

Development of a social impacts monitoring system for the Seima Core Protection Forest REDD+ Demonstration Site

Interim report



Wildlife Conservation Society Cambodia Program, May 2012

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Cover picture: In 2012, with assistance from the conservation project in Seima Protection Forest, the indigenous village of Andoung Kraloeng became one of the first in the country to receive a communal land title. This will strengthen their tenure security in the face of several external threats whilst improving forest protection and biodiversity conservation outcomes. A community leader is pictured celebrating the new title with the His Excellency the Senior Minister for the Ministry of Land Management, Urban Planning and Construction.

Section 1 Overview

Introduction

WCS is providing technical assistance to the FA to develop a site-based carbon offset project under the Reduced Emissions through Avoided Deforestation and Degradation (REDD) framework. Credits will be generated in the Core Area of the Seima Protection Forest, where the two organisations already cooperate on a long-term conservation project. It is a designated national REDD demonstration site. The Project Document (PD) will be submitted for validation against the two leading voluntary market standards, the Voluntary Carbon Standard (VCS), which focuses on quantifying emission reductions, and the Climate, Community and Biodiversity (CCB) Standard, which focuses on assuring social and environmental co-benefits.

Conservative projections suggest the site can generate emissions reductions of 300,000 tCO₂ per year beyond baseline levels. There are significant co-benefits expected as the site has high biodiversity and livelihood values. CCB requires that these positive impacts be both predicted in advance and demonstrated in practice through monitoring. This interim report describes the process of designing the social elements of that monitoring system. The final report will describe the full monitoring system and the results of baseline data collection. The design will be incorporated into site-specific validation for the voluntary carbon market and is also intended to generate lessons learned for the design of the national system.

The preparation of this report was funded by UNDP under Micro-Capital Agreement Project Number D0078446. It forms an element of the UN-REDD programme of support for Cambodia’s National REDD Readiness process. The conceptual work covered by this report has been led by WCS Cambodia in partnership with the Forestry Administration. We acknowledge the extensive technical inputs from CENTDOR (the Centre for Development Orientated Research), Henry Travers (Imperial College, London) and Dr Sarah Milne (Australian National University).

CCB Requirements

Requirements of the CCB Standard are set out in the tables below. CM1 and CM2 set the performance standards for impacts on and off site, while CM 3 sets the standards for the monitoring system itself. Some of the requirements refer to data such as situation assessments produced under other criteria. The standards also include detailed footnotes clarifying terms and suggesting suitable methodologies, which are not reproduced here.

Standard CM1 Net positive community impacts

Concept	Indicators (= Criteria)
The project must generate net positive impacts on the social and economic well-being of communities and ensure that costs and benefits are equitably shared among community members and constituent groups during the project lifetime.	1. Use appropriate methodologies to estimate the impacts on communities, including all constituent socio-economic or cultural groups such as indigenous peoples (defined in Criterion 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 defensible 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 under Criterion G2). The difference (i.e., the community benefit) must be positive for all community groups.
Projects must maintain or enhance the High Conservation Values (identified in G1) in the project zone that are of particular importance to the communities’ well-being.	2. Demonstrate that no High Conservation Values identified under Criteria G1.8.4-6 will be negatively affected by the project.

CM2. Offsite Stakeholder Impacts

Concept	Indicator
The project proponents 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.	The project proponents must: <ol style="list-style-type: none"> 1. Identify any potential negative offsite stakeholder impacts that the project activities are likely to cause. 2. Describe how the project plans to mitigate these negative offsite social and economic impacts. 3. Demonstrate that the project is not likely to result in net negative impacts on the well-being of other stakeholder groups.

CM3. Community Impact Monitoring

Concept	Indicator
The project proponents must have an initial monitoring plan to quantify and document changes in social and economic well-being resulting from the project activities (for communities and other stakeholders). The monitoring plan must indicate which	1. Develop an initial plan for selecting community variables to be monitored and the frequency of monitoring and reporting to ensure that monitoring variables are directly linked to the project’s community development objectives and to anticipated impacts (positive and negative).

<p>communities and other stakeholders will be monitored, and identify the types of measurements, the sampling method, and the frequency of measurement.</p> <p>Since developing a full community monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being validated against the Standards. This is acceptable as long as there is an explicit commitment to develop and implement a monitoring plan.</p>	<p>2. Develop an initial plan for how they will assess the effectiveness of measures used to maintain or enhance High Conservation Values related to community well-being (G1.8.4-6) present in the project zone.</p> <p>3. Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.</p>
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This report aims to fulfill Indicators 1 and 2 under Criterion CM3 – the initial plans for monitoring community impacts and the maintenance of High Conservation Values. The full monitoring plan is also well advanced and so it is expected that the full monitoring plan will be completed at or before the time of validation.

Sources of guidance

The design of the monitoring system is closely linked to the design of the project itself, which is set out in the draft PD. The CCB Standards provide a detailed framework for designing a project, and hence provide a basic structure for the monitoring too. CCB and other organizations have produced a detailed guidance document on Social and Biodiversity Impact Assessment for land-based carbon projects¹ (hereafter, ‘the CCB manual’). This manual incorporates all relevant requirements of the CCB Standards, is based on the concepts of the Open Standards for the Practice of Conservation² and provides a sensible, efficient and comprehensive approach to monitoring based on widely agreed principles. Although it is not mandatory to follow this guidance, it seems likely to become a standard text and a key reference for auditors examining a project.

The new Seima REDD project is essentially an expansion of the existing, long-term conservation project at the site, which began in 2002 and has been partly successful, but due mainly to funding constraints it operates at too small a scale to ensure full and permanent reduction of greenhouse gas emissions over the whole site. Hence the design of interventions and monitoring has been an iterative process throughout that period and was not, initially, built around a REDD framework. Since REDD planning began in 2008 we have reviewed existing systems and adjusted or added to them to ensure that all VCS and CCB requirements are met. The Seima conservation project was designed using the Living Landscapes framework³, which was in turn one of the approaches that contributed to the design of the Open Standards. From 2010 onwards Version 1 of the CCB Manual was also available from 2010 onwards. Since these sources are so closely connected, we find that most of what has been done in the past is consistent with the current guidance in Version 2 of the manual. Therefore we describe our process and results in the framework now suggested by the CCB manual, in a way that we hope will be helpful to future project developers.

The CCB manual does not cover the assessment and monitoring of formally defined social High Conservation Values (HCVs) in any detail, so for these aspects we used a separate manual⁴ which does not specifically relate to REDD projects but is easily applied to them. In practice we found that the main Seima project is already designed in such a way as to protect social HCVs and monitor their condition, so few, if any, activities had to be added to the project to meet these CCB requirements.

¹ Richards, M. and Panfil, S.N. (2011) *Social and Biodiversity Impact Assessment (SBIA) Manual for REDD+ Projects: Part 1 – Core Guidance for Project Proponents. Version 2*. Climate, Community & Biodiversity Alliance, Forest Trends, Fauna & Flora International, and Rainforest Alliance. Washington, DC.

² Conservation Measures Partnership (2007) *Open Standards for the Practice of Conservation. Version 2.0*. www.conservationmeasures.org/wp-content/uploads/2010/04/CMP_Open_Standards_Version_2.0.pdf.

³ www.wcslivinglandscapes.com

⁴ ProForest (2008) *Good Practice Guidelines for High Conservation Value assessments*. ProForest, Oxford, UK.

Framework for impact assessment and monitoring

There are two broad approaches to impact assessment. The CCB manual recommends that it is not cost-effective or necessary to design statistically robust formal experiments, since these require large, matched control populations that do not receive project interventions. Instead it is recommended to monitor project impacts in relation to a hypothetical model of how the project activities are expected to cause changes at the site. If monitoring shows that the predicted positive impacts are occurring (e.g. low levels of landlessness) and the various processes within the model are occurring as predicted (e.g. active community land tenure groups are being set up with REDD funds, attempted land grabs are being detected and prevented), then this is considered sufficient evidence that the model is correct and the benefits can be attributed to the project investments. The hypothetical model is referred to in the CCB Manual as a *Theory of Change* but the Seima project uses the equivalent term *Conceptual Model*. A conceptual model has been in use at Seima since 2006⁵ and was updated in 2010-2011 as part of the PD writing process.

The CCB Manual proposes a seven step process, summarised below. An iterative approach, as used in Seima, is recommended so results from later steps can be used to go back and refine some of the earlier steps. Stages 1-4 have largely been completed during previous phases of REDD project development at Seima. Section 2 of this report summarises the results of those stages as essential background for understanding the monitoring system described in Section 3 (Stages 5-6).

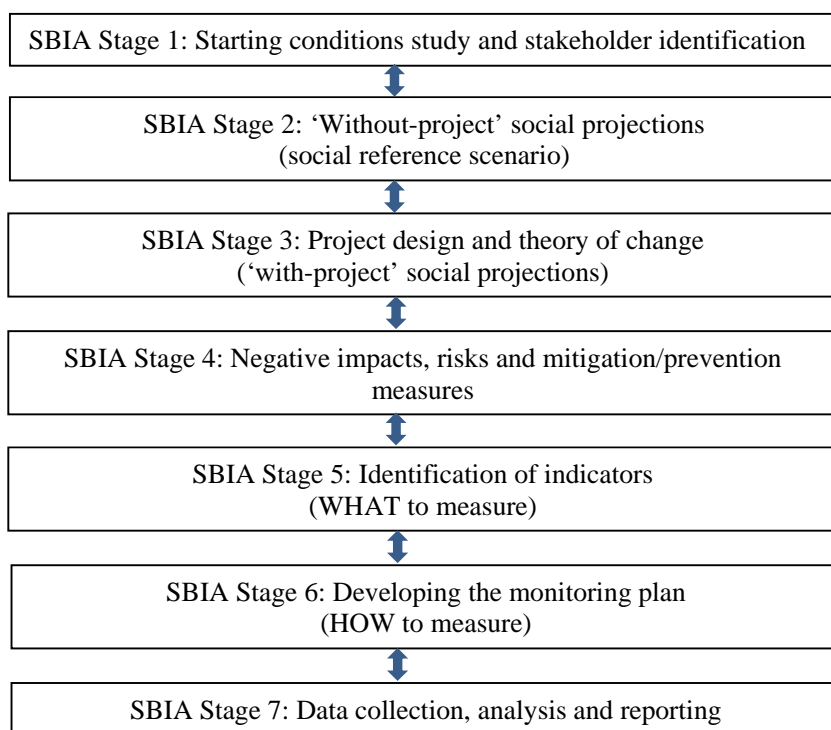


Figure 1 The stages in developing a Social Impact Assessment and monitoring plan (Adapted from the CCB manual, Figure 2)

⁵ WCS/FA (2006). *Vision for the Seima Biodiversity Conservation Area*. Wildlife Conservation Society - Cambodia Program and Forestry Administration. Phnom Penh, Cambodia.

Section 2 Situation analysis and project design

Stage 1 Starting conditions study and stakeholder identification

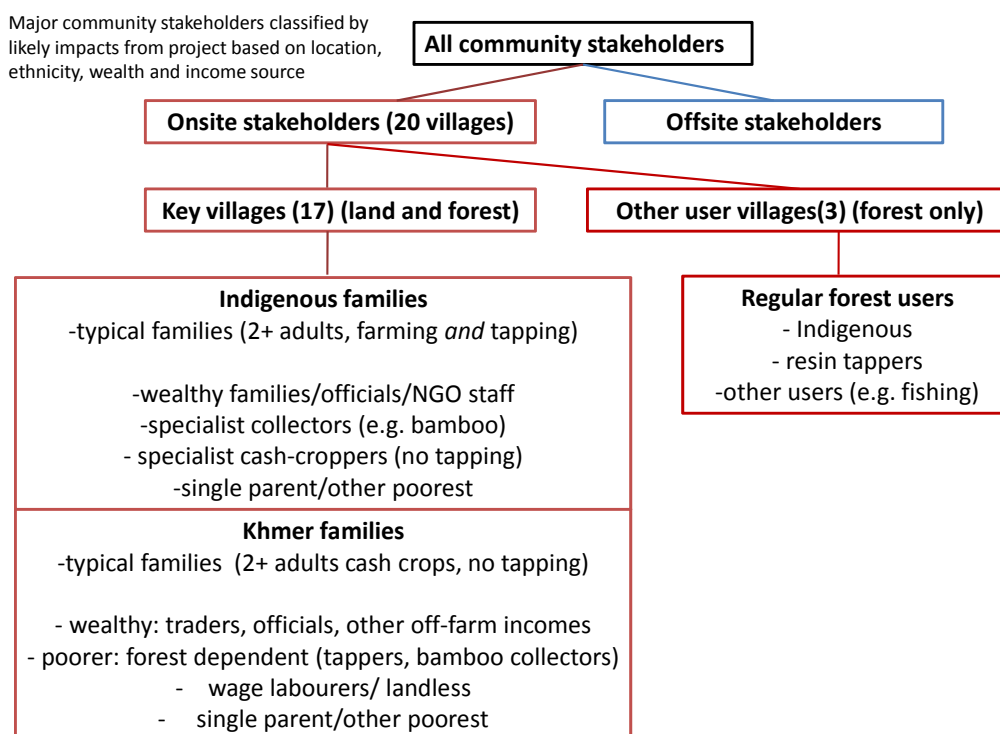
Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Description of socio-economic conditions at project start; identification of all stakeholder groups that might be affected by the project	Social: Participatory Rural Appraisal (PRA) 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 and G1.6, G3.8

The socio-economic conditions at project start are set out in the relevant sections of the draft PD. The analysis draws on the extensive previous studies that have been done in and around the SPF, and the results of earlier community consultations at village and landscape level. It covers social and cultural features of the communities, their main economic activities and the legal framework for natural resource use. The very great livelihood importance of both agricultural land and forest products is demonstrated for most social groups, confirming these two aspects as valuable focal areas for the project.

An analysis of the key stakeholders on and off site was also conducted, to ensure that the benefits and impacts are assessed for each group. The classification shown below was used as a basis for analysing the interests of each group, their relationships and their relative significance in relation to achieving project goals. This contributes to two later steps, the design of interventions (Stage 3) and the analysis of the distribution of risks and benefits (Stages 5-6). It also provides a useful framework to ensure that the full range of interests are represented during consultations.

Figure 2 Stakeholder classification used for the SPF REDD project



The analysis indicates that there are two groups of offsite stakeholders, neither of which needs to be included in the monitoring. One group benefits from the downstream environmental benefits of the project (e.g. protection of migratory fish); it is probably not cost-effective to seek to measure these distant and diffuse benefits, and as they are positive it is conservative and acceptable to disregard them in monitoring. The second group represents people with no traditional claim to the area wishing to visit for purely illegal activities such as land-grabbing, logging and hunting. Under the CCB framework it is not necessary to quantify or monitor the benefits or costs to this group.

During this stage it is also recommended to develop a 'project vision statement' and a set of 'focal issue statements' summarizing key themes for analysis and action. These correspond to the goal and targets set out in the conceptual model (see Figure 3).

The HCV assessment was conducted primarily as a desk exercise. To validate the results for the social values (5 and 6) a consultation was taken with project staff and key community leaders in December 2010⁶. The key finding was that the HCVs were essentially the same as the main conservation targets of the overall project (Table 1).

Table 1 Summary of social HCVs identified in the SPF Core Area

High Conservation Value	Details
<i>HCV5: Forest areas fundamental to meeting basic needs of local communities</i>	Approximately 12,500 people live in 20 villages using the SPF Core Area, of whom a large proportion depend on forest resources. Collection of liquid resin from forest trees, mainly <i>Dipterocarpus alatus</i> is the most important source of cash income for remote communities, providing income that is essential for purchasing rice and other basic needs. The fisheries of the rivers and pools of the SPF Core Area are of fundamental importance as the main protein source for most households. Other important resources include rattan, bamboo, honey and medicinal plants.
<i>HCV6: Forest areas critical to local communities' traditional cultural identity</i>	19 of the 20 villages are predominately ethnic Bunong who are animist with very strong cultural links to the forest. Culturally important areas ('spirit forests', 'spirit pools' and grave forests) have been mapped for 9 villages and are known to exist for most other communities.

Stage 2 'Without-project' social projections

Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Projection of social conditions and impacts assuming there is no project and focusing on the variables and outcomes most likely to be affected	Social: Stakeholder focus group discussions, problem flow diagrams, scenario analysis, etc.	Concept G2 (especially Criteria G2.1, G2.2 and G2.4), Concepts GL1, 2, 3

The CCB Standards require a prediction of changes *attributable to project activities*, whilst livelihood changes attributable to other factors are considered part of the baseline, without-project scenario. The CCB Manual recommends that the no-project scenario *'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 project-related land uses.'* This is a valuable distinction, as overall livelihood trends in the project zone will to a large extent mirror a wide variety of changes in the broader Cambodian and regional economy that are difficult to predict, such as population growth, employment, commodity markets and the effects of globalization, levels of Foreign Direct Investment, the political and security situation,

⁶ Pollard, E. H. B. and Evans, T. D. (2012) *Seima Protection Forest High Conservation Values Assessment*. Wildlife Conservation Society Cambodia Program.

natural disasters, levels of corruption and so on. Expected future changes in the climate are also very hard to predict with enough accuracy to inform management decisions. Following the rationale above it can be assumed that for most or all of these factors the trajectory of change will be the same in the with-project and without-project scenarios, and so they are not directly relevant to identifying net project impacts. The conceptual model helps us to concentrate on those factors that we may be able to change, relative to their baseline trajectories.

The projection of social conditions in Seima in the without-project case is set out in detail in the relevant section of the draft PD and summarized in Annex 1. It is structured around the threats that make the targets in the Conceptual Model difficult to achieve (Figure 3). Four direct threats are identified (in pink) and five indirect threats (in grey). The main links between threats and targets are shown by arrows to form causal chains. The model is based in part on consultations with a wide range of stakeholders, together with a series of analytical studies at the site. Since many factors cannot be modeled quantitatively with current data, especially over such a long period, the projected scenario is qualitative and focuses on those aspects which can confidently be predicted to improve or worsen significantly, and for which the project will attempt interventions.

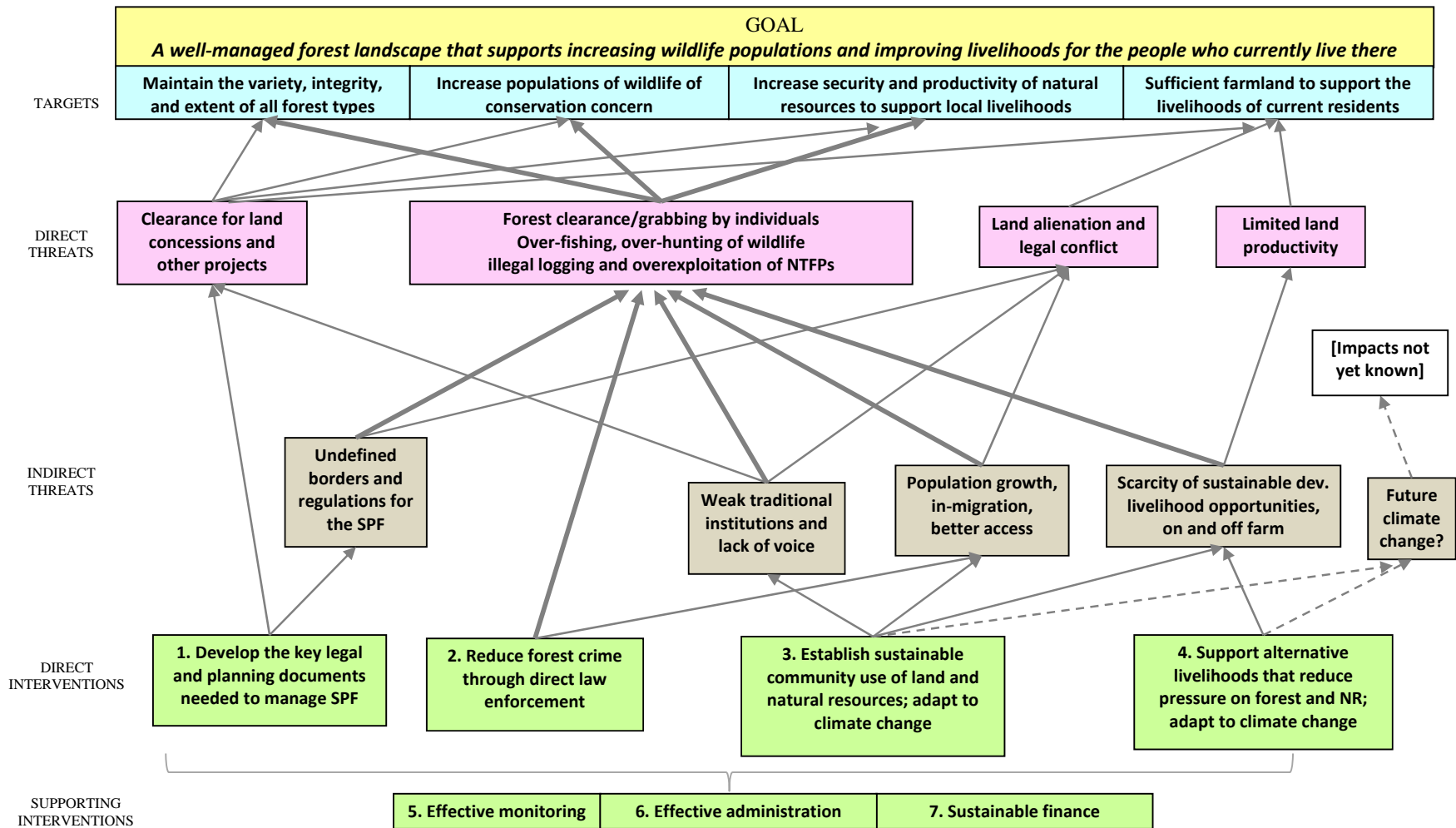
Stage 3 Project design and conceptual model

Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Description of how the project proponents and stakeholders think the social objectives will be achieved, and identification of key assumptions between the project outputs, outcomes, and impacts	Theories of change developed by representative stakeholder groups	Concept G3 (especially Criteria G3. 1, G3.2, G3.3,G3. 5, G3. 7 and G3. 8), CM1

To design the project we took the threat/target chains from Stage 2 and proposed a set of activities to control these threats. The four main interventions of the project are linked directly to these nine threats, and backed up by three supporting interventions (Figure 3, interventions in green).

Figure 3 Conceptual model for the SPF Core Area REDD Project



The HCV report cited earlier shows that the interventions listed in the conceptual model are also sufficient to maintain or enhance the identified social HCVs (Table 2). The specific actions under each intervention are listed in Annex 2.

Table 2 Management interventions to maintain or enhance social HCVs in the SPF

High Conservation Value	Corresponding project targets	Interventions
<i>HCV5: Forest areas fundamental to meeting basic needs of local communities</i>	<p>Increase security and productivity of natural resources to support local livelihoods</p> <p>Maintain the variety, integrity, and extent of all forest types</p>	<ul style="list-style-type: none"> ○ Land-use planning at a village level to protect forest resources ○ Development of community natural resources management rules to encourage more sustainable use of resources ○ Livelihood support activities to reduce the pressure to harvest resources unsustainably. ○ Law enforcement to protect forest and aquatic resources from external pressures ○ Appropriate zoning of the SPF that recognises NTFP collection
<i>HCV6: Forest areas critical to local communities' traditional cultural identity</i>	<p>Increase security and productivity of natural resources to support local livelihoods</p> <p>Maintain the variety, integrity, and extent of all forest types</p>	<ul style="list-style-type: none"> ○ Village level land-use planning to map and protect spiritual sites ○ Law enforcement to protect spiritual sites from outside threats ○ Appropriate zoning of the SPF that recognises spiritual sites

Stage 4 Negative impacts, risks and mitigation/prevention measures

Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Analysis of possible negative social impacts and cost-effective mitigation measures	Social: Analysis of results chains, stakeholder focus groups, community stakeholder dialogue, expert review	Criteria G3.5, G5.4, G5.5, G5.6, and Concepts CM1,CM2

The CCB manual recommends that an initial assessment of potential negative impacts should be done in relation to the conceptual model. However, it goes on to state that ‘A characteristic of negative impacts is that they tend to be unexpected and indirect and may not be picked up in a theory of change analysis. It is therefore essential to complement the [analysis] with constant and open dialogue with stakeholder groups. This can be by means of open-ended discussions with stakeholder focus groups (such as women, NTFP collectors, etc.) using a checklist of questions drawn up according to the project context.’

In early meetings we attempted to discuss the potential negative impacts of the project using an open, brainstorming approach but found this unproductive, perhaps because the project has many elements and so participants found it difficult to immediately think of or rank potential problems. Therefore a different, more structured approach was used. The main direct activities of the project were listed under the four broad headings in the Conceptual Model and workplan and then for each of these we presented a preliminary assessment of risks, affected stakeholders and mitigation measures, generated by the project team. Participants in the various meetings were asked to comment on this preliminary

analysis and change or add to it as required. This was found to be a more productive approach. This impacts assessment was done formally in one multi-community workshop on 8 December 2010⁷ and then separately in each village during Phase 1 of the FPIC process during 2011. We also took account of other comments raised during the three phases of the FPIC process. The identified risks and mitigation measures are given in Annex 2 and will form the basis of a checklist for monitoring negative impacts.

Unexpected negative impacts may also occur during project implementation, and so the monitoring plan is designed to detect those as well, through the focus groups mentioned above. The checklist forms a good basis for this, since it requires participants to consider every aspect of the project in turn.

⁷ Sopha Sokhun Narong (2010) *Assessment workshop on environmental and social impact of project implementation of the Seima REDD Carbon Project, 08 December 2010*. WCS Cambodia Program, Phnom Penh.

Section 3 Design of the monitoring framework

Stage 5 Identification of indicators

Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Identification of monitoring indicators to measure progress in achieving the desired social and biodiversity outcomes and objectives	Social indicators may be based on the <i>theory of change</i> , the sustainable livelihoods framework or, in some systems, generic indicator lists	Concepts CM3, B3

The CCB manual notes that it is desirable to have indicators at all levels in the hierarchy from output to impact. It also notes that ‘An ideal indicator from the perspective of showing attribution is one that measures an ‘intermediate state’ or assumption between an outcome and an impact, or between an output and outcome, since this most clearly shows progress along a causal chain.’

The preceding stages allow us to describe a clear set of objectives at different levels in the conceptual model. These include:

- the overall goal for better forest management and improved livelihoods
- four specific targets
- nine key threats that must be reduced
- a set of activities that must be implemented effectively

Monitoring of outputs from activities is straightforward and is not discussed in detail here. The project implements an annual work planning process which lists expected outputs and provides a clear structure for monitoring through the annual reports.

For each of the higher level objectives we have identified an expected without-project trend and an intended with-project trend (Annex 1). We have attempted to make these fit the SMART criteria (Specific, Measureable, Achievable, Relevant and Time-bound). This clarity enables us to select suitable indicators that show whether the results occur as expected (Annex 1). In practice it is important to have a mixture of qualitative and quantitative indicators. The qualitative indicators are especially suitable for conducting community-based evaluations, which are a required element under CCB. The indicators themselves need to be Specific, Measureable, Achievable, Relevant, Reliable and Sensitive to change.

Four main techniques will be used to collect these data:

- 1) Many of the qualitative measures of success will be collected during **periodic consultation workshops** at village or landscape level. These workshops will also allow a review of any negative impacts arising, including unexpected impacts (see Stage 4 and Annex 1). Wherever possible, these discussions will be combined with other project activities (e.g consultations for the annual work planning process), so as to minimise the financial burden of monitoring. The consultation process is also expected to improve communication between stakeholders and therefore strengthen project implementation.
- 2) Many of the quantitative measures will be collected during a statistically robust **household-level survey** (HHS) across all 20 target villages to be conducted periodically (probably every 2 years) and the **rapid demographic survey** at settlement level, which is also conducted every 2-3 years. These surveys are stand-alone activities that involve additional effort and cost but they are essential to effective monitoring
- 3) Some quantitative measures (e.g. on concession impacts) will be derived from **GIS** mapping activities such the remote sensing analyses of forest cover trends.

- 4) Some measures on the results of specific interventions (e.g. adult education or ecotourism) will be derived from the work of **local NGO partners** implementing their own activities. This has limited incremental cost since this kind of monitoring is best practice for such projects in any case.

We have identified at least one indicator, and sometimes more than one, for each of the results in this table. This is a comprehensive approach, but may be found to be too ambitious, in which case the design will be scaled back. The test period through 2012 will help to identify which indicators are both essential and achievable.

One challenging conceptual aspect of the design is how best to address the requirement of the CCB Standard to consider the distribution of costs and benefits between stakeholders. The stakeholder analysis in Stage 1 allows us to identify the main groups of stakeholders and the indicators chosen can mostly be broken down according to these classes, either during data collection (for participatory approaches) or during data analysis (for quantitative datasets). For example, it should be possible to look at trends in resin tree ownership, landlessness or agricultural productivity in relation to a variety of different parameters (ethnic group, family size, reported occupation etc) that determine whether a specific family belongs to a vulnerable stakeholder group or not.

The methods required for monitoring social HCVs are set out in the HCV report and summarised in Table 3. These methods are fully incorporated into the overall monitoring program and do not need special or additional measures.

Table 3 Monitoring requirements for social HCVs

High Conservation Value	Indicators	Monitoring Method
HCV 5: Basic needs	Resin productivity, bamboo sustainability, fish catches	Demography monitoring, socio-economic monitoring protocol (HHS)
HCV 6: Cultural values	Maintenance of spirit forest & pools; involvement of indigenous communities in management planning	Socio-economic monitoring, remote sensing, threats monitoring.

The CCB Standard allows a project to be certified at ‘Gold Level’ if it meets additional requirements for biodiversity, livelihood or climate change adaptation goals. This may attract additional buyers or improve the price of any credits sold. The possibility of the Seima project being able to demonstrate livelihood achievements at the Gold level will be assessed during the analysis of the results being collected under Stage 6 (see below).

Stage 6 Developing the monitoring plan

Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Design of the community and biodiversity monitoring plans, including data collection methods for measuring indicators	Social: PRA, surveys, key informants, Basic Needs Survey (BNS), Participatory Impact Assessment (PIA, and other data collection methods	Concepts CM3, B3

At the time of writing, Stage 6 is underway.

The GIS- based systems and the design of the rapid demographic survey are fully developed already.

The HHS has been developed by WCS and CENTDOR, with the participation of two external researchers, on the basis of a similar pilot survey conducted in 2007. A 2-day workshop was

conducted to refine and test the design with a stratified group of local community members, and full scale implementation is now underway with an aim to sample 30 families per village across the 20 target villages. The survey includes a range of indicators, including a Basic Necessities Survey, the first that has been attempted in North-east Cambodia to our knowledge.

The participatory monitoring approaches will be developed stepwise over the coming few months, linked to other project events. One important step will be the annual work planning meeting, to be held in late June 2012. Prior to this meeting, a 1-2 day community stakeholder feedback session will be held, to inform work planning by the team. This will be structured around a review of some of the indicators in Annex 1, with participants invited from a cross-section of relevant villages.

The refinement of social indicators collected by local NGOs will primarily take place during late 2012 and in 2013.

Stage 7 Data collection, analysis and reporting

Summary of stage from CCB Manual:

Description	Main Methods / Activities Proposed	Relevant CCB Concepts and Criteria
Data collection, analysis, and reporting, including verification of SBIA results with stakeholders	Stakeholder meetings and feedback workshops	Concepts CM3, B3

This stage will be completed in the second half of 2012.

Annex 1 Summary of the conceptual model, projections and indicators

	Projection without project	Impacts on	Projection with project	Indicator (Quant)	Method*	Indicator (Qual)	Method*
<i>CCB Core Standards</i>							
Social and economic well-being of communities; distribution of costs and benefits	Static or decline for vulnerable stakeholders; improve for less vulnerable stakeholders	Primary impact on vulnerable stakeholder groups	Improving for all stakeholder groups, including vulnerable groups	Basic Necessities Survey, basket of assets and income measures for each stakeholder group	HHS	Reported trends	Partic.
	<i>[Note: vulnerable stakeholders are indigenous households, forest-users, landless households, woman-headed households and households affected by concessions]</i>						
Net positive impacts on biodiversity	Severe declines with extinction of many vulnerable species	Biodiversity values, users of biodiversity, forest health	Biodiversity values increasing, return to natural levels	Index based on forest cover and wildlife population trends	Synthesis of target data	-	
Conceptual Model Target							
Maintain the variety, integrity, and extent of all forest types	Declining extent and quality of all vegetation types	Biodiversity values; livelihoods of vulnerable stakeholders	Stabilized cover of natural vegetation, improving quality	Forest cover monitoring and other parameters required for carbon accounting	GIS		
Increase populations of wildlife of conservation concern	Declining populations of most globally threatened species	Global public goods; cultural losses; dietary contribution; ecotourism projects; health of forest ecosystem	Populations increased to carrying capacity	Population sizes for 4-6 target species	transect surveys and dung DNA	Presence and distribution	Sightings, camera-trapping
Increase security and productivity of natural resources to support local livelihoods	Declining security, abundance and productivity of harvested natural resources and availability of clean water	Especially on vulnerable stakeholders	Security, abundance and productivity of key resources maximised; clean water freely available to all communities	resin tree ownership, reported harvest levels of other forest products and fish	HHS	Reported trends	Partic.
Sufficient farmland to support the livelihoods of current residents	Increase in landlessness, static or decreasing agricultural productivity	Especially on vulnerable stakeholders	Landlessness among the poor low and stable; agricultural productivity and sustainability increasing	land ownership measures (landlessness, ave holdings); rice sufficiency / crop sales	HHS, +LNGOs	Reported trends	Partic., LNGOs

Conceptual model threat							
Clearance for land concessions and other projects	Increasing loss to concessions	Especially on vulnerable stakeholders	Losses to concessions minimised and halted	Mapping of affected areas	GIS	Reported trends	Partic.
Undefined borders and regulations for the SPF	Continuing weaknesses in protection	Especially on vulnerable stakeholders	Borders, zones and regulations clearly defined and enforced	Mapping of demarcation, legal documentation	GIS	-	-
Population growth, in-migration, better access	Continued high in-migration, increased competition; increased conflict	Especially on vulnerable stakeholders	Population growth lower than in reference area; net in-migration negligible; access to forest areas fully controlled	Net in-migration negligible; access to forest areas fully controlled	HHS, Demog	Reported trends	Partic.
Forest clearance/grabbing by individuals; over-fishing, over-hunting of wildlife; illegal logging and overexploitation of NTFPs	Widespread over-harvesting /clearance	Especially on vulnerable stakeholders	Illegal activities (clearance, hunting, over-fishing, hunting, logging, NTFP harvest) at very low levels	Patrol information (MIST system), independent surveys (e.g. snares, stumps), Defor mapping	WCS/FA	Reported trends	Partic.
Land alienation and legal conflict	Alienation, forced sales, Uncertain tenure due to expansion outside agreed land-use plans	Especially on vulnerable stakeholders	Land alienation ceases, no land illegally occupied and subject to conflict	# of reported incidents	HHS, systematic recording of conflicts and legal tenure	Reported trends	Partic.
Weak traditional institutions and lack of voice	Seriously declined	Especially on vulnerable stakeholders	Traditional and new community institutions effective, cultural cohesion improved	Levels of involvement	HHS, committee records	CBO effectiveness self-assessment	Partic.
Limited agricultural productivity	Decline, stagnation or slow improvement	All onsite communities	Agricultural productivity increasing	Agricultural productivity indicators (e.g. t/ha)	HHS (all HH); LNGOs (target families)	Reported trends	LNGOs
Scarcity of sustainable dev. livelihood opportunities, on and off farm	Continued dependence on limited number of often unsustainable livelihoods	All onsite communities	Increasing diversity of viable, sustainable livelihood opportunities	# of liv activities; size of reported income sources	HHS (all HH); LNGOs(target families)	Reported trends	LNGOs
Climate change	Difficulty adapting to changes in availability of wild-harvested resources and productivity of farming systems	Especially on vulnerable stakeholders	Increased capacity to adapt to climate-driven changes	-	-	Reported trends	Partic., LNGOs

Note: table includes both social and biological indicators, for completeness

*Method:

HHS = Household survey

Partic. = WCS/FA-led consultation workshops

LNGOs = Local NGOs' own monitoring

Demog = Rapid demography survey

GIS = Mapping approaches such as remote sensing

Annex 2 Preliminary assessment of potential negative impacts

	Expected positive impacts	Potential negative impacts	Most vulnerable stakeholders	Assessment and mitigation of threats
Sub-Objective #1: Key legal and planning documents for the Seima Protection Forest and surrounding landscape are approved and implemented				
Action #1: Support for sub-decree maintained among senior levels of government and general public	recognition and protection of traditional/existing livelihoods, reduced risk from concessions, infrastructure, migration etc, improved status of key natural resources, REDD finance for livelihood improvement	restriction of development options	poorest, women, IP	in fact there is no significant restriction on options for community development beyond those in national law mitigation of any possible restriction of options comes from increased investment in alternative and improved livelihoods
Action #2: Management plan approved and implemented (including zonation and regulations)	clearer definition of existing rights and responsibilities, strengthen capacity of FA to implement activities/manage threats, improved status of key natural resources	zonation will potentially exclude traditional harvest activities in certain areas (to be defined through consultation)	IP, forest-dependent Kh users	this is best considered voluntary displacement of customary uses,: further FPIC will be sought for this step, risks will be countered by careful design and piloting, compensation for resin tree users, targeted provision of alternative livelihoods
Action #3: Mondulkiri Provincial Corridors strategy implemented (maintaining links to other forests)	increased involvement of provincial authorities in supporting SPF management and controlling threats	none	-	
Action #4: Develop partnerships with the private sector (to reduce impacts by companies)	reduced negative impacts from company activities	none	-	
Action #5: Develop international cross-border dialogue	reduced cross-border impacts (esp logging, illegal hunting)	none	-	
Action #6: Adaptive Management system (regular public reviews and workplans)	SPF management responds to changes in community needs/attitudes	undue representation of certain groups	-	structured, balanced forum for participation
Sub-Objective #2: To reduce forest and wildlife crime by direct law enforcement				
Action #1: Enforce wildlife, forest and protected area laws and sub-decree through patrols	effective control and deterrence of illegal activities by outsiders and community members; improved security of land and forest resources; improved general law and order situation	inappropriate prevention of legal uses, selective enforcement, over-harsh punishment, unclear rules	IP, poor Kh users	legal awareness, monitoring, training, enforcement strategies, demarcation/regulations, grievance system, regular staff reviews, strong responses to any corruption found

Action #2: Establish and implement law enforcement monitoring framework	increased effectiveness of Action#1	physical risks to informants from criminals	non-powerful people	voluntary participation, incentives not enough to motivate undue personal risk taking, confidentiality rules, adaptive management, grievance system
Action #3: Ensure sufficient patrol buildings, equipment and staffing	increased effectiveness of Action#1	buildings on community land		obtain community approval before building or seek other locations
Action #4: Ensure sufficient patrol personnel capacity	increased effectiveness of Action#1	none	-	
Action #5: Liaise with Provincial, National and other authorities	increased effectiveness of Action#1	none	-	
Action #6: Establish Community-based Patrolling and/or monitoring system	additional control and deterrence of illegal activities by outsiders and community members; improved security of land and forest resources; improved general law and order situation; jobs for community members	risk from offenders; conflict within community; legal liability	IP, poor Kh users	manage through community groups; voluntary participation, participatory approaches; coordinate with local government; adaptive management; develop cautiously to resolve legal issues
Sub-Objective #3: Land and resource use by all core zone communities is sustainable				
Action #1: Form and maintain land-use agreements with communities	increase tenure security, improve management of threats, build community cooperation/strengthen traditional systems and cultural norms	communities allocated too little land; process causes/revives conflicts or changes social dynamics; marginalised groups not accounted for	IP, poor Kh users	participatory process, safeguards for all village members; grievance process; local gov. oversight
Action #2: Legally register communities and users	increase tenure security, improve management of threats, build community cooperation/strengthen traditional systems and cultural norms	CBO formation gives too much power to some groups; individual registration excludes some users unfairly	IP, poor Kh users	participatory process (= national process for ICC, local process for user cards), safeguards for all village members; grievance process; local gov oversight
Action #3: Indigenous land titling in appropriate communities	further increase tenure security and define boundaries of carbon ownership	communities allocated too little land; process causes/revives conflicts or changes social dynamics; marginalised groups not accounted for	IP, poor Kh users	participatory process, safeguards for all village members; grievance process; local gov oversight
Action #4: Demarcation of the Forest Estate; reforestation of recent clearance	improve management of threats, clarify extent of rights (reduce risk of conflict with the law); reforestation sequesters carbon, increases supply of forest products/biodiversity and	communities allocated too little land; process causes/revives conflicts or changes social dynamics; marginalised groups not accounted for; reforestation in wrong areas	IP, poor Kh users	participatory process (see WCS/FA/MoE 2009), safeguards for all village members; grievance process; local gov oversight
Action #5: Conduct extension and communication activities	support all other activities	none	-	
Action #6: Liaise with Commune Council and other agencies	support all other activities	none	-	
Action #7: Engage with civil society organisations operating in the Project area	support all other activities	none	-	
Action #8: Ensure the capacity of Project	support all other activities	none	-	

staff is sufficient				
Sub-Objective #4: Support for alternative livelihoods that reduce deforestation				
Action #1: Establish sustainable timber harvests in buffer zone areas	bring forest under sustainable management, control threats, alternative and improved livelihoods	damage from logging, corruption/social conflict, inequitable benefit-sharing; business liabilities	IP, women, elderly	FA approval of management plan/ESIA; financial safeguards; participatory approach, oversight by local authorities
Action #2: Establish community-based ecotourism	alternative and improved livelihoods; incentives to change behaviour and control threats	environmental and social impacts from tourists, corruption/ social conflict, inequitable benefit-sharing; business liabilities	IP, women, elderly	environmental screening/monitoring; code of conduct for tourists and agents; participatory approach, oversight by local authorities
Action #3: Support agricultural extension activities	alternative and improved livelihoods, incentives to change behaviour and control threats	inequitable benefit-sharing, corruption	IP, women, elderly	participatory approach, oversight by local authorities
Action #4: Provide infrastructure support linked to conservation activities	alternative and improved livelihoods, incentives to change behaviour and control threats	inequitable benefit-sharing, corruption	IP, women, elderly	participatory approach, oversight by local authorities
Action #5: Develop NTFP-based livelihood projects	bring forest under sustainable management, control threats, alternative and improved livelihoods	over-harvest, corruption/social conflict, inequitable benefit-sharing; business liabilities	IP, women, elderly	FA approval of management plan/ESIA; participatory approach, oversight by local authorities
Action #6: Develop and manage a system to share carbon benefits	alternative and improved livelihoods, incentives to change behaviour	corruption/social conflict, inequitable benefit-sharing	IP, women, elderly	participatory approach, oversight by local and national authorities
Action #7: Improve literacy and numeracy	increase capacity to participate in other activities; increase off-farm livelihood opportunities	inequitable benefit-sharing	IP, women, elderly	participatory approach, oversight by local authorities
Sub-Objective #5: Collect information on long-term ecological and social trends				
Action #1: Monitoring of trends in forest cover	assess threats, measure success	none		
Action #2: Monitoring of key wildlife species	assess threats, measure success	none		
Action #3: Socio-economic and demography monitoring	assess threats, measure success/negative impacts	none		
Action #4: Facilitate research that will benefit the management of the SPF	inform adaptive management	unethical research		ensure ethical review by source institution
Action #5: Ensure sufficient staff capacity is available	support other activities	none		
Sub-Objective #6: Effective administrative, accounting and logistical procedures are in place				
Action #1: Evaluation and feedback on staff capacity, effectiveness and training	support other activities	none		

needs				
Action #2: Develop and maintain effective management, administrative and accounting systems	support other activities	none		
Sub-Objective #7: Long-term financial security				
Action #1: Develop and Implement REDD project	ensure documentation, consent and approvals to allow sale of carbon credits	covered elsewhere		
Action #2: Establish Eastern Plains Trust Fund	ensure transparent long-term sustainable management of funds	none		
Action #3: Continued support of a wide range of donor partners	maintain funding for baseline levels of protection	none		
Action #4: Increase use of commune development funds for project activities	reduce need for external funding	none		system already has many safeguards