
THE REDD OPPORTUNITIES SCOPING EXERCISE (ROSE): A TOOL FOR PRIORITIZING SUB-NATIONAL REDD+ ACTIVITIES – CASE STUDIES FROM GHANA, TANZANIA, AND UGANDA



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List of Acronyms

CBFM	Community Based Forest Management (Tanzania)
CBO	Community-based organisation
CFM	Collaborative Forest Management (Uganda)
CREMA	Community Resource Management Area (Ghana)
CRM	Collaborative Resource Management (Uganda)
DD	Deforestation and degradation (driver)
DF	Dedicated or Community Forest (Ghana)
FR	Forest Reserve (Ghana)
JFM	Joint Forest Management (Tanzania and Uganda)
MBIFCT	The Mghahinga and Bwindi Impenetrable Forest Conservation Trust
MJUMITA	Tanzania Network of Community Forest Managers
MRV	Monitoring, Reporting and Verification (of carbon)
NFA	National Forestry Authority (Uganda)
NFR	National Forest Reserve (Tanzania)
NGO	Non-governmental organization
PES	Payments for ecosystem services
REDD+	Reduced Emissions from Deforestation and Forest Degradation plus
ROSE	REDD+ Opportunities Scoping Exercise
THF	Tropical high forest
UWA	Uganda Wildlife Authority
VPA	Voluntary Partnership Agreement (Ghana)
WMA	Wildlife Management Area (Tanzania and Uganda)

Executive Summary

The Katoomba Ecosystem Services Incubator (Incubator for short) aims to help rural communities access payments for ecosystem service (PES) markets, and to develop regional capacity in land-use based carbon finance. As part of this process, the Incubator has developed a tool or methodology called the REDD Opportunities Scoping Exercise (ROSE). ROSE is a tool for classifying and prioritizing potential REDD+ sub-national activities and for assessing critical constraints to project development, especially those associated with the legal, political, and institutional framework for carbon finance. The ROSE tool is therefore relevant to the development of REDD+ at both the sub-national and national levels; in the three case study countries, the ROSE studies have provided key inputs to national 'REDD+ Readiness' processes.

The ROSE tool was developed and refined during 2009 in the course of conducting case studies in Tanzania, Uganda, and Ghana. The tool has two main stages: a 2-3 day key informant or expert workshop, and an analysis of policy, legal, and institutional constraints by a small in-country team following the workshop. In the first stage, workshop participants work through a set of steps aimed at identifying high potential REDD 'project types' and the main legal, political, and institutional 'gaps' constraining development of the identified project types.

This report explains the ROSE methodology and process and also summarizes key findings of the case studies. This includes a brief description of the high potential project types identified at the three ROSE expert workshops. The case studies revealed considerable similarity as regards the higher-level gaps or constraints, many of them key issues for the national REDD+ strategy development and capacity-building phase of REDD+ (or Phase 1 of the proposed three phase REDD+ development approach), including:

- Uncertainty as regards carbon property rights, including whether they will be linked to tree and/or land tenure, as well as potential legal conflicts over carbon ownership;
- The need to clarify benefit shares between the government and communities in joint forest management (JFM) arrangements in Tanzania and Uganda, and to develop thinking around (net carbon revenue) benefit-sharing mechanisms in all three countries, probably involving the development of trust funds based on democratic and accountable governance systems;
- A range of governance concerns surrounding accountability, transparency, and legal compliance;
- The need for aggregation mechanisms that reduce transaction costs, especially in the context of community forest management;
- Concerns about overlaps or confusion in state institutional roles and responsibilities, and the challenge of how to develop strong inter-agency and inter-sectoral coordination;
- The need for information and capacity-building (technical and institutional) at all levels, including at the community, regional, and local government levels.

The report finishes with some suggestions for improving the ROSE tool, but recommends it as a cost-effective approach for engagement with REDD+ in a given country, including feeding into the development of national REDD+ Readiness processes.

1. Introduction

The Katoomba Ecosystem Services Incubator, or Incubator for short, is an instrument created by the Katoomba Group with the aims of helping rural communities access payments for ecosystem service (PES) markets and developing regional capacity in land-use based carbon finance (Box 1). In support of these goals, the Incubator has developed a tool called the REDD Opportunities Scoping Exercise (ROSE). ROSE is essentially a tool for early engagement with Reduced Emissions from Deforestation and forest Degradation Plus³ (REDD+) issues in a given country; specifically it enables the user, which could be a government department, to classify and prioritise potential REDD+ sub-national activities, and to make an initial assessment of key constraints to project development, including those associated with the legal, policy, and institutional framework for carbon finance.

Box 1. Katoomba Ecosystem Services Incubator

The 'Katoomba Ecosystem Services Incubator' mobilizes comprehensive support to bring promising PES projects to market, inform policy, and build capacity. The Incubator focuses mainly on communities and small to medium landowners, sectors which have a critical role in providing ecosystem services, but which face considerable constraints in accessing and effectively using carbon finance and other types of PES finance. The Incubator thus addresses the supply side constraints to community access to PES markets. By investing in capacity building, project design and technical assessment, the Incubator creates the platform to leverage other project finance, and positions local stakeholders for equitable participation in the hoped-for benefits. The Incubator is also increasingly focusing on the interface between projects and policies.

The Katoomba Incubator currently has three regional offices and programs - Latin America (with a particular focus on Brazil and the Andes Region), East Africa (focused on Uganda and Tanzania) and West Africa (focused on Ghana, Liberia, Nigeria and Sierra Leone). It draws on its staff and a roster of partners to link global expertise and local capacity in support of its core regional partners with the aim of developing regional capacity, and thereby reducing the need for external consultants.

This paper first presents the ROSE methodology and process as applied in Tanzania, Uganda, and Ghana during 2009. The explanations should be sufficient for other countries or institutions to adopt/adapt the ROSE tool according to the national REDD+ context and current progress as regards carbon finance for forestry and other land-use projects. The paper also presents some highlights from the three case studies and concludes with some reflections on the ROSE tool, including suggestions for how to improve it.

³ REDD+, as used in the United Nations Framework for Climate Convention (UNFCCC) 'Conferences of the Parties', includes forest conservation, sustainable forest management, and enhancement of forest carbon stocks, including by planting trees.

2. Overview of the ROSE Tool

At the national level, **ROSE assessments provide a rapid qualitative analysis, based on expert opinion, to identify key emissions abatement opportunities across different forest contexts.** At the sub-national level, ROSE is a pre-cursor to the costly process of pre-feasibility and feasibility analysis – a key outcome of the ROSE expert workshop is the identification of high potential REDD+ *project types* (see Box 2 for an example of a project type). ROSE thus provides a framework for a programmatic approach to REDD+ and for the pre-feasibility prioritization of potential sub-national activities that are in line with national strategic as well as market requirements. Integral to the ROSE process is recognition of the need to address policy- or macro-level constraints to project success; the three ROSE studies have therefore invested considerable effort in assessing legal and institutional constraints to, and opportunities for, REDD+ carbon finance.

Box 2. Example of a REDD+ 'project type' in Uganda

In the ROSE approach, a REDD+ project type is defined as a combination of (a) the ecosystem type, (b) the land tenure and institutional framework, and (c) the main deforestation and forest degradation (DD) driver(s). For example, the Uganda ROSE expert workshop participants identified pit sawing as the main DD driver in 'well-stocked' tropical high forest (ecosystem type) in 'Strict Nature Reserves' (land tenure type) managed by the National Forestry Authority (institutional basis). Meanwhile, privately owned land in the same ecosystem type was threatened by the expansion of smallholder agriculture and constituted a separate project type. The differences in DD drivers and land tenure resulted in distinct project types.

The ROSE process bridges projects and policies and is highly relevant to the development of national REDD programs. In the three countries where it has been implemented, the ROSE studies have generated a set of legal, institutional, and policy-related recommendations that are helping inform the national 'REDD Readiness' and priority-setting processes. For example, in Ghana, the legal analysis from the ROSE study informed an analysis of the country's REDD+ architectural options. Even where REDD+ is expected to be predominantly programmatic and fund-based, the national policy initiatives and other actions to promote REDD+ will need to be results-based and will call into play similar criteria to those required for carbon market viability. Box 3 considers the emerging project-policy interface of REDD+.

Box 3. Projects and Policies in a Post-Copenhagen REDD+ Architecture

While the post-2012 REDD+ architecture was still rather unclear following Copenhagen, most observers argue that the cost-effective reduction of deforestation and forest degradation will require a mix of policy and project approaches in the proposed three-phase approach. The ROSE assessment uses a structured analytical framework to provide inputs into REDD+ strategies at both national and sub-national levels.

It is self-evident that policy-related and institutional approaches are essential for addressing the underlying drivers of deforestation and thus for tackling a range of complex and inter-sectoral issues surrounding agricultural productivity and expansion, land and tree tenure, forest governance, land-use planning, transport infrastructure, poverty reduction, use of subsidies, etc.

The Incubator predicts that sub-national activities or projects will continue to play a key role in a country's suite of REDD+ activities. Projects have proved effective means to building technical capacity, and are critical to the process of developing and providing cost-effective land-use incentives for the stakeholders who will ultimately determine the success of national programs. Specifically, sub-national activities:

- allow for near-term abatement potential to be realized, while enabling conditions are created to deliver results through national level approaches;
- are an attractive target for private capital, which is also needed to achieve emissions reductions;
- allow for innovation and controlled learning before embarking on national-level experiments;
- create platforms for developing contracts, establishing the appropriate level and mix of incentives and for developing equitable and transparent benefit-sharing mechanisms;
- are important for demonstrating how REDD+ incentive mechanisms can deliver positive benefits and also for building credibility and momentum behind national-level frameworks.

3. The ROSE Methodology and Process

3.1 Introduction

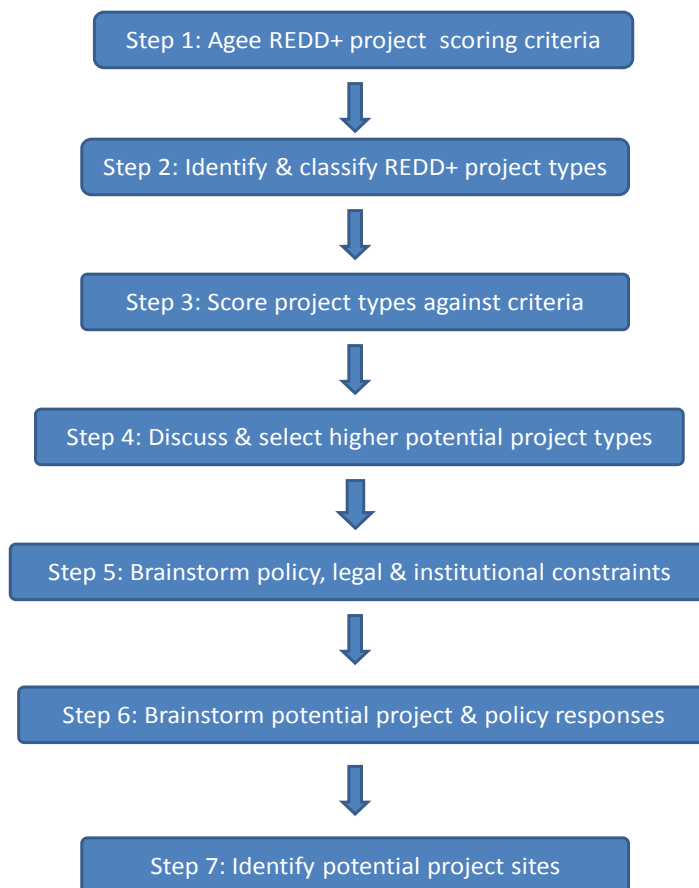
The ROSE scoping study methodology was developed through an iterative process. The first exercise was undertaken in Tanzania in March 2009. The lessons from Tanzania were incorporated into applications of ROSE in Uganda and Ghana in May and July 2009 respectively. The ROSE process falls into two main stages: an 'expert workshop' and, following the workshop, an analysis of policy-related, legal and institutional constraints to carbon finance by a small in-country study team. The two sets of findings are incorporated into a report that includes a portfolio of potential REDD project types and a set of recommendations for legal, policy-related, and institutional actions or reforms to stimulate forest carbon finance.

3.2 ROSE Expert Workshop

The first phase of the ROSE scoping study is a 2-3 day workshop with a small cross-sectoral and interdisciplinary group of experts who collectively combine a good understanding of carbon markets, the national forest and agricultural sectors, and the main deforestation and forest degradation (DD) drivers, as well as related legal, social, and institutional issues. For example, the 20 participants of Ghana’s ROSE expert workshop were composed of senior government staff from the forest, agriculture, and cocoa departments; representatives of various international and national NGOs (including ones representing civil society groups); an international tree crops research center; a land lawyer; a consultant forest economist; a consultant working on a legal analysis of the forest sector, etc.

Following the ROSE methodology as developed in the three case studies, participants work through seven main steps (Figure 1), although it should be noted that steps 6 and 7 were not undertaken in all cases due to time constraints.

Figure 1. ROSE Expert Workshop Steps



The seven ROSE expert workshop steps are as follows:

Step 1. Agreement on REDD+ project-scoring criteria: This consists of analyzing and agreeing upon a set of nationally appropriate REDD+ project-scoring criteria, i.e., characteristics that contribute to the likely viability and attractiveness of REDD+ projects. A starting point for this exercise can be to discuss the criteria used in previous ROSE studies and criteria stemming from national REDD+ processes. Box 4 presents the criteria used in the three ROSE studies.

Step 2. Identification and classification of REDD project types: This involves identification (and agreement) of the country's main forest ecosystems and, where data exist, their carbon emissions profiles; sub-classification of forest ecosystems by land tenure and institutional basis; and identification of the main DD drivers for each ecosystem/tenure situation. A project type can therefore be defined as a combination of the ecosystem type, the region or area, the land tenure and institutional basis, and the main DD drivers. For example, in Tanzania, an important REDD+ project type was miombo woodland managed under Community Based Forest Management (CBFM) in the Morogoro, Tabora, and Manyara Regions and where charcoal and farming were the main DD drivers; and in Ghana, an example of a project type was wet evergreen high forest in Forest Reserves in the Western Region and where the main DD drivers were tree and food crops, especially cocoa (see also Box 2). This results in an initial list of project types.

Step 3. Scoring of project types against the criteria: The workshop participants then score each identified project type against the agreed criteria. All the criteria are initially given an equal weighting, and rated on a scale of 1 (least desirable) to 3 (most desirable). The resulting scores are then aggregated into a total score for each project type, and an initial ranking is made. Table 1 presents an example of the scoring of potential REDD project types in the Ghana ROSE, including scores for some of the main criteria.

Step 4. Discussion and selection of higher-potential project types: After the initial scoring process, the participants should look critically at the result, and decide, if they make sense or whether the scoring process (and possibly criteria) needs to be revisited. As happened in Uganda, the participants may decide to give a higher weighting to certain key criteria, such as carbon additionality, land-use opportunity costs, land or tree tenure situation, permanence risk, etc., and then rescore the project types. The workshop participants could also decide to make a qualitative judgment, as, for example, happened in Tanzania. In this case, the scoring provided a useful basis of discussion, but rather than use the scores to decide, the group decided in the end to trust their collective judgment in identifying the higher-potential project types.

Step 5. Brainstorm of policy-related, legal, and institutional constraints for each high-potential project type: This step involves identifying the main policy-related, legal, and institutional constraints and opportunities (for carbon finance to succeed) around the identified project types. A lawyer (or ideally two) with land-tenure experience is critical for this discussion. For example, in Uganda, the need to clarify benefit-sharing arrangements and various land tenure issues emerged as high priorities.

Step 6. Brainstorming of potential project and policy responses for each high-potential project type: The workshop participants can then brainstorm on potential policy and project responses to the constraints identified in Step 5, as well as thinking about the earlier identified DD drivers. Ideally, this should be for each project type, but in practice the policy-related, legal, and institutional constraints tend to cut across most project types, e.g., land tenure and governance issues. The aim is to identify measures, which, if they could be successfully implemented, could have a major impact on the uptake of REDD+ in a given country.

Step 7. Identification of potential REDD project sites for each high-potential project type: This is another brainstorm exercise which aims to conclude with an initial list of possible project sites for each of the identified high-potential project types.

Box 4: Project-Scoring Criteria Used in the Three ROSE Case Studies

The project type-scoring criteria used in all three ROSE expert workshops were:

- Opportunity cost associated with the alternative (to REDD) land-use
- Threat level or likely carbon additionality
- Clarity of land tenure
- Clarity of tree tenure (and possibly of carbon property rights)
- Size of forest areas and/or aggregation potential
- Biomass or carbon level of the ecosystem type
- Institutional/governance capacity associated with the project type
- The probable leakage risk associated with a project type
- Potential for replicability or scaling-up of a project type
- Level of community benefits or poverty reduction
- Potential for bundling (adding other ecosystem service payments to REDD+)

Other criteria used in one or two (but not all) country studies were: the likelihood of carbon permanence; remoteness or accessibility; likely level of government interest; applicability of an existing carbon methodology (or the need to develop a new methodology); adaptability of a project type to emerging markets (e.g., potential to take advantage of fair trade markets); compatibility of the project type with existing livelihoods; and the level of biodiversity co-benefits.

Table 1: Example of Scoring of REDD Project Types in Ghana (Selected Criteria Only)

Ecosystem Type	Tenure	Deforestation & Degradation Drivers	Total Score	Carbon Content	Size / Aggregation Potential	Threat/ Carbon or Project Additionality	Opportunity Cost ¹	Land Tenure	Tree Tenure	Replicability
High Forest - Wet Evergreen	Production Forest Reserves	Unsustainable/ illegal logging	32	3	3	2	1	3	3	2
	Production Forest Reserves	Tree/food crops	38	3	3	3	1	1	3	3
	Off-Reserve	Tree/food crops	32	3	3	3	1	3	1	3
	Off-Reserve	Logging	33	3	3	3	2	3	1	3
	Off-Reserve (CREMA/DF)*	Tree/food crops & logging	41	3	3	3	1	3	3	3
High forest - moist semi-deciduous	Forest Reserves	Unsustainable/ illegal logging	32	3	3	2	1	3	3	2
	Forest Reserves	Wildfire/logging	39	3	3	3	3	3	3	3
	Off-reserve	Tree/food crops	32	3	3	3	1	3	1	3
	Off-Reserve	Logging	33	3	3	3	2	3	1	3
	Off-Reserve (CREMA/DF)*	Tree/food crops & logging	40	3	1	3	3	3	3	2
Transition Zone	Forest Reserves	Wildfire	37	2	3	3	3	3	3	3
	Production Forest Reserves	Logging	32	2	3	2	2	3	3	3
	Protected Forest Reserves	Illegal logging	32	2	3	2	2	3	3	3
	Off-Reserve	Wildfire & fuel-wood/charcoal	39	2	3	3	3	3	3	3
Guinea Savanna	Off-Reserve	Farming/grazing charcoal & fire	39.5	2.5	3	3	3	3	3	3

¹ In this case, a score of 1 represented a high opportunity cost, and a score of 3 a low opportunity cost.

*Abbreviations: DF = 'dedicated' or community forest; CREMA = Community Resource Management Area

3.3 Policy-Related, Legal, and Institutional Analysis by In-Country ROSE Team

The second stage of the ROSE process involves refining and fleshing out the expert workshop results by a small in-country team of experts. This involves further analysis and research on the policy-related, legal, and institutional constraints to development of the higher potential project types. In the African ROSE studies, this team was composed of two or three consultants, including one with strong legal expertise (ideally a land lawyer), and a forest sector specialist with a good understanding of the social and institutional issues. Specific activities of the in-country team include:

- A review of relevant legal and policy documents, e.g., any PES legislation, and land or tree tenure policies considered relevant to carbon property rights issues;
- Key informant interviews with a range of national, regional, and local stakeholders, including governmental agencies (of various sectors), representatives of regional and traditional authorities, community-based organizations (CBOs), and NGOs, as well as other key informants who were unable to participate in the ROSE expert workshops;
- Writing up the research and incorporating it into a consolidated ROSE country report.

4. Selective Highlights of the ROSE Country Case Studies

4.1 Tanzania

4.1.1 High-Potential REDD Project Types

The Tanzania ROSE study was conducted during March and April 2009. It resulted in seven high-potential project types, summarized in Table 2 and described below.

Table 2: Summary of High-Potential Project Types in Tanzania

Ecosystem Type	Tenure/Institutional Basis	Main Deforestation and Degradation Drivers	Opportunity Cost	Threat Level/Additionality
Miombo Woodland	Community-Based Forest Management	Charcoal	High	Moderate-High
	Wildlife Management Area	Farming	Moderate	Moderate
Coastal Forest	Community Based Forest Management	Logging/charcoal	High	Very high
Eastern Arc / Montane Forests	Joint Forest Management in National Forest Reserves	Fire	Moderate	Moderate
	Forest Nature Reserves	Illegal logging	Moderate	High
Acacia-Savanna	Customary Community-Based Forest Management	Farming/fuel wood	Moderate	Moderate
Guinea-Congolese	Joint Forest Management in National Forest Reserves	Farming/charcoal	Moderate	High

Miombo woodland accounts for about two-thirds of the country's forest area, mainly in western and southern Tanzania. The main deforestation and degradation drivers (DDs) of miombo woodland are charcoal, farming, and logging, resulting in high land-use opportunity costs near urban areas like Dar es Salaam. Community-Based Forest Management (CBFM) provides the best basis for REDD+ due to the strong and legally defensible community rights to trees, land, and carbon. A second situation favoring REDD+ is where there are large blocks of miombo woodland in Wildlife Management Areas (WMAs) and where agriculture is the main threat. The WMAs tend to encompass several poor villages. Recent legislation has empowered community-based organizations in wildlife management in WMAs, although further reform and/or guidance is needed to incorporate forest management in the WMAs.

Much of the 50-200 kilometer coastal forest belt is also under CBFM, but is subject to high opportunity costs associated with high returns to illegal logging and charcoal, especially near towns. Therefore REDD+ initiatives need to find a balance between threat levels and opportunity costs – this is often quite correlated with the distance from urban areas. CBFM areas are also quite fragmented so an effective aggregation mechanism is essential.

By contrast, the Eastern Arc montane catchment forests tend to occur in quite large blocks and have high carbon (biomass) and biodiversity levels or values. Much of this ecosystem type comes under National Forest Reserves (NFRs) and is managed with communities in a type of Joint Forest Management (JFM). Although JFM arrangements in NFRs are quite challenging for carbon finance, mainly due to the current lack of clarity of benefit-sharing arrangements, it was rated as a higher potential REDD+ project type in view of the high carbon levels, moderate opportunity costs, and other factors. Also included as a higher-potential project type were the state-managed montane forests gazetted as Forest Nature Reserves and threatened by illegal logging.

It is important to note that most forest areas with higher market or biodiversity values in Tanzania are in NFRs, including most of the mangrove forests. The latter were carefully analyzed in the ROSE workshop, but due to high opportunity costs and the benefit-sharing problem of JFM were not selected as a high potential project type at this point. This is not to say that mangroves are not hugely important both as carbon reserves and for their poverty or livelihood importance; however, in the current political and legal framework, adaptation funding could prove more effective for their sustainable management.

Significant areas of Acacia savanna woodlands are located in protected areas, especially game reserves, in northern and central Tanzania. These woodlands are effectively owned by the communities in customary (or non-formalized CBFM) and were considered to have significant REDD+ potential in response to the main DD drivers, farming and fuel wood. Finally, the biologically rich Guinea-Congolese forests of northwestern Tanzania, also NFRs under JFM arrangements, were felt to have considerable REDD+ potential, provided a balance is found between credible threat levels (mainly from farming and charcoal) and opportunity costs and assuming that the benefit-sharing issues can be resolved.

4.1.2 Key Policy-Related, Legal, and Institutional Issues

Following the in-country analysis of legal and institutional constraints, several key areas were identified where progress could have a major positive impact for both sub-national activities and the national REDD+ program (it can be observed that there is a strong inter-relationship between these actions, many of them relating to governance issues):

- Clarification of benefit-sharing under JFM in the form of legally binding agreements to define how forest-management benefits (including carbon) are shared between the two managing parties (state and community), combined with effective and transparent mechanisms for benefit-sharing between community members. While benefit-sharing remains unclear in Tanzania's JFM system, there is little incentive for communities to engage in REDD+.
- Development of a national REDD Trust Fund based on transparent and accountable institutional arrangements for channeling incentives to local forest managers; a possible model for Tanzania is the Eastern Arc Mountains Conservation Endowment Fund.
- Capacity-building of local institutions in monitoring and evaluation (M&E), reporting, communications, and administrative good practice to increase downwards accountability.
- The development of effective aggregator mechanisms to address the high transaction costs of supporting REDD+ in village and community forests. A potential aggregator was the MJUMITA (Tanzania Network of Community Forest Managers) community forestry network (see Box 5).
- Formalization of customary CBFM arrangements via the legal registration of Community Forest Reserves under the Forest Act, and development of more formal governance relationships between forest managers and local institutions.
- In the context of community management in Wildlife Management Areas, reforms or institutional innovation are required to bring wildlife and forest management under the same local institutional arrangements.
- Clarification of the hierarchy between general and sector-specific legislation in order to reduce potential legal conflicts, e.g., the potential of future forest sector legislation to contradict the Land Act (see Box 6).

Box 5. Tanzania Network of Community Forest Managers (MJUMITA)

In Tanzania, there are a large number of scattered community forestry groups managing forest or woodland areas of varying size; an aggregation mechanism is therefore essential for reducing the transaction costs (or ‘diseconomies of scale’) of REDD. The recently established MJUMITA network could prove important both for aggregation and benefit-sharing: its aims include consolidation of the marketing and sales of village, community, and private forest products under a single entity and according to a commonly agreed set of standards and norms. MJUMITA could also potentially channel carbon payments to participating communities, but will require significant capacity-building to undertake this effectively.

Box 6. The Potential for Conflict over Carbon Property Rights in Tanzania

Tanzania’s 1999 Land Act defines land ownership to include “things naturally growing on the land, buildings and other structures permanently affixed to, or under, land.” The law considers trees to be fixtures on the land and therefore property of the landowner. However, even when land tenure is interpreted to include tree ownership, the apparent inference that carbon rights will be directly linked to tree tenure could prove incorrect. In Tanzania, legislation specific to forestry can take precedence over more general land legislation, so that it is possible that carbon property rights⁴ will be defined separately to tree tenure.

4.2 Uganda

4.2.1 High-Potential REDD Project Types

The Uganda ROSE study of May/June 2009 provided an opportunity to refine the methodology first developed in Tanzania. The three-day ROSE expert workshop, attended by 19 participants from a range of state, NGO, and civil society organizations, as well as several interested donors, identified six priority project types for REDD in Uganda (Table 3). It can be noted that ‘high stocked’ tropical high forest was not rated as high potential since it is already well protected.

The tropical high forest (THF) ecosystem in Uganda is classified as ‘low stocked’ where the forest canopy becomes irregular due to logging or farming interventions. In this ecosystem, Collaborative Resource Management (CRM) is found mainly in and around wildlife reserves, and where pit-sawing and livestock grazing are the main threats. CRM is a type of JFM in which the state is represented by the Uganda Wildlife Authority (UWA), which manages the protected areas. It provides a promising land tenure

⁴ At the same time, it was noted that carbon property rights could be less critical in the context of national REDD+ programs *provided that* the state finds an effective way of compensating resource managers for their opportunity and transaction costs. Assigning carbon property rights away from landholders would however be problematic for project-level carbon trading in current carbon markets; also the assignment of carbon property rights to resource owners/users, including indigenous groups, increases the likelihood that REDD would be equitable.

framework for REDD, partly since there is scope to build on tourism revenue-sharing mechanisms; 20 percent of tourism revenue currently goes to local community-based organizations (although higher levels of tourism revenue clearly reduce carbon additionality).

Table 3: Summary of High-Potential Project Types in Uganda

Ecosystem Type	Institutional/ Tenure Basis	Main DD Drivers	Opportunity Cost	Threat Level/ Additionality
Low Stocked Tropical High Forest	Collaborative Resource Management with Uganda Wildlife Authority	Pit-sawing/livestock grazing	Low	Moderate
	Collaborative Forest Management with National Forestry Authority	Agriculture/logging	Low	High
	Private Land	Agriculture/ firewood/ poles	Moderate	High
Woodland	Collaborative Forest Management with National Forestry Authority	Charcoal/agriculture/ tree plantations	Moderate	High
	Private Land	Charcoal/grazing/ agriculture	High	High
	Collaborative Resource Management with Uganda Wildlife Authority	Charcoal/grazing/ agriculture	Low	Moderate

Collaborative Forest Management (CFM) is another variation of JFM used around protected areas managed by the National Forestry Authority (NFA). CFM involves ten-year agreements between the NFA and communities to co-manage the production zones around protected areas. CFM is best suited to project sites where agriculture is the major DD driver and the threat level is low to moderate, but tends to be less effective where logging is the main threat.

‘Private land’ is freehold land owned by individuals, cultural/traditional institutions, or families; some of this is in communal forest on formerly public lands. A high proportion of the remaining low stocked tropical high forest is on private land and has the highest threat levels from surrounding communities, since it is commonly perceived as open access and ‘idle’ – a third of Uganda’s private land forest area was deforested between 1990 and 2005. The main DD drivers are agriculture, firewood harvesting, and charcoal production. But REDD projects face challenges of aggregating small forest blocks, facilitating land titling to resolve competing claims, and developing benefit-sharing mechanisms between landowners and adjacent communities.

While woodland biomass levels are only a third of low-stocked tropical high forest, woodlands represent a high proportion of Uganda’s total woody biomass. Moreover, they are under great threat – the current stock is less than half of what it was in 1990. CFM is the JFM modality in woodland areas under NFA jurisdiction. REDD may prove more viable where the main DD drivers are agriculture and charcoal production due to moderate land-use opportunity costs.

‘Private’ woodland is often collectively owned by many households in high poverty areas. Since the woodland is under severe pressure from surrounding communities, there would seem to be considerable REDD potential, although the opportunity costs associated with the main DD drivers are

high, and there are considerable organizational and aggregation challenges. Finally, there is also considerable woodland in wildlife reserves where CRM is already established, and the UWA shares tourism fees with local communities as part of a JFM-type arrangement. Again, a key question is whether there would be sufficient carbon additionality given the tourism revenue and moderate threat levels from charcoal, overgrazing, and agriculture.

4.2.2 Key Policy-Related, Legal, and Institutional Issues

The expert workshop and in-country ROSE analysis identified several issues of major importance for the development of REDD+ in Uganda, both at the national and sub-national levels:

- A clear legal and policy framework for carbon finance is urgently needed. Existing policies and laws are unclear as regards carbon finance (see Box 7). Early formulation of the proposed Climate Change Policy and a review of the 2002 National Forestry Plan are key priorities.
- The institutional framework for carbon finance also needs clarification. There has, for example, been confusion about the institutional ownership of Uganda's REDD+ Readiness Plan and strategy. The Climate Change Unit established under the office of the Permanent Secretary of the Ministry of Water and Environment could, however, provide the institutional clarity needed.
- REDD+ urgently requires a legal instrument to define how carbon revenue will be shared between the state and communities, as well as guidelines for benefit-sharing mechanisms.
- CFM also needs more streamlined and equitable negotiation processes; negotiation of CFM agreements is a slow process in which communities are in a weak bargaining position.
- Trust funds could prove very important for the promotion of good governance and equity in benefit-sharing. A potential trust fund model for REDD+ in Uganda is provided by the Mgahinga and Bwindi Impenetrable Forest Conservation Trust Fund (Box 8).
- A key constraint is the limited grass-roots technical, organizational and administrative capacity; considerable education, training, and capacity-building are required for communities to effectively manage their natural resources and participate in REDD+ projects.
- Improved national and local governance capacity and accountability.
- Stronger property rights and more streamlined procedures for private landowners to be able to legally use natural resources occurring on their land is a further requirement.
- Finally, although Uganda has considerable experience with land-based carbon finance, there is still limited national technical capacity for REDD+, especially as regards carbon monitoring, reporting and verification (MRV).

Box 7. Untangling Uganda’s Land Tenure Legislation to Clarify Carbon Ownership

The legal framework for land tenure established by the 1995 Ugandan Constitution and subsequent land tenure legislation defines landownership as including the land and all that grows on it. However, the Land Act of 2001 creates the potential for conflicting tenure over land and trees, and therefore probably carbon, by recognizing that *bona fide* occupants (settlers) have overlapping rights with private ‘*absentee*’ landowners, as well as with cultural or traditional institutions. A recommendation of the ROSE study was to finalize the National Land Policy, since this can lead to an amendment of the Land Act and thence to a disentangling of the conflicting tenure claims.

Box 8. The Mgahinga and Bwindi Impenetrable Forest Conservation Trust Fund

The Mgahinga and Bwindi Impenetrable Forest Conservation Trust Fund (MBIFCT) was established in 1994 via a Memorandum of Understanding with the Uganda Wildlife Authority (UWA) to support activities in Protected Areas (PAs) with the aim of reducing pressures on the Mgahinga and Bwindi Protected Areas by providing alternative livelihoods to surrounding communities. The Trust Fund is governed by a democratically elected Local Community Steering Committee. This committee reviews and approves small grants for community projects that generate economic development opportunities and enhance local participation in the management of the protected area.

4.3 Ghana

4.3.1 High-Potential REDD Project Types

The Ghana ROSE expert workshop, held in July 2009, identified seven high-potential project types, as listed in Table 4 and discussed below (Table 1 shows the scoring of several criteria).

Table 4: Summary of High-Potential Project Types in Ghana

Ecosystem Type	Institutional/ Tenure Basis	Main DD Drivers	Opportunity Cost	Threat Level/ Additionality
Wet Evergreen High Forest	Forest Reserves	Tree/food crops & logging	High	High
	Off-Reserve – CREMA*/ Dedicated Forest	Tree/food crops & logging	High	High
Moist Semi- Deciduous High Forest	Forest Reserves	Logging & wildfire	Moderate	High
	Off-Reserve –CREMA*/ Dedicated Forest	Tree/food crops & logging	Moderate	High
Transition Zone	Forest Reserves	Wildfire	Moderate	Moderate
	Off-Reserve	Wildfire & charcoal/ fuel wood	High	High
Guinea Savanna woodland	Off-Reserve	Farming, charcoal, wildfire & grazing	High	High

*Abbreviation: CREMA = Community Resource Management Area

Wet evergreen high forest, located mainly in the Western Region, is being rapidly degraded by food and tree crops, especially cocoa, as well as by illegal or unsustainable logging practices both inside and outside the forest reserves. The ROSE expert workshop felt that there is a high potential for REDD+ in forest reserves, since many of these are under severe threat from cocoa and other tree/food crops, and the opportunity costs are more manageable than in situations in which logging is the main DD driver.

It was also felt that outside forest reserves there is little hope for REDD with the prevailing lack of rights and incentives for farmers and communities to retain naturally occurring state-managed trees on their land. The ROSE workshop felt that REDD would only become an option for off-reserve areas under a new management or tenure modality such as Community Resource Management Areas (CREMAs) or Dedicated Forests (DFs), in which communities have stronger natural resource management rights (although to date the CREMAs have been mainly oriented towards wildlife or biodiversity protection). While deforestation pressures and opportunity costs may be marginally lower (conditions being slightly less optimal for low-shade cocoa farms) in the moist semi-deciduous high forest areas, the same issues and drivers apply, with the addition of fire in the drier eastern areas.

In the transition zone, which is on the northern fringes of the high forest area, wild fires, charcoal, firewood, and farming are the main DD drivers. With land-use opportunity costs and threat levels rated as moderate or high by the ROSE workshop, it was felt that both the forest reserve and off-reserve situations had REDD+ potential. The savanna areas of northern Ghana contain much lower levels of biomass than the high forest zone, but the woodlands, particularly along the rivers, were felt to have REDD+ potential provided appropriate responses are found to the multiple DD drivers, including farming, grazing, charcoal production, and fire. CREMAs and/or Dedicated Forests would also be relevant for the transitional and savannah zones.

4.3.2 Key Policy-Related, Legal, and Institutional Issues

The Ghana in-country ROSE analysis conducted in late 2009 reinforced many preliminary conclusions of the ROSE workshop. A more in-depth analysis of the legal issues in particular was possible in Ghana, compared to Tanzania and Uganda, due to additional funding linked to an analysis of national REDD+ architectural options. The in-country research involved a careful analysis of forest sector legislation, policy documents, and land tenure legislation.

This analysis revealed that the current legal and political framework has prioritized economic exploitation of the country's forests, leaving farmers and forest-based communities with few legal, economic or customary incentives to maintain trees or forest patches in the landscape. Key weaknesses of the current legal and policy framework for REDD+ are the lack of clarity and clarification surrounding carbon definitions, ownership and benefit-sharing mechanisms (see Box 9); problems with forest stewardship and governance including weakly implemented and conflicting laws; perverse policy incentives stemming from state ownership of naturally occurring trees, especially trees on cocoa farms; and land tenure issues and conflicts which prejudice social equity and increase transaction costs.

Box 9. Carbon Regulation, Rights and Benefit-Sharing – Key Challenges to REDD+ in Ghana

A key question in Ghana is how carbon will be regulated, defined, and owned. There has been speculation that because forest carbon is found in forest biomass and is linked to trees, its regulation and management should be housed in the Forestry Commission (FC); concerns with this choice include the potential for soil and wetland carbon to become part of a future climate change abatement agreement and the need for stronger inter-sectoral planning and policies given that most DD drivers stem from the agricultural sector.

The term ‘carbon’ itself requires further definition, as it can refer to ‘carbon sequestration’, ‘carbon sink’, ‘carbon sequestration potential’ and ‘carbon credits’, and a policy decision is needed on whether to classify it as a security or a commodity. Once carbon is more clearly defined, it will be necessary to allocate ‘rights’ to the carbon – either ownership rights or the economic right to benefit or both. An analysis of threats to carbon permanence and decision-making under different (hypothetical) carbon rights scenarios found that, if carbon rights were allocated according to the DD drivers and land-user decision-making criteria, the permanence risks would be much lower than if carbon rights were tied to economic tree rights, land or tree tenure.

Regardless of how carbon rights and ownership discussions are resolved, benefit-sharing mechanisms have to provide individuals and communities with real and tangible incentives for REDD+ to work. The question of who owns the carbon could be less important than how local stakeholders are compensated for their efforts to sequester or store carbon. The analysis identified several examples of benefit-sharing mechanisms found in existing social and governmental institutions in Ghana, providing good opportunities to build effective benefit-sharing mechanisms based on sound evidence and experience. At the same time, national stakeholders should become more realistic about the levels of financial benefits likely to emerge from REDD. If current carbon prices continue, the financial returns could struggle to compensate the transaction, implementation and opportunity costs of REDD+.

At the same time the study revealed several complementary initiatives to a national REDD+ program, including the Natural Resources and Environmental Governance (NREG) program, which aims for improved coherence of national and donor efforts to promote sustainable resource management; the Voluntary Partnership Agreement⁵ (VPA) signed in 2009; the evolution and growing interest in CREMAs which provide a firm basis for incentivizing farmers and communities to manage naturally occurring trees; prioritization of plantation development, including clear tree ownership rights for farmers or landowners; efforts to decentralize natural resource management to District Assemblies; and other efforts to address social rights and inequities. The study also identified some laws that are not currently implemented, but that would contribute significantly to REDD+ objectives, if implemented effectively.

The following main recommendations, many of which also form part of the Government’s Readiness Preparation Proposal (R-PP) submitted to the World Bank Forest Carbon Partnership Facility in January 2010, resulted from the ROSE study:

⁵ The VPA is an agreement between the Government of Ghana and the European Union (EU) in which only legally produced timber or wood products will be imported by EU countries from Ghana, in return for technical and financial assistance for establishing the required governance capacity and verification systems.

- Since most DD drivers stem from the agricultural sector, solutions must also be based on actions or policies from that sector, for example, developing higher-yielding cocoa models, so cocoa farmers are persuaded to intensify existing cocoa areas rather than expand them and so that national cocoa production levels are achieved on less land (although other measures are needed to combat the risk of higher cocoa productivity leading to an expanded cocoa area);
- A vital action to stimulate REDD+ in Ghana would be a reform of the tree tenure for naturally occurring trees; current tree tenure, in which landowners or farmers cannot sell timber from naturally occurring trees on their farms, greatly reduces their interest in retaining trees;
- Apart from tree tenure reform, the main hope for REDD outside forest reserves is the development of CREMAs or Dedicated Forests – these local institutional arrangements increase user rights and provide the scope for participatory resource management, resolution of land tenure issues, and establishment of equitable benefit-sharing mechanisms;
- Carbon ownership needs clarifying – the government of Ghana may wish to consider alternative ways of benefiting from carbon revenue in view of the likely negative impact of state carbon ownership on landowner/farmer interest in keeping trees, while recognizing that revenue flows may not significantly exceed the transaction and opportunity costs;
- Ghana has several experiences and legal instruments of possible relevance to benefit-sharing, which require further analysis;
- Improved cross-sectoral coordination and planning are fundamental to the success of REDD+, suggesting that a higher-level ministry or cabinet body should take charge of REDD+; one urgent priority would be to iron out contradictions in existing laws;
- Improved governance is another critical requirement for REDD+ to succeed, including more effective legal compliance and increased downwards accountability and transparency, critical to the success of benefit-sharing mechanisms;
- There is a need to increase the engagement and capacity of district assemblies and traditional authorities (or chieftaincies) in REDD+ activities; district assemblies could incorporate REDD+ in their Natural Resource Plans, while either traditional authorities or district assemblies can develop and enforce by-laws that promote sustainable natural resource management;
- Lands and trees that become part of REDD+ activities need to be surveyed and documented;
- It should be noted that a phased approach to a national-level REDD+ strategy creates a risk for proposed voluntary carbon market projects. Because the generation of carbon credits is a long-term process and it is likely that a national strategy will be developed in the meantime, projects need some kind of official recognition or guarantee of carbon ownership;
- Implicit in discussions about REDD+ is a focus on economic relationships and decision-making, but issues of trust and socio-cultural norms are also crucial factors that must be taken into account when considering how REDD+ will be structured;
- A coherent biomass energy policy would help combat unsustainable charcoal production.

5. Recommendations and Conclusions

5.1 Suggestions for Improving the ROSE Process

While the ROSE studies have proved valuable to the Katoomba Incubator and national stakeholders (judging by the feedback received), on reflection there is room for improving the ROSE tool so that it can become more cost-effective.

The ROSE workshops varied considerably as regards the data available for informing the ROSE workshop discussions. In these days of constant meetings and conferences, it is difficult to keep a group of high-level experts or key informants together for more than two days. Therefore, it is vital to use the time as efficiently as possible. It was observed that on the first day of the ROSE workshops, the discussions proceeded quite slowly as participants got to grips with the process and tasks. A preparatory analysis by a senior national consultant would inform and facilitate the discussions. A ROSE workshop preparation document could include, for example:

- A map of the main forest ecosystems and discussion of possible ecosystem classifications;
- Data on carbon biomass and deforestation rates by ecosystem type (if available);
- A summary of the main land tenure and institutional regimes;
- A summary of relevant national policy and legislation, including land and tree tenure, environmental laws, PES legislation, etc.;
- A rough map or maps with basic ecological, land-use, and tenure/institutional information (e.g., protected areas, forest reserves) to help discuss project types and potential project sites;
- Review of relevant social or equity analysis, e.g., NGO analysis of the social risks of REDD+.

This preparatory document, together with a description of the ROSE process (e.g., this report), should be sent to the participants at least a week before the meeting.

The ROSE workshops also varied greatly in terms of the number of key informants and in the balance between sectors/stakeholders (forestry, agriculture, government, NGO, civil society, academics, donors, etc.) and areas of expertise (carbon markets, MRV, social and policy issues, etc.). The private sector in particular was under-represented at the ROSE workshops. While the Ghana ROSE workshop had 20 key informants and the Uganda meeting had 19, the Tanzania workshop only had eight, although the latter reflected the fact that it was the pilot project, where the ROSE methodology was mainly developed.

Some consideration should also be given to the desirability of inviting community or indigenous representatives; for example, it would have been very useful at the Ghana ROSE workshop to have had representatives of the landowning traditional authorities or chieftaincies, who (at least in Ghana) can also be influential at the national or policy level. On the other hand, it is important to note that the ROSE tool was not designed to be part of a representative multiple stakeholder process – rather its aims were to inform the Katoomba Incubator of how and where to engage in REDD+, to help build national

capacity and understanding of REDD+ issues, and to create a useful technical document for REDD+. A ROSE study will hopefully provide a very useful input to a national multiple stakeholder forum to discuss REDD+, but does not pretend in any way to be a decision-making forum itself.

5.2 Potential Contribution of ROSE to ‘REDD+ Readiness’

ROSE is a quick and cost-effective tool for analyzing REDD+ activities in a given country context. The cost of each ROSE study was in the range US\$ 25,000-30,000, including international consultants and Forest Trends’ staff time. ROSE assessments have proved to be effective tools for developing REDD+ capacity and opportunities and can be used to support a variety of processes towards ‘REDD+ Readiness’ including:

- The development of a Readiness Preparation Proposal (R-PPs) for the World Bank Forest Carbon Partnership Facility; in particular, the ROSE approach would support several sections of the R-PP, especially Component 3a, ‘Assess candidate activities for a REDD+ Strategy’, and the analysis of policy-related, legal, and institutional issues required for Components 1 (‘Land-use, forest policy and governance quick assessment’) and 4 (‘REDD+ implementation framework’).
- To the extent that international agreements support, and individual countries adopt, a REDD+ architecture based on the ‘nested approach’, the ROSE approach would help promote the development of a balanced portfolio of sub-national activities and, more generally, a balanced REDD+ strategy involving complementary policy, legal, institutional and project level initiatives.
- Quantitative assessments of emissions reductions potential. The set of high-potential project-type categories laid out in the ROSE assessments provides a useful framework for overlaying a more quantitative assessment of abatement potential and cost curves to further prioritize REDD strategies, policies, and project opportunities.
- Development of demonstration activities illustrative of key project types. While national-level strategies and programs are put into place, a ROSE study can point to opportunities within the forest and land-use sector that may be particularly attractive options for near-term emissions reductions. Building successful demonstration activities, including effective benefit-sharing mechanisms, is critical to building national and regional capacity and demonstrating to stakeholders how REDD+ can lead to tangible benefits.

Annex 1

List of ROSE Reports

This report was based on the following ROSE reports which can be downloaded from the Forest Trends website (<http://www.forest-trends.org/publications.php>).

Katoomba Ecosystem Services Incubator. 2009. Getting Started on REDD In Tanzania: A Scoping Study for the Katoomba Ecosystem Services Incubator. Forest Trends, Washington, DC.

Katoomba Ecosystem Services Incubator. 2009. REDD Opportunities Scoping Exercise (ROSE) Uganda. Forest Trends, Washington, DC.

Katoomba Ecosystem Services Incubator with the Nature Conservation Research Centre. 2009. REDD Opportunities Scoping Exercise (ROSE) for Ghana: ROSE Expert Workshop Report. Forest Trends, Washington, DC.

Katoomba Ecosystem Services Incubator with the Nature Conservation Research Centre. 2010. REDD Opportunities Scoping Exercise: Implications of the Legal and Policy Framework for Tree and Forest Carbon in Ghana. Forest Trends, Washington, DC.

Annex 2

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