# MANUAL FOR SOCIAL IMPACT ASSESSMENT OF LAND-BASED CARBON PROJECTS:

## PART I – CORE GUIDANCE FOR PROJECT PROPONENTS

VERSION 1.0

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A Note about this Version:

Version 1.0 of the Manual is released with the aim of obtaining feedback from project developers or other interested parties on how to improve it. This will contribute to a revised Version 2.0 to be published in early 2011. Please send feedback or suggestions to Michael Richards (mrichards@forest-trends.org) or Steve Panfil (spanfil@climate-standards.org).

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The Katoomba Ecosystem Services Incubator, a program of Forest Trends, aims to link communities with the emerging markets for ecosystem services by providing targeted technical, financial, business management and legal support to promising small-scale community-based projects with potential for long-term financial viability, and with the aim of benefiting low-income rural people and imperilled biodiversity.

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www.fauna-flora.org

# Acknowledgements

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# Foreword

Are land-based carbon projects good for local people? Many rural communities are keen to embark on carbon projects as a way of generating income, jobs, and other social benefits. Offset buyers are also attracted to the idea of reducing emissions and simultaneously helping local people. Others are wary that these projects may do more harm than good – a poorly designed project can result in, for example, the loss of (uncompensated) traditional livelihoods or resource access rights of poorer community members.

We think that the combination of robust standards for assessing the social performance of projects, and the use of credible methods of social impact assessment can help ensure positive outcomes for local people. The Climate Community and Biodiversity (CCB) Standards, originally launched in 2005, are widely favored by project developers, investors, and buyers. And while not yet official, safeguards to prevent negative social impacts figure prominently and repeatedly in draft UNFCCC negotiating texts on REDD+ and in US climate change legislation.

The emphasis in the early years of the carbon markets has been mainly on assuring the integrity of project emission reductions; co-benefits have received much less attention. But the balance is changing, and there are justifiable concerns that co-benefits must, like carbon, be real, 'additional' and, as far as possible, measurable. This is partly necessary for market confidence as offset buyers increasingly seek evidence that they are getting what they pay for, including co-benefits. We also must insist, as a community, that on ethical or equity grounds, carbon projects must at the very least 'do no harm'. In fact, a prominent auditor of carbon projects recently stated in a public meeting that "getting the social methodology right is just as important as getting the carbon methodology right."

In response to such issues, Forest Trends has formed an alliance with three other NGOs – the Climate, Community and Biodiversity Alliance (CCBA), Rainforest Alliance, and Fauna & Flora International (FFI) – with the aim of producing a user-friendly Manual for project proponents on how to conduct cost-effective and credible social impact assessment. The concepts described in this Manual will be relevant to a wide range of site-level land-based carbon activities, whether designed for compliance or voluntary markets (we believe that sub-national activities will continue to have an important role in a future REDD + architecture).

Thanks to the financial support of World Bank PROFOR, Morgan Stanley, NORAD, GEF-UNDP, and USAID-Translinks, we are therefore pleased to release this first version of the "Manual for Social Impact Assessment of Land-Based Carbon Projects." During 2010, the Manual will be field-tested; as part of the field-testing process, projects are invited to use it and provide feedback to the lead authors Michael Richards (mrichards@forest-trends.org) and Steve Panfil (spanfil@climate-standards.org). This will help improve the quality of the second version of the Manual to be released in early 2011.

We therefore very much hope that you will find this initial version of the Manual useful, and look forward to your feedback.

Michael Jenkins,
President, Forest Trends and the Katoomba Group

## List of Acronyms (Core Guidance and Toolbox)

| | |
|---|---|
| A/R | Afforestation/Reforestation |
| BNS | Basic Necessities Survey |
| CCB | Climate, Community and Biodiversity (Standards) |
| CCBA | Climate, Community and Biodiversity Alliance |
| CDM | Clean Development Mechanism |
| CMP | Conservation Measures Partnership |
| GEB | Global environmental benefit |
| GEF | Global Environment Facility |
| IAIA | International Association for Impact Assessment |
| INAFI | International Network of Alternative Financial Institutions |
| ISEAL | International Social and Environmental Accreditation and Labeling (Alliance) |
| LOAM | Landscape Outcome Assessment Methodology |
| M&E | Monitoring and Evaluation |
| MEA | Millennium Ecosystem Assessment |
| MFI | Micro-Finance Institution |
| MPA | Marine Protected Area |
| MSC | Most Significant Change (method) |
| NGO | Non-Governmental Organization |
| NTFP | Non-Timber Forest Product |
| PDD | Project Design Document |
| PEV | Participatory Economic Valuation |
| PIA | Participatory Impact Assessment |
| PIPA | Participatory Impact Path Analysis |
| PLA | Participatory Learning and Action |
| PRA | Participatory Rural Appraisal |
| QPA | Quantitative Participatory Assessment |
| REDD | Reduced Emissions from Deforestation and forest Degradation |
| ROtI | Review of Outcomes to Impacts (methodology) |
| RRA | Rapid Rural Appraisal |
| SAPA | Social Assessment of Protected Areas (initiative) |
| SCM | Social Carbon Methodology |
| SEEP | Small Enterprise and Education Network |
| SIA | Social Impact Assessment |
| SLF | Sustainable Livelihoods Framework |
| SMART | Specific, Measurable, Achievable, Realistic/Reliable, Time-bound |

*Note: Only acronyms that are used more than once are listed here.*

# Introduction – What Is this Manual about?

## Introduction and Objectives

This *Manual for Social Impact Assessment of Land-Based Carbon Projects* is designed to help those who design and implement land-based carbon projects to credibly document the ways in which their projects affect the livelihoods of the people that live in and around their project site. Many of these projects aim to simultaneously deliver social and environmental co-benefits, and to be validated and verified against standards such as the Climate, Community & Biodiversity (CCB) Standards (CCBA, 2008).

Reforestation, avoided deforestation, and other land-based emissions reductions activities typically cover large areas of land in the rural parts of developing countries, where local people are often poor and highly sensitive to changes in land use. Accurately projecting and then measuring both the positive and negative impacts of a project is a moral imperative and also has important commercial implications. Social and environmental co-benefits attract many offset buyers to forest carbon projects (EcoSecurities, 2010). Just as these buyers seek assurance that the offsets they buy represent real emissions reductions, they also want to know what the real effect of a project is on the local people. The guidance in this manual is designed to facilitate responsible project design, implementation, and communication of the results of social impact assessment (SIA) to all stakeholders.

The key objective of the Manual is to provide guidance to project proponents as regards the use of cost-effective and credible methods[1] to assess the social benefits or impacts of multiple-benefit land-based carbon projects, including those validated under the CCB Standards. The Manual particularly aims to complement the CCB Standards, since these are the most widely used Standards for multiple-benefit land-based emissions reductions projects. Other sub-objectives of the Manual and the accompanying research process are to:

- increase the socio-economic benefits of land-based carbon projects – good practice SIA should improve project quality and could raise social benefits, e.g., systematically thinking through the causative links involved in generating social benefits may result in a modification in project design which enhances the positive social impacts;
- strengthen and deepen the application of the CCB Standards;
- identify a small core set of indicators which can be applied across a range of projects;
- contribute to adaptive project management and increased stakeholder engagement, which should in turn contribute to project sustainability and carbon permanence;
- contribute to the (currently weak) empirical body of understanding about the socio-economic effects of land-based carbon projects.

[1] It should be noted that the methods proposed in this Manual are not mandatory elements of the CCB Standards. There are numerous ways to approach impact assessment that are valid and that would meet the requirements of the CCB Standards.

An earlier review of SIA methods (Richards, 2008) revealed that this is an area in which there is no clear methodological guidance for land-based carbon projects, and subsequent analysis has led us to the conclusion that the absence of such guidance is a key factor constraining the adoption of good practice, especially given that many project proponents are in relatively uncharted territory according to their previous experience and areas of expertise. In view of this concern, four NGOs have come together to develop appropriate methodological guidance. The Manual is thus the product of an alliance consisting of the Katoomba Ecosystem Services Incubator of Forest Trends, the Climate, Community and Biodiversity Alliance (CCBA), Rainforest Alliance, and Fauna and Flora International (FFI). These NGOs combine extensive experience and expertise in the analysis of carbon finance for sustainable natural resource management (in a range of forestry, agricultural, and landscape-level contexts), social analysis, standard setting, auditing, and carbon project development.

Finally it is important to explain that this is a first version of the Manual. It will be modified and improved following a period of field testing in 2010. Any comments or suggestions for improving it are strongly welcomed, and should be sent to either Michael Richards (mrichards@forest-trends.org) or Steve Panfil (spanfil@climate-standards.org).

## Who Is this Manual for?

The Manual has been developed principally for carbon offset project designers and implementers who are not specialists in monitoring and evaluation (M&E). We recognize that these project proponents usually face significant financial limitations and other constraints that limit their choices of impact assessment methods. We do, however, expect the users of the Manual to have experience in designing and implementing land management projects. We have structured the Manual with frequent references to the CCB Standards, but the approaches and methods described are broadly applicable to many types of natural resources management activities.

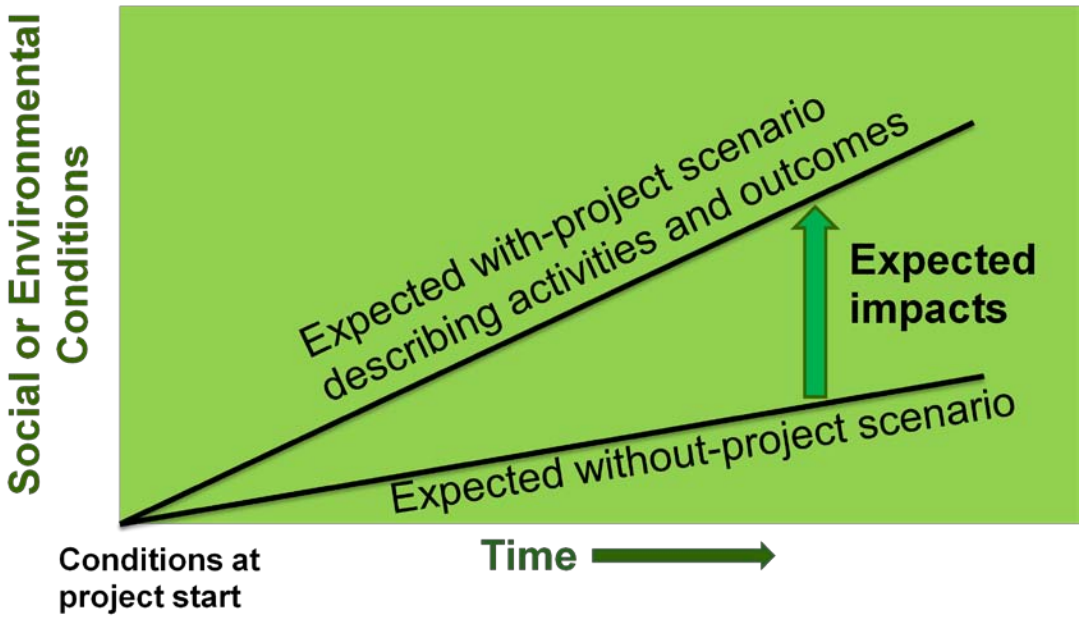
## What Do the CCB Standards Require?

As regards the scoail co-benefits, the CCB Standards require that projects generate net positive impacts for local communities. Determining what these impacts are and that they are on balance positive requires a number of important steps. These include:

- an accurate description of conditions at the start of the project;
- a projection of how those conditions would change, if the project were never implemented (the “without-project” scenario);
- a description of the likely outcomes after the implementation of the project (the “with-project” scenario);
- a justification of how project activities are likely to bring about the expected changes;
- design and implementation of a credible system for monitoring social impacts – known as the “community monitoring plan” in the CCB Standards.

The CCB Standards therefore require that the project proponents describe the socio-economic condition of communities and make projections about how this condition will change with and without the influence of the project. To be approved against the CCB Standards, the "with-project scenario" must show an improvement over the "without-project" scenario, as described graphically in Figure 1.

**Figure 1: Graphical Representation of Expected Net Positive Benefits of CCB-Validated Projects**




These requirements raise several questions that the Manual should help project proponents find the answers to:

- What should be measured?
- How should the projections be made?
- How do we measure the changes or differences?
- How do we show that the changes were due to the project?

This last question is often termed the "attribution" question and highlights a key requirement of the CCB Standards. Just as emissions reductions must be additional to be converted into carbon credits, positive social benefits must be additional under the CCB Standards. **Concept CM1** of the CCB Standards states that "the project must generate net positive impacts on the social and economic well-being of communities." **Criterion CM1.1** goes on to state that:

> "A credible estimate of the changes must include changes in community well-being due to the project … based on clearly defined and defendable assumptions about how project activities will alter social and economic well-being … the "with-project" scenario must then be compared with the "without-project" scenario of social and economic well-being in the absence of the project. The difference (i.e., the community benefit) must be positive for all community groups."

This means establishing, at the CCB validation point, that the projected improvement in social conditions will be caused by the project activities rather than by other factors, and at the CCB verification points, showing that any claimed social benefits were due to the project. If the social benefits would have happened anyway – in the "without-project" situation – they are not attributable to the carbon project. For example, if social benefits increase due to a state or NGO health project or a macro-economic change (e.g., devaluation providing a boost to export crops), carbon project developers cannot claim credit for the social benefits, nor will the carbon credit buyers have paid for them. A significant part of the Manual is devoted to the thorny issue of how to show cause and effect or "attribution" of social benefits.

## What Are Social Impacts?

A representative definition of social impacts is that:

> "By social impacts we mean the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society." (National Maritime Fisheries Service, 1994)

A more detailed definition by the International Association of Impact Assessment (IAIA, 2003) draws strongly on rights-based approaches (Box 1).

**Box 1. IAIA Principles for Social Impact Assessment**

According to the International Association for Impact Assessment (IAIA), social impacts, for the purpose of social impact assessment, can be defined as changes to one or more of the following:

- People's way of life – how they live, work, play, and interact on a day-to-day basis;
- Their culture – that is, their shared beliefs, customs, values, and language or dialect;
- Their community – its cohesion, stability, character, services, and facilities;
- Their political systems – the extent to which people participate in decisions that affect their lives, the level of democratization that is taking place and the resources provided for this;
- Their environment – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust, and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources;
- Their health and wellbeing – health is a state of complete physical, mental, social, and spiritual well-being, and not merely the absence of disease or infirmity;
- Their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties;
- Their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

*Source: IAIA, 2003*

A key distinction is between a social impact/change and an outcome (or the process leading to a social change). For example, improved community organization, employment, increased household income, or a change of livelihood (e.g., bee-keeping instead of bushmeat hunting) resulting from a carbon project are outcomes, but they are not social impacts, since they do not *per se* alter human behavior or welfare for better or worse. On the other hand, improved family health as a result of being able to afford a healthier diet from honey sales is a social impact.

Social impacts can be direct or indirect, as well as intended or unintended. Indirect or secondary impacts are the result of direct impacts – an example could be children spending longer at school as a result of an improvement in family income. Possible negative or poverty impacts of a large REDD project that restricts agricultural land use could be an increase in the local prices of food and land. The main focus of this Manual is on the direct and intended impacts of project activities, partly since these are easier to measure and prove, but it will not ignore the need to track and record indirect and unintended consequences of project actions, some of which could have negative social impacts.

An important type of indirect benefit is the social impact of environmental improvements. For example, better quality water or improved dry season flows resulting from a Reduced Emissions from Deforestation and forest Degradation (REDD) project could improve the health of downstream communities; another example could be where A/R (afforestation/reforestation) type woodlot or agroforestry activities act as a shelter belt or windbreak for farming, and thereby increase household

income and improve the family diet. Some environmental or indirect benefits are easier to identify and prove than others – this is important as regards the attribution challenge for SIA.

In this Manual, the term 'social impacts' is used interchangeably with 'community impacts'. A key aspect of social impacts is income distribution or equity; multiple-benefit carbon projects generally aim to improve the relative welfare of the rural poor (both between and within communities), and this is a key aspect of Gold Level CCB validation. Gender and child impacts are further elements of the equity or distribution objectives of CCB-validated projects as stated in several of the CCB criteria.

As regards negative social impacts or outcomes, critics of A/R projects, especially those involving plantations, monocultures, etc., often claim evidence for trade-offs between climate change objectives and the co-benefits. For REDD projects, an obvious example is loss of current livelihoods derived from unsustainable land use. Projects must therefore monitor for negative social impacts as well as positive ones, and as the CCB Standards (especially G3) point out, they need to design and implement actions to mitigate adverse effects. A problem with negative impacts is that they are hard to predict and therefore require special attention in the SIA process.

## What Is Social Impact Assessment?

The definition of Social Impact Assessment (SIA) by the International Association of Impact Assessment (IAIA) is:

> "the processes of analyzing, monitoring, and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment." (www.IAIA.org)

The same source notes that impact assessment is "the process of identifying the future consequences of a current or proposed action. The "impact" is the difference between what would happen with the action and what would happen without it." It can be noted that these definitions refer to 'ex-ante' or forward-looking impact assessment. In this Manual, we focus on both ex-ante and 'ex-post' impact assessment, since the CCB Standards demand good practice at both the validation and verification stages.

There is considerable overlap between the concepts of SIA – or more generally impact assessment – and monitoring and evaluation (M&E). M&E is a broader concept than impact assessment, for example, much of M&E is about improving the efficiency of internal management systems. But they do have a lot in common, and a significant part of the Manual is about developing and implementing an effective social M&E system.

## How Is this Manual Organized?

The Manual is divided into two Parts – "Part One: Core Guidance for Project Proponents" and "Part Two: Toolbox of Methods and Support Materials". This division makes the Manual as user- friendly as possible. Separating out the process and stages of SIA from the more detailed methods and support materials allows the core guidance to be reasonably succinct, since the explanation is not cluttered with details on the methods or tools, examples, sources, etc. This separation is also convenient in that some of the methods or tools are required at various points of the SIA process and can be referenced, rather than the reader having to read through various explanations of a tool according to the context or stage of the SIA process.

Part One of the Manual sets out seven main SIA Stages (Figure 2) which follow the steps or stages involved in cost-effective and good practice SIA, and, as much as possible, the sequence of the CCB Standards themselves, as shown in Table 1.

Although the SIA stages are presented linearly above, in practice, SIA is likely to be an iterative process – for example, SIA Stages 3, 4, and 5 will shed light on key 'change process' variables or outcomes; and this in turn may require revisiting the 'counterfactual' or 'without-project' analysis (SIA Stage 2).

**Figure 2. Proposed Social Impact Assessment (SIA) Stages**

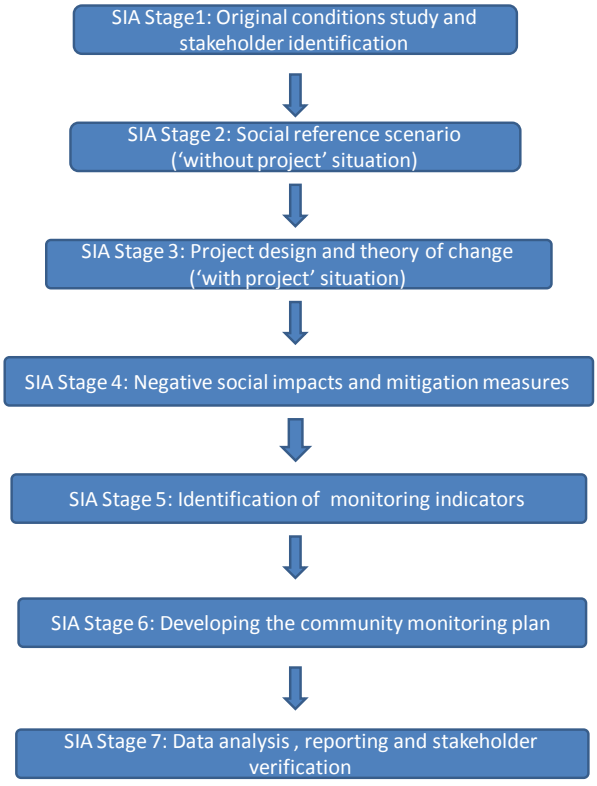


**Table 1: Summary of Proposed SIA Stages and Relevance to the CCB Standards**

| SIA Stage | Brief Description | Main Methods / Activities Proposed | Relevant CCB Concepts and Criteria |
|---|---|---|---|
| SIA Stage 1 | Description of socio-economic conditions before project start-up and identification of all stakeholder groups that might be affected | PRA Participatory Rural Appraisal methods, household surveys, community maps, secondary data, wealth or well-being ranking, and stakeholder analysis | Concept G1 (especially Criteria G1 1, G1.2, G1.3, G1.5 & G1.6), Criterion G3.8 |
| SIA Stage 2 | Projection of social conditions and impacts, assuming there is no project, and focusing on the variables and outcomes most likely to be affected | Stakeholder focus group discussions, problem trees, scenario analysis, expert analysis, etc. | Concept G2 (especially Criteria G1.1, G1.2 & G1. 4) |
| SIA Stage 3 | Formulated description of how the project proponents and stakeholders think the social objectives will be achieved, and identifying key assumptions between the outputs, outcomes and impacts | Causal model or theory of change developed by multiple stakeholder groups | Concept G3 (especially Criteria G3. 1, G3.2, G3.3,G3. 5, G3. 7 & G3. 8) |
| SIA Stage 4 | Analysis of possible negative social impacts and cost-effective mitigation measures | Stakeholder focus groups, community stakeholder dialogue, participatory impact assessment | Criteria G3.5, G5.4, G5.5, G5.6, and Concept CM2 |
| SIA Stage 5 | Identification of monitoring indicators to measure progress in achieving the desired social outcome & objectives | Indicators may be based on causal model, sustainability frameworks[3], or be defined by beneficiaries | Concept CM3 |
| SIA Stage 6 | Design of the social or community monitoring plan, including data collection methods for measuring indicators | PRA, surveys, key informants, Basic Needs Survey (BNS), Participatory Impact Assessment (PIA) & others | Concept CM3 |
| SIA Stage 7 | Analysis, reporting and verification of the SIA results with stakeholders | Stakeholder meetings and feedback workshops | Concepts CM3 and GL |

[3] Most prominently the Sustainable Livelihoods Framework (SLF).

Part Two of the Manual – the Toolbox of Methods and Support Materials – is further divided into three main areas – Social Impact Assessment Frameworks; Data Collection and Analysis Methods; and Support Materials. Based on a review by Forest Trends of SIA methods (Richards, 2008), as well as the wider literature, three main SIA frameworks are presented in Area 1:

- Causal models or the theory of change approach (Section T2)
- Sustainability framework approaches (Section T3)
- 'Matching methods' or the quasi-experimental approach (Section T4)

Area 2 of the Toolbox presents a range of data collection or analysis methods that are likely to be used in SIA:

- General data collection methods (T5)
- The Basic Necessities Survey (T6.1)
- Participatory Impact Assessment (PIA) (T6.2)
- Quantitative Participatory Assessment (QPA) (T6.3)
- Participatory Economic Valuation (PEV) (T6.4)
- Most Significant Change (MSC) Method (T6.5)
- Stakeholder analysis (T7.1)
- Problem trees (T7.2)
- Scenario analysis (T7.3)

Finally, Area 3 of the Toolbox presents some Support Materials for SIA including a review and typology of social impacts of land-based carbon projects based on empirical evidence (T8); further guidance on how to select appropriate indicators (T9); and some indicator checklists (T10).

# Overview of Key Issues in Social Impact Assessment

## Introduction

There is no doubt that social impact assessment (SIA) is tricky! It is quite hard to do well and easy to do badly. Even sophisticated and expensive SIA studies have been found to be flawed in one way or another. This is because we are dealing with something that it is difficult to be certain about – you cannot easily measure or quantify social change, or say what has caused it.

On the other hand, social impact assessment does not require sophisticated methods, and we believe that, based partly on the principle of 'appropriate imprecision', project proponents can credibly document the likely social impacts of a carbon project, insofar as it is possible to judge them at any point in time. Given the right guidance, some training and/or a week or two of technical assistance, project staff, and stakeholders should be able carry it out.

## Why Is SIA Tricky?

The main reasons why SIA is tricky are as follows:

- The problem of attribution – it is difficult to prove cause and effect
- Social impacts tend to be long-term phenomena – it is hard and unrealistic to identify them in the short- term
- Social impacts may be subtle and not easily measured
- Social impacts are often unexpected and/or can be negative
- Social impacts are easy to confuse with outcomes
- Lack of research data on the social effects of land-based carbon projects
- Lack of user-friendly guidance on SIA for carbon project developers

Attribution is a big challenge for all types of impact assessment and especially when considering indirect impacts, e.g., an improvement in school enrolment or child nutritional status, when the project could be one of several contributory factors. It is much less of a problem, if we are talking about direct outcomes or impacts, for example, an increase in income or change of attitude to forest conservation as a result of a REDD+ project. Therefore projects that specify more direct social impacts rather than indirect or downstream impacts will find it much easier to present convincing evidence of positive social benefits to the auditors. Attribution is particularly discussed in SIA Stages 3 and 5.

By definition, social impacts refer mainly to long-term changes and are often not very tangible. Also, verification audits against the CCB Standards must begin within five years of the project start-up. For these reasons, it is more practical to identify short- and medium-term social benefits in the form of project outputs and outcomes, rather than to try and identify longer-term social impacts from the outset.

Since social impacts are often unexpected and sometimes negative, we need to use a mix of methods for picking them up. For unexpected or negative impacts, open-ended participatory approaches are best, and there is no substitute for regular contact with stakeholders. Negative social impacts are always possible, for example, REDD projects sometimes involve a difficult livelihood transition from non-sustainable to sustainable land uses, large injections of cash at five yearly intervals can be challenging for traditional institutions, many impacts are indirect or unexpectedly, and any project can go wrong. Monitoring for negative impacts is covered in SIA Stage 4.

The lack of research data on social impacts of land-based carbon projects is inevitable given their short history and the small number of operational projects. The introduction of more systematic SIA methods will gradually help increase our body of understanding and make future SIA slightly easier. We have tried to systematize what we know about social outcomes and impacts in **Toolbox Section T8.**

Finally, the apparent lack of user-friendly guidance on SIA for project developers is the main rationale for this Manual. We hope we succeed in making it a bit less tricky!

## Cost-Effectiveness

Social impact assessment is not worth doing, if it is not credible. While it is unclear whether there is a trade-off between cost and credibility or how strong the trade-off is, the aim of the Manual is to develop a way of doing SIA at the lowest cost of achieving a basic or minimal level of credibility. This is because we are well aware that this represents yet another transaction cost, and a further reduction in net carbon payments, thus affecting both the financial viability of the project and the returns to key stakeholders.

SIA studies using traditional approaches to SIA like the quasi-experimental method are expensive – the literature reports a typical cost of between US $50,000 and $150,000 depending on a range of factors, including project size (Richards, 2008). The main reason for using the experimental or quasi-experimental approach – involving the statistical (if possible) comparison of control and treatment (project) groups – is to tackle attribution. While projects are at liberty to use the quasi-experimental approach, we believe that is not the most appropriate approach in many situations, partly due to the cost, but also because of some of the difficulties of implementing it (Box 2).

**Box 2. The 'Quasi-Experimental' Approach – Costs and Challenges**

The essence of the experimental or quasi-experimental approach, also known as the 'matching methods' approach, is to make statistical or non-statistical comparisons between 'control' and 'treatment' groups. Control groups or individuals are non-participants with similar 'observable' (age, income, education, gender, etc.) characteristics to project participants. If the comparison results in significant differences between the two groups, the differences can be regarded as attributable to the project rather than to other influences.

In an experimental approach, controls are selected via random sampling. But this is expensive (partly due to the sample size) and often not practical, so a 'quasi-experimental' approach involving 'constructed controls' is usually used. This involves trying to find people or groups who are as similar as possible to the project participants.

But it is often difficult to find suitable controls: firstly, while their observable characteristics may be similar, they may have different unobservable characteristics (e.g., attitude to risk); if they are close to the project area there is a risk of project spillover effects, e.g. project information affecting behavior of the controls; and if more distant control groups are selected, this increases the risk that other factors, like market access or other projects, will affect the comparison. Other problems include the low motivation of control groups to cooperate, the tendency for people to change their behavior when studied, and the ethical problem that controls cannot participate in any project expansion. Matching methods are further discussed in **Toolbox Section T4**.

*Main Sources: Richards, 2008; La Rovere & Dixon, 2007; USAID, 2006.*

The additional cost of what is proposed in this Manual is less than might at first appear to be the case. This is because most of the steps required for SIA are in fact obligatory requirements of the CCB Standards (e.g., **CCB Concepts G1, G2, G3, CM1, CM2** and **CM3**). Since SIA itself is a requirement of the CCB Standards, it becomes a question of the relative cost of different approaches that are capable of achieving the minimum level of credibility.

While there are several potential approaches to SIA, which have been researched in preparing for this Manual, we think that what is presented here is the most cost-effective approach, and should not be too demanding as regards expertise. We do not however at this point know the cost of SIA as proposed in this Manual – it will be important to track the cost of undertaking SIA in some case study projects.

A key question as regards cost-effectiveness is who undertakes SIA. The high cost noted above refers to independent studies usually undertaken by teams of consultants. Therefore the aim is to develop an approach to SIA which can be undertaken by the project team with the help of carefully selected stakeholder representatives, and possibly with the support of a local NGO or consultant. Using university students (preferably at the Masters or Doctorate levels) can sometimes lower costs, although quality control is needed, and academic objectives can limit the practical contribution of such studies.

We do however strongly recommend a short advisory input to the project, as early as possible in the process of project development, to help design and develop the SIA system; outside facilitation or support may be particularly useful for SIA Stage 3. It can be a false economy to "go it alone", if it is later found that the methods used lack credibility, and the auditor advises that an independent study is needed.

Another key aspect of the cost of SIA is scale. In this respect, SIA is no different to other transaction costs. Larger projects and/or projects with effective forest user aggregation strategies (e.g., via farmer cooperatives) normally have lower transaction costs per tonne of $CO_2$ equivalent mitigated or per Voluntary Emissions Reduction (VER) generated. Another important way of keeping costs in check is to integrate SIA as much as possible with other key aspects of project design (e.g., using data from the analysis of agents and drivers of deforestation, leakage analysis, etc).

The benefits of an effective SIA system go beyond satisfying the CCB Standards or providing market accountability. It should result in vital information for improving project design, most obviously in terms of ensuring the best combination of activities and outputs for promoting social benefits and for encouraging adaptive project management.[4] For example, the ability to reduce deforestation or sustain new plantations depends on positive relationships with local people. Better project design should result in more social benefits (and less negative impacts), and early detection of problems would enable projects to take remedial or mitigation measures, so that a problem can be dealt with cost-effectively rather than let it get out of control.

## Measuring Challenges

A simplistic way of looking at SIA is to consider its two main questions: what should we measure, and how should we measure?

Of these two questions, the first one 'What to measure?' is more difficult. It refers mainly to the issue of what indicators should be monitored in order to track progress in achieving the expected social objectives of the project. This includes considering how to tackle the attribution issue and ensuring appropriate definition of the social objectives or desired social results in accordance with the project design. It also includes an assessment of potential negative outcomes, so that these can be adequately monitored. These issues are particularly tackled in SIA Stages 3 and 5. The 'What to measure?' challenges are also faced in SIA Stage 1 ('Where are we starting from?') and SIA Stage 2 ('What would happen without the project?').

The 'How to measure?' question refers mainly to how we should monitor and analyze the data, and especially to the data collection methods involved in monitoring the indicators (SIA Stage 5). 'How to measure?' issues also crop up in SIA Stages 1 and 2. Most of the data collection methods are very well known and documented, for example, participatory rural appraisal (PRA) methods, household surveys, focus group discussions, etc. There are however some more specialized data collection methods for impact assessment – these are covered in **Toolbox Section T6.**

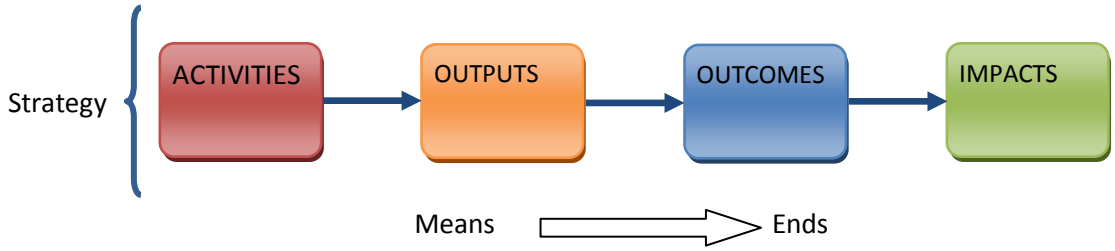
[4] Adaptive management is defined in the CCB Standards (Criterion G3.8) as "a process where policies and activities can adapt to future conditions to improve management success" (CCBA, 2009).

## The Causal Model or Theory of Change Approach

We have already established that, since the CCB Standards demand that social benefits must be additional to the 'without-project' situation, the cause-and-effect or attribution problem must be tackled in some way for the SIA to be considered credible. It has been noted above that the traditional approach to tackling attribution, the matching methods or quasi-experimental approach, may not be viable for most land-based carbon project situations.

However, a practical and cost-effective way for looking at social impacts is to use the *theory of change* or *causal model* approach. The essence of this approach is that the project design team and the project stakeholders need to develop a hypothesis of how the project aims to achieve its intended goals and objectives, including its social objectives. This becomes the project's theory of how and why change will happen. To be convincing it needs to trace how the (short-term) project *activities* and *outputs* will cause (short to mid-term) social *outcomes* and thence how these will lead in turn to (longer-term) social *impacts.* The activities and outputs can be considered as the means of achieving the project ends – positive social outcomes and impacts – and a causal chain can be built up as shown in Figure 3.

**Figure 3: Project Causal Chain Underlying the Theory of Change Approach**




*Source: Reproduced with permission from GEF Evaluation Office & Conservation Development Centre. 2009. The ROtI Handbook: Towards Enhancing the Impacts of Environmental Projects. Methodological Paper #2. Global Environment Facility: Washington DC.* http://www.thegef.org/gef/node/2096

If evidence can be presented that the short- and intermediate-term objectives (*outputs* and *outcomes*) of the project are being achieved, and if this forms part of a convincing cause-and effect-project story, then the auditor can have reasonable confidence that the longer-term objectives (*impacts*) will be achieved.

Other reasons for using the causal model or theory of change approach are that it helps tackle the attribution problem, mainly through the selection of appropriate indicators of change, and it is seen by many sources as providing an essential basis for project design (e.g., as stated in the 'Open Standards' of project cycle management promoted by the Conservation Measures Partnership (2007). This Manual therefore gives considerable prominence to the causal model or theory of change approach as a practical and cost-effective approach to SIA, and there is considerable reference to it in SIA Stages 3 and 5, as well as in **Toolbox Section T2**.

Since it appears to represent a cost-effective approach to SIA, different versions of this approach are being increasingly adopted by development or conservation organizations, including the Global Environment Facility (GEF) Evaluation Office, the World Bank's Independent Evaluation Group (IEG), the United Nations Environment Program (UNEP), the World Conservation Monitoring Centre (WCMC), the Wildlife Conservation Society (WCS), UK AID in its 'Integrated Impact Assessment Approach', GTZ with its 'Results-Based Impact Chain', and the International Social and Environmental Accreditation and Labeling (ISEAL) Alliance.

The approach of the micro-finance sector to impact assessment is also noteworthy. Having decided that traditional approaches to social impact assessment are too expensive, its approach, as set out by the SEEP Network (2006), has been to evaluate success according to the social performance of microfinance institutions (MFIs) rather than by attempting to attribute longer term social impacts to project activities. Social performance is defined as the effective translation of an institutional mission into practice and the likelihood of outcomes leading to social value (or impacts). Various social-rating schemes evaluate MFIs via a set of change or outcome indicators that reflect benchmark levels or international best practice. Qualitative methods are then used to explore plausible links between these change/outcome indicators and poverty impacts.

SIA is therefore not just about social impacts – it is also about social outcomes, since these give us some very strong clues about the likely impacts. In fact, at many points in the Manual we refer to social outcomes *and* impacts, and it might have been more accurate to use the acronym SOIA (Social Outcomes and Impacts Assessment) – but SIA is the more established term.

## The Diversity of Project Types

There is a diversity of land-based carbon project types, including those being submitted for CCB validation. There are large and small projects; REDD and A/R projects; projects with relatively few social impacts, possibly because due to being in a remote area with few stakeholders; community-based projects with a range of stakeholder groups, etc. This means that there is no 'one-size-fits-all' approach – project proponents need to select the approach and methods they think are most appropriate to their project context. At the same time we detect a considerable desire for guidance on cost-effective approaches to SIA.

## Stakeholder Participation and Community Engagement

The CCB Standards set out the need for community involvement in the project management cycle: for example, **CCB Criteria G3.8** and **G3.9** describe the consultation and communication requirements, and **Criterion G3.10** stipulates a conflict resolution system. Much of this is linked to the principle of 'full, free, and informed consent'. Transparency and effective participation may help reduce negative perceptions of a project and contribute to positive outcomes and impacts. Stakeholder participation in SIA is also essential for credibility and cost-effectiveness.

This Manual emphasizes participatory methods where possible and provides guidance for community engagement in SIA. Participatory monitoring methods form an essential part of a cost-effective SIA system provided due diligence is exercised as regards the dangers of bias and strategic responses from project beneficiaries – participatory methods should be backed up by other research methods (triangulation) where possible.

Another important aspect of community engagement is ensuring that stakeholders are fully informed of the SIA process and results and have the opportunity to challenge or discuss them, if they do not accord with their perceptions of reality. This is a form of ground-truthing. The Verification auditor will check the SIA findings with stakeholder groups anyway.

## The Desired Level of Differentiation

An important issue for SIA, and one which can also affect the costs, is the level of differentiation needed in the analysis as regards gender, poverty level, holding size, tenure basis, seasonality, ethnicity, communities, location, etc. The question is what level of disaggregation or differentiation of analysis is necessary?

The CCB Standards require proponents to describe the social, economic, and cultural diversity within communities and to identify specific groups such as indigenous peoples (**Criterion G1.5**). Where project impacts are likely to have greater impacts on a specific group, the project should design methods to assess these impacts. Projects that seek Gold-Level approval by meeting the optional **Concept GL2** must have a system in place to identify positive and negative impacts on poorer and more vulnerable groups, including women and other disadvantaged groups.

The level of differentiation required has implications for the data collection methods. Participatory research methods are generally better as regards intra-household differentiation (especially gender) than household surveys. For example, Participatory Rural Appraisal (PRA) wealth or well-being ranking is an essential method for SIA Stage 1 in view of the importance of looking at distributional and poverty impacts. For further discussion of differentiation issues, see Schreckenberg et al. (2010).

## Towards a Core Generic Set of Indicators

In many SIA contexts, for example, where a large project developer has several projects, or sometimes in the context of a Standard, it can be desirable to have a small set of externally defined indicators that are applied to all projects. The Social Carbon Standard, for example, has a list of approved indicators which projects are encouraged to use. This allows comparisons between projects and can generate improved understanding about the social benefits and costs. This can feed into improved project design and support processes, as well as an improvement in the Standards themselves.

The NGO partners involved in developing this Manual also wish to develop a small core set of indicators which will be included in the final revised version of the Manual. It is realized that project proponents

tend to feel that external indicators are imposed and tend to be less relevant to their project design needs. It is therefore important to keep them to a minimum and only select those that are easy to measure or for which the data already exist. These indicators would not substitute the need for project-context indicators.

## A Preliminary Set of Good Practice Principles

This chapter concludes with some good practice guidelines or principles for cost-effective SIA:

- Invest in early technical assistance or training in SIA;
- Spend time clarifying project objectives or desired social results, and how it is hoped that these will be achieved;
- Distinguish between the outputs, outcomes, and impacts, and assess the causative linkages between them – ideally using the theory of change or causal model approach;
- Invest time in the selection of appropriate indicators;
- Use participatory data collection methods as much as possible and back these up by other research methods (triangulation).

Finally, we should use the principle of appropriate imprecision (as opposed to inappropriate precision) as promoted in participatory learning approaches to rural development (Chambers, 1983) – SIA is more of an art than a science, and is a very new art for land-based carbon projects. Telling a convincing story with some data to back it up is much more important than trying to undertake a quantitative or statistical analysis, which could anyway suffer from various kinds of research bias.

# SIA Stage 1: Original Conditions Study

## Introduction

The **CCB Standards Concept G1 (Original Conditions in the Project Area)** states: the original conditions of the project area (including the surrounding area) before the project commences must be described. This description, along with the baseline projections (**G2**), will help determine the likely impacts of the project.

The Original Conditions study is an essential first stage in the SIA process, since it provides the basis for the 'with'- and 'without-project' reference scenarios. **CCB Criteria G1.5, G1.6, G1.8.4, G1.8.5** and **G1.8.6** summarize the information required for describing the social context of the project at its start-up.

## General Principles

Based on the CCB Standards, the Original Conditions data should include:

- Basic socio-economic information of communities in the project zone, including land-use and livelihood systems, especially where linked to natural resources; community infrastructure (health clinic, school, wells, meeting centers, etc.); on- and off-farm employment; transport infrastructure and market access; location of villages and hamlets on a map; number of children at school; etc.
- Basic cultural and demographic information, including cultural diversity, minority groups, population, gender (e.g., number of female headed households), migration trends, etc.
- Land and tree tenure type and security, access rights to natural resources, customary rules and institutions especially over common pool resources, tenure conflicts or boundary issues, etc.
- Location of any High Conservation Value (HCV) areas that are important for meeting basic community needs, e.g., essential food, fuel, fodder, medicines, and building materials (**Criteria G1.8.4, G1.8.5** and **G1.8.6**)
- Governance systems and issues, e.g., decision-making structures, local government, crime levels, conflict resolution mechanisms, etc.
- Major development constraints, e.g., market access, credit, soil erosion, etc.
- Other key social problems, e.g., health, alcoholism, violence, etc.

There seems to be a general temptation to collect a wide range of information during an Original Conditions study, resulting in very long questionnaires which annoy local people, or weeks of PRA work which are exhausting and expensive (in terms of foregone tasks) both for community members and project staff. The project SIA team should therefore give more weight to the processes and variables which they think are most likely to be affected by a carbon project. For example, it is useful to get some basic information on literacy and educational levels (e.g., number of children per household going to

school and at what level), but it is not worth trying to analyze educational quality, since the impact of education is likely a weak or indirect effect of most carbon projects.

On the other hand, water quality and associated health problems could be important for a forest carbon project. Obtaining a strong understanding of land and tree tenure issues, local social structures and governance mechanisms issues are also high-priority areas, as noted in **CCB Criterion G1.6**. **Toolbox Section T8**, which reviews likely social outcomes, impacts, and change processes, should be useful to help project proponents prioritize areas for data collection.

## Stakeholder Identification

A key component of the Original Conditions study is stakeholder identification and analysis, for example see **Criterion G1.5** and its footnotes. The CCB Standards distinguish between communities that are inside and outside of the project zone, which is the area where emissions reductions or removals will be achieved. The impacts on stakeholders that live beyond the project zone must also be assessed and mitigated, so that the project does no harm to these offsite stakeholders.

As pointed out by **Criterion G1.5**, it is essential to differentiate local stakeholders according to their wealth or well-being (for example, by using a PRA wealth or well-being ranking method), ethnicity, gender, age, tenure or land use/livelihood interests (e.g., charcoal makers, pastoralists, non-timber forest product (NTFP) gatherers, etc.). This analysis provides the basis for identifying stakeholder groups and sub-groups. A useful tool for differentiating and describing stakeholders is stakeholder analysis **(Toolbox Section T7.1).**

Once the stakeholder groups and sub-groups have been identified, it is important to try and identify some representatives to take part in the SIA process. One possibility is to form a Stakeholder Committee. The selection process for such a Committee needs to find a balance between leadership characteristics (e.g., people who command respect), democratic processes (it would be ideal if they were elected by their stakeholder sub-group), educational, or literacy levels (since they should be able to read reports), gender, ethnicity, time availability, etc. It is very important for the credibility of the SIA that the most vulnerable (e.g., landless) and minority groups are represented. This is likely to be a trial and error process for each project.

## Recommended Methods

The methods required for complying with G1 are in general very well-known and documented in a number of manuals (e.g., CARE, 2002), and therefore do not require much elaboration in this Manual (although **Toolbox Section T5.2** presents a short review of them). These include:

- Participatory rural appraisal (PRA) and Rapid Rural Appraisal (RRA) methods, including participatory community mapping, and wealth or well-being ranking
- Focus group or key informant semi-structured interviews
- Household surveys
- Stakeholder analysis (**Toolbox Section T7.1**)

Secondary data, such as surveys undertaken by government departments, or, if project proponents are lucky, an NGO or state survey of socio-economic conditions in the area, can also be useful to complement primary data collection, but should not be used as a substitute for primary data. This is because it will have been collected with other objectives and target groups in mind, and the quality of the methodology used is often difficult to check.

# SIA Stage 2: Social Reference Scenario – What Would Happen Without the Project?

## Introduction

**CCB Standards Concept G2** states that "a baseline projection is a description of expected conditions in the project zone in the absence of project activities. The project impacts will be measured against this 'without project' reference scenario."

**Criterion G2.4** further specifies that the project proponents should: "describe how the 'without project' reference scenario would affect communities in the project zone, including the impact of likely changes in water, soil, and other locally important ecosystem services." The social reference scenario will make inferences of how the baseline land-use scenario described in **Criterion G2.1** affects the people in the project zone.

In this manual, we use the term 'social reference scenario' to refer to the social component of the baseline projection required by **CCB Concept G2**, since the word 'baseline' is mainly associated with carbon measurement. However, the concept is the same as for a carbon baseline: we need to project social processes and conditions into the future assuming there is no project – hence, we often refer to the 'without project' or 'counterfactual' analysis. In theory, a strict comparison of the 'with' and 'without project' scenarios would give us the net additional social benefits. However, social benefits are not like carbon – they are difficult to quantify and measure, and it can be difficult to show that any improvement (or deterioration) in them is due to the project rather than to other influences.

As with SIA Stage 1, the social reference scenario analysis is a requirement of the CCB Standards, and should not represent an additional SIA cost for carbon project developers.

## General Principles

SIA Stage 2 involves a forward-looking analysis based on current trends and aims to build a convincing story of what is likely to happen to the social variables or conditions, and the processes that lead to them, in the absence of the project. Data collection in SIA Stage 2 should therefore focus on the outcomes of processes or conditions that are most likely to be affected by the project – these are often linked to the project-related land uses. Thus, for example, **Criterion G2.4** specifies the need to assess changes in water, soil, and other locally important ecosystem services. Another example could be the predicted 'without project' availability of key NTFPs used in 'coping strategies' during emergencies or bad years for food production.

Analysis of the social reference scenario assumes a basic understanding of the 'with project' design. A good starting point may be to undertake a simple exercise to determine the likely project impact areas or processes. Table 2 presents a useful checklist of potential impact areas for a land-based carbon project, and users are also referred to **Toolbox Section T8.**

**Table 2: Potential Social and Environmental Impact Areas**

| | |
|---|---|
| **Social Development** | |
| Labor Rights | The range of rights enshrined in the International Labor Organization Declaration on Fundamental Principles & Rights at Work |
| Gender Equity | Access to opportunities and empowerment of girls and women, as well as the reduction of discrimination and inequalities based on gender |
| Access to Education | Access to, engagement in, and attainment through education |
| Access to Health and Sanitation | Access to medical treatment and improved sanitation, notably through access to clean water and the availability of sewage treatment |
| Cultural Identity | Respect for self-determination, intellectual property, benefit-sharing, and religious tolerance |
| **Environmental Integrity** | |
| Water | Water conservation and quality |
| Integrity for Biodiversity | Diversity of life at the levels of species, genetic diversity, and ecosystems |
| Soil Fertility | Maintenance of organic matter and biological activity, as well as conserving soil from all forms of erosion |
| Climate Change | Mitigation of greenhouse gas emissions and strengthening the resilience and adaptation capacity of people, their livelihoods, and ecosystems to climate change |
| Natural Resource Management | Management of resources from production to post-consumption by supporting the integrity of ecosystem services, maintaining harvest levels that ensure regeneration, and reducing/effectively managing waste |
| **Economic Resilience** | |
| Secure Livelihoods | Understood as an economic concept incorporating income, wealth, poverty and employment, whether paid, voluntary, formal or informal, and with some resilience to shocks |
| Social Capital | Social capital refers to connections among individuals – social networks, and the norms of reciprocity and trustworthiness that arise from them; it includes the concepts of knowledge sharing and social safety nets |
| Resilience to Economic Risk | Assurance of self-reliance and the ability to counter risk through economic diversification and access to finance |
| Inclusive Value Chains | Fairness and responsibility for all actors in a value chain, so that they consciously operate as one stage in a longer chain |

*Source: Based on ISEAL, 2010.*

It is essential that local project stakeholders participate in the development of these projections and predictions, for example, by getting them to discuss the main processes and causative factors leading to changes in social conditions, possibly in the form of a problem tree. It is also important to take into account potential bias in their contributions. For example, local stakeholders sometimes think that their responses could lead to additional services, products, subsidies, etc. from the project.

Whatever methods are used, it is important to identify influencing factors or change processes on social processes or outcomes. Identification of these is essential for SIA Stages 3 and 4, and more generally for achieving the project social objectives (otherwise the project strategies and activities may miss their target). It is also important to identify key assumptions in the social change processes. For example, a key assumption could be that poor road access limits the availability of key social services as well as agricultural profitability. If the road access is likely to change in the 'without project' scenario, then this needs to be made clear in the social reference scenario. **Toolbox Section T8** provides more guidance on social change processes.

## Recommended Methods

The methods appropriate for this stage are less developed than for other stages, but apart from general participatory data collection methods, like stakeholder focus group discussions and key informants, possible participatory methods include problem trees and scenario analysis (**Toolbox Section T7**), as well as expert analysis.

# SIA Stage 3: Project Design and Theory of Change – How Will Social Benefits Be Achieved?

## Introduction

**CCB Concept G3** (Project Design and Goals) states that "The project must be designed in sufficient detail so that a third-party can adequately evaluate it**"** and **Criterion G3.2** states that the project proponent must "describe each activity with (its) expected climate, community and biodiversity impacts and its relevance to achieving the project's objectives."

Furthermore **Criterion CM1.1** states that:

> "The project proponents must use appropriate methodologies to estimate the impacts on communities, including all constituent socio-economic or cultural groups such as indigenous peoples (defined in G1), resulting from planned project activities. A credible estimate of impacts must include changes in community well-being due to project activities and an evaluation of the impacts by the affected groups. This estimate must be based on clearly defined and defendable assumptions about how project activities will alter social and economic well-being, including potential impacts of changes in natural resources and ecosystem services identified as important by the communities (including water and soil resources) over the duration of the project. The 'with project' scenario must then be compared with the 'without project' scenario of social and economic well-being in the absence of the project (completed in G2). The difference (i.e., the community benefit) must be positive for all community groups."

Clear presentation of the project design, including the project logic of how the desired social effects of the project are to be achieved, is essential for cost-effective SIA. The approach presented in this section, if done appropriately, represents a cost-effective response to the problem of attribution, and provides a sound basis for selecting appropriate indicators (SIA Stage 5).

## General Principles

The need for a clear and strategic project design, including for evaluation or impact assessment, is repeatedly stressed in the project cycle management literature. For example, the *Open Standards for the Practice of Conservation* developed by the influential Conservation Measures Partnership[5] (CMP) notes that a clear project logic ensures that the focus of an evaluation is on the objectives, outcomes and impacts that the project is striving to achieve (Conservation Measures Partnership, 2007).

We recommend that the theory of change or causal model approach be used at the project design stage of SIA. The project theory of change is the hypothesis, as developed by the project design team, of how the project aims to achieve its intended goals and objectives, including its social objectives. In simple

[5] Core Members of the CMP are the African Wildlife Foundation (AWF), Conservation International (CI), The Nature Conservancy (TNC), Wildlife Conservation Society (WCS) and World Wide Fund for Nature/World Wildlife Fund (WWF), and various other influential NGOs are Collaborative Members.

terms, it is a roadmap showing exactly how the project plans to get from Point A (project strategy and activities) to Point Z (project impacts).

As with any theory there is no guarantee that it will work in practice, since it is based on a number of key assumptions which may or may not hold true. These hypotheses mainly surround the cause-and-effect relationships which the project proponents assume or hope will hold true. SIA thus seeks to establish whether they are correct in their hypothesis of how the changes will happen. This includes showing how the project activities will alter the change processes that would otherwise result in a continuation of current trends. A good understanding of the underlying conditions, change processes, and social reference scenario (SIA Stages 1 and 2) is a pre-condition for conducting SIA Stage 3.

## The 'Causal Model' or Theory of Change

Many different terms are used to describe the theory of change or causal model approach, for example, 'outcome logic model', 'conceptual model', 'results chains', 'logic chains', 'impact pathways', 'outcome-impact pathways' and 'review of outcomes to impacts'. As these terms imply, cause-and-effect analysis and understanding the links between outcomes and impacts are at the heart of the causal model approach.

In the Key Issues chapter, we considered the importance of the attribution challenge for establishing additionality and noted the difficulties and cost of 'matching methods' approaches using control groups, which is the classical approach to determining attribution. We also noted that SIA is difficult since social impacts are normally long-term phenomena, and it is unrealistic to expect to see these in time for the near-term CCB verification audits. After five years, we may not see durable poverty reduction effects, but we should be able to observe more tangible mid-term *outcomes*, e.g., an increase in family income due to carbon payments or employment, and we should certainly see the tangible project *outputs* or short-term achievements (e.g., number of trees planted, number of people trained in administrative systems, etc.).

As explained in the Key Issues Chapter, the rationale for using the theory of change or causal model approach to SIA is that, if it can be showed that the short- and intermediate-term objectives (*outputs* and *outcomes*) are being achieved, the auditor can have reasonable confidence that the longer term objectives (*impacts*) will be achieved. The causal model therefore tries to link the early (*outputs*) and intermediate (*outcomes*) results of the project strategy (or set of activities) to longer-term changes (*impacts*), as depicted in Figure 4. As noted in Box 3, the distinctions between project activities, outputs, outcomes, and impacts are fundamental to the causal model approach.

**Box 3. Distinguishing between Activities, Outputs, Outcomes and Impacts**

Project *activities* are the physical or implemented activities of the projects. Activities, in turn, require material or human inputs or resources including staff, consultants, information, learning tools, etc.

Project *outputs* are the tangible short-term results of project activities and normally take the form of products or services provided during the project lifetime and as a direct result of project funding. Examples of outputs include training courses, numbers trained, agreements signed, seedlings raised, area planted, management plans developed, studies undertaken, administrative systems developed, etc. Outputs are quite easy to observe, measure, and verify, and so are commonly used as indicators in project-monitoring systems.

Project *outcomes* are the direct intended results stemming from the outputs. They are short- and medium-term changes experienced by project stakeholders and/or by the physical environment and are less tangible and easy to measure than outputs. Outcomes could include (more) positive attitudes to forest conservation, generation of carbon income, increased employment, reduced extraction due to an effective by-law, development of an effective benefit-sharing system, and improvements in knowledge, skills, behavior and practice (e.g., in governance or administration) as a result of project activities.

Project *impacts* are the end results sought by the project, especially as regards net social changes. Impacts differ from outcomes and outputs in that the latter are (still) the means to achieve the project goals or long-term objectives, while the impacts represent the latter. They may occur as a direct or indirect result of project outcomes, e.g., in a carbon finance project, generation of cash income from carbon sales could be a key outcome. But this is still only a means to poverty reduction – the 'ends' will depend on how the cash is distributed and spent.

*Source: GEF Evaluation Office & Conservation Development Centre, 2009.*

The project logic needed for the causal model approach is very similar to the logical framework approach – it forces project developers to be explicit about the project logic and should result in a clear project design. Thus, many sources (e.g., Conservation Measures Partnership, 2007) see the causal model or theory of change approach (the CMP uses the term 'conceptual model') as integral to the whole process of project design.

## Main Steps in Developing a Causal Model

Based on a range of sources, it is possible to identify six main steps to developing a causal model. These steps should be conducted as far as possible with a representative group of project stakeholders, e.g., the Stakeholder Committee, if this appears to be operating effectively. The proposed steps are:

A. Articulate and prioritize the social problems and needs which the project is trying to address, especially the predicted consequences of the 'without project' scenario (thus SIA Stage 2 directly feeds into the causal model), and list the desired social results or objectives of the project in the short-, medium- and longer-term (this step may already have been undertaken as part of the project design process);

B. Identify the project strategies and activities or means of achieving the desired social results or objectives, showing how the project will tackle the change processes or critical constraints to improvement (drawing on SIA Stages 1 and 2). These means or strategies for delivering social benefits are likely to include an effective and transparent benefit-sharing mechanism.

C. Based on steps A and B, classify the project means and (social) ends into *activities*, *outputs* (short-term project achievements), *outcomes* (short- to mid-term project effects), and *impacts* (longer-term, more durable effects), following the guidance in Box 3. In general, the project means are activities and outputs, and the project ends are outcomes and impacts. In some causal model approaches each output, outcome, and impact is expressed as an objective: these objectives should be as SMART (Specific, Measurable, Achievable, Realistic/Reliable and Time-bound) as possible.

D. Identify any external factors (e.g., changes in policies) and risks[6] which might prevent the outputs, outcomes, and impacts (or the equivalent SMART objectives), or external assumptions which will favor them, but over which the project has little or no control, e.g., international carbon prices, reaching an agreement on climate change at the UN Framework for Climate Change Convention (UNFCCC), government policies, the rate of inflation, a surge in agricultural prices, a political crisis, a lack of state compliance, tenure or institutional reforms, etc.

E. Develop a set of "if-then" statements linking the activities to the outputs, the outputs to the outcomes, and the outcomes to the impacts. This is at the core of the causal model – the challenge is to identify and specify the cause-and-effect relationships in achieving the next link in the chain (or SMART objective). "if-then" statements should distinguish 'internal assumptions[7]' (based on step B) and 'external assumptions' (step D). The word 'linkage' is sometimes used in causal model analysis instead of assumption. Both types of assumptions[8] or linkages are essential for achievement of the desired social results.

F. Validate the causal model with stakeholder groups (beyond the stakeholder representatives involved in the development of stages A to E), e.g., by means of community meetings.

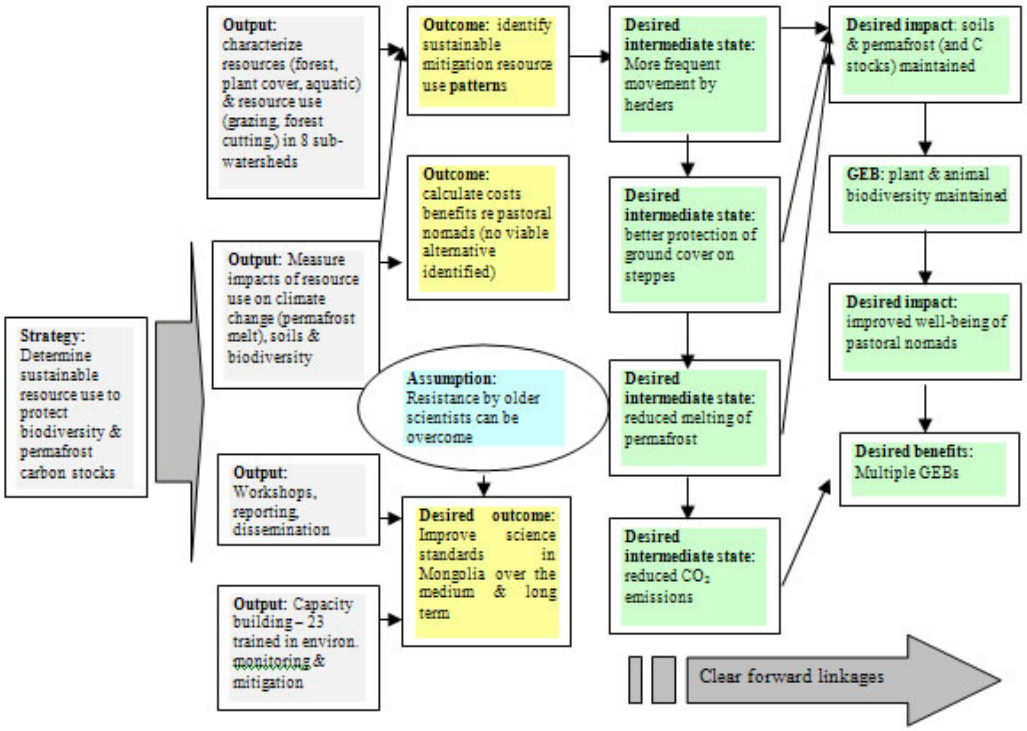
Figure 4 presents an example of a causal model developed for a Global Environmental Facility (GEF)-supported project to reduce $CO_2$ emissions from permafrost melt and achieve other environmental objectives in Mongolia. The causal model or theory of change was developed using the 'Review of Outcomes to Impacts' (ROtI) approach **(Toolbox Section T2.3).**

[6] Risk analysis and identification are emphasized in several CCB Criteria and Indicators, for example, G3.5.

[7] An example of an internal assumption is a well-designed benefit-sharing mechanism, including governance safeguards focusing on accountability, transparency, etc.

[8] **CCB Indicator CM1.1** includes the obligation on project proponents to present "clearly defined and defendable assumptions about how project activities will alter social and economic well-being."

**Figure 4: Example of Causal Model of GEF Mongolia Environmental Project (ROtI Approach[9])**




Acronym: GEBs - global environmental benefits

**Project Summary:** The GEF Mongolia project promoted sustainable forest, plant, and aquatic resource use, protection of biodiversity, and reduced $CO_2$ emissions from permafrost melt. Workshops were held; reports disseminated; and 23 young scientists trained. The outcomes were: identification of an improved system of resource use and management – more frequent movement by herders – and improved science standards in Mongolia in the mid- to long-term (but this was resisted by the hierarchy of older scientists). The project's success depended on more frequent movement by herders; this would result in less damage to the permafrost, reduced melting and GHG emissions, protection and improved productivity of soils and groundcover, and maintenance of plant and animal biodiversity. More frequent movement of herders depended in turn on the financial returns compared to the opportunity cost – the return from less frequent movement.

*Source: Reproduced with permission from GEF Evaluation Office & Conservation Development Centre. 2009. The ROtI Handbook: Towards Enhancing the Impacts of Environmental Projects. Methodological Paper #2. Global Environment Facility: Washington DC. http://www.thegef.org/gef/node/2096*

[9] In the ROtI approach, an 'intermediate state' is a project achievement which links outcomes to impacts; achievement of an intermediate state makes it more likely that a positive impact will be achieved.

## Recommended Methods

As already noted, there are several variants of the causal model. Project developers should investigate which variant they are most comfortable with. Three specific causal model or theory of change methodologies are described in **Toolbox Section T2*:***

- The 'Open Standards for the Practice of Conservation' approach of the Conservation Measures Partnership (2007) supported by the on-line *Miradi* initiative (www.miradi.org);
- The 'Review of Outcomes to Impacts' (ROtI) approach (GEF Evaluation Office & Conservation Development Centre, 2009);
- 'Participatory Impact Pathways Analysis' (PIPA) developed by the Institutional Learning and Change Initiative (ILAC) and the International Center for Tropical Agriculture (CIAT) (Douthwaite et al., 2008).

The Open Standards approach is a comprehensive and holistic approach to project design, monitoring, and evaluation and is of most value when used at the design stage (although all the variants should be used at the design stage for maximum benefit). The Review of Outcomes to Impact (ROtI) approach could be used as a more stand-alone approach to SIA, if it is felt that the project design process was robust. On the other hand, it is mainly designed for ex-post evaluation so needs to be adapted for assessing SIA at the project-validation phase. Participatory Impact Pathways Analysis (PIPA) may be more appropriate for situations in which stakeholder relationships are complex. All three approaches ideally require some training and/or an experienced facilitator for at least part of the process.

# SIA Stage 4: Negative Social Impacts and Mitigation Measures – What Could Go Wrong?

## Introduction

Social impacts can be positive or negative. A review of outcomes and impacts of land-based carbon projects **(Toolbox Section T8)** identifies a range of possible negative impacts from different project types. And while it is hoped that most impacts will be positive, there is always a chance that things will not go according to plan. One of the challenges for SIA is how to pick up on unplanned and negative social impacts – the causal model or theory of change approach may be less helpful in this respect. Another requirement, also a core element of good practice SIA, is to identify 'mitigation' measures to counteract any negative impacts that occur.

A major rationale of the CCB Standards is that, as well as encouraging projects that are likely to result in significant social benefits, they seek to deter projects with likely negative social impacts. For example, a project which results in the uncompensated loss of customary access rights or 'social displacement', either geographically or through major livelihoods changes, should not be approved under the CCB Standards.

**CCB Criterion G3.5** states that the project proponents:

> "must identify likely natural and human-induced risks to the expected climate, community, and biodiversity benefits during the project lifetime and outline measures adopted to mitigate these risks."

Also **Concept CM2** (Offsite Stakeholder Impacts) states that they

> "must evaluate and mitigate any possible social and economic impacts that could result in the decreased social and economic well-being of the main stakeholders living outside the project zone resulting from project activities. Project activities should at least 'do no harm' to the well-being of offsite stakeholders." (A footnote clarifies that this well-being should not be achieved through illegal actions or in a way that clashes with people's statutory or customary rights).

**CCB Criteria G2.4, G5.5, CM1** and **GL2.5** are also relevant and point to the need to assess possible negative impacts as well as monitor them. It is therefore clear that the CCB verification auditor will want to see an analysis of potential negative social impacts, what the project is doing to reduce the risk of these negative impacts happening, and how it would respond if they do occur.

## General Principles

Prediction of the likelihood or risk of negative social impacts is difficult, as well as unpopular, since project proponents are naturally reluctant to discuss what might go wrong with a project. However, failure to undertake this key stage of SIA properly could make the difference between a project failing it

being able to withstand unexpected challenges. Open discussions with local stakeholders regarding potential negative impacts are part of informed consent, and when these impacts are identified early, they are much more easily mitigated.

In practice, there is no escaping the social risks associated with carbon projects, as reviewed in **Toolbox Section T8**. This reveals that many of the potential negative social and cultural impacts are indirect and difficult to predict. Some observers refer to 'social leakage', for example, if a REDD+ project is successful at reducing in-migration to a project area, the poverty of the would-be migrants could be exacerbated. At the same time, the social reference scenario (SIA Stage 2) may well reveal a worsening social and cultural situation without the project.

A robust social risk analysis and design of abatement or mitigation measures can counter potential negative social impacts. Project proponents could draw up a list of questions after examining key assumptions in the causal model, for example:

- What will happen to existing lawful forest-based livelihoods, if restrictions are put on the extraction of forest products (if a REDD project)?
- What will happen to family subsistence, if from now on only dead firewood can be collected? Who collects the firewood now, and how far might they have to walk to collect firewood? What could be the implication of this for child welfare?
- What will happen to the nutrition of poorer families who were quite dependent for protein on bushmeat or hunting?
- What will happen to NTFP collectors, if harvest levels have to be reduced?
- What will happen to village traders of forest products?
- What will happen to previous customary grazing rights or 'transhumant' graziers?
- Will these problems affect richer and poorer families similarly? (Special attention should be paid to their resource endowments, e.g., their situation as regards the availability of on-farm tree products and their relative dependence on common pool resources).
- Will some people or households have to go further to collect their firewood or water? Who does this work?
- Will the problem (any identified problem) affect men and women differentially?
- How will the project affect female-headed households?
- What other possible negative impacts might there be on women and children?
- What will stop the project benefits being creamed off by the rural elites?
- What will prevent benefit-sharing mechanisms suffering from governance problems? (Or what governance safeguards are in place to ensure the effective, transparent, and accountable management of the carbon finance?)
- How could the poorest benefit from the project assuming they are not employed and have no stake in the carbon payments?
- How will the project affect landless people?

- How can 'cultural security'[10] be safeguarded?
- What might be the effect on local institutions of relatively large injections of cash at five yearly intervals? How can the project increase the capacity of local institutions?
- If the money goes to the men, what is the likelihood that they will spend a lot of it on alcohol? Could this lead to an increase in domestic violence?
- Is there anything in the legal contract between the project developers and local resource users which could result in negative equity impacts?

There is an almost endless potential list of questions – the important ones will depend on the project type and context. When drawing up the key risks and questions, **Toolbox Section T8** should prove useful.

Once the most likely negative social risks have been identified and an appropriate monitoring system has been developed, the project should identify a set of cost-effective mitigation actions as mandated, for example, in **CCB Concept CM2**. A separate mitigation action or strategy is needed for each potentially significant negative impact identified. If an adverse impact cannot be prevented or mitigated, some kind of compensation may be needed, whether in cash or kind, although this would require a careful justification of how this would result in a net benefit for the project stakeholders.

The task of monitoring potential negative impacts is only touched on here, since it involves the selection of indicators and development of a monitoring plan, which are covered in SIA Stages 5 and 6. Any monitoring system should be based firstly on effective stakeholder dialogue – the holding of regular meetings with representative project stakeholders to discuss what is working well or badly.

An effectively functioning stakeholder committee, in which individual stakeholders feel confident they can air their grievances over project activities, would facilitate this process. Complaints need to be taken seriously and investigated, which means that the project should factor in the necessary time. A social liaison officer who regularly meets with the stakeholder committee could, for example, be a useful mechanism, and his/her meeting reports could be used by the auditor to explore or clarify issues with the stakeholders. At the end of the day, it will be up to the judgment of the CCB auditor to decide if sufficient effort has gone into the analysis and monitoring of negative social impacts.

## Recommended Methods

The main method for identifying social risks is the common sense one of discussing the potential risks with project stakeholders, once the latter have a very clear understanding of the project activities, while being careful to avoid strategic or biased responses. Other key informants to talk to include local NGO

[10] One definition of cultural security is "the capacity of a society to conserve its specific character in spite of changing conditions and real or virtual threats: more precisely, it involves the permanence of traditional schemas of language, culture, associations, identity and national or religious practices, allowing for changes that are judged to be acceptable" (http://scottforrest.pbworks.com/f/nrf2004.pdf)

staff who have been in the area for a long time, government extension officers, local and regional government officials, consultants or academics who have undertaken social studies in the area, etc.

Scenario analysis **(Toolbox Section T7.3)** is helpful for assessing trade-offs between community objectives; stakeholder workshops, focus group discussions, and other PRA techniques are also useful for assessing negative impacts. Users should consult Catley et al. (2008), Pretty et al. (1996), and CARE (2002) for further information on participatory methods for impact assessment.

# SIA Stage 5: Identification of Indicators – What Should We Measure?

## Introduction

The selection of appropriate indicators is at the heart of SIA. Building on the results of the causal model analysis, this responds to the basic question – what should be measured in order to show that the social benefits are happening, or, since they are longer-term phenomena, are very likely to happen if certain assumptions hold true? We also need to think of a systematic way of checking for negative impacts if things do not go according to plan.

Although indicator selection is not specifically mentioned in the CCB Standards, **Criterion CM1.1** instructs project proponents to "use appropriate methodologies to estimate the impacts on communities", while **Criterion CM3.1** instructs them to "develop an initial plan for selecting community variables to be monitored". These 'community variables' can be interpreted as monitoring indicators. The 'initial plans' have to be developed into full community or social impact monitoring plans within six months of the project start-up date or within 12 months of CCB Validation as stipulated by **Criterion CM3.3**. Further guidance on the selection of indicators is provided in **Toolbox Section T9**.

## General Principles

An indicator is "a quantitative or qualitative factor or variable that provides a simple and reliable means to measure how well a desired outcome, value or criterion is being achieved or fulfilled" (OECD/DAC, 2002). Another definition is that of "a measurable entity related to a specific information need such as the status of a target, change in a threat, or progress toward an objective" (Conservation Measures Partnership, 2007). Therefore, the first requirement for identifying indicators is to achieve clarity as regards the desired results or objectives, as emphasized in SIA Stage 3. These desired results or objectives can be short-, medium or long-term (equivalent to outputs, outcomes and impacts).

Choosing indicators involves determining what indicators are best for assessing progress towards achieving a set of desired outcomes, targets or objectives. When a desired social result is written as a target or objective, deciding on the appropriate indicator becomes much easier. The key question to ask is: "What would we expect to see, if the objective is in the process of being, or has been, achieved?" Each objective or target should have at least one indicator.

## Using the Causal Model to Identify Indicators

The causal model provides the best basis for selecting (positive) outcome or impact indicators since attribution, or cause-and-effect, is factored in. As noted by USAID (2006), it makes little sense to use indicators that do not capture the key linkages in a project's underlying casual chain. Secondly, using the causal model encourages cost-effectiveness, since it focuses the monitoring exercise on the most important change factors.

It was noted in SIA Stage 3 (Step C of developing the causal model) that it is desirable to identify SMART objectives (or targets) for each output, outcome, and impact. These objectives/targets become the basis for identifying the indicators. Depending on the objective and on how easy it is to observe, as well as on the factors or variables that make up the linkages or assumptions between the outcomes and impacts (and between the outputs and outcomes), the indicator could either be the SMART objective itself or the linkages/assumptions between them (since these are likely to reflect a change process).

Provided that the "if-then" statements of Step E (in SIA Stage 3) are carefully constructed and verified with stakeholders, it should be relatively easy to identify the indicators: for example, *if* the income resulting from the sale of carbon credits (the outcome) is spent on children's education, improved health and more nutritious food, *then* there should be a positive poverty outcome (*impact*). In this case the outcome indicator would be the net carbon income per family, and the impact indicator would be the proportion of it spent on poverty-related goods or services.

The terms 'output indicator', 'outcome indicator' and 'impact indicator' help us to distinguish the different levels of the project logic. Some possible examples of output, outcome, and impact indicators are presented in Table 3. Indicators can be quantitative or qualitative – in practice it is good to have a mixture of both.

**Table 3: Examples of Possible Output, Outcome and Impact Indicators**

| Indicator Types | Possible Examples |
|---|---|
| Output Indicators (Social) | - numbers of jobs created<br>- number of people trained in X<br>- number of trees planted |
| Outcome Indicators (Social) | - number of households adopting an alternative livelihood activity<br>- % or absolute increase in household income from carbon payments<br>- reduction in hours spent by women collecting firewood or water<br>- % of carbon landholders agreeing that they get a fair payment (this implies a viable project and an effective benefit-sharing system)<br>- % of women on the project stakeholder committee<br>- number of people who understand the basic accounts of community costs and benefits (this is a measure of governance transparency) |
| Impact Indicators (Social) | - % reduction in infant mortality or % of household living on < $1 per day (these are poverty indicators);<br>- % of local population changing from negative to positive attitude to forest conservation measures;<br>- a reduction in domestic violence (this could be based on annual discussions with female focus groups, possibly using a participatory scoring method) |

## Alternative Approaches to Indicator Selection

A popular approach to indicator selection in sustainable development type projects has been the use of 'sustainability framework' approaches derived from the Sustainable Livelihoods Framework (SLF). The indicators derived from this approach are based on a set of livelihood or system 'assets' or 'capitals' and are linked to the sustainability of the livelihood or system over time. The basic SLF model defines five main 'capitals' or livelihood assets that provide the basis of people's livelihood choices; the SLF approach also involves an analysis of the dynamic between people's capital assets, their 'vulnerability context', and the policy, legal and institutional framework – this dynamic determines livelihood sustainability[11] and poverty outcomes (see Figure 5). The five capital assets[12] are:

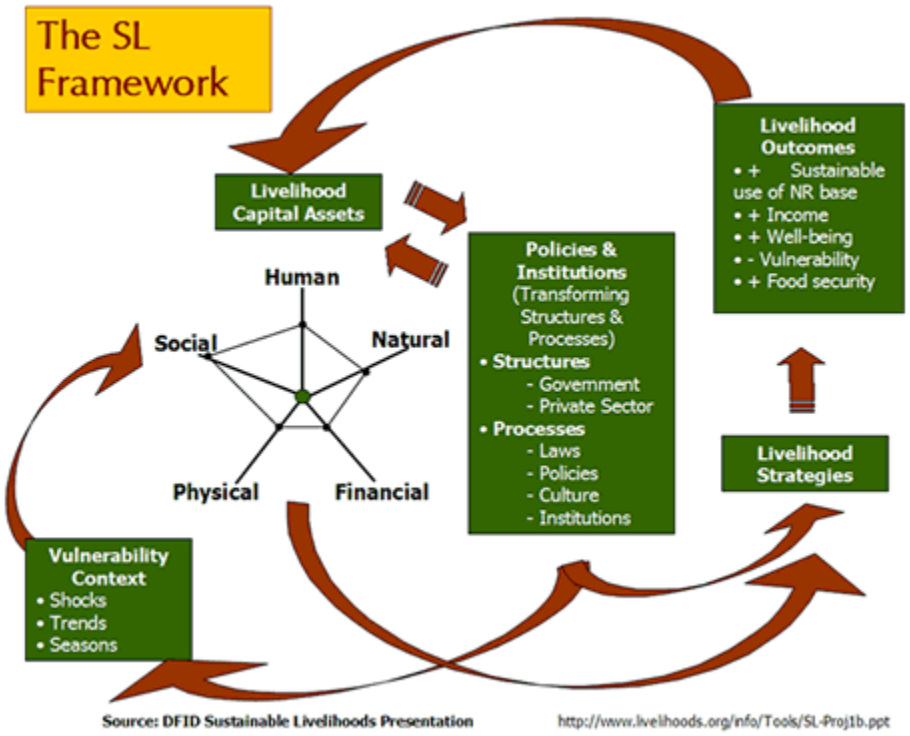
- Human capital, e.g., education, formal, and informal skills, health;
- Natural capital, e.g., natural resources such as farming and grazing land, forests and non timber products, wildlife, and water;
- Physical capital, e.g., shelter, infrastructure such as roads and transport, buildings, irrigation systems, and productive assets such as seed, tools, livestock, fishing gear and other farm and processing equipment;
- Financial capital, e.g., cash income and remittances, credit, savings in kind and cash;
- Social capital, e.g., formal and informal institutions (including markets), associations (e.g., water users, savings and credit, etc.), extended families, and local mutual support mechanisms.

The SLF therefore provides a basis for selecting indicators that will contribute to project and stakeholder sustainability, as well as human rights aspects. Users are directed to Schreckenberg et al. (2010) for a more thorough analysis of the SLF for in the context of SIA.

In the context of carbon finance, the most prominent application of this approach is the Social Carbon Methodology (SCM) developed by the Ecology Institute in the Brazilian Amazon (www.socialcarbon.org). The SCM covers the whole project cycle management process, with impact assessment treated as integral to the design phase. The SCM is linked to the increasingly used Social Carbon Standard; some projects, especially in Brazil, are aiming for validation under both the SCM and the CCB Standards since this would put them in a very strong market position.

[11] A livelihood can be considered sustainable when it "can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base" (Chambers and Conway 1992).
[12] Some SLF variants add 'political capital' to the other five capital assets.

**Figure 5: Sustainable Livelihoods Framework Diagram**




*Source: http://www.chronicpoverty.org/uploads/assets/files/DFIDSLFrameworkdigram.doc*

There are six capitals or 'resources' in the SCM approach – natural, financial, human, social, carbon, and biodiversity resources. The SCM lists a number of approved indicators of the sustainability of resource use for each of the capitals. A key difference with other approaches to indicator selection is that project developers are provided with a list of indicators to choose from. Another consideration is that, as with other sustainability framework approaches, attribution is not factored into indicator selection, and so it would be advisable to combine it with a 'matching methods' approach and/or participatory methods for assessing attribution (see **Toolbox Sections T4** and **T6.2**). **Toolbox Section T3.3** provides more detail on the SCM.

We also recommend that projects include some indicators identified by local stakeholders and/or based on local measures of well-being as described by Catley et al. (2007), Pretty et al. (1996) and CARE (2002). It is common sense to ask local or primary beneficiaries how they view the success of a project based on their own criteria, which may be different how outsiders view it. Other possible frameworks for indicator selection include rights-based approaches and 'value chain analysis', but it was felt that these are probably not cost-effective or appropriate for carbon projects (for further discussion of them see Schreckenberg et al., 2010).

## Criteria for Indicator Selection

We have already established that the indicators should be as SMART as possible, that is they should be:

- **S**pecific: the indicator should be defined and understood by all stakeholders in the same way
- **M**easurable: ideally it should be possible to record quantitative as well as qualitative changes in the indicator
- **A**chievable: the indicator should be realistic in terms of the cost and complexity of data collection
- **R**eliable: the indicator should give consistent answers or numbers
- **T**ime-bound: the indicator should have a time limit attached

Apart from this well-known list, other important criteria are:

- The cost of associated data collection methods
- Attribution: how useful is the indicator for revealing whether the social benefits are 'additional'?
- Stakeholder participation in indicator selection and measurement
- Sensitivity: the indicator should change in proportion to changes in the condition or variable which it is designed to monitor

The cost of data collection is covered in more detail in SIA Stage 6. One way of keeping costs in check is to use 'proxy' indicators which are less precise, and sometimes less objective, but easier to record or observe. This is where the principle of 'appropriate imprecision' can be invoked – it is far more important to show convincing evidence that a positive change is occurring than to try and precisely quantify the magnitude of any change.

Participatory assessment of the achievement of targets or objectives is both a common sense (the stakeholders know best how the project has affected them) and cost-effective approach. It is even possible to generate numerical estimates of stakeholder perceptions of whether a social (or environmental) variable has improved due to the project, as elaborated in **Toolbox Sections T6.2** and **T6.3**. Further guidance on indicator selection is provided in **Toolbox Section T9**.

## Indicators for Negative Impacts

Indicators can also be selected for the likely negative impacts, although regular and well-documented stakeholder discussions, in which stakeholders are encouraged to raise concerns and problems, may be sufficient, if negative impacts are highly unlikely according to the project type and design.

The key question is: "What would we expect to see, if a negative impact is in the process of happening or has happened?" For most negative outcomes or impacts, there will be symptoms or signs to make one suspect a deeper problem, for example, allegations of inequity in benefit-sharing mechanisms, people not turning up to meetings, arguments, conflicts, disunity, desertion from the project, an

unexpected increase in local land or food prices, etc. If such signs are detected, participatory methods such as those described by Catley et al. (2007) should be used to try and detect the underlying problem and what has caused it.

An approach favored in the 'Open Standards for the Practice of Conservation' (Conservation Measures Partnership, 2007) is the 'threat-rating approach'. This involves identifying the threats to achieving social benefits and then identifying the symptoms or 'observable change processes' that would indicate an increased risk of the threat (these would naturally become the indicators). The threats are rated or ranked using a set of well-defined criteria based on the scope, severity, and irreversibility of the problem.

## Recommended Methods

As discussed above, the recommended approach to indicator selection in this Manual is the causal model approach or its variants (for more details see **Toolbox Section T2)**. Use of sustainability framework approaches for indicator selection is further explored in **Toolbox Section T3**; the Landscape Outcomes Assessment Methodology (Aldrich & Sayer, 2007)) in particular appears to be a practical, participatory, and cost-effective method for indicator selection (**Toolbox Section T3.4**). Data collection methods for measuring indicators are covered in SIA Stage 6 and **Toolbox Sections T5** and **T6.**

# SIA Stage 6: Developing the Community Monitoring Plan – How Should We Measure (the Indicators)?

## Introduction

Once it has been determined *what* should be measured, the next task is deciding *how* to measure it. Most indicators can be measured in more than one way, so the decision on what methods to select will depend on a range of factors including:

- The intended users of the monitoring results
- The appropriate level of accuracy and precision
- The extent to which a method is participatory
- Transparency and simplicity of method
- The cost (related to several of the above)

The CCB Standards do not mandate the use of any particular monitoring or data collection method, but rather make reference to a list of "Potential Tools and Strategies" in Appendix A of the CCB Standards. Users are referred to **Toolbox Sections T5** and **T6** for more detailed guidance on data collection methods.

## When Should a Monitoring Plan Be Developed?

The development of a monitoring plan is an important component of project design and should ideally be done when the project activities are planned. This will help ensure that monitoring is integrated into project implementation in the most efficient way. The CCB Standards, however, do allow some flexibility as to when the complete monitoring plan must be completed. **Criteria CL3.2, CM3.2** and **B3.2** state that the full monitoring plan must to be developed within 6 months of the project start date or within 12 months of project validation. These provisions were made in recognition of the fact that the development of a full monitoring plan can be costl, and that some projects use validation to attract the investment needed to complete the monitoring plan.

Project developers should be aware that this flexibility also carries an element of risk. When a full monitoring plan is included in the Project Design Document (PDD) at the time of validation, it is evaluated by the auditor to determine, if the planned monitoring will be sufficient to demonstrate that the project has delivered the expected climate, social, and environmental benefits. When the full monitoring plan is not included in the PDD, the project runs the risk of discovering at the time of verification that monitoring was inadequate. This could result in a failed verification audit.

A project that develops its monitoring plan after validation may contract an auditor to obtain a separate opinion on the quality of the monitoring plan, but this will likely result in a higher total cost than having the monitoring plan evaluated as part of the validation audit.

## Intended Users of Monitoring Results

A monitoring plan is designed to collect information about how a project is being implemented and about the outcomes and impacts that it produces. A range of groups has a stake in the results, including: the communities affected by the project; the implementation team that seeks to improve project management; the government; the project funders; and others.

These groups may be interested in different types of information. The government or project funders may be more interested in aggregated socioeconomic measures, while local communities will be more interested in understanding how individual villages, or groups within a village, have been affected. When designing a monitoring plan, the information requirements of all stakeholders should be considered in a way that efficiently addresses the different needs.

## Accuracy and Precision

Accuracy is the degree to which a measurement is correct, while precision is a way of describing how fine the measurement is. Monitoring methods should obviously aim to produce accurate results, for example, about whether an impact is positive or negative, or about which groups of stakeholders are affected by project activities.

Achieving the appropriate level of precision, however, is more subjective. As discussed earlier, projects should strive for enough precision to be credible, but should avoid investing large amounts of time and resources to gain unnecessarily high levels of precision. Participatory approaches to monitoring, for example, may not yield a high degree of precision, but can result in information that is easily understood and reflects the real opinions of community members.

## Participatory Monitoring Methods

As with all aspects of project design and implementation, participation of local stakeholders is essential in order to take advantage of local knowledge and to ensure that decisions are made with the full and informed consent of local people. **Toolbox Section T6** describes some of the most relevant participatory monitoring or data collection methods. These methods result in information that is more meaningful to local people and tend to be more cost-effective than household surveys or sophisticated methods requiring more specialized expertise.

For example, a practical and participatory method for measuring attribution is contained in the Participatory Impact Assessment (PIA) set of methods (Catley et al., 2007) described in **Toolbox Section T6.2.** This involves listing all the possible contributory or causal factors of an observed social outcome or impact; deciding which ones are project factors and which are non-project factors: getting project stakeholders to rank and score all the factors; and finding the total score of the project factors, so that it is possible to say what proportion of the effect was due to project factors (according to this group of stakeholders).

Project developers should be aware, however, of the cost of participatory methods for local people and should also be cognizant that their effective use requires skilled facilitation and analysis. Where the methods are highly time-consuming or otherwise expensive for community members, alternative methods and/or appropriate compensation should be considered. It is also important to triangulate the results of a particular method by another method (which may also be a participatory method).

## Transparency and Simplicity

The results of a monitoring method must be easily understood by the intended user. Methods that require sophisticated analysis may be appropriate for researchers, funders, or other stakeholders, but may be ineffective for local community members. If the monitoring method cannot be easily understood then the results are likely to be mistrusted.

## Cost

Some measurement methods require large amounts of time and expensive expert involvement. Higher-cost methods may produce a higher level of precision, but will not necessarily yield results that are more useful. Project developers should choose methods that are good enough to produce useful information. As the CCB Standards require only that "appropriate methodologies" be used, a project developer may choose lower precision and lower cost methods as long as the reasons for choosing these methods are clear.

It may be paradoxical, but an expert consultant hired when the monitoring plan is being developed can help the project select appropriate low-cost monitoring and research methods that save the project money in the long run.

## Summing Up

The development of a monitoring plan, including which methods to use, and where and when they will be applied, is as much an art as science. Where possible, monitoring plans should be prepared when the project is being designed. A range of factors like community participation, cost, and the appropriate level of precision, should be considered in the light of the requirements of the different users of monitoring data.

# SIA Stage 7: Data Analysis, Reporting and Stakeholder Verification – What Should We Do with the Data?

## Introduction

All of the effort of designing and implementing a monitoring plan is only useful once the gathered information is synthesized into a form that is easily understood by the local stakeholders and other users of the monitoring data, including the auditors that will evaluate the project at the time of verification. SIA Stage 7 describes what to do with the data so that it can be used in a verification audit and can contribute to improved project management.

## Data Analysis

Each monitoring method produces information that must be summarized. For some methods this requires sophisticated statistical methods, and in others it can be done in simple and intuitive ways. In either case, a clear description of how the data was collected and analyzed must be presented, together with the summarized results. This transparency is essential if the monitoring results are to be convincing.

## Reporting

The CCB Standards require that projects disseminate both the monitoring plan and the results of monitoring through the internet and in locally appropriate ways (**CL3.2, CM3.2**, and **B3.2**). Prior to the verification audit, a project proponent must also prepare a report that describes how a project has met the CCB Standards, and this must include the monitoring results. This report must be made public for a 30 day comment period prior to the verification audit.

## Stakeholder Verification

The reporting requirements of the CCB Standards are designed to promote a high level of transparency and accountability. Project proponents have an ethical responsibility to share monitoring results with affected stakeholders, but the dissemination of results is also an opportunity to review the data collection process and to check with the stakeholders whether the results seem to accurately reflect reality.

The CCB Standards do not specify how stakeholder verification should be carried out, so each project proponent will have to identify the appropriate stakeholder groups as well as the best ways of disseminating the monitoring results. During verification, the auditor will check whether all stakeholders have had the opportunity to review and comment on the monitoring reports.

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## Glossary of Terms[13]

*Activity:* The practical, time-bound actions that the project carries out to deliver the desired project outputs.

*Adaptive Management:* The use of regular monitoring and evaluation in order to adjust or modify actions so that long-term goals can be obtained. It is a systematic process for continually improving and learning from the outcomes (results) of inputs and activities.

*Assumptions:* Hypotheses about factors or risks which could affect the progress or success of a project's attempt to achieve its goals.

*Attribution:* Ascribing a causal link between observed (or expected to be observed) changes and a specific intervention.

*Baseline Information:* Analysis of data describing the situation before the implementation of a project (within an enterprise or region), against which progress can be assessed or comparisons made.

*Causal model or theory of change:* A theory-based evaluation tool that maps out the logical sequence of means-ends linkages underlying a project and thereby makes explicit both the expected results of the project and the actions or strategies that will lead to the achievement of results.

*Data Collection Tools:* Methodologies used to identify information sources and collect information during an evaluation.

*Evaluation:* The systematic and objective assessment of an on-going or completed project, program or policy, and its design, implementation and results.
Note: The aim is to determine the relevance and fulfillment of objectives, development efficiency, effectiveness, impact, and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both participants and managers (of projects).

*Impacts:* Positive and negative long-term or durable effects resulting from the implementation of a project, directly or indirectly, intended or unintended.

*Impact driver:* The significant factors that, if present, are expected to contribute to the ultimate realization of project impacts and that are within the ability of the project to influence.

*Indicator:* Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement to reflect the changes connected to a project, or to help assess the performance of an organization.

[13] Main sources: GEF Evaluation Office & Conservation Development Centre, 2009; ISEAL, 2010; OECD/DAC, 2002.

*Input:* The physical, human, financial, and capital resources applied to a project and to its component activities.

*Intermediate state:* The transitional conditions between the project's outcomes and impacts that must be achieved in order to deliver the intended impacts.

*Monitoring:* A continuing process that uses systematic collection of data on specified indicators to provide indications of the extent to which objectives are being achieved.

*Outcome:* The likely or achieved short-term and medium-term results from the implementation of a project that contribute to the project's impacts (positive or negative).

*Outcomes-impacts pathways:* The means-ends relationships between project outcomes and the intended impacts that describe the specific conditions or factors that are required in order to achieve impacts.

*Output:* The products, capital goods, and services that result directly from project activities and that the project must deliver in order to achieve the project outcomes.

*Results:* The outputs, outcomes, and impacts (intended or unintended, positive and negative) resulting from the implementation of a project.

*Stakeholders:* Agencies, organizations, groups, or individuals who have a direct or indirect interest in the project or its evaluation.

*Strategy:* The major types of intervention employed by a project in order to deliver the intended impacts.