership positions. Initially, conflicts were discussed and resolved at the annual general meetings. However, the issues were also later addressed through leadership training (offered to the executive members by IRD) and training-of-trainers for members at the farmer field schools through partnership arrangements. Cultural challenges – such as the association of cashew farming with bad omens/spirits and cashews being taboo for Muslims – have been overcome through awareness-raising activities by farmers who have benefited from cashew farming. Other strategies were campaigns to disseminate information and organise trade fairs so that farmers could appreciate the associated benefits of cashew farming.

18.4.2 Overcoming legal challenges to do with resource access

Due to a lack of policy for the cashew sub-sector, stakeholder's efforts are not well coordinated. Therefore, the association continues to lobby government to develop policies. One of the challenges to improving security of resource supply is the limited access to fertiliser that would improve production. This is mainly due to high costs. To overcome resource-supply challenges farmers are trained in other methods for increasing production such as improving the soil conditions, growing high-yield varieties, introducing beehives to boost pollination.

18.4.3 Overcoming ownership and benefit-sharing challenges

Land ownership is based on customary tenure. This is the system where landowners (land acquired through customary rights) have full rights to use the land and these rights can be passed on to heirs and descendants. With regards to access to benefits and their distribution, individual producers own all of the proceeds from the sales of their products, but they are obliged to contribute an annual fee of GMD300 to the associations in recognition of the services rendered to members (although not all members regularly pay). This is the association's only income apart from non-technical support-related resources provided by partners.

Some association members claim that some members have initiated the process of acquiring leasehold titles for their cashew plantations. They aim to add value to their plantations which could serve as collateral for acquiring loans. This form of land tenure granted by the Ministry of Lands and Regional Administrations is based on the Western concept of leasing and is gradually replacing customary forms of tenure. The manner of the grant varies slightly depending on whether the land is located in the Greater Banjul Area (which includes Banjul and part of the West Coast Region) or in the provinces.

18.4.4 Overcoming labour challenges

Given the association's mode of operations, it does not face any challenges related to recruitment, labour or infrastructure as all operations are done at an individual level. There are no communal farms owned by the association. Individual farm owners are responsible for providing labour and infrastructure for cashew nut drying and temporary storage. The association's activities are limited to identifying and negotiating raw cashew nut prices with agents on behalf of its members.

At the individual farmer level, labour is provided by family members be it on an individual or a family plantation. Sometimes labour can be a challenge especially when children are at school. Children make a significant contribution to most plantation activities. In such situations, farmers hire casual labour which is paid in cash or in-kind. Also, individual farmers of the same farmer field school sometimes collaborate to transport and sell their produce directly to an agent of their choice. Such arrangements are outside of the association's mandate and concern.

The association, with the support of IRD, the World Bank's Growth and Competitiveness Project (GCP) and the Forest and Farm Facility (FFF), continuously strives to build the technical capacity of individual association members through training on product development and monitoring the quality of raw cashew nuts to maintain the reputation of the association.

18.4.5 Overcoming marketing challenges

One of the main challenges faced by the KCFA is securing enough supply from its members for its regular buyers. The members are not obliged to sell to the agents that the association has negotiated and signed contracts with. Instead some members sell to other agents or even middlemen who are pre-financed by other foreign buyers based

in the country (Indians, Chinese and Lebanese). These middlemen negotiate the price with farmers rather than buying the product for a fixed unit price. To overcome some of these challenges, KCFA has been linking farmers in the farmer field schools through the LCFs with agents, selling to them rather than to the middlemen. The LCFs also organise transport to guarantee delivery to designated agents.

Since the formation of the association, it has been acting as a platform for market information, collection, and sharing new developments in the product value chain. Farmer field schools are used to discuss and exchange information on marketing and best production practices with the support of LCFs. Most importantly, as a result of price negotiations, KCFA members have been able to double their profit, which has improved production. Farmers are collaborating in transporting their products to designated market places.

Initially, there was much mistrust between farmers and traders, mainly middlemen. This was mainly due middlemen undercutting prices. IRD and FFF intervened to train farmers on the concept of the value chain by organising annual marketing fairs prior to the marketing season. These involved different actors in the value chain such as producers, buyers, middlemen, agents, exporters and processors. The aim was to share experiences from the past trading season (successes and challenges) to pave the way forward for the coming season. The concept of linking farmers to markets, support and service institutions was appreciated by all actors along the value chain and helped to increase understanding of different market segments and identify potential partnerships.

18.5 Key lessons

18.5.1 Keeping down costs

Sharing reliable market information amongst association members combined with producers coordinating to jointly transport their products to market has contributed significantly to lowering overhead costs relating to marketing.

The availability of improved cashew varieties either in the form of seedlings or grafts produced by trained people who are locally based has significantly reduced transport costs for purchasing planting materials.

18.5.2 Retaining customers and willingness to pay

One of the main successes in building customers' confidence and their willingness to pay for the product is the ability of the farmers to produce quality raw cashew nuts – even though disagreements over quality between farmers and buyers is common during price negotiations. It is not uncommon for dishonest buyers to use the pretext of quality as an excuse to negotiate lower prices – although that is not to say that inexperienced individual farmers do not also tender low-quality products – but disagreements over quality can be overcome by testing. Buyers typically adjust their prices based on the quality of the raw cashew nuts. However, price adjustments have not affected the high demand for cashew nuts, as buyers and producers still make a huge profit.

18.5.3 Success factors

Through the association's efforts, a series of linkages to other support and service institutions have been forged to increase and improve the technical and managerial skills of association members.

The interventions of IRD through the USDA-funded Food for Progress programme funds has significantly contributed to developing and strengthening the farmer's association to better understand the cashew value chain, develop better business practices, improve farmers' ability to better negotiate with cashew traders and keep records of their activities and investments. However, the association has not capitalised on the trainings provided such as processing techniques, marketing strategies and value addition to expand their mandate to include buying, selling and processing cashew nuts to increase profit. Negotiations and agreements between the association and agents have not fully served the purpose of guaranteeing that the agent is supplied with a specific quality of product from the association's members. In future, this could serve as a lever to oblige all members to sell their cashew nuts to the agents the association has signed contracts with.



Traditional My Urban Tribe Cloth

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The Philippines: Sunflower Weavers' Association (Sunflower)

Empowerment within an indigenous women's enterprise in Bukidnon, Mindanao, the Philippines

by Maria Theresa Padilla-Matibag and Ruth Canlas

In the Philippines, as elsewhere, women and indigenous peoples in general have limited scope for economic and social empowerment. Here, the authors describe how the Higaonon women of Bukidnon province have used their weaving skills and forest use rights to create a thriving enterprise producing and marketing hinabol, a traditional fabric woven from abaca, an NTFP grown in their local forests. The Sunflower Weavers' Association enables the women to command a higher price for their products, significantly contributing to household incomes. With support from external partners, Sunflower has maximised benefits from the forest by creating a high-quality product much in demand, at home and abroad.

19.1 Context in which Sunflower operates

This case study describes the work of the Sunflower Weavers' Association (hereafter called Sunflower), an indigenous Higaonon women's community-based non-timber forest product (NTFP) weaving enterprise in the Bukidnon province of Mindanao, Philippines. Within this context, enterprise development has been considered as an effective strategy utilised by the government to reduce poverty and improve local economies, especially in rural communities where raw materials and manual labour are considerably abundant and readily available. However, in certain localities and economies women's participation in economic activities outside the home is not encouraged. Instead, women are given roles and functions that dominate the domestic and reproductive spheres or an expansion of it in the service industry. Not so many women would have the confidence to enter the industries dominated by men, which limits their opportunities for better income and growth.

Philippine women, as elsewhere, are in a disadvantaged position in the spheres of local economic and social development. This prevents them from fully participating in development processes, programmes and projects in their localities. As a result, much-needed economic power that women can contribute to is not maximised in local economies, particularly in rural areas. Similarly, men enjoy the benefits and privileges of local development initiatives more than the women who are further pushed into poverty.

Indigenous peoples are challenged by poverty in the same way as women, because of discrimination and other social conditions that marginalise them. Indigenous people comprise 10–20 per cent of the population of the Philippines. They do not (by their own definition) consider themselves poor (ADB, 2002). Their resource-rich environment provides their food needs, despite the fact that certain development interventions, particularly

extractive industries, continue to adversely affect access to land and resources for many of these indigenous communities. In many cases, however, due to the remoteness of their communities, their access to basic government services such as education and health are very limited or non-existent.

Women, in the main, face greater challenges in getting equal access to opportunities and services compared to men. Moreover, indigenous women are doubly burdened with respect to access to their rights. Apart from their struggles as women, they also confront the frequent discriminatory treatment experienced by indigenous peoples in various aspects of human existence – economic, political, social, cultural and environmental (i.e. including access to land and natural resources).

Adding to this challenging situation is women's typical low level of education, thereby aggravating and limiting their opportunities for better employment. Fortunately, many indigenous women have specific skills learnt through tradition such as weaving fabrics made from natural raw materials available in their forests. Thus, their cultural products have become their traditional livelihoods, providing their families and communities with additional income, especially during low-harvest seasons.

It is important to note that the rights of women and indigenous peoples within the Philippines are protected through specific national and international legal instruments. For indigenous peoples, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and Convention No. 169 on Indigenous and Tribal Peoples Convention of the International Labour Organisation (ILO) provides protection at the international level. Provisions of both instruments cover the rights of indigenous peoples against discrimination and further marginalisation and equal access to social, economic and political opportunities. ILO 169, if ratified in states, requires governments to enact and implement laws reflective of the provisions in the convention. For women, one of the important international instruments is the Convention on the Elimination of Discrimination against Women (CEDAW).

19.1.1 The enabling environment

In the Philippines, the Indigenous Peoples' Rights Act (IPRA) provides for a comprehensive coverage of indigenous peoples' rights. However, despite this law and its ample provisions, its implementation on the ground remains a challenge especially for its implementing agency, the National Commission on Indigenous Peoples (NCIP). For the women of the country, the Magna Carta of Women or RA 9710 has salient provisions on women's rights, equal employment opportunities and gender and development budgets, among others. Other national laws protecting women and children are: Women in Development and Nation Building Act (RA 7192), Special Protection of Children Against Child Abuse, Exploitation and Discrimination Act (RA 7610), Anti-Sexual Harassment Act of 1995 (RA 7877), Anti-Rape Law of 1997 (RA 8353), Rape Victim Assistance and Protection Act of 1998 (RA 8505), Anti-Trafficking in Persons Act of 2003 (RA 9208), and Anti-Violence Against Women and their Children Act of 2004 (RA 9262). Republic Act 10644 or the Act Promoting Job Generation and Inclusive Growth through the Development of Micro, Small and Medium Enterprises of 2013 has important provisions that can be tapped by community-based enterprises for specific support. The Higaonon women are covered by

the above-mentioned legal instruments that support their rights as indigenous peoples, as women and as community-based entrepreneurs.

The area of study is in the *barangay* of Manalog, Malaybalay City, Bukidnon province in Mindanao.¹ Mindanao is a resource-rich island and the second largest in the southern Philippines. It has the highest concentration of indigenous peoples, around 60 per cent of the population nationally.

Hilly Bukidnon is one of 24 provinces on the island with a similarly rich cultural history because of the seven indigenous tribes living in its upland towns and villages – the Higaonon, Talaandig, Manobo, Umayamnon, Matigsalug, Tigwahanon and Bukidnon tribes.

Bukidnon is located in central Mindanao and subdivided into 46 municipalities, two of which are cities. It is called the 'South Summer Capital the Philippines' because of its cool weather and is home to the endangered Philippine eagle. Another ecological feature of the province is Mount Kitanglad, the country's fourth highest mountain, that also needs protection and conservation. Critical to this case study is the fact that Bukidnon is one of the top eight abaca-producing provinces in the Philippines.

Abaca is internationally known as Manila hemp (*Musa textilis*). It is a plant species of banana that is native to the Philippines and is grown as a commercial crop in the country. It is also grown in Ecuador and Costa Rica. It is used as raw material for textiles (such as the fabric known as 'hinabol') in fashion and furniture manufacture and in industrial and pharmaceutical products such as rope, paper, rugs and mats.

Malaybalay, the capital city of Bukidnon, is classified as an agricultural area and is one of the two famous municipalities producing abaca. The other abaca-producing municipality in Bukidnon is Impasugong. Malaybalay's other agricultural products include rice, corn, sugarcane, vegetables, legumes, root crops, and commercial crops such as rubber, coffee, banana and pineapple. Although abaca is considered by the government as an agricultural product, it is an NTFP in areas like Bukidnon where it is naturally grown in and near forests.

19.1.2 The operating environment

Abaca is identified as Malaybalay's One Town, One Product (OTOP) by the Department of Trade and Industry (DTI). OTOP is a government priority programme to promote entrepreneurship and create jobs. It supports micro, small, and medium enterprises (MSMEs) to manufacture, offer and market distinctive products or services through the use of indigenous raw materials and local skills and talents. Based on an updated DTI study on abaca, there is still a growing worldwide demand for abaca and the Philippines has been the highest producer of abaca since trading of this product began in as early as the 18th century. It was then used in the shipping industry, as a very sturdy rope can be manufactured from it (DTI, 2013).

1. A *barangay* is the smallest administrative division in the Philippines, usually a village, district or ward, but can also refer to e.g. an inner-city neighbourhood or suburb.

Malaybalay and Bukidnon province, in general, have an ideal environment and soil for abaca. Abaca plants grow best in areas with volcanic soil and a wet climate that most parts of the country like Bukidnon are endowed with. Mindanao has been encouraged to expand its abaca production to meet the global requirements after the Bicol region, the highest producer of abaca, was affected by the abaca bunchy top virus (ABTV) and abaca mosaic virus in 2009. The Visayas region, in recent news (GMA News Online, 2014), is also affected by the above-noted viruses and Bract mosaic disease. In those regions, abaca production expansion was made through monocrop plantations that were vulnerable to massive disease infestation, thereby adversely affecting harvest volumes substantially.

Considering the continuous global demand for abaca, the local government of Malaybalay is supporting the expansion of the industry in its locality. With more government support, both local and national, the Philippines can continue to dominate the abaca export market, according to the same DTI study (DTI, 2013).

Employment data in Malaybalay showed that 70 per cent of its population are employed in farming/crop production. This is then followed by employment in government agencies and commercial/private establishments. There are more men in employment than women, with a 2:1 men-women ratio based on employment data from traditional establishments. This could mean that women's productive work that is home-based is not counted in the employment statistics and therefore becomes part of the informal economy. Home-based workers would include the Higaonon women weavers who, in reality, have been providing around 50 per cent of their household income from the sale of their traditional textile, hinabol.

Hinabol is a handwoven fabric made from abaca. It is a term in Binukid, a Higaonon dialect, meaning 'handwoven'. It typically has a colourful design and has been traditionally used as an offering to the gods during times of conflict. Thus, hinabol is considered a 'peace cloth'. *Kinatupi* and *ginuntiyán* are the types of hinabol used as offerings. They are considered to be sacred fabrics with their uncommon patterns and are woven only by wives of the *datu* (generally an elder trained in spirituality and education) (De Jong, 2014). A traditional gift made from hinabol fabric is the *kamuyot*, a slingbag-like backpack used to carry bolo knives.

Weaving the hinabol is a traditional livelihood and cultural activity of the Higaonon women who pass on their skills to the younger generations at an early age of 14–17 years old.

As early as WWII, Higaonon women had been hand weaving the hamuti using abaca fabric for the Filipino military uniforms.

Mother of Sunflower's president Jena Lagunday

Manalog is one of 46 *barangays* of Malaybalay City. It is situated on a mountain, in a buffer zone before the old-growth forest. It has a total land area of 3,500 hectares. It is part of the government-issued Certificate of Ancestral Domain Title (CADT) to Bukidnon-Higaonon tribes that covers 14 *barangays* and an area of 36,647 hectares. In 2012, the government approved its Ancestral Domain Sustainable Development and Protection Plan (ADS DPP) developed through a participatory process with various stakeholders and managed by the indigenous peoples' organisation, Bukidnon-Higaonon Tribal Association Inc. (BUHITA) (Estremera, 2012).

The *barangay* has bountiful spring sources that supply fresh water to Malaybalay City. Built facilities include a hall, day-care centre, health centre, elementary school, chapel and a covered basketball court that also serves as a multi-purpose function hall for most of the *barangay* events. Travel to Manalog from Malaybalay City takes about one hour by *habal-habal* (a motorcycle modified for public transport) traversing the rough and hilly unpaved road.



Latest population data posted in the local health centre for Manalog, July 2014

Manalog is inhabited mainly by the Higaonon tribe. Its latest population data, posted in its health centre (see photo), indicates 881 people in 139 households. Abaca farming and hinabol weaving is the main source of income, but they also grow corn, fruit and other vegetables for consumption. It is one of eight *barangays* that has a regular harvest of abaca and produces abaca fibres (Department of Trade and Industry Malaybalay, 2013). Many of the skilled hinabol weavers also reside in this *barangay*.

Abaca is planted in family farms near or within the forest. It has been the practice in Manalog that abaca plants are harvested when they are mature (18 months old or fruit-bearing already) to produce good quality fibre. The varieties usually planted by farmers in Manalog in support of the weaving tradition of the Higaonon women are *babalonon*, *tangkongon* and *putian*.

With men taking charge of farming in the fields and forests, women are engaged in hinabol weaving as their home-based income source. Weaving hinabol has not only served as a cultural tradition carried on by women but has also provided the Higaonon families with additional income especially during the lean months of agricultural production. It has been an appropriate income-generating activity especially for women of reproductive age because they can create products in their own home while tending to their small children. One of the weavers, a mother of a 10-month-old baby, stated that:

Kung mangabol mi, ibutang lang nako ang akong bata sa palanggana sa akong tapad paghuman nya magtutoy

[whenever I weave, I just put my baby in a wash basin after breastfeeding her].

Mary Joy Lagunday, Higaonon weaver of Sunflower



Mary Joy Lagunday, a Higaonon weaver from Manalog with her 10-month old baby

© NTFP EP Philippines/Ma. Theresa P. Matibag

The Higaonon women started selling their hinabol in the 1980s. The production volume, however, was limited and could not compete with factory-style mass production. It had to be priced properly to consider various aspects such as labour, cultural and artistic value, and environmental sustainability, among others. The weavers shared some of the challenges they faced when they were selling their handwoven products individually prior to organising themselves into an association.² Their challenges at the outset included:

- The poor/inconsistent quality of Hinabol fabrics being produced,
- Weavers had no concept of marketing (as they only sold their products to whichever trader came to their homes),
- Traders only paid for products on a consignment basis (i.e. weavers were paid only when their products were sold by the trader),
- Weavers not being paid in full and long delays before they received the cash,
- The low price of Hinabol fabric at only 30 Philippines Pesos (PhP 30 or US\$0.67) per metre, as dictated by the traders,
- High competition between weavers for the same clients,
- Inefficient production,
- Use of chemical-based dyes in products, and
- Lack of business skills among weavers.

19.2 About Sunflower as a business

Sunflower is a business that sells hinabol fabric. Its origins date to early 2009 when some Higaonon women weavers in Manalog initiated an informal group that sold hinabol fabric to handicraft shops in Malaybalay City. They formed the group as a response to the low purchasing price for their hinabol. That price is usually dictated by buyers or traders in discussions with individual sellers. At the start of the second half of the same year, the Philippine programme staff of the Non-Timber Forest Products Exchange Programme (NTFP-EP) visited the area upon learning about the existence of a pool of skilled Hinabol weavers.³ NTFP-EP conducted a feasibility study on the potential of the group to become a community-based enterprise.

2. Based on focus group discussions (FGD) conducted during field research in Manalog by the author, 10–11 July 2014.

3. For more information about the programme, see: www.ntfp.org

19.2.1 The vision

The informal groups of weavers – 49 Higaonon women – requested support from NTFP-EP to help them set up a formal organisation or enterprise in their locality. They were finally set up in August 2009 and called themselves the Sunflower Weavers' Association. They got their name from the wild sunflower that grows abundantly along the road to Manalog. The members felt that they were like the sunflowers – always seeking the sun for nourishment. Like the sunflower, they will continue to grow even if the plant is burned. The Sunflower weavers have maintained this attitude and remain organised as a women's enterprise group despite all challenges. A Sunflower weaver said,

[B]efore, we thought the sunflower is of no use although there are plenty of them, but later we learnt that they can be a source of natural dye.

During their organising phase facilitated by the NTFP-EP Philippines programme, the members came up with the following vision and mission for their organisation:

Vision: *'Malamboon nga pamilya ug kalidad nga kinabuhi pinaagi sa panginabuhian sa pagpangabol'* which translated means 'improved quality of life through forming a weaving enterprise'.

Mission: *'Maila nga komunidad sa mga Higaonon mangangabol nga gahimo sa dekalidad nga hinabol nga haom sa panginahanglan sa buyer'* which translated means 'Well-known Higaonon-weaving community producing quality hinabol that suits the needs of the buyer'.

Also in 2009 the NTFP-EP Philippines included the Sunflower enterprise into their second crafts support programme. Their inclusion meant that product development activities were organised. For example, a natural dyeing process was introduced. Samples of their products were sent to potential buyers who eventually placed big orders for the hinabol products.

Table 19.1 shows the timeline of organised support from NTFP-EP to the Sunflower Weavers' Association is described.

2009	2009–2010	2011–2012	2013	2014
<ul style="list-style-type: none"> ■ Core group organising began ■ Community consultation ■ Baseline 	<ul style="list-style-type: none"> ■ Organisational and enterprise development ■ Improvement of production process ■ Product development 	<ul style="list-style-type: none"> ■ Product classification ■ Initial attempts at product standardisation such as in natural dyeing process ■ Market engagement <ul style="list-style-type: none"> ■ Local marketing (Lindungawan and CMCC) ■ Export market (C&B) ■ Business planning 	<ul style="list-style-type: none"> ■ Product development ■ Market engagement <ul style="list-style-type: none"> ■ Promotion/ buyers' education ■ Local market expansion ■ Export market (New York, USA) 	<ul style="list-style-type: none"> ■ Development of standards ■ Review of business plans & financial management training ■ Product training & participation in Manila FAME & international exhibition in Manila

In 2010, Sunflower's membership increased to 70 women. It was also during 2010 that a client from abroad ordered a large volume of naturally dyed hinabol. As a result, additional weavers were involved to meet the required volume. But there are not always large orders of this sort. At present, there are 38 active members representing 54 per cent of the total membership.

In October 2013, Sunflower was registered with the Department of Labour and Employment (DOLE), one of the government agencies that provide support for community livelihood projects. Such registration opened up the opportunity to access DOLE's livelihood programme for their proposed project to rehabilitate and replant abaca to ensure a continuing resource supply.

Analysis of the weavers' population in Manalog during a field research visit in 2014 indicated that 90 per cent of the women from the age of 14 are skilled hinabol weavers. Sunflower weavers represent 80 per cent of the overall population of the *barangay* where the business is based.

19.2.2 Business inputs

NTFP-EP has provided a range of business inputs to support the development of Sunflower. Based on the four stages of development of community forest enterprises (CFEs), Sunflower can be considered at the mature stage and moving towards the developing stage (Feris and Greijmans, undated). Mature enterprises are those that are fully integrated into supply chains and producing quality products that meet market demands. Sunflower has been creating naturally dyed hinabol fabric for the local and export markets. As it moves into the 'developing' stage, Sunflower has started to incorporate value addition, handling and/or transformation processes and product diversification.

In terms of recent inputs to the business, Sunflower has been experimenting with various sources of natural dyes such as sunflower that have not yet been considered as a standard source by the Philippine Textile Research Institute (PTRI). PTRI is a line agency of the Department of Science and Technology (DOST) that supports the local textile and allied industries to achieve global competitiveness through utilisation of indigenous resources, and development of technical competence in textile production and quality assurance.

Another source of input has been in the area of product design. The hinabol fabrics come in various designs and make, with various names/categories assigned to each: from traditional designs to those with modern patterns, and from those using natural dyes to those using synthetic dyes. Table 19.2 shows the range of fabric designs and products to date.

Table 19.3 shows the raw materials used for Hinabol and their corresponding suppliers, availability and price.

Table 19.2 Fabric and product designs developed by Sunflower Weavers' Association

Categories assigned to the different hinabol fabrics based on:		
Design	Colour using natural dyes	Colour using synthetic dyes
Traditional	'MY TRIBE' 	'MY URBAN TRIBE' 
		
Modern patterns	'MY STYLE' 	'MY URBAN STYLE' 
		
Plain colours	'MY COLOUR' 	'MY URBAN COLOUR' 

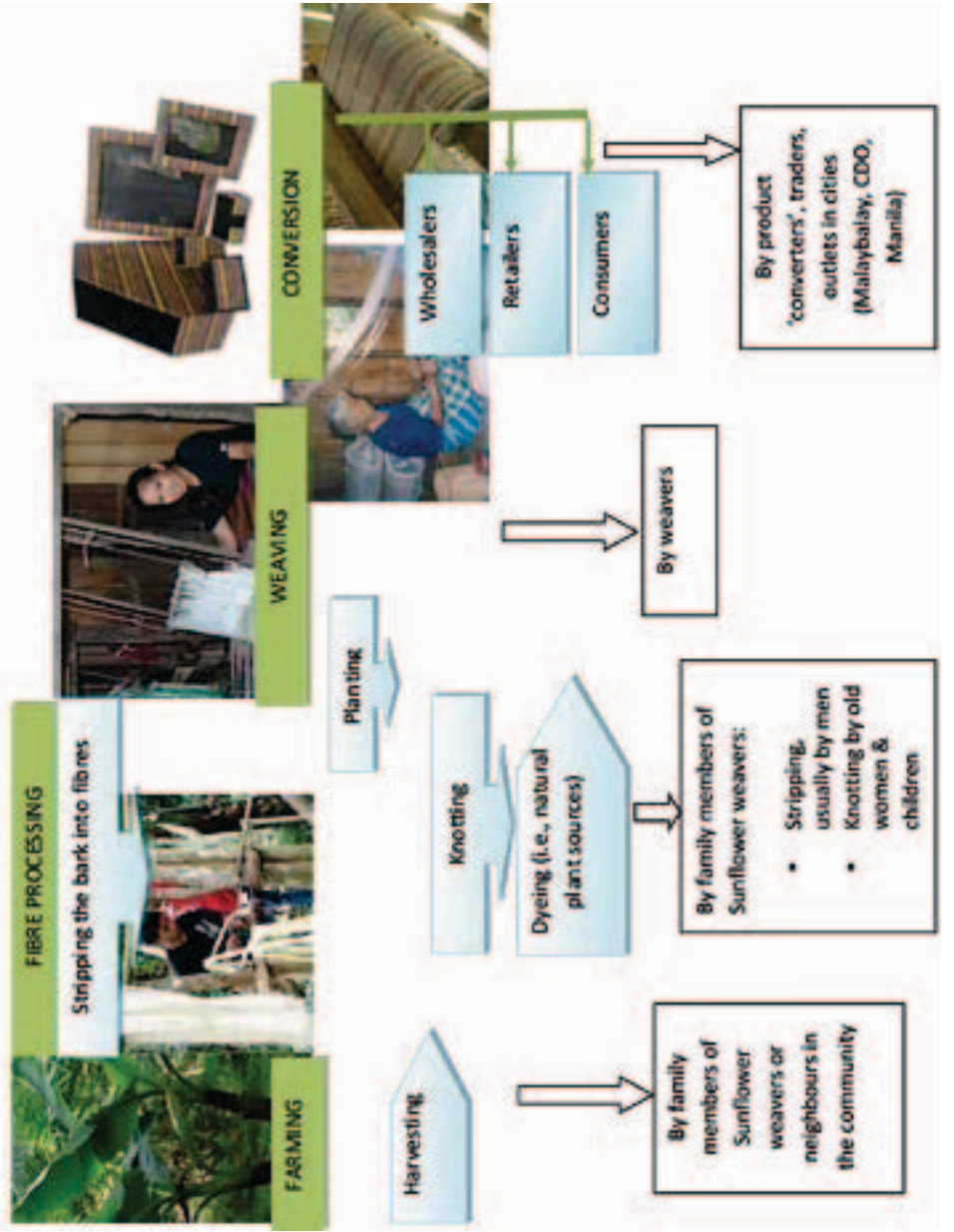
Table 19.3 Hinabol: raw materials, suppliers and prices

Type of material	Suppliers	Availability	Unit price
Abaca	Manalog farmers	Whole week of harvesting	PhP 50 (US\$1.11)/abaca plant
Synthetic dyes (Dyobos)	Stores in Malabalay & Cagayan de Oro Chemical Provides store in (Quezon City)	Available all year	Per gram (much cheaper if bulk purchased in Cagayan de Oro) PhP 600–900/kilo (US\$13–20)/kilo
Natural dyes	From Manalog (except dye from mahogany)	Year-round harvesting except sunflower and mahogany	Per kilo if purchased from the gatherers PhP 2–5/kilo (US\$0.04–0.11)/kilo
Chemical reagents or bleach Soap Fuel, wood Water	Stores in Malaybalay and Cagayan de Oro	Available all year	
Clean mate (soap)	Store in Manila	Available all year	PhP 455 (US\$10)/gallon
Soda ash	Harnwell Chemicals in Cagayan de Oro	Available all year	PhP 44 (US\$1)/kilo
Sodium silicate	Harnwell Chemicals in Cagayan de Oro	Available all year	PhP 1,500 (US\$33)/cb
Hydrogen peroxide	Harnwell Chemicals in Cagayan de Oro	Available all year	PhP 2,300 (US\$51)/cb
Copper sulphate	Harnwell Chemicals in Cagayan de Oro	Available all year	PhP 225 (US\$5)/kilo
Ferrous sulphate	Harnwell Chemicals in Cagayan de Oro	Available all year	PhP 64 (US\$1.4)/kilo

19.2.3 Main activities

The Hinabol fabric passes through several processes – from harvesting the raw material from the abaca plant until it is handwoven into a colourful natural fabric. Figure 19.2 shows the various stages of activity relating the production process within the hinabol value chain.

Figure 19.2 The hinabol value chain from planting to end user



19.2.4 Technology and skills

The raw material is sourced and harvested from the farm usually owned by the family of the Higaonon weaver-members of Sunflower. When they have no more abaca to harvest from their own farms, they buy from their neighbours. Many of the trees are found in the nearby forest but some are also planted within the plots beside their homes. Farming and harvesting is usually done by the men – spouses, sons and brothers, among others.

The processing of the tree bark into fibre is a tedious process that requires strength. This part of the process is therefore dominated by men. (The abaca strips can already be sold at this stage – abaca has many uses such as in the manufacturing and pharmaceutical industries and business.) Knotting the fibres converts it into the longer threads required for continuous weaving. This is usually done by old women and children in the community. Men also help in this process especially if Sunflower has a big order for hinabol.

The dyeing process gives the fabric the colours that their design requires. There are two types of dyeing, using synthetic and natural dyes. Synthetic dyes have been used by the weavers since they started to learn weaving. With the demand for products that are natural and organic by many consumers, the use of natural dyes had become the current trend. Natural dyes are those colours sourced from plants found locally such as the bark of mahogany for brown or sunflower for yellow.

Weaving the design is the most complicated phase in creating hinabol fabric. This is undertaken by the Higaonon women who usually have the patience and perseverance to complete the task and come up with a good-quality finished product.

19.2.5 Business partners

In addition to NTFP-EP, the main partners of Sunflower in marketing its products are the Custom Made Crafts Center (CMCC) (the marketing arm established by the NTFP-EP Philippines programme) and Lindungawan, a gift shop, arts and crafts store and café in Malaybalay. These partners have provided information and training to Sunflower weavers on factors to determine the proper pricing of their products that takes into account the cost of their labour in addition to setting aside funds for environmental management, organisational sustainability and market development. They also provide and/or support trainings on various concerns such as product development, organisational and financial management, among others. The other markets mentioned above were also developed through their main partners.

19.2.6 Customer groups and product types

Marketing the product has always been a challenge but with group/organisational strength, the Sunflower weavers are able to demand a good price and are also able to develop networks and partners that support them in market development. Aside from directly dealing with local 'converters' or handicraft business establishments, Sunflower have been able to expand their markets outside of Malaybalay through assistance from partners such as NTFP-EP Philippines and Lindungawan.

Export rejects are sold to 'converters' in local markets at much lower prices. A local craft-shop owner interviewed for this research actually complained that Sunflower has not been able to sell them good-quality hinabol since 2010–2011 when Sunflower could not cope with the required volume of their export client. Sunflower members stated in response that those were actually the traders who bought their products at much lower prices and did not pay them on time.

Sunflower has the following market outlets and pricing for the different product categories of Hinabol (see Table 19.4)

Table 19.4 Main markets for Sunflower Weavers' Association					
Market	Product classification	Prices	Pricing strategy	Place of distribution	Promotional activity
1. Local (Mindanao)					
Lindungawancraft shops	MY TRIBE, MY STYLE, MY COLOUR	PhP 155–175 (US\$ 3.5–4)/m	Fair pricing Same price as competitors	Malaybalay and Cagayan de Oro	Selling through Sunflower network Gives tokens Participation in local trade fairs Consignments Gives discounts
	MY URBAN TRIBE, MY URBAN STYLE, MY URBAN COLOUR	PhP 100–145 (US\$2.25–3.25)/m	Lower price for poorer quality products		
	Class C (low quality)	PhP 40 (US\$0.9)/m			
Other craft shops in Bukidnon & Cagayan de Oro	Class C (low quality)	PhP 40 (US\$0.9)/m			
2. National (Manila)					
Custom-made crafts centre (CMCC)	MY TRIBE, MY STYLE, MY COLOUR	PhP 135–215 (US\$3–4.8)/m	Fair pricing Same price as competitors Lower price for poorer quality products	Manila	Selling through Sunflower network Gives tokens Participation in local trade fairs Consignments Gives discounts
	MY URBAN TRIBE, MY URBAN STYLE, MY URBAN COLOUR	PhP 125–175 (US\$2.8–3.9)/m			
3. International					
Crate and Barrel (US)	Table runners (MY COLOUR)	PhP 115 (US\$2.6)/m		USA	
Eurocrafts (US)	Placemats (MY URBAN COLOUR)	PhP 67 (US\$1.5)/m		USA	

19.2.7 Differentiation in the market place

In marketing its hinabol, Sunflower emphasises the uniqueness of its product and hence its differentiation in the market. As they put it, it is a product:

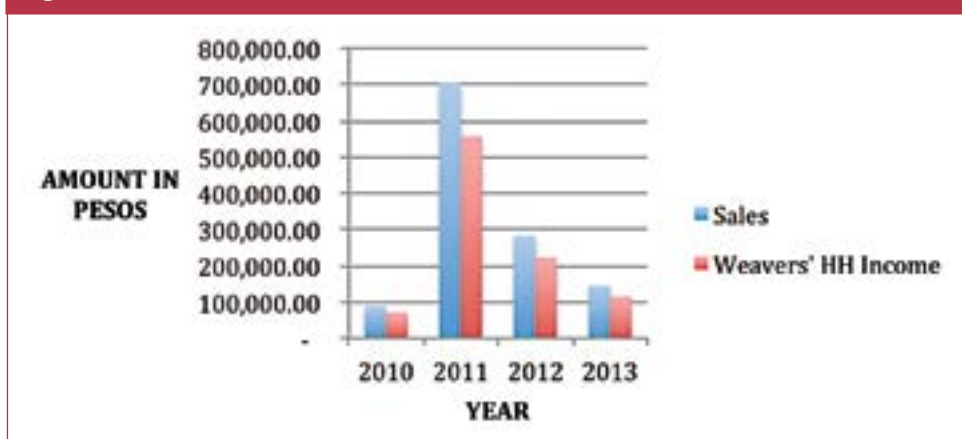
- Of Bukidnon,
- From the Higaonon tradition and culture,
- With concerns for environmental sustainability, and
- Made by Higaonon women.

Indeed, only Sunflower is able to capture clients looking for indigenous, organic and natural handwoven products. They are the only hinabol producers who can supply the fabric with naturally dyed colours. The recorded sales of Sunflower hinabol fabric since its first year of operation in 2010 are presented in Table 19.5 and Figure 19.3.

Table 19.5 Sales and income, Sunflower Weavers' Association

	2010	2011	2012	2013
Sales (in PhP)	90,073.60	704,137.25	283,010.90	145,328.00
Weavers' HH income (in PhP)	71,158.14	556,268.43	223,578.61	114,809.12

Figure 19.3 Sales and income, Sunflower Weavers' Association



The 2010 sales volume has already created a good financial impact at the household level, providing better incomes for the families of Sunflower members. The high sales in 2011 came from export earnings. Although sales in 2013 decreased from the 2011 level, it was still higher than the baseline data in 2010. Overall, hinabol weaving continues to provide a good source of additional income. Around 79 per cent of the annual income of Sunflower actually goes to the weavers and their households. Twenty-one per cent is retained as organisational income.

19.3 Who controls Sunflower's business?

19.3.1 Origin of the value proposition

The decision to organise the women weavers in Manalog came from the weavers group itself. It was based on the need to address common problems faced by the Higaonon women, which included marketing their products. The group leader, Jena Lagunday, has strong political and local government support because her husband, Roneo Lagunday, is the current Barangay Chairman. Through facilitation by NTFP-EP Philippines programme, the Higaonon women of Manalog were able to organise themselves into Sunflower Weavers' Association.

19.3.2 Control over forest resource access

Controlling the enterprise is not only concerned with human resources but with other aspects such as land and natural resources. The legal instruments that provide usufruct and exclusive rights to forests around Manalog for the Higaonon women and men support their viable use of the land for a sustainable community-based enterprise. Manalog is one of 14 barangays covered by the BUHITA Certificate of Ancestral Domain Title that allows the Higaonon in the area to manage the resources within their ancestral domain.

19.3.3 Control of the business

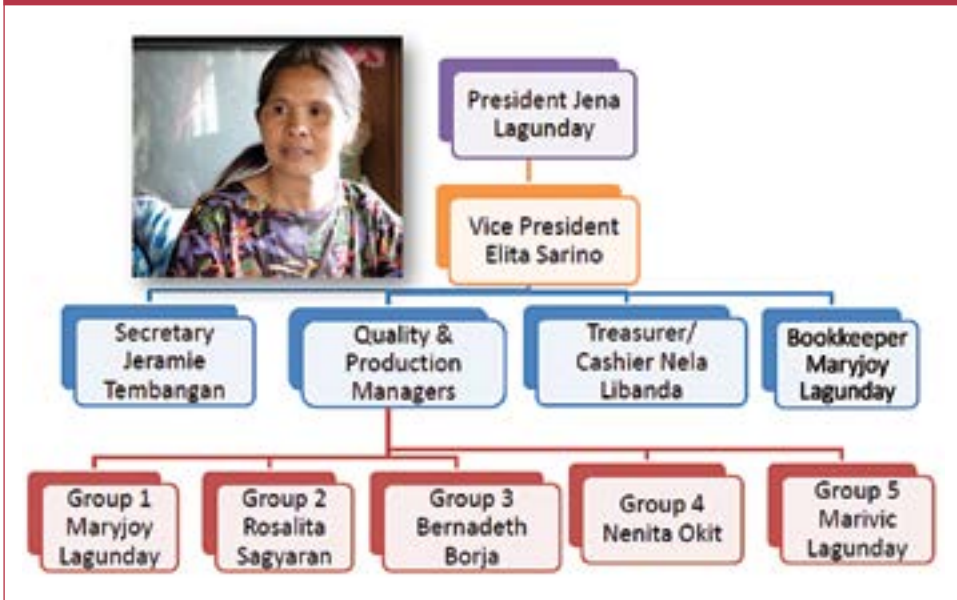
The association has been driven by a strong leader. This initially made it difficult for the organisation and its other members to rely on the strengths of other women. But as time has progressed the need to determine specific roles and functions has been given more importance resulting in the organisational structure described in Figure 19.4.

Overall, the organisation is controlled by the leaders and the members of the Sunflower Weavers' Association. The group has its business plan that serves as its guide in ensuring its organisational sustainability and viability. It has developed its own pricing scheme with 87 per cent of the price allocated for production costs and the remaining 13 per cent to cover all overhead costs and margins for the group. Part of its margin goes to a fund for cultural preservation and resource management.

The positions involve the following roles and responsibilities:

- The president both oversees the implementation of activities and also serves as the marketing officer who looks for buyers and ensures products are delivered as ordered. She is a signatory to all bank transactions.
- The vice president assists the president in all tasks and is also a signatory for bank transactions.
- The secretary keeps records of organisation documents and members and takes minutes.
- The treasurer handles the organisation's funds for safe keeping.
- The bookkeeper records income and expenses.
- Group leaders ensure quality production within their teams.

Figure 19.4 Organisational structure of the Sunflower Weavers' Association



19.3.4 Staff selection and roles

Selecting staff and assigning roles is done based on the individual's respective skills. In terms of identifying gender-oriented roles in the process of producing the hinabol, several activities have been identified, indicating specific functions done by men and women (see Table 19.6).

Table 19.6 Specific gender-oriented roles in the production of hinabol

Women weavers	Men/husbands
Pounding Knotting Dyeing (centralised if there is a purchase order signed by the group especially if it is the requirement of the buyer) Weaving (done individually in the house of the weaver)	Planting/replanting Harvesting Stripping

Whenever there is a high demand for hinabol fabric, as they experienced in 2011 and 2012 when they produced hinabol for export, men took on some of the functions usually undertaken by women such as pounding or knotting abaca fibres in preparation for weaving and slicing mahogany bark as well as gathering fuelwood for dyeing.

19.3.5 Delivery options

As noted in Section 19.2.6, the Sunflower Weavers' Association has a range of customers, local, national and international. The delivery options vary depending on the particular customer and are controlled by the president.

19.3.6 Customer research

The president of the Sunflower Weavers' Association serves as the marketing officer who looks for buyers and ensures products are delivered as ordered. She is supported by the Custom Made Crafts Center (CMCC) (the marketing arm established by the NTFP-EP Philippines programme) and Lindungawan. Both help her to find local customers.

19.4 How has Sunflower overcome key challenges?

Sunflower is relatively young as a business entity. Nevertheless, it has developed a series of responses to a number of business challenges that have affected its operations. These are described in more detail here.

19.4.1 Challenges to do with the value proposition

One key challenge has been to do with maintaining product quality. Within the region, extreme heat affects the quality of the fibre. Heavy rains and typhoons also affect the harvesting and processing operations. In addition, delivery and purchase of materials can be delayed due to swollen rivers. The Sunflower business has responded by following the ideal time for weaving (early morning and late afternoon) during cool weather.

There have also been some challenges relating to processing techniques. For example, there have been some failed attempts at innovations in dyeing affecting the end-product quality. There has also been inefficient recording of recipes/formulas in dyeing. To overcome these challenges the business has developed recommended procedural standards and measurements in dyeing.

In terms of ensuring product quality, an additional challenge has been that strict quality control is not implemented by the staff officers in the business. To address this, guidelines have been produced to ensure that staff follow a seven-point quality-control system developed together by Sunflower and NTFP-EP Philippines.

One final issue that emerged was that the business did not have a septic tank for waste water treatment. They therefore raised funds to rebuild the natural dye centre that was destroyed by a landslide during Typhoon Pablo. This was enabled through follow-up support from the National Commission on Indigenous Peoples (NCIP) and a submission has been made to the Canada Fund and the Japan International Cooperation Agency (JICA).

19.4.2 Overcoming legal challenges to do with resource access

The Sunflower Weavers' Association has not suffered from any legal challenges to do with its resource base. As noted above, existing legal instruments provide usufruct and exclusive rights to forests around Manalog for the Higaonon women and men, which support their viable use of the land for a sustainable community-based enterprise

The business has recognised a need to secure a **steady supply of raw materials** from their members as there is a need for continuing production to be able to reach a wider market. Recently, abaca reforestation training (planting native trees and abaca) was provided to

the Sunflower members by Marlito Bande of Visayas State University (VSU). The weavers and their families have started their abaca nurseries and will be planting abaca and native trees in their forests soon. This strategy of abaca reforestation will enable Sunflower weavers to have a continuous supply of abaca.

19.4.3 Overcoming ownership and benefit-sharing challenges

The main challenges of ownership to date have been the lack of capital for production with few buyers providing advance payments of 20–50 per cent when placing an order. To address this issue, support organisations like NTFP-EP Philippines and the Father Vincent Cullen Tulugan Development Centre (FVCTLDC) have provided technical assistance such as in market matching and financial management.

Notwithstanding such support, the president has had to borrow or take out loans from outside sources when weavers need advance payment. But there are plans in place to build up capital from sales from January 2015 to overcome these cash-flow issues.

While early on in the history of the business the financial management system did not work well, Sunflower has now implemented a financial recording and management system. The earlier failures in proper recording and bookkeeping with bookkeepers and cashiers not consistently functioning have been resolved by Sunflower, by assigning three bookkeepers with specific functions (expenses, deliveries and sales) supported by a continuation of technical assistance from NTFP-EP Philippines.

A final challenge was that the business did not originally have a bank account. But an early EXCEED (Expanding Community Enterprise and Economic Development, the training arm of NTFP-EP) training field visit provided some income to Sunflower that could be used as an opening balance for their bank account.

Regarding **financial** concerns, Sunflower definitely needs additional training and coaching to ensure that they are able to follow the basics of accounting. This will help them better manage their financial resources and keep track of important details necessary for their financial reporting and audit. They should also strictly follow their financial policies in order to protect their financial resources. Fair costing and pricing assessments should also be done on a regular basis.

19.4.4 Overcoming labour and organisational challenges

Early in the development of the business it was observed that some officers were not functioning well. For example, the treasurer had been inactive because of a change of residence and had to be replaced.

In addition it was noted that Sunflower had developed with a very heavy dependency on its original leader. To counter this challenge, some actions and plans were made to delegate some of the duties of the Sunflower president to other members of the organisation by creating the business structure described above.

At the **organisational and management level**, Sunflower recognises the need to further strengthen their knowledge in enterprise leadership and management. Their cooperation with development partners such as NTFP-EP Philippines and Lindungawan should continue as these partners are truly committed to supporting them towards self-reliance.

There is also a perceived need to continue to advocate and promote organisational values and principles among members. This will encourage members to commit to providing support, services and even raw materials to the organisation. They, however, need to improve their system for sharing benefits so members will recognise the advantages of being a member of the organisation. They have already a system of distributing work among the weavers. But there is still a need to establish concrete guidelines on how net income should be allocated and how the resource management and cultural preservation fund can be used.

19.4.5 Overcoming marketing challenges

In terms of marketing challenges, Sunflower has faced problems due to its geographic location – large distances to local markets lead to high transportation costs. To address this, the business has maximised loading efficiencies to reduce travel expenses when delivering hinabol to city centres

An additional challenge is that some weavers had been marketing on their own and so becoming competitors of Sunflower. The key here was for Sunflower to develop its brand and centralise the marketing of products so that customers could be assured of volumes and quality products. Peace and order can be an issue in the neighbouring municipalities who compete with Sunflower – and the best way to tackle this has been to have a strong marketing strategy that is inclusive of as many weavers as are needed to fulfil orders.

In the early stages there were issues to do with inappropriate packaging materials in delivering the product from the community to the buyers. Over time, the business started to use and reuse clear plastic for packaging hinabol fabric for delivery, showing off the quality of the product. The initial limitations on product lines (abaca fibres and hinabol fabric) have also been addressed by trying to diversify fabric designs.

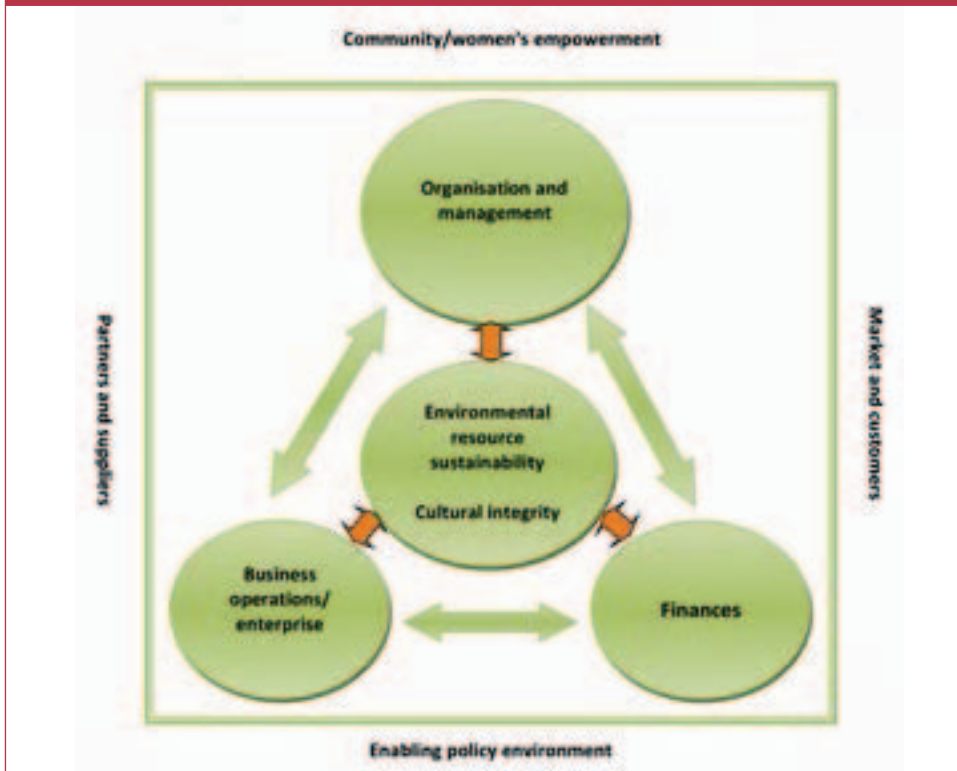
In terms of business operations/enterprise, Sunflower officials recognise the need to improve their products, packaging and branding and finding new markets for their products. Its members also indicate their need for more product training such as on the combination of colours for dyeing the fabric. NTFP-EP Philippines has recently provided them with such training with the help of a young designer who has taught them colour combinations and textile designs. To address their product-development training needs, Sunflower should continue maximising their partnerships with FVCTLDC and CMCC that support them in marketing and better packaging their products.

19.5 Key lessons

The Sunflower women weavers have good and empowering stories to tell individually as well as organisationally. It is a story of indigenous women transforming their roles from ordinary home-based workers to an empowered group of entrepreneurs negotiating for better price margins for their traditional products. It is a story of women weavers passing on the skilled tradition to young Higaonon women for the dual purpose of supplementing incomes for their households and promoting their rich cultural tradition through time. It has indeed been an empowering experience and a good story for the Higaonon women of Manalog, particularly the Sunflower women weavers, because they have been able to achieve the results they need and want – that of increasing their incomes and promoting their weaving tradition.

Through the process of research leading to this study it became clear how important the organisational structure of the business was – including various aspects of Sunflower's organisational and business set-up and management as shown in Figure 19.5. The figure shows the relevant elements that were analysed to determine sustainability of a locally controlled social enterprise. Included are key inputs in each of the elements to establish the empowerment process of women weavers of Sunflower.

Figure 19.5 Sunflower Weavers' Association organisational structure: key elements of success



19.5.1 Keeping down costs

There is a good potential for the Sunflower weavers' business to grow. Not only do they have the skills required for the enterprise but they also have access to the raw materials in their locality – the abaca and sources of natural dyes. This availability is one opportunity for Sunflower to keep costs down and remain competitive.

In addition, the secure tenure within their ancestral domain where their abaca plants grow is also protected as Manalog is one of the 14 *barangays* covered by the BUHITA CADT issued by NCIP. There are also effective strategies to grow the market for specialised products such as hinabol and its by-products with technical assistance from development partners like NTFP-EP Philippines, CMCC, FVCTLDC and Lindungawan as well as government agencies with support programmes for indigenous peoples and for women.

It was found that maintaining abaca-growing backyard gardens has helped to ensure a sustained supply of abaca fibre. When linked to the evolution of hinabol weaving from a traditional craft to a commercial production – it was possible to share costs of production and so increase the positive impact of the business on the lives of the Higaonon in Manalog, particularly the women and their households.

19.5.2 Retaining customers and willingness to pay

A key lesson here was that, through greater business organisation, organised weavers can demand better prices and accomplish more efficient marketing efforts.

The Sunflower Weavers' Association has benefitted greatly from branding the positive livelihood benefits that have resulted from the business. For example, there have been advances in the higher interdependence between husbands and wives as a consequence of the support from spouses who recognised that weaving can provide a better income than farming (this can be seen in greater support from men for domestic work and childcare, especially when there is a high demand for the women's weaving skills). The business has also strengthened local people's purchasing power (and generally, economic empowerment), particularly for the Higaonon women who prioritise spending from the household budget on public goods that includes children's school supplies and clothes, among others. The result of this has been a decrease in the out-migration of women for employment as domestic workers outside their *barangay*/province (a story shared by Sunflower weaver Jeramie Tembangan, who returned to Manalog because of the good income from hinabol weaving when Sunflower was able to expand its market in 2010).

Strong efforts to promote the Higaonon weaving tradition have also led to the encouragement of more women to learn and/or improve their weaving skills because of the income potential generated from the Sunflower experience. This has increased confidence of the Higaonon women as a result of their participation and learning from various trainings provided by their development partners. All of this helps to attract and retain customers.

19.5.3 Success factors

The Sunflower weavers' positive contribution to the local economy is reflected in the 30–50 per cent share of their income in the total family budget. The organisational structures that have been developed have opened up marketing opportunities and increased incomes. With more income contributed by women to the household budget, they have more of a voice in decision making on spending. As shared by the Higaonon Sunflower members in interviews conducted for this study, they prioritise their children's education. Indeed, one study indicates that money in the hands of women leads to higher spending on public goods, in particular child-related goods (Doepke and Tertilt, 2014). This refers to an investment in human capital which should benefit development in general.

The Sunflower enterprise has not only provided income to its member weavers but also indirectly to the other members of the community such as the *habal-habal* operator and the part-time sewers, among others. The functions of the other members are important in the various phases of the hinabol value chain.



Vietnam: Ben Hai Forestry Company

A company–community partnership in plantation wood production

by Nguyen Quang Tan, Bui Thi Linh and Hoang Huy Tuan

In the last 20 years, Vietnam has seen an economic boom and a rapidly growing wooden furniture export industry. But the poverty rate among forest communities (particularly ethnic minorities) remains high and many cannot afford to invest in tree plantations. This chapter describes the work of the Ben Hai Forestry Company, a state forestry company and one of the first in Vietnam to achieve Forest Stewardship Council (FSC) certification for both sustainable forest management and chain of custody. While this case study is not about 'local control' of forest resources, the Ben Hai Forestry Company uses innovative local oversight mechanisms to drive a strong partnership with local people in managing over 800 hectares of plantation, involving those communities in an income-generating opportunity that they would not otherwise have had access to.

20.1 Context in which the Ben Hai Forestry Company operates

20.1.1 The enabling environment

Vietnam is a tropical country in Southeast Asia whose total area is 330,958km², of which around 13.9 million ha (40 per cent of the total land area) is covered by forest (FPD, undated). The eastern coast of the country borders the Eastern Sea, with a coastline of more than 2000km from north to south. The population is estimated at 88.8 million people as of December 2012, with a density averaging 268 people per km² (GSO, undated). Around 32 per cent of the country's population is urban and 68 per cent rural. Vietnam has 54 different ethnic groups, the largest of which is the Kinh (GSO, undated).

National economic reform (known as the Doi Moi policy) in the late 1980s allowed more stakeholders to become involved in different aspects of the economy, particularly natural resource management. Since then, Vietnam's economic situation has changed dramatically. Gross domestic product (GDP) has increased on average at 7.25 per cent per year in 1990–2010: as a result, Vietnam has changed from being a very low-income country to a middle-income country (GSO, undated). The economic structure has also changed, with industry and construction sectors expanding from 22.8 per cent of the total GDP in 1990 to 38.6 per cent in 2012. In contrast, the agriculture, forestry and fishery sectors have decreased from 38.7 per cent to 19.7 per cent of total GDP in the same period.

Along with economic growth has come poverty reduction. The poverty rate has decreased from 58.1 per cent in 1993 to 14.2 per cent in 2010, marking a successful achievement of the Millennium Development Goal (MDG) on poverty reduction (GSO, undated). Yet significant disparities in poverty rates continue to exist across the regions, and between rural and urban areas. For example, the poverty rate remains high among ethnic minority groups and in forest areas. Poverty is most severe in forest areas and among communities whose livelihood strategies are based on agriculture and forest activities.

Vietnamese forests play an important role for rural communities in upland areas. They are home to over 25 million people, mostly ethnic minorities living in remote upland areas where access to information is often limited. Forest resources can provide materials for rural livelihoods. They can also be an important source of income for the local population. But forests are also an integral part of the customary lives of those communities. As well as the implementation of the Doi Moi policy, there have been significant changes in forest tenure over the last two decades. While state forest enterprises (SFEs) were the dominant actors in forest management in the early 1990s, forests are now managed by eight different groups of stakeholders. Local people (households and village collectives) currently manage around 30 per cent of the country's forest area – compared to almost none in early 1990s. (FPD, undated; Nguyen, *et al.*, 2001).

With industrialisation has come the expansion of the wooden furniture export industry and the (international) market for woodchip. There has been an average annual growth in export turnover of 25–30 per cent over the last decade, reaching US\$6.23 billion in 2014 (GSO, undated). Vietnam has become known as one of the top exporters of wooden furniture in the world. At the same time, woodchip exports have increased, with the emergence of international buyers operating in joint ventures with Vietnamese partners. The value of woodchip and pulp exports in 2011 reached US\$730 million, more than a twenty-five-fold increase from 2000, and a seven-fold increase since 2005 (MARD, 2014; To, 2012).

20.1.2 The operating environment

Until the early 1990s, Vietnam maintained a centrally planned economy. Central government decided on targets to be achieved in particular planning periods. Forest resources in Vietnam were no exception and were mainly managed as state forest enterprises. At the time, local communities' traditional forest-management practices were considered backward and were replaced with more 'scientific' forest management by the SFEs. Yet the SFEs mainly focused on exploiting existing forest resources and local communities had little or no involvement in forest management. As a result, the area of natural forest diminished (through overcutting).

When there was little forest left to exploit, the state budget to run the SFE system was cut, generating considerable unemployment (MARD, 2001; Nguyen *et al.*, 2001). Restructuring the SFE system became necessary. Over the last two decades, various legal reforms were made to the SFE system. SFEs were either restructured into business-like enterprises which were to operate sustainably on a self-financing basis, into management boards for protection forests (MBPF), or dissolved.¹

In 2004, the government of Vietnam sped up the SFE reform process through Decree 200/2004/ND-CP dated 3 December 2004. The most recent SFE reform was initiated by Decree 25/2010/ND-CP, which transformed state companies into one-member limited liability companies, which is a form of state-owned company whose liabilities are limited by the resources under their management. As a result of this reform process, 256 SFEs have been transformed into 148 one-member forest limited liability companies, three joint stock

1. In Vietnam, forest types are categorised as either special-use forests, production forests or protection forests.

companies, 91 forest management boards and 14 SFEs have been dissolved (MARD 2014). The forest land area managed by SFEs has reduced from 4 million hectares to 2.2 million hectares, of which 1.35 million hectares have been transferred into new management boards for protection forests and 415,125 hectares have been handed over to local authorities.

The idea of reforming the SFE system was to improve the performance of SFEs (particularly with regard to self-financing, meaning the SFE may profit or fail based on its own finances). They were also to maintain and develop the forest resources under their management. Participation of non-state stakeholders, particularly local communities, was also expected to increase their share of benefits derived from the resource. Through the reform, forests that had not been effectively managed by SFEs would be returned to the state, to be allocated to local communities.

Within this context, these new state forestry companies (SFCs) faced various challenges:

- While the name changed from 'state forest enterprises' to 'state forestry companies', more important aspects such as the management structures and enterprise governance mechanisms remained the same.
- Many forestry companies faced financial problems (which translated into low income for employees) and have not been able to realise their intended role as a driving force for socio-economic development.

Nevertheless, the expansion of wooden furniture processing and trade in Vietnam and the export market for woodchip and pulp has led to a sharp increase in demand for (plantation) wood materials. Plantation forests in Vietnam have expanded at the rate of approximately 226,590ha per annum in 2006–2010. Harvests from these plantations are mainly small-diameter timber (approximately 90 per cent of total harvest) which is mostly used for producing woodchip for export (To, 2012). Vietnam plantation forests have not yet been able to meet the demand for larger timber from the wooden furniture manufacturing industry.

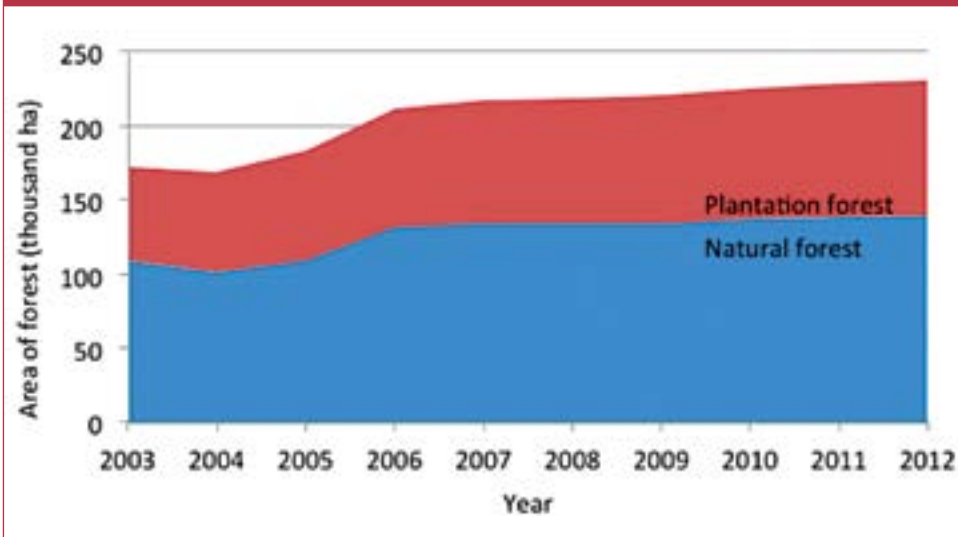
It is also important to note that local households across Vietnam manage around 1.73 million hectares of plantation. This is equivalent to around 49 per cent of the total plantation forests in the country and around 43 per cent of the forest land area managed by local communities (FPD, undated). While this suggests a high potential for tree plantations to provide a stable supply of materials to the wooden furniture manufacturing industry, the poor economic conditions of many local households do not allow them to invest in tree plantations at all. Those who can afford to invest in tree planting cannot wait until the trees reach maturity (for larger timber production), which results in cashflow problems and suboptimal returns for households and, more importantly, the inability to provide materials to the manufacturing industry.

Quang Tri province is located in the central coastal region of Vietnam. It borders the Eastern Sea and shares borders with Quang Binh province to the north, Thua Thien Hue province to the south and Laos to the west. It lies in a strategic location at the centre of the country and in the region, at the junction of the north–south national road and the east–west transborder road that connects ports in the Eastern Sea with Laos, Thailand and Myanmar.

The population of Quang Tri is approximately 612,000 people (137,000 households with approximately 4.4 persons per household). There are three main ethnic groups: the Kinh constitutes 91 per cent of the total population and the other ethnic groups (Van Kieu and Pa Co) make up the rest.

The total physical area of Quang Tri is 474,000ha, of which 89,000ha is farmed land and 290,000ha is forest. Forest plantations are well developed in the province, with an average growth of around 3,000ha per annum between 2003 and 2012 (see Figure 20.1), mainly planted with the fast-growing acacia species.

Figure 20.1 Changes in forest area in Quang Tri province, 2003–2012



Source: Quang Tri Bureau of Statistics (undated) and GSO (undated)

In Quang Tri province, there are three state forestry companies currently in operation. Their forest resources have been allocated by the state (see Table 20.1). The operations of these companies focus on the commercialisation of existing production forest (e.g. production of woodchip and pulp, processing plantation timber) and the conservation of any existing protection forest.

Similar to the situation of other SFCs in the country, the three SFCs in Quang Tri also face financial constraints in the commercialisation of production forests, particularly when loans from formal credit institution often have high interest rates and are of a short duration (compared to forest production cycles). This study focuses on the evolving partnership between one of these SFCs, the Ben Hai Forestry Company, and local communities. The authors are aware that in terms of business decisions, there is little in the way of 'local control'. Nevertheless, the Ben Hai Forestry Company's unusual local oversight mechanisms drive a strong and mutually beneficial partnership with local people.

Table 20.1 Forest areas under state forestry companies in Quang Tri province

	Trieu Hai Forestry Company	Duong 9 Forestry Company	Ben Hai Forestry Company
Forest area classified for production (ha)	5,281.6	5,470.0	7,533.1
Forested area	5,135.0	5,221.0	6,871.6
Bare land	146.6	249.0	439.0
Forest area classified for protection (ha)		1,944.0	1,930.1
Forested area		1,894.0	1,820.5
Bare land		50.0	64.3
Total forest area (ha)	5,281.6	7,414.0	9,463.2

20.2 About the Ben Hai Forestry Company

20.2.1 The vision

The Ben Hai Forestry Company is a state-owned one-member forestry limited liability company based in Vinh Linh district of Quang Tri province. The company's long term vision is 'to develop high-yield plantations to ensure the long-term supply of raw FSC-certified materials; to protect and enrich the natural forests to conserve genetic resources and biological diversity of natural forests; and to contribute to the strategic development of forestry in Vietnam (2006–2020), to environmental protection and economic development, and to the life of local communities in a sustainable way.'

The primary goal of the company is 'to provide valuable benefits to investors through the development, management and exploitation of forests planted with fast-growing species, and protection and enrichment of the natural forests'. This will be achieved by:

- Developing and managing the entire forest area of high productivity using fast-growing species such as acacia, and conserving the biodiversity of natural forests.
- Providing each year approximately 30,000–35,000m³ of high-quality timber from plantations.
- Protecting and restoring the environment through tree-planting activities throughout the whole area and minimising environmental impacts during the implementation of reforestation activities.
- Promoting active participation of other actors (particularly local people) in tree-planting activities through large-scale support for planting, tending, protection and logging of trees.
- Protecting benefits to local communities such as firewood, mushrooms, bamboo shoots and free forest seedlings for local residents involved in tree plantation, and providing areas for grazing and beekeeping where appropriate.
- Providing a certain volume of larger timber suitable for furniture making to promote industrial development in Quang Tri province.

The Ben Hai Forestry Company was officially registered in 2007 as a one-member state-owned limited liability company.² In November 2011, the company fulfilled its ambition to attain well-managed forestry standards and became one of the first forest companies in Vietnam to achieve Forest Stewardship Council (FSC) certification for both sustainable forest management and chain of custody.^{3 4}

The company has a land rights use certificate issued by the Quang Tri Provincial People's Committee (which oversees the company activities). The company's main activities take place inside 9,463ha of forest. The approximate annual allowable quota for cutting commercial timber (in cubic metres of round wood) is 94,380m³ per year. Annual commercial production of non-timber forest products (NTFPs) included in the scope of the FSC certificate is also significant. Most of the roundwood products are derived from acacia plantation forests, but the natural forests also contribute through environment protection and biodiversity conservation.

Box 20.1 Historical timeline of Ben Hai Forestry Company

- 1979 The company was founded by merging two state forest enterprises, Bai Ha Logging Company and Vinh Linh Plantation Company. The main business was planting pine (*Pinus merkusii*), logging timber and exploiting other forest products.
- 1992 The company became a state-owned enterprise with the mission to rehabilitate bare hills and mountains in the west of Vinh Linh district (Quang Tri province).
- 2007 Post-reform, the company was changed into a one-member limited liability company (now called the Ben Hai Forestry Company). The total area under the company management is 9,463ha which is located in the northwest of Vinh Linh district and belongs to six communes (Vinh Ha, Vinh Long, Vinh Chap, Vinh Thuy, Vinh Son and Vinh Khe). The business activities are mainly afforestation, pine-resin collection, timber and furniture processing, importing and exporting forest products and forest protection.

The product portfolio of the company includes resin, woodchip, sawn wood and wooden furniture, and polymer bricks (made from sand, cement, weathered ferrous soil and sawdust). Before 2010, the product portfolio consisted only of woodchip and resin. In addition, the company also provides seedlings from their nurseries to the local market. The main markets for the company's products are:

- Resin: domestic and international
- Woodchip: Asia (China and Japan)
- Sawn wood and wooden furniture: domestic, Asia and Europe
- Polymer bricks: domestic market
- Seedlings: local market

2. Decision 1420/QĐ-UB by Quang Tri Provincial People's Committee dated 5th July 2007.

3. Certificate registration No GFA-GM/COC-002265 awarded by GFA Consulting Group on 23 November 2011.

4. Chain of custody certification verifies that certified wood is tracked from the forest to the final product to ensure that it originates from certified forests.

In 2012, the total turnover of the company was VND226.5 billion (around US\$11 million). The average income of staff members is VND4.5 million (US\$211) per month.

Before developing its sustainable forest management plan in 2010–2011, the company made an important contribution to the local economy through the production, processing and trade of forest products. It also helped to maintain the ecological environment through conserving and developing natural forest resources. However, a key challenge for the company was the involvement of local people in their activities. There was limited sharing of information between the company and local communities.

Part of the change in company practice with regard to local people coincided with the company's successful pursuit of FSC certification. It was one of the first SFCs in Vietnam to acquire FSC certificates for its forests (including both natural and plantation forests), in as early as 2011.

20.2.2 Business inputs

As noted above, the company manages 9,463ha of two types of forest: production forest and protection forest (see Table 20.2). There is also bare land (forest land without trees) and other land (roads, water bodies etc.). This forest area was allocated by the state when the company was established and in 2011 the company was given the land-use title for 50 years for the establishment of plantations and the protection of natural forests. The rights attached to the title are recognised by the Land Law and the Law on Forest Development and Protection.

Land/forest type	Total	Sub-enterprise 1	Sub-enterprise 2	Sub-enterprise 3
Protection forest	1,930.1	1,018.1	616.1	295.8
Forested land	1,820.5	971.1	596.4	253.1
<i>Natural forest</i>	1,099.3	616.8	472.8	9.7
<i>Plantation forest</i>	721.3	354.3	123.6	243.4
Bare land	64.3	34.0	19.2	11.1
Other	45.3	13.0	0.6	31.7
Production forest	7,533.1	2,834.2	2,223.4	2,475.6
Forested land	6,871.6	2,472.2	1,990.8	2,408.6
<i>Natural forest</i>	580.2	57.0	6.2	
<i>Plantation forest</i>	6,291.5	1,898.2	1,984.7	2,408.6
Bare land	439.0	347.2	91.8	
Other	22.5	14.8	140.7	67.0
Total	9,463.2	3,852.3	2,839.5	2,771.4

Source: Ben Hai Forestry Company (2010)

In the past, the plantation forest was mainly planted with pine species (*pinus merkusii*) for resin production. In recent years, acacia (*acacia hybrid*, *acacia mangium*) have gradually replaced pine. The natural forest area is of high conservation value. This includes a diversity of rare and valuable plants and wildlife, such as 13 fauna and 35 floral species listed in the International Union for Conservation of Nature's red list of threatened species (IUCN, 2015). As most of the natural forests managed by the company are at the stage of restoration after previous heavy cutting, the company therefore focuses on conservation in these areas.

Regarding financial inputs, the Ben Hai Forestry Company is 100 per cent state owned. The total capital of the company, as allocated by the state, is VND39 billion.⁵ The company also borrows from the bank and mobilises funds from local people for new tree plantations. On average, it is estimated that local people have invested around VND15 million per ha of plantation, of which around VND5 million has been provided in cash (for seedlings and other materials) and the rest in labour (for land preparation, planting, tending and patrolling the young plantation). Managing approximately 800 hectares of plantation in partnership with local people, the company has mobilised around VND12 billion from the communities. They have also helped to include those communities in an income-generating opportunity that they would not otherwise have had access to.

20.2.3 Main activities

The company is currently involved in the following forestry activities (see Table 20.2):

- **Seedling production and supply:** the company has established three nurseries in different parts of its territory, using tissue-culturing technology. All seedlings produced are single stem for better wood production. FSC-certification auditing takes place on an annual basis with all FSC-certified seedlings, mainly *acacia hybrid*, *acacia mangium*, and *acacia auriculiformis*. The company sells over half of the seedlings locally (to local households/communities) and supplies the rest to households that have a contract with the company to plant production forests.
- **Tree plantation and tending:** every year, the company works with local households to establish new plantations and tend existing ones. The company is well known for involving local people in tree planting and tending.
- **Logging and woodchip production:** logging activities involve plantation production forest and are undertaken manually. Woodchips are produced from forests aged 6–7 years. Sawn wood is produced from 12-year-old forests.
- **Collection of resin:** resin is collected from the company's pine (*pinus merkusii*) plantations (1,800ha).

20.2.4 Technology and skills

The involvement of local communities is of particular importance in the company's operations, and is the key interest of this study. Since the reform of the company in 2007, it has given considerable attention to involving local people in its activities. The company has worked closely with local communities to plant, tend and protect the plantation forests, as well as protect the existing natural forests. There are two types of partnership between the company and local households:

5. US\$1 is approximately VND21,300.



One of the company's nurseries

- **Local suppliers:** control rests firmly with community members. Local people invest their financial capital and the company helps them to secure land (including that belonging to the company), sells seedlings at a reasonable price and gives free technical support for land preparation, tree planting, tending and other related issues. Local people have the freedom to buy seedlings from the company or from other suppliers provided that they ensure a level of wood production on company land of 80–120 tonnes/ha after seven years. Most if not all people end up buying seedlings from the company as it sells quality FSC-certified seedlings produced from tissue culturing whereas other suppliers produce seedlings from seeds.

When it is time to harvest, local tree growers and the company will jointly assess the standing timber volume of the forest area to be harvested; the result of this assessment will be the basis for calculating the share of profits for each side. Once an agreement has been reached on the standing volume, local people are free to decide whether to sell their timber to the company or to any other buyers.

When grown on company land, the company receives 20–30 per cent of revenue (after taxes and any applicable duties), depending for example on the location of the land or type of soil. Local people receive 70–80 per cent. This is discussed and mutually agreed at the beginning of the contract. At present, around 500 households have this type of partnership with the company, covering an area of approximately 800ha. The company has developed the policy framework for partnerships and publicly invites local people with the resources to sign up. All partnership agreements between the company and local people are made on an individual basis. In general, the partnership framework conditions are set by the company, and local people are free to choose from different options outlined in the agreement (e.g. choice of supplier for seedlings, or buyers for wood). There is yet no organisation among those individual households supplying timber to the company through this arrangement – and to that extent the business itself is not locally controlled, even if the individual timber supply from community members is firmly under local control.

- **Local labour contracts:** with this second type of partnership, local people enter into contractual arrangements with the company for tending and protecting new plantations (from the second year until harvesting). With this type of partnership, local people invest only their labour (not financial capital) in taking care of the plantation, which includes weeding, applying fertiliser and patrolling the forests. In return for their labour, they receive VND1.5 million per hectare per year from the company.

Box 20.2 How partnerships with the company are enhancing wood production for local households

Ms H and her family have lived in Vinh Ha commune of Vinh Linh district, Quang Tri province for many years. They currently have 10 hectares of forest land, which they use to plant trees. Her family began planting trees in the early 2000s when the market price for plantation wood became attractive.

In 2009, the family started planting acacia in partnership with the Ben Hai Forestry Company on the land that was 'allocated by the company'.⁶ Depending on the stage of plantation process, technical staff members from the company assist her (and other people in the village) free of charge on land preparation, tree planting, weeding and applying fertiliser. They provide guidance on how to prune and thin the trees to produce high-quality wood. In addition, they also provide a free technical manual for her family to use when needed. To begin with, the family purchased seedlings from the market but then decided to buy them from the company. The quality of the seedlings bought from the market was poor and many of the young trees died soon after planting.

Learning from the technical assistance the company has provided, Ms H and her husband have applied similar techniques to their other acacia plantation (which is on their own land) for larger-scale wood production. In the past (before their partnership with the company), they planted their trees at a high density but knew nothing of thinning and tending the plantation. This resulted in the production of small trees suitable only for chipping and pulp. Now, by using the thinning and tending techniques that the company has taught them, they can produce better timber and will soon be able to construct a new house.

Source: interview with authors

20.2.5 Business partners

One of the most important types of business partner that the company has is the local people involved in the partnerships for tree planting and tending. These households live in the surrounding areas.

20.2.6 Customer groups and product types

The business caters to a variety of customer groups:

- Local communities (seedlings and sawn wood)
- International woodchip and pulp processing companies
- Domestic/local sawn-wood processing companies
- Domestic/local pine-resin collectors

6. This is the term used by the villagers to refer to land from the company where they plant and tend trees. This reflects a sense of control over the forest resources by local people involved in the partnership.

It is worth noting that the company also has a polymer brick factory, which only began production in 2014.

At the moment, the Vietnam-Japan Chip Corporation (VIJACHIP), located in the Vung Ang industrial zone in the same province, is the biggest customer of the Ben Hai Forestry Company. Around 80 per cent of the woodchip and pulp produced by the company is purchased by VIJACHIP.

VIJACHIP was formed in 2001 as a joint venture between two enterprises, the Vietnam Forest Corporation (VINAFOR) and Sojitz Corporation (Japan). VIJACHIP's business focuses on processing and selling woodchip and pulp to the Japanese market for paper production.

Apart from VIJACHIP, the Trung Son timber processing plant in Dong Ha city, Quang Tri province purchases 10–15 per cent of Ben Hai Forestry Company's wood products, mainly sawn wood.

Most pine resin is purchased by the Quang Phu Pine Stock Company. This is a joint investment between the Ben Hai Forestry Company and the Quang Ninh Pine Stock Company. The Quang Phu Pine Stock Company is located in Nam Dong Ha industrial zone with a manufacturing capacity of 5,000 tonnes of resin per year (BaoMoi.com, 2011).

20.2.7 Differentiation in the market place

For the Ben Hai Forestry Company, the sustainable supply of high-quality FSC-certified timber is what distinguishes their product from others on the market. The values underpinning their products are a well-managed forestry business, strong community involvement and socially, economically and environmentally sustainable development.

- The company works with NGOs and local people to implement public awareness programmes on environmental conservation. It pays attention to forest regeneration and succession; genetic origin, species and ecosystem diversity; and natural cycles that affect the productivity of the forest.
- The company commits not to use any genetically modified organism or any unidentified/illegal animals, plants, genetic or micro-organisms. The Ministry of Agriculture and Rural Development has approved the planting of acacia and eucalyptus trees, which are carefully tested to ensure they are appropriate to the regional topographical conditions.
- The company commits not to convert natural forest into plantation forest. All plantation areas are on previously bare land.
- The company develops and commits to follow the guidelines of tree felling, pest and fire control, chemical and pesticides use, and other safeguards to minimise negative impacts on the environment.
- The company has agreed with local government and local communities on the mechanism to be used to deal with any conflict (if it exists) related to forest management and to compensate for any damage caused by business activities on forest lands.

- The Company is very aware of the importance of the forest to local communities who have lived in the area for generations.
- Local communities are given equal opportunities in terms of employment, training and use of forest resources. The company also promotes active community-based forest management. The notion of community-based forest management is understood here as forest management done by community members, whether collectively or not, and is primarily the commercial growing of trees to supply the company (or other buyers depending on individual community members' preferences).

20.3 Who controls the Ben Hai Forestry Company?

20.3.1 Origin of the value proposition

The value proposition for the business has been developed by the company's leadership and is supported by the provincial authorities. The decisions to access international timber markets, reduce dependence on woodchip, pursue FSC certification and practice well-managed forestry were collectively agreed as the ways forward.

To ensure social welfare and community interest, the company has attempted to involve local people in forest management. There is a company belief that the forest will be developed and protected effectively when local people have a sense of responsibility for and possession of those forest resources.

20.3.2 Control over forest resource access

According to Decision 342/2005/QĐ-TTg dated 26th December 2005 by the Prime Minister and Decision 3561/QĐ-UBND dated 29th December 2006 by the Quang Tri Provincial People's Committee (PPC), the Ben Hai Forestry Company has a mandate to:

- Manage and protect forest resources,
- Exploit plantation forests, pine resin and rubber latex,
- Develop forest resources using silvicultural treatments such as planting, tending and regenerating,
- Utilise other forest resource such as tree branches and tops, and
- Process and produce timber products and construction materials.

Accordingly, the company has full rights to control access to and use of the forest resources allocated to the company. Local communities who have entered into contractual agreements in partnership with the company also have the right to access and use the plantation forests.

In reality, unauthorised extraction of the company's forest resources by the local communities also happens, especially for firewood and construction. Between 2005 and 2009, 39 logging cases, 84 forest fires and 10 land clearance cases were reported, affecting over 300ha of forest. To mitigate such situations, the company is now working much more closely with local communities to implement joint forest management that helps increase local participation in and responsibility for managing forest resources.

20.3.3 Control of the business

The company is registered as a state-owned company in Quang Tri province and comes under the administration of the Quang Tri Provincial People's Committee (PPC). The company's board of trustees, board of directors and inspectors are appointed by the PPC. Heads of the company's departments are appointed by its board of trustees. Business decisions can be made independently of the Quang Tri PPC as long as those decisions do not go against any direction of the state.

The Provincial People's Committee is a standing body of the Provincial People's Council whose members are elected. Members are meant to be representative of different stakeholder groups, including communities, but no community members are actually there. Their representatives are often mass organisations like farmers' associations or women's unions. So although in theory the company is 'locally controlled', in practice community members must deal with several levels of hierarchy to exert any influence over decision making.

The board of directors consists of one general director and two deputy general directors. Their responsibilities and powers include:

- Maintaining and developing the company's capital allocated to it by the state, including fixed assets, forest resources and financial capital,
- Maintaining business effectiveness,
- Strictly complying with regulations and policies from the state about employment.

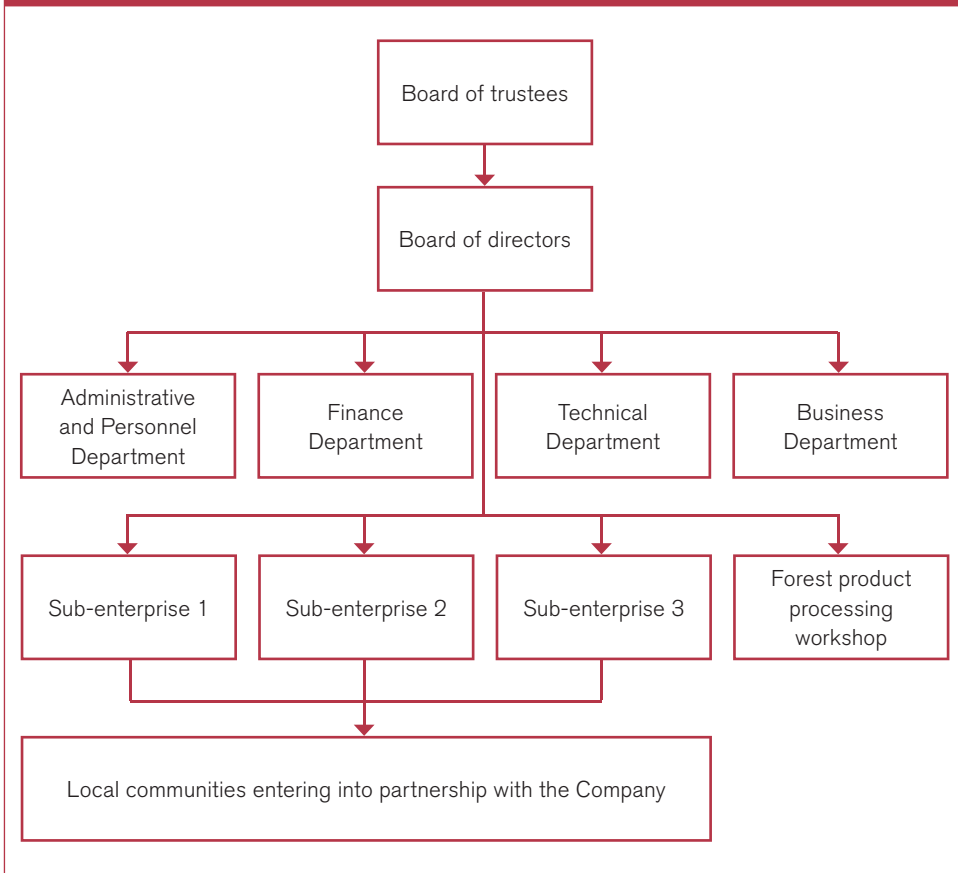
The general director directly manages the operation of the company, discipline, strategies and plans, business and trading activities and financial issues. S/he is responsible for drafting business plans and contracts with customers. Two deputy general directors can act on behalf of the general director if needed.

The company has four sub-enterprises (sub-units 1, 2 and 3 and a forest products processing and trading sub-unit). These are the production units. It has a head office with four departments (see Figure 20.2). The company has 123 staff (81 men and 42 women), most of whom (78 people or 63.4 per cent) are labourers working in the production units. The rest are managerial, administrative and technical staff, most of whom work at the head office.

The company's first priority is the prosperity of its employees. It also has the mandate to contribute to the well-being of the local communities who live in its vicinity and of the province in general. Depending on the level of the employees, they can influence company decisions regarding the operations of the company by sending comments to the board of directors.

In the partnership agreements with local communities (where the land is contributed by the company and local people contribute financial and human resources) there is a shared control over the plantation forest between local communities and the company. Local communities can decide what to do with the plantation at the time of harvest, as long as the technical procedures indicated in the contract are followed. They are also free to sell their plantation wood to any buyers, provided that the share of benefits agreed to in the contract is returned to the company.

Figure 20.2 Organisational structure of Ben Hai Forestry Company



20.3.4 Staff selection and roles

The department of administration and personnel is responsible for staff recruitment, human resources assessments and capacity building. The department is also assigned to implement labour and wage policies, including safety at work.

The technical department is responsible for forestry technology research, development, application, and transfer. The department is in charge of developing professional training courses for the company's employees. The department also supervises and monitors changes in forest resources as well as managing the forest inventory database.

In their management plan, the company is planning to:

- Provide short technical and management training courses for 30–50 staff per year,
- Provide 3–5 scholarship per year for ethnic minority children,
- Organise agriculture and forestry extension courses, develop demonstration models, provide guide books and organise study tours to enhance the knowledge of its staff of

planting techniques, tending, harvesting, forest production preservation for example, with an expected number of 200 participants per year, and

- Cooperate with university and vocational schools to enhance the capacity of staff and local communities.

For new staff members (who are not directly appointed by the Provincial People's Committee or the company's board of trustees), selection is based on open competition. New posts are advertised in the mainstream media and the company uses a recruitment committee to assess candidates.

20.3.5 Delivery options

There are two delivery options for customers. Products can be sold at the company gate (if the customers prefer to use their own transportation). Alternatively, the company can deliver products to the customer's premises. Households involved in the tree planting partnerships with the company who sell their plantation wood to the company can also choose to deliver their wood to the company gate either using their own or a hired truck, or they can sell their wood at their own farm gate. Local people decide for themselves on their preferred delivery option.

20.3.6 Customer research

The business department is responsible for conducting market analysis and customer surveys. Based on the results, business and investment strategies and plans are developed, and solutions for market expansion are proposed.

20.4 How has the Ben Hai Forestry Company overcome key challenges?

20.4.1 Challenges to do with the value proposition

The Ben Hai Forestry Company faces several key challenges in developing their business value proposition. Two of the key ones include:

- **Business competitors** such as rubber plantation companies and woodchip-processing companies: the Ben Hai Company has been under pressure to give up land for the development of rubber plantations. Rubber trees have a high economic value, and are preferred by local people. Therefore rubber plantation companies have a strong influence over the actions of the Ben Hai Forestry Company. There are also other woodchip-processing facilities located nearby. This creates a high demand for wood in the local area. Meanwhile, with FSC certification, the company focuses on the sawn-wood market. However, this market is very limited and unstable as the company has not been able to establish business relations with a wide range of buyers for FSC products yet. The challenge is to be competitive in terms of price in existing markets and to try and develop markets in which the company has a reputational advantage.
- **Timescales:** wood production takes time and depends on weather and climatic conditions. The company has sought to address this challenge by mainly planting plantation forests with monocultures of fast-growing species.

To address these challenges, the company has changed its business strategy and management system. It invests in new wood-production and processing technologies which help to increase productivity and efficiency. It has also expanded the business to other sectors by producing polymer bricks (to make use of the existing resources and materials from other business) and increasing resin collection. So that it can respond more quickly to changing business needs, the company has also moved towards making decisions related to business strategies and plans without waiting for direction from the provincial Department of Agriculture and Rural Development. In addition, the company has improved the effectiveness of its workers by offering performance-based payments to staff members and sharing responsibility for forest management with local communities.

20.4.2 Overcoming legal challenges to do with resource access

The company is not involved in any legal or practical land conflicts with any companies around its area of forest. The boundaries are stated clearly in the land-use certificate's map and easily identifiable in the field site with permanent markers. There are no forests or lands of local people overlapping the company's land.

However, to address the issue of illegal logging, the company began developing partnerships with the local community using a community-based forest management plan to enhance the participation of local people in forestry, which also generated benefits for them from the forest resources. In addition, the company organised awareness-raising and information-sharing events with local communities on the importance of forest protection.

20.4.3 Overcoming ownership and benefit-sharing challenges

The company has addressed benefit-sharing challenges through partnerships with local communities in the plantation. In addition, the company plans to expand these local partnerships to community lands. The idea is that the company will provide seedlings and technical guidance and purchase the forest products if the grower decides to sell them to the company. If all the investments (including labour and material inputs) are covered by local community, they will have full control of their plantation products.

Where the local community contributes only labour and the company pays for all other inputs, the benefit sharing will be 70 per cent for the company and 30 per cent for the community, after paying all the related costs and fees. This new model is however at the early stages of development. The company needs to discuss the model further internally and to develop the framework conditions before it can publicly invite local people to join.

In terms of challenges over ownership, the company has established signs, fences and trenches in places where land encroachment is common. It has written agreements with local communities on mechanisms to resolve conflicts over forest land-use rights as well as regulations on forest protection and management, land use, and ownership of resources on the land.

20.4.4 Overcoming labour and infrastructure challenges

Infrastructure challenges for the company include poor road conditions (within their territory) due to erosion and landslides during the rainy seasons. In total, there is about 300km of road which needs to be maintained and improved. From 2011 to 2014, the company upgraded 140km of road, which included the establishment of a drainage system (around 0.5m wide and 0.5m deep) to facilitate rainwater runoff. Upgrading work on the remaining road is expected to finish by 2020.

Similarly, the company is planning to upgrade the infrastructure of its nurseries to meet the growing demand for high-quality seedlings. By 2020, the company expects to finish upgrading two nurseries in sub-units 1 and 2 and to build a new one in sub-unit 3.

The company is yet to address any major challenges to do with water supply, electricity or the road system connecting to other districts and provinces.

Regarding building the capacity of its workforce, since November 2011 the company has arranged for forest management training for its staff, organised by the German company ForestFinance. ForestFinance has been successfully implementing sustainable afforestation forestry projects in different countries for more than fifteen years. They provide training-of-trainers training on FSC Standard sustainable forest management. The company's staff then organise training for the other company workers in implementing forest management standards and preparing their forests for certification according to international standards.

For the conservation of natural forests, the company works closely with wildlife research and conservation agencies to improve the capacity of its staff in charge of conservation activities, especially for endangered species. It also organises short training courses with simple content for village chiefs and local authorities on the importance of forest resources and using village meetings as a means of raising people's awareness of legal regulations related to forest conservation.

20.4.5 Overcoming marketing challenges

In addition to its successful pursuit of FSC certification, the company has diversified its products. While producing traditional products like resin and pulp, it has also expanded to new products like sawn wood and polymer bricks. As discussed above, the company sees capacity development of its staff as essential to product quality assurance. The company also places a strong emphasis on following the principles of sustainable forest management as required by the Forest Stewardship Council.

20.5 Key lessons

20.5.1 Keeping costs down

The main successes the company has had in keeping costs down include:

- **Drawing in community investment:** through its partnerships with local communities, the company has been able to successfully mobilise both human and financial resources. Local people pay for seedlings and fertilisers and provide the labour to establish and tend the plantation. It is estimated that local people have invested approximately VND15 million per hectare of plantation – VND5 million in cash (for seedlings and other materials) and the rest in labour (for land preparation, planting, tending and patrolling the young plantation). With 800ha of plantation managed in partnership with local people, the company has mobilised around VND12 billion from the communities.
- **Making use of the existing unused resources and by-products:** the company has moved beyond the 'usual' products of pulp and woodchip to make use of other resources and by-products. For example, it has begun production of polymer bricks for construction to make use of unfertile soil (which not suitable for tree planting) and sawdust (from wood processing).
- **Investment in new technologies:** the company has invested in new technologies to keep up-to-date with new developments in the global market and to increase its efficiency. For example, the company has shifted from traditional seedling production from seeds to seedling production from stem cuttings to improve tree quality. In addition, the company has also invested in new wood production and sawmill processing technologies, which has helped to enhance product quality following FSC standards.
- **Performance-based payments:** in terms of human resources management, the company has moved forward with a new system of performance-based payments. Labourers are not paid a flat rate. Instead, they receive payments based on the quantity and quality of their work.

20.5.2 Retaining customers and willingness to pay

The company has adopted various measures to develop and retain its customers:

- **Brand development:** it has targeted future market expansion in the area of responsible forest products through its FSC timber certification. The company achieved FSC certification in 2011 for all of its forests (both natural and plantation) and was one of the first companies in Vietnam to be granted FSC certification.
- **Diversification:** additionally the company has begun to diversify its product portfolio, so that it is not overly reliant on one sub-sector in this increasingly competitive market.

20.5.3 Success factors

The main factors that have contributed to the Ben Hai Forestry Company's success so far are:

- **Cultivating a good relationship with local communities:** the company has attempted to provide a range of options of working in partnership with local people, with clear contractual agreements and a fair benefit-sharing ratio.
- **Actively moving toward international timber markets** by achieving FSC certification and through sustainable, community-based forest management.
- **Diversification:** the company has developed a range of product lines that act as a hedge against uncertainty in any one particular market.
- **Investment in modern technology:** this has helped the company to remain efficient and competitive both in terms of product quality and price.



Chachaklum loading lorry with logs

© FAO-GFP

Conclusions from the analysis of 19 successful locally controlled forestry business models

by Duncan Macqueen

21.1 Introduction to the case analysis

This book has drawn together a relatively wide range of case studies of locally controlled forestry business models (see Table 21.1). Most of these models exhibit strongly democratic decision-making structures (with the slight exceptions of the unusual Thai and Vietnam contexts). Chapter 1 put forward the argument that democratic control (rather than capital control) over business was likely to be better at reconciling complex trade-offs between local and global needs that span social, environmental and economic issues. It also advanced the view that 'success' was not easily measured except by the survival of business entities – precisely because the business trajectory would be negotiated between multiple differing priorities of that democratic membership. For example, members whose primary concerns are restoring adjacent forests or community cohesion might not view success in the same light as members whose primary concerns are staff pay. Success in a collective venture must inevitably involve balancing multiple priorities while keeping the business afloat.

While the case studies that we have collected comprise only a small sample of what is in reality a vast portfolio of forest and farm endeavour, looking in detail at business models in this way can yield some useful insights. This chapter attempts to capture some of those insights. A debt of gratitude goes also to the participants of the fourth international Forest Connect workshop where most of these case studies were represented (Macqueen *et al.*, 2015). Participatory working group sessions at that meeting analysed the case studies to draw out what were felt to be generally applicable lessons (albeit without the advantage of seeing the detailed written case studies). The conclusions from those working groups are woven into the current chapter alongside additional observations from the author.

In this chapter fourteen conclusions are made about what it takes for locally controlled forestry business to be successful. These are framed around the fivefold structure of the case studies themselves. Observations are therefore made relating to: the enabling environment (section 21.2); the business model itself (section 21.3); the ownership structure (section 21.4); how the businesses overcame challenges (section 21.5) and critical success factors (section 21.6) as shown below in Table 21.2. In order to make intelligible that table, the conclusions are listed here with an alphabetical coding (Box 21.1)

Table 21.1 Summary of the case studies presented in this book

Chapter and country	Name of business	Main product or service
Chapter 2. Bolivia	Asociación Indígena Maderera de Cururú (AIMCU)	Timber
Chapter 3. Bolivia	Asociación de Apicultores de San Antonio de Lomerío (APMIL)	Honey
Chapter 4. Brazil	Cooperativa Mista de Flona do Tapajós (COOMFLONA)	Timber
Chapter 5. Burkina Faso	Yemboama Union of Non-Timber Forest Product Producers	Baobab, shea, tamarind and honey
Chapter 6. Cambodia	Cambodian Federation for Bee Conservation and Community-Based Wild Honey Enterprises (CBHE)	Honey products
Chapter 7. Ethiopia	Aburo Forest Managing and Utilization Cooperative and Birbirsa Natural Resource Conservation Cooperative	Frankincense and coffee respectively
Chapter 8. Guatemala	Chachaklum SA	Forestry management and market services
Chapter 9. Guatemala	Xate Mayaland Committee	Xate palm leaves
Chapter 10. Indonesia	Koperasi Wana Lestari Menoreh (KWLM)	Timber, processed timber
Chapter 11. Indonesia	Wana Manunggal Lestari Cooperative (KWML)	Timber, processed timber
Chapter 12. Laos	Keoset Organic Coffee Producer Group	Coffee
Chapter 13. Mexico	Unidad Comunal Forestal Agropecuaria y de Servicios de Ixtlán (UCFAS)	Timber, processed wood products and furniture
Chapter 14. Nepal	Himalayan Bio Trade Pvt Ltd	Handmade paper
Chapter 15. Nepal	Himalayan Naturals	Charcoal briquettes
Chapter 16. Thailand	Doi Chang Coffee Farm (DCCF)	Coffee
Chapter 17. The Gambia	Tumani Tenda Eco-Tourism Enterprise	Tourism
Chapter 18. The Gambia	Kombo Cashew Farmers Enterprise	Cashew nuts
Chapter 19. The Philippines	Sunflower Weavers' Association (Sunflower)	Hinabol woven fabric
Chapter 20. Vietnam	Ben Hai Forestry Company	Processed wood products, furniture, resin, polymer bricks and seedlings

Box 21.1 Main conclusions from the analysis of the case studies in this book

Enabling environment

- a. An enabling policy environment that gives local people secure commercial forest tenure can trigger or scale up viable and sustainable business models

Business model

- b. Strong local origins and member-based ownership give resilience
- c. Support for capacity development is enhanced if it includes training in financial administration alongside technical support appropriate to scale
- d. Investing in market research underpins evolution towards better and also more diversified business
- e. Finding ways to differentiate products or services in the market is critical for continued success
- f. Reinvesting some profit towards upgrading the offer to customers helps long-term business prospects
- g. Establishing a second-tier organisation that aggregates product and provides services to first-tier producer organisations provides a longer-term growth trajectory

Ownership structure

- h. Clarity over the organisational structure and roles and responsibilities within it increases business efficiency
- i. Financial oversight mechanisms assure accountability and help avoid financial abuses that frequently lead to business failure
- j. Maintaining staff mobility and leadership turnover can help to spread capacity within the business and improve long-term sustainability

Overcoming challenges

- k. A broad vision within which the pursuit of profit plays a supporting role helps maintain cohesion in a group business
- l. Finding creative ways to secure finance for investment and cashflow is often essential to success

Success factors

- m. Seeking out and taking advantage of partnerships and networking opportunities is crucial to opening up new business opportunities
- n. Maintaining a strong commitment to staff development and production or service quality wins and keeps customers

For each conclusion, Table 21.2 indicates case study examples where this has been the case. These are highlighted in green. Cases where the issue is either not covered in the text or the issue was not the case are highlighted in red. For each conclusion, two particular case studies that exemplify a particular conclusion are also discussed in the text.

For those interested in delving further, Table 21.2 provides a summary of the case studies, to which particular conclusions apply. It can quickly be seen that a business can survive without implementing some of these conclusions – but that for most case studies; most of these conclusions are valid.

Table 21.2 Comparison of the main conclusions with the case studies

Issues	Enabling environment Business model							Ownership structure			Overcome challenges		Success factors	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Case study														
Chapter 2. Bolivia (AIMCU)														
Chapter 3. Bolivia (APMIL)														
Chapter 4. Brazil (COOMFLONA)														
Chapter 5. Burkina Faso (Yemboama Union)														
Chapter 6. Cambodia (CBHE)														
Chapter 7. Ethiopia (frankincense and coffee cooperatives)														
Chapter 8. Guatemala (Chachaklum SA)														
Chapter 9. Guatemala (Xate Mayaland Committee)														
Chapter 10. Indonesia (KWLM)														
Chapter 11. Indonesia (KWML)														
Chapter 12. Laos (Keoset Group)														
Chapter 13. Mexico (UCFAS)														
Chapter 14. Nepal (Himalayan Bio Trade)														
Chapter 15. Nepal (Himalayan Naturals)														
Chapter 16. Thailand (DCCF)														
Chapter 17. The Gambia (Tumani Tenda Eco-Tourism)														
Chapter 18. The Gambia (Kombo Cashew Farmers)														
Chapter 19. The Philippines (Sunflower)														
Chapter 20. Vietnam (Ben Hai Forestry Company)														

Case studies which illustrate an example of each of the book's main conclusions (within the thematic areas in Box 21.1) are highlighted in green. Case studies which do not cover that issue or report the lack of that issue as a problem are highlighted in red.

The following sections give examples from practice to illustrate each conclusion for each thematic area, concluding with a discussion of how to mainstream the findings from this work.

21.2 Locally controlled forestry business needs to be enabled

Locally controlled forest business exists in almost all countries, but whether it remains clandestine and informal or is unleashed to serve the formal economy, restore forest cover or combat poverty is determined (in part) by the enabling environment.

a) An enabling policy environment that gives local people secure commercial forest tenure can trigger or scale up viable and sustainable business models

So frequently has this conclusion been drawn, that it almost goes without saying (see for example RRI (2014a)). Businesses cannot operate if they cannot assure creditors and customers of their ability to deliver the product or service in question. Making such assurances requires secure commercial tenure over resources – full stop. But it is not just the legislative provision of secure commercial tenure. It also matters how many bureaucratic steps businesses have to take to obtain that tenure and how many other legislative impediments are thrown in their way (business registration, tax formalities, employee requirements, transport licenses etc.). And it matters too how the legislation is enacted or enforced (consistently or on a discretionary basis, fairly or unfairly, efficiently or not). And it is not just law enforcement that is the issue. Governments also have a role to play in actually supporting locally controlled forestry business, for example through incentive programmes, technical extension, organising trade fairs and so on. These issues can make or break business. But it is also possible to operate in a 'creatively informal' manner even in environments quite hostile to locally controlled business if the will is there.

In most of the case studies in this volume, there is at least some supportive legislation in favour of locally controlled forestry business. For example in Bolivia, the new Forestry Law grants to indigenous communities and social organisations the commercial rights to access large areas of forest. This enabling legislation has led to a proliferation of many local attempts at business – including the Asociación Indígena Maderera de Cururú (AIMCU) (Chapter 2) and the Asociación de Apicultores de San Antonio de Lomerío (APMIL) (Chapter 3). But as noted in each of those case studies, the mere granting of secure commercial tenure does not guarantee problem-free business. Far from it – this is why other supportive elements in the enabling environment are necessary.

In Burkina Faso, for example the Yemboama Union of Non-Timber Forest Product Producers (Chapter 5) has benefited from a series of projects that have been catalysed by the creation in 2008 of the National Agency for Promotion of Non-Timber Forest Products (APFNL). This has developed national action plans for many non-timber forest products (NTFPs) including gum Arabic and shea that are traded by the Yemboama Union – with associated projects and technical extension support on offer. It is when government departments manage to shift control and thereby responsibility for forest protection to local forest businesses while reorienting themselves towards the provision of incentives and technical extension that real progress begins. Guatemala is a case in point, where a shift towards locally controlled forestry (see Chachaklum SA in Chapter 8) has been incentivised by major financial support programmes – Programme of Incentives to Small Landowners with Forestal or Agroforestal Vocation (PINPEP) and Forestry Incentive Programme

(PINFOR) – backed by the creation of a new Department of Industry and Commercial Forestry within the National Forests Institute (INAB).

21.3 Business development requires constant evolution

None of the case studies here is the finished article, the successful blueprint. All are a work in progress. Like any other business, locally controlled forest business must constantly adapt to changing circumstances, customer preferences and competition. Maintaining a competitive cutting edge requires constant evolution – which can be enhanced by a good business model.

b) Strong local origin and member-based ownership gives resilience

Local cultural skillsets can form the basis for competitive business advantage. In looking across these case studies, particular sub-sectoral choices (whether timber, NTFPs or service provision) appeared to matter less than the commitment to building on the assets of members. Buy-in from group members is critical, so ways of making group members attracted to the business proposition need to be incentivised. This goes beyond economic aspects such as collective harvesting and marketing and includes strong commitments to social and environmental ends. For example in Bolivia, AIMCU (Chapter 2) saw the experience of its staff and their assets of 26,500 hectares of forest as an opportunity enhance the broad aspirations of the community. They therefore sought to develop, not only log sales, but also a specialised service-provider capability by setting up a subsidiary company, the Forest Services Enterprise of Cururú (SERFORCU) that sells forest inventory, management and harvesting services (both to its own parent company and to other adjacent community areas). Created in 1998, AIMCU and its subsidiary company SERFORCU became the first community timber business certified by the Forest Stewardship Council (FSC). Despite major setbacks in 2012 where its principal buyers failed to pay (leading to the collapse of SERFORCU), the management professionalism gained with AIMCU has helped it survive through continuing local sales.

Another good example is that of the Kombo Cashew Farmers Enterprise in Gambia (Chapter 18). This organisation developed simply through the meetings on Sundays between poor cashew farmers – in a context in which there is no official government policy on or support for cashew-nut production. The cashew farmers realised that to get a better price, they would benefit from working together, both to increase volumes but also to agree quality standards and assurances that would strengthen their negotiating position with traders. While the business is still in its infancy, the strong local ownership of the idea and enterprise is likely to stand it in good stead going forward. Inclusive and participatory processes were used in the formative stages of that business but there is still work to do to ensure that mechanisms to distribute and reinvest the income from that business are developed.

c) Support for capacity development is enhanced if it includes training in financial administration alongside technical support appropriate to scale

Financial literacy and an understanding of basic accounting, bookkeeping and issues such as risk management, are key areas that underpin any successful business. Without them, it is virtually impossible to undertake business planning with clear annual objectives regarding

production and profits, including cost–benefit analysis. For this reason it is built into all basic courses in enterprise development, including the market analysis and development (MA&D) methodology which has been used in support of several of the cases mentioned in this book (e.g. Chachaklum SA and Xate Mayaland Committee in Guatemala in chapters 8 and 9). For example, early on in the development of the Sunflower Weaver's Association in the Philippines (Chapter 19) it was recognised that the financial management system was not working well and that this was a threat to the collective functioning of the group business. The solution identified was to assign three bookkeepers with specific functions (for expenses, deliveries and sales) and to approach the support programme Non-Timber Forest Products Exchange Programme for South and Southeast Asia (NTFP-EP) for training in financial literacy.

Another example comes from the case study of the teak growers' cooperative Koperasi Wana Lestari Menoreh (KWLM) in Indonesia (Chapter 10). For this cooperative it was identified that financial literacy workshops for all members were a key preventative approach to ensuring accountability in financial transactions. By developing financial understanding within the business organisation, members were felt to be more likely to closely monitor KWLM's finances for errors and abuses – and thereby maintain the trust within the organisation. In almost all of the other case studies, financial literacy training has been an early component of work to establish the business, for example in the training of bookkeepers in the Tumani Tenda Eco-Tourism enterprise in the Gambia (Chapter 17).

d) Investing in market research underpins evolution towards better (and also more diversified) business

As noted above, business models constantly need to evolve. By conducting market research, and making this a core component of business development, a business can identify new market niches and thereby evolve or diversify to ensure future viability. Although the case study from the Ben Hai Forestry Company in Vietnam (Chapter 20) does not strictly involve 'local control' (albeit overseen by trustees appointed by the Provincial People's Committee), the company has invested strongly in market research. Through that research they identified several market opportunities that could complement their core forest timber business, including pine latex (rubber) production and the manufacture of polymer bricks for the construction industry. This diversification helps to maintain income streams that act to improve cashflow for the primary woodchip, pulp and sawn wood business which draws a significant volume of product from individual households in adjacent communities with whom the company partners.

Another example comes from COOMFLONA in Brazil (Chapter 4). While the main product for this cooperative is logs sold at auction in a forest patio area, further market possibilities were also identified for members to sell natural latex and latex products, medicinal plants and seeds. It recently also opened a store in the neighbouring town of Santarem in the Brazilian Amazon to sell these products alongside finished timber products such as doors, furniture and crafts to local consumers and tourists. Aware of the value of the tourism market, the cooperative is now working with external partners to develop community-based tourism activities in their production forest. It is this sort of market evolution that keeps a business active, and helps also broaden the interests of potential members within the communities from which the business is drawn.

e) Finding ways to differentiate products or services in the market is critical for continued success

However original the initial idea for the business was, competitors are quick to catch up. A key element of any business model is therefore how the business can differentiate itself in the market place. This may be by developing the product line, or it may be by branding the product so as to tell a particular story to the customer. A good example of both comes from the Sunflower Weavers' Association (Chapter 19). Within this association producer members actively sought to experiment both with new designs for their Hinabol woven fabrics, and also to experiment with previously unused dyes so as to improve the colour range of their products (eventually also seeing the need to carefully document the prescription or methodology for making each of these dyes). But in addition to product development, the Sunflower Weavers' Association also developed a strong brand based on the way the product development supported traditional practices of the Higaonon culture, which involved a strong emphasis on environmental sustainability and women's empowerment.

Another example of this attempt to differentiate the product in the market comes from the Doi Chang Coffee Farm (DCCF) in Thailand (Chapter 16). They emphasise to customers the high-quality, single-origin, strictly hard-bean nature of their Arabica coffee. But they have also sent regular samples of their coffee to be independently tested for quality in laboratories in Thailand – with a transparent testing, tracking and recording procedure that is shared with customers and helps to build confidence in the DCCF brand. And the differentiation is further enhanced by a strong branding story about production by poor Akha farmers who originally planted opium but have now sought more beneficial alternatives through the formation of their own coffee buyers' group. Such examples are also often further developed by independent third-party certification schemes – which in the case of timber and sometimes NTFPs often involve the Forest Stewardship Council (e.g. AIMCU in Bolivia in Chapter 2, COOMFLONA in Brazil in Chapter 4, the Xate Mayaland Committee in Guatemala in Chapter 9, KWLM in Indonesia in Chapter 10 etc.). The advantages of market access afforded by such certification sometimes outweigh the costs of the certification process itself.

f) Reinvesting some profit towards upgrading the offer to customers helps long-term business prospects

The importance of keeping back some profit and reinvesting it to improve the business model cannot be overstated. Evolving a business usually needs investment. Financial mechanisms for this need to be in place. Several of the case studies demonstrate how challenges were overcome by keeping a sharp eye on the business market niche and reinvesting profits to improve what the business has to offer within it. For example, in the Guatemalan Petén region, founding members of Chachaklum SA (Chapter 8) realised that a government programme (PINFOR) had incentivised, through cash payments, the establishment of plantations – such as the local forest growers' network of San Francisco Petén. However, the rush to grow trees (for those cash payments) had not been accompanied by adequate attention on to how to manage those plantations, identify markets for products arising from thinnings and final logs, and mediate sales. Skills within the founding members of the forest growers' network were built up through a range of strategic partnerships with civil society groups, so that they could then provide those



Forest Connect field trip in Vietnam during which successful cases of locally controlled forestry business were discussed

commercial services – initially to the full membership of the forest growers' network, and later to other plantation owners in the region. Rather than distribute profits to members, Chachaklum SA has decided to reinvest resources into a small-diameter sawmill business to broaden its capacity to offer markets for plantation thinnings. Local recognition of that market gap underpinned the local origin of the Chachaklum business in 2012 and reinvestment into the business has helped to consolidate its place in the market.

Another example comes from Nepal, where a joint-venture company Himalayan Naturals (Chapter 15), established in 2010, identified a market niche in supplying charcoal briquettes to the Kathmandu household heating market. Sourcing waste wood from community forest user groups, some 21 fully community-owned charcoal briquette enterprises (together holding a 20 per cent share in Himalayan Naturals) developed a standard product and packaging. Teaming up with a stove design company they then reinvested profits in 40 one-day marketing-kiosk retail outlets, and sold both stoves and briquettes to a series of retail outlets. Substantial profits are now being reinvested in the design of stoves for the commercial heating and cooking markets. By constantly evolving, these businesses are keeping ahead of the competition. Similar examples can be seen in most of the case studies, for example in the Gambian Tumani Tenda Eco-Tourism Enterprise (Chapter 17) where their initial lack of energy was soon addressed by reinvesting early profits in the procurement of solar lamps and gas freezers that greatly improved what they could offer to their customers.

g) Establishing a second-tier organisation that aggregates product and provides services to first-tier producer organisations provides a longer-term growth trajectory

A key constraint for many of the business models outlined in this book is the geographical isolation from markets, service providers and decision makers. Attempting to sell products

in small volumes to distant markets is a challenge. A very useful strategy is to link several first-tier producer organisations (that are producing the same thing) with a second-tier organisation that can aggregate product and provide services to its member organisations. Services might include market information, value-added processing and packaging, training in required quality standards, the provision of credit, representation with decision makers and so on. Paying for these services separately (which are profitable in their own right) through funds generated from profits can reduce the pressure on member organisations, which might otherwise have to pay disheartening membership fees. Where attempts to support individual enterprises are struggling, thinking through the options for a second-tier organisation can be a way to unleash the market potential of those groups. Good examples come from the two honey businesses here described. The Bolivian APMIL in Chapter 3 and the Cambodian Federation for Bee Conservation and Community-Based Wild Honey Enterprises (CBHE) in Chapter 6 both saw the need to join or form a second-tier marketing organisation. In the case of APMIL, inappropriate early projects left the group barely surviving. But through joining the Departmental Association of Beekeepers of Santa Cruz (ADAPICRUZ), APMIL could join others in becoming shareholders of a marketing organisation, Apícola del Bosque, that has enabled them to gain access to more formal markets such as supermarkets (through proper packaging and branding). In the case of CBHE, this was set up as a second-tier organisation that would disseminate guidance on quality honey products and aggregate products from 16 first-tier honey enterprises across six provinces. It in turn works with two marketing companies NatureWild and SKC (Sahakreas CEDAC, a social enterprise established by the Center for Study and Development in Agriculture) to brand and distribute the honey to a wide range of markets.

Another good example is that of Unidad Comunal Forestal Agropecuaria y de Servicios de Ixtlán (UCFAS) in Mexico (Chapter 13). After decades of individual harvesting, the 1970s saw the emergence of a single organisation that represented business interests for three communities. Over time, four separate businesses emerged under the overall general assembly of those three communities: a forest management company (Technical Forestry); a logging, extraction and transport company (UNFOSTI); a primary and secondary processing company (UCFAS – the subject of the case study); and an eco-tourism company. UCFAS is a second-tier organisation that essentially takes timber from three communities and adds value to it through the production of sawn lumber and furniture. Over time the company has reinvested profits into ever-more sophisticated processing businesses – while also generating considerable income streams for the three owning communities.

21.4 Organisation is critical to maintaining local control

h) Clarity over the organisational structure and roles and responsibilities within it increases business efficiency

Almost all of the case studies in this book deal with group businesses (the one slight exception being the Ben Hai Forestry Company in Vietnam, Chapter 20). Group business management requires much more careful attention to roles and responsibilities than alternative business models – both in ensuring that the right people are in the right jobs, and that their mandate is clear and uncontested. Because of this, almost all of the case studies have clear descriptions of the organisational structure and mandates of the key positions in the business. A good

example of this comes from the Laos Keoset Organic Coffee Producer Group (Chapter 12) which has avoided conflict by having clearly defined roles (underneath a general manager and two deputies) for quality assurance, coffee roasting, marketing, visitors, technical extension, handicraft work (packaging and display) accounting, petty cash and logo development.

Another good example is that of the Nepalese Himalayan Bio Trade Pvt Ltd company that makes handmade paper (Chapter 14). In this case the organisational structure was particularly important because the origin of this second-tier marketing organisation origin rested only partly with the local community forest user groups making the paper. A support institution, the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) helped develop the idea for the institution and then attracted a set of four investors to invest capital. These sit on the general assembly along with representatives of four handmade-paper and two essential-oil producing first-tier community groups. Below the general manager, a technical and export manager and an operations manager control sections relating to marketing, purchases, production, new product development, retail stores and customer relations. The structure was set up and agreed by the communities involved through a process of voting.

i) Financial oversight mechanisms assure accountability and help avoid financial abuses that frequently lead to business failure

Maintaining control of group businesses, however strong the initial cohesion of members, can be threatened by internal rifts (particularly over decision-making relating to financial management). The solution to this is found in clear organisational structures and roles, transparency of financial accounting and some form of independent oversight. One good example of this is from emerging multi-product cooperatives in Ethiopia such as the Aburo Forest Management and Utilization Cooperative founded in 2011 (Chapter 7). One of the product groups within this cooperative is the Agubela frankincense business group. Between the functions of the general assembly of all members of the cooperative and the executive committee of the particular frankincense business groups are two important committees: an independent audit committee and an elders' committee. These committees ensure that the financial returns from and social impacts of the business are fully transparent and in line with the wishes of the broader community – without trespassing into the operational management decision of the executive committee.

Another example comes from Mexico, where UCFAS (Chapter 13) is the final link in a chain of four community-owned companies that handle forest management; logging, extraction and transport; wood processing and furniture manufacture; and eco-tourism from three community forest areas. Under the overall umbrella of the general assembly of community land owners of Ixtlán there is a vigilance council. It independently oversees the financial management and social impacts of the three community-owned businesses under its charge. Once again, there is clear separation between the community customary authority and the management of the business (who in this case was a professional hired from outside the community) but with an oversight mechanisms to ensure transparency.

j) Maintaining staff mobility and leadership turnover can help to spread capacity within the business and improve long-term sustainability

Too often, locally controlled forest businesses are launched through the vision and drive of

a single individual only to collapse if that leader moves on. An alternative ailment is found in situations where an ineffective leader clings to power and cannot be replaced despite the availability of better alternatives within the business. Avoiding both pitfalls is possible by ensuring careful thought is given to the appointment of staff and renewal processes to ensure that they do not remain in perpetuity beyond their optimal service. Several of the more successful case studies mention explicit processes to ensure that this does not happen. For example in the Indonesian Wana Manunggal Lestari Cooperative (KWML) in Chapter 11, the cooperative managers' committee appoints a chairman only for a three-year period. Where it has been less successful is to find a mechanism to assure that the producer members of teak sell only through the cooperative and not individually to traders on a personal needs basis.

An even more advanced approach to staff mobility and leadership turnover is found in UCFAS in Mexico (Chapter 13). Within the community, access to forest resources is governed by a system of traditional customs in which community leadership positions are elected via a common-law system in the community general assembly (which oversees the four businesses described above). General managers of the four enterprises must attend general assembly meetings and explain all decisions that have been taken in the recent past for community approval. Transparency is the main objective. Under the general assembly, the commissariat is the executive agency for the communities as a whole – and these individuals, who are on the board of each business, are elected for a period of three years. The general managers themselves do not need to come from the community but are hired on merit for a fixed term – and can be dismissed by the board.

21.5 The challenge is to balance economic concerns with social and environmental concerns

k) A broad vision within which the pursuit of profit plays a supporting role helps maintain cohesion in a group business

Unlike profit-driven companies, locally controlled forestry business often have broader sustainable livelihood benefits in view. Indeed it is this which is both distinctive, helps to underpin commitment to the success of the business, and merits greater investment. For example, KWLM in Indonesia (Chapter 10) serves as a marketing company for its member teak growers. It has managed to maintain and expand its membership, and deliver increasing volumes of timber to clients, by offering members a fair price for their timber. It provides FSC-certified forest management and sales services to those members. The market access advantage of that certification, as well as the livelihood and sustainability benefits for members, allows it to remain viable, despite very thin profit margins for the actual cooperative itself. The KWLM itself is not profit maximising.

Another example comes from the Yemboama Non-Timber Forest Product Union in Burkina Faso (Chapter 5) that was set up by one of a number of village tree enterprise managers supported by TreeAid. The union is essentially an aggregation and marketing enterprise for 39 community enterprise groups producing baobab, shea, balanites (desert date), gum Arabic, tamarind and honey products. Its role is to secure additional, more lucrative, markets for those groups among national and international wholesalers, processors and



Participants of the Fourth International Forest Connect Workshop in Vietnam

traders. Good relationships within the union have helped it to develop and reinvest profits into basic processing and packaging equipment and larger storage facilities. Members are free to sell independently, but choose to sell through the union, in part because of higher prices offered, and in part because they can see the longer-term livelihood benefits of developing the infrastructure of the union.

I) Finding creative ways to secure finance for investment and cashflow is often essential to success

To find investment capital and manage cashflow, businesses need access to finance. How to achieve this in practice is often an innovative combination of internal financing by members coupled with approaches to regular finance institutions for larger investment needs. For example, KWLM in Indonesia (Chapter 10) faced problems in assuring that its members sold timber through the cooperative. Tree growers inevitably had short-term cashflow needs (for school fees, medical emergencies etc.) and were tempted to sell timber direct to traders at those points in time (undermining the whole management system that was certified as sustainable by the Forest Stewardship Council). To address that issue from the beginning, the cooperative worked with a local credit union CUKATA that was able to offer members loans to cover short-term financial needs – and was repayable when the timber was cut according to the sustainable management plan (and which would otherwise have been cut instantly). The Keoset Organic Coffee Producer Group in Laos (Chapter 12) similarly operates a revolving loan fund for its members. Neither exposes the business to high financial risks of failed repayments.

In other situations larger, more risky investment capital is required. One example of how this was secured comes from the Doi Chang Coffee Farm in Thailand (Chapter 16). This group needed significant financial capital to invest in coffee storage facilities, machinery and cashflow for staff salaries in the processing units – if they were to be able to buy coffee from member growers in the region and simultaneously add value and remain financially solvent themselves with all the savings of all members, they did not have the required capital to hand. The solution was found by establishing a group enterprise consisting of 12

enterprises (each which had to have at least seven founding members). By so doing it was possible for each enterprise head to take out a loan, the combined total of which exceeded any possible loan for a single business, and which was sufficient as start-up capital to allow them to proceed with their business model. The loans are still in the process of being repaid (a substantial risk) but the collective decision was that the benefits outweighed that risk.

21.6 Success is a process of survival

m) Seeking out and taking advantage of partnerships and networking opportunities is crucial to opening up new business opportunities

Isolated local forest and farm producers need all the help they can get. One common success factor in many of the case studies was the deliberate commitment to seek out and take advantage of local projects, NGOs and private-sector partners. Perhaps the best example of this comes from the Gambian Tumani Tenda Eco-Tourism Enterprise (in Chapter 17). Eco-tourism requires a wide range of services including accommodation, food and beverages, events and functions, boat trips, forest walks and cultural activities. With enterprise development support from the NGO Natural Resources Consulting (NACO), they also partnered with a service provider, the Association of Small Scale Enterprises in Tourism (ASSET) to publicise their eco-tourism venture, the Gambia Tourism Board for advice on eco-tourism, Gambia Tours and West African Tours to help with accommodation bookings, the Department of Forestry (for advice on community forestry and forest walks), and the National Environment Agency to make sure that they did not contravene any environmental laws.

The Brazilian COOMFLONA in Chapter 4 also shows a wide range of partnerships that have been actively nurtured by cooperative leaders. The Catholic Church and the Union of Rural Workers helped them to establish the three initial associations that were ultimately to unite into the cooperative business. They took advantage of the Project to Support Forest Management in the Amazon (ProManejo) financed by the International Tropical Timber Organisation (ITTO) doing experimental logging in the production forest but also committed to exploring livelihood alternatives for local communities (including handicrafts and furniture making). Staff from the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA) together with staff from ProManejo then moved more directly to help the community associations establish a cooperative following Ordinance 40 which allowed for community timber enterprises. Further support came from the Tropical Forest Institute which gave COOMFLONA subsidised access to a skidder, and the Amazon Alternative project which helped pay for their forest certification. By being open to and drawing on these multiple partners the cooperative has managed to become a serious locally controlled business – the first of its kind in Brazil.

n) Maintaining a strong commitment to staff development and production or service quality wins and keeps customers

For business the customer is king. Making sure that staff are equipped to meet the demands of those customers is a vital part of any business. A good example of efforts to strengthen staff capacity to attend to customer demand comes from the CBHE in Cambodia in Chapter 6. CBHE was set up precisely to deal with aspects relating to sustainable honey-harvesting techniques, high quality control in production and honey

packaging and delivery. The enterprise developed guidelines on all aspects of honey production to ensure that far-distant members could all meet the customer demand for a premium grade of honey (rather than the traditional street vendor alternative). Through a detailed market survey they were able to help their producer members to produce, and their partners to package, products that have successfully met the demand.

Another example comes from the Guatemalan Xate Mayaland Committee in Chapter 9 which produces Xate palm leaves primarily for Easter decorations for USA church groups. Training has been given to those collecting and cutting the Xate leaves – and they know exactly what quality is acceptable to the buyer. Low temperature storage has been installed and again is operated by people experienced in meeting customer requirements. Classification of the leaves is usually done by women who have been trained according to the specific requirements of the purchasers. Under the oversight of the Xate Mayaland Committee, individual local xate groups have also been trained in business management skills including managing costs, accounts and taxes, leadership and negotiation, and market access. All of the investments in staff development help to ensure that the business works smoothly and delivers what the customer wants.

21.7 How to mainstream the findings from this work

So, how might these success stories be scaled-up and what risks must be considered in doing so? Three main points deserve brief discussion:

How to align the agency behind the necessary enabling investment? Evidence of the benefits of locally controlled forestry is now compelling. New funding facilities such as the Forest and Farm Facility (FFF), together with knowledge alliances such as Forest Connect, are making steady progress in developing the capacity of forest and farm producer organisations to scale up success (Macqueen *et al.*, 2014b). The focus on improving organisational structures is proving to be highly effective to scaling up as it motivates other members to join and participate in those groups, especially if there is a strong emphasis on business. Support to facilitate the emergence of first-, second-, and third- level organisations brings both market benefits (through scale efficiencies) and political influence (through voter numbers). Issues are then directly represented by producers, instead of being articulated by intermediary NGOs, or through consultations with individuals with no formal representative mandate. However, progress needs to be matched by governments making simultaneous efforts in improving commercial tenure rights, providing technical extension services, and underwriting business development and finance services. In order to make the shift to a supply model based on local forest and farm producers, their group enterprises will need to be able to attract asset investors, and this will only happen once these pre-conditions are in place.

How to overcome the fear of individual failure in a process targeting success?

Businesses fail – even the most successful ones. There is no guarantee that all 19 of the case studies reviewed in this paper will survive. Failure can be entirely self-inflicted but it can also be the result of reasons beyond the control of the business. The case study from Bolivia is a good example of this. AIMCU's subsidiary company SERFORCU failed for

reasons beyond its control, but capacity was easily transferred over to the parent company, the community timber association. In the end, capacity was significantly increased within the local area and association, and that in itself is a win. Building knowledge about **how** to achieve success and the many steps that have led up to it allows for a broader analysis of what success is. It also puts more emphasis on learning from challenges, or failure. In our research we have attempted to capture the story behind the success both to support service providers advising small-scale forestry businesses on how to address key challenges (which are often similar in nature) and learn from them.

How to build partnerships that work for the partners as well as the beneficiaries?

Support agencies for locally controlled forest enterprises exist in their thousands. But they too need to secure their funding, often competitively – in an environment where novelty reigns. Support agencies such as NGOs have access to funding resources that these businesses do not, especially during the initial stages. Local control can only be achieved once the business can access and control finance flows on its own. However, getting funds directly to businesses on the ground continues to be a challenge, also to the businesses reviewed here, despite evidence of financial prudence and business capacity. There are numerous examples where co-dependency is developed between NGOs and small-scale businesses, where the former rely on their beneficiaries to meet their (donor) goals so that they can continue to secure funding (Elson, 2012). However, this can stifle entrepreneurship and ability for businesses to mature. One way of avoiding this trajectory is to ensure partnerships are developed with clearly agreed goals, expectations, benefit-sharing mechanisms and exit strategies (Elson, 2012).

This paper has highlighted the potential of often democratic locally controlled forest enterprises. Their ability to incorporate long-term social, economic and environmental values into their business models makes them different and rather special – vis-à-vis for-profit corporations. Processes such as reducing emissions from deforestation and forest degradation (REDD+) and forest law enforcement, governance and trade (FLEGT) have so far failed to engage and support adequately these locally controlled business models as an integral part of the solution to deforestation and illegal logging.

History has shown us that even the most impressive policies to stimulate local participation in managing forest landscapes mean very little if not implemented or enforced (Bolin *et al.*, 2013; Ribot and Peluso, 2003; Ribot and Larson, 2012; RRI, 2014; Steven *et al.*, 2014; Sunderlin *et al.*, 2008). Although commercial tenure rights, technical extension and access to business development and financial services are key for enabling enterprises to scale up, these will not be realised unless producers are organised **before**, to negotiate what support is needed, and then **after** to make sure that support is delivered. Scaling up the organisation of producer organisations and linking them effectively with each other is therefore a fundamental pre-condition and a priority for enabling investment.

These case studies represent governance and natural resource contexts from all over the world. The results therefore are widely applicable and can be used to increase understanding and encourage agencies to support locally controlled forest enterprises in many different countries and contexts.

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Human populations and economies are growing in a finite planetary environment. Combining equitable human development and environmental protection is therefore an ever more pressing challenge. Within that broad context, there are increasing overlapping claims on forest land. It is not enough that forests are protected for their biodiverse ecological integrity on which the climatic future of the global public depends. Forests must also cater to the multiple more immediate needs of almost 1.3 billion local forest-farm producers who live in or next to forests and derive food, fuel, construction materials, water flows and a host of other diversified medicinal, cosmetic and craft products that help them survive and adapt to climate change.

Reconciling the overlapping claims on forests of these 'right-holders' is best handled democratically. Democratising forest governance has therefore long been on the forest agenda. But the conventional architecture of business has largely escaped democratic scrutiny – despite its lamentable track record of reconciling human development with environmental protection.

This book is a very partial compendium comprising 19 more democratic business model cases from 14 countries across Africa, Asia and Latin America that have a better track record. Each model to some extent replaces the conventional business paradigm of 'capital seeking natural resources and needing cheap local labour' with 'local rights-holders managing natural resources and seeking capital'. Understanding how these cases have succeeded (or at least survived) is critical if we are scale-up models of business that deliver equitable human development and environmental protection together. Each case study therefore explores the origins of the business model, how their value-chain activities are structured, how democratic control and benefit distribution was organised, and what lessons were learned along the way.

Can democratic forms of business that cater to the full range of economic social and environmental interests of their members, compete in the modern market economy? This compendium makes the case that they can, and indeed must, if we are to reconcile equitable human development with environmental protection. So the emerging lessons on how to organise and scale-up a process of democratising forest business have global relevance.



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