ICIMOD Manual 2017/13

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FOR MOUNTAINS AND PEOPLE

Developing Sub-National REDD+ Action Plans: A Manual for Facilitators

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ICIMOD Manual 2017/13

Developing Sub-national REDD+ Action Plans: A Manual for Facilitators

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Acronyms and Abbreviations

AF	Agroforestry
CBFM	Community Based Forest Management (Nepal)
CFUG	Community Forest User Group (Nepal)
DADO	District Agriculture Development Office (Nepal)
D&FD	Deforestation and forest degradation
DFO	District Forestry Office (Nepal)
DFSCC	District Forest Sector Coordination Committee (Nepal)
DFSP	District Forest Sector Plan (Nepal)
DRAP	District REDD+ Action Plan (Nepal)
EW	Expert group Workshop (in SRAP process)
FAO	Food and Agriculture Organisation of the United Nations
FPIC	Free Prior and Informed Consent
GHG	Greenhouse Gas
GIS	Geographic Information System
HH	Household
ICIMOD	International Centre for Integrated Mountain Development
IFM	Improved forest management
IP	Intervention Package
LIP	Livelihoods Improvement Plan
MAI	Mean Annual Increment
M&E	Monitoring and evaluation
MRV	Measurement, Reporting and Verification
NGO	Non-government organisation
NTFP	Non-timber forest product
NRAP	National REDD+ Action Plan (of Vietnam)
NS	REDD+ National Strategy
OP	Operational Plan
PAMs	Policies and Measures
PES	Payments for Ecosystem Services
PRAP	Provincial REDD+ Action Plan (Vietnam)
PSP	Permanent Sample Plot
REDD+	Reducing Emissions from Deforestation and Forest Degradation 'plus' SFM, conservation and enhancement of forest carbon stocks
RIA	REDD+ Implementation Agreement
SIS	Safeguards Information System
SFM	Sustainable Forest Management
SMART	Specific, Measurable, Achievable, Realistic, Time-bound (indicators)
SRAP	Sub-national REDD+ Action Plan
SW	Stakeholder Workshop (in SRAP process)
UNEP-WCMC	United Nations Environment Programme World Conservation Monitoring Centre
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations Collaborative Programme on REDD+
VDC	Village Development Committee (Nepal)
WG	Working group (in SRAP workshops)

Executive Summary

This manual has been prepared for facilitators working with planners and multiple stakeholders in the development of sub-national plans for Reduced Deforestation and forest Degradation (REDD+). It is based on idea that sub-national REDD+ planning is essential for operationalising a REDD+ National Strategy. The manual is based on pilot Sub-national REDD+ Action Plan (SRAP) experiences in Vietnam and Nepal over the period 2014-2016. It is written in a prescriptive style, but the methodology is generic and can be adapted to the country context and requirements.

The SRAP methodology and process is based on international best practices, including the 'theory of change' approach to planning, monitoring and impact assessment. An advantage of the theory of change approach is that it is conducive to stakeholder participation. Multiple stakeholder workshops are central to the SRAP process.

The proposed SRAP process has five main stages: PREPARE, ANALYSE, PLAN, MONITOR and BUDGET. The ANALYSE stage (B) takes place mainly in two multiple stakeholder workshops with 20–30 participants: the 'Problem Analysis Workshop' and the 'Solution Analysis Workshop'. The remaining stages (C-E) take place in smaller, and more technical, expert workshops, except for the 'Safeguards Analysis Workshop' which can take place in a third multi-stakeholder workshop.

At the end of the five stages, the SRAP should be ready for approval or modification by sub-national and national decision makers, and can be incorporated into the REDD+ National Strategy[1] (NS). The participatory and results-based planning methodology, including a robust monitoring protocol, should facilitate donor support and investment in the SRAP.

It is important to note that the SRAP process is not presented as an alternative to more technical or quantitative planning approaches; rather, the aim is for the SRAP process to complement, and integrate with, more technical or quantitative planning methods. For example, spatial analysis is integral to the SRAP process. In Vietnam, spatial analysis teams were involved in several SRAPs with support from the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). This resulted in online publication of guidance on spatial analysis in the SRAP process (Hicks et al., 2016).

Experiences from pilot initiatives under the UN-REDD Programme of Vietnam (five Provincial REDD+ Action Plans) and Nepal (one District REDD+ Action Plan) over the period 2014 to 2016 indicate that the SRAP process can contribute to cost-effective Sub-national REDD+ planning since it will help:

- Identify strategic REDD+ intervention packages: the emphasis of the theory of change approach on cause and effect analysis helps identify REDD+ interventions that respond strategically to the deforestation and forest degradation (D&FD) drivers and barriers to scaling up forest carbon enhancement activities;
- Identify risks and benefits, and corresponding risk mitigation and benefit enhancement measures, that can enhance the multiple benefits of REDD+, minimise trade-offs between objectives, and facilitate compliance with the REDD+ safeguards;
- Facilitate adaptive management by monitoring progress towards REDD+ goals, including the mitigation of safeguard risks: a key characteristic of indicators identified with the theory of change approach is their capacity to show 'attribution' (cause and effect);
- Increase stakeholder ownership and transparency in the REDD+ planning process, thereby strengthening the SRAP's social sustainability;
- Facilitate donor support and investment in the SRAP;
- Develop national capacity to apply a generic planning methodology in a range of natural resource management contexts.

[1] This is called the National REDD+ Action Plan (NRAP) in Vietnam.

As with any participatory approach, however, the quality of outputs from the SRAP process depends on the quality of participation. Quality can be achieved through investing in the training of workshop facilitators, undertaking systematic preparatory work to ensure workshop participants are as well informed as possible, holding relatively short workshops (two days is the maximum for a multiple stakeholder workshop) and through careful selection of workshop facilitators and participants.

Introduction

REDD+ and the Rationale for Sub-National Planning

Reducing Emissions from Deforestation and Forest Degradation (REDD+) is a global initiative, developed as part of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD+ addresses climate change by compensating forested countries for the cost of reducing net greenhouse gas (GHG) emissions from the forest sector. National REDD+ strategies will reduce GHG emissions by lowering the rate of deforestation and forest degradation (D&FD) and/or increasing GHG removals from the atmosphere by the enhancement of forest carbon stocks (the + of REDD+) through afforestation (including agroforestry), reforestation, natural forest restoration (including enrichment planting), and improved forest management (IFM) of natural or planted forests.

The main difference between REDD+ and previous attempts to promote sustainable forest management (SFM) and conservation is that countries must demonstrate successful outcomes through measurable reductions in the level of GHGs in the atmosphere in order to be eligible for financial incentives. In other words REDD+ involves 'result-based payments.' This means that beneficiary countries from international REDD+ payments must compare their actual GHG emissions and removals with a benchmark known as the Forest Reference Level (FRL). At the same time, a REDD+ strategy must maintain and, if possible, enhance the multiple benefits of forests, and therefore help meet the REDD+ 'Cancun safeguards' mandated in the UNFCCC process.

A REDD+ National+ Strategy (NS)[2] is mandatory under the UNFCCC for any country wishing to receive international REDD+ payments; it is vital because inappropriate policies, measures and governance arrangements, across several sectors, must be addressed for REDD+ to be successful. In most countries there are significant sub-national differences in forest ecosystems and D&FD drivers that make it vital that REDD+ planning and implementation happens at the sub-national and local level.

A Sub-national REDD+ Action Plan (SRAP) responds to the challenge of operationalising a NS and its component policies and measures (PAMs) by tailoring them to address locally specific D&FD drivers and barriers to expanding (forest carbon) enhancement activities. Sub-national planning also allows local stakeholder participation in the planning process, which will increase the transparency, ownership and social sustainability of REDD+ programmes. If possible SRAPs should be undertaken after a detailed NS process so that the SRAP process can build on and complement the national PAMs, and because this sequencing should result in a more streamlined and cost-effective SRAP process while ensuring the overall national coherence of REDD+.

Finally it should be noted that while this manual uses the generic term 'Sub-national REDD+ Action Plan' (SRAP), each country will have a different name for SRAP according to the regional government unit; thus in Nepal, the SRAP equivalent is the District REDD+ Action Plan (DRAP), and in Vietnam it is the Provincial REDD+ Action Plan (PRAP).

[2] In Vietnam the NS is called the National REDD+ Action Plan (NRAP).

Introduction to Manual

This is a manual for designing a Sub-national REDD+ Action Plan (SRAP). It is particularly orientated to facilitators[3] of the planning process. It uses a prescriptive style, but the underlying methodology is generic and can be adapted to country context and experience. This manual builds on an earlier Sub-national REDD+ planning approach ('Participatory Sub-national Planning') developed for Vietnam (M. Richards & Swan, 2014) and pilot SRAP experiences in Vietnam and Nepal from 2014 to 2016: draft Provincial REDD+ Action Plans (PRAPs) were developed in Vietnam for Binh Thuan (the first pilot study in 2014), Ca Mau, Ha Tinh, Bac Kan and Lao Cai Provinces, and in Nepal it was piloted through development of a draft District REDD+ Action Plan (DRAP) for Chitwan District.

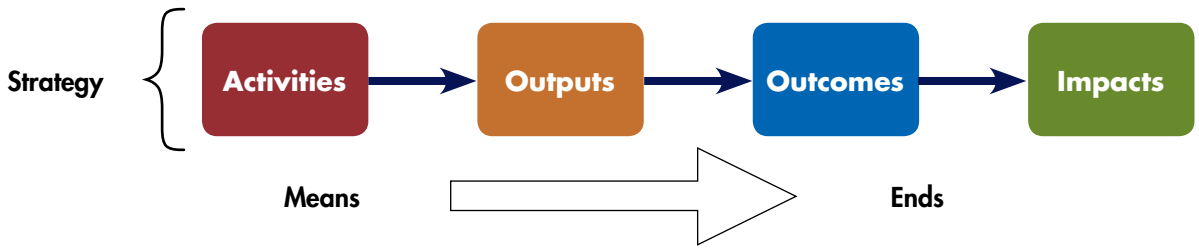
It is important to note that the SRAP process is not presented as an alternative to more technical or quantitative planning approaches; rather it is meant to complement, and be integrated with, more technical or quantitative planning methods. For example, spatial analysis has an integral role in the SRAP process. In Vietnam, multi-stakeholder workshops in several provinces were helped by spatial analysis teams supported by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). This also resulted in online publication of guidance on using spatial analysis in the SRAP process (Hicks et al., 2016).

'Theory of Change' Basis of SRAP Process

The SRAP process is based on the widely used[4] 'theory of change' approach to programme and project design, monitoring and impact assessment. 'Theory of change' may sound complicated but is no more than a plan or hypothesis of how a project or intervention (such as a REDD+ programme) can achieve its intended objectives. All programmes and projects have a theory of change, but it is not always made explicit. As with any theory, there is no guarantee it will work. All plans are based on cause-and-effect assumptions that the planners hope will hold true. Therefore in the theory of change approach there is strong emphasis on cause-and-effect analysis through the use of 'problem trees' and 'solution trees'.

As indicated in Figure 1, the theory of change approach to planning involves setting out and tracking the links, assumptions and risks of implementing a set of strategies and activities (or interventions) in order to achieve the desired outputs, outcomes and impacts. The theory of change approach therefore encourages strategic and cost-effective REDD+ interventions.

Figure 1: **Establishing causal linkages with theory of change analysis**



[3] There are two levels of facilitators: higher level or SRAP process facilitators and working group (WG) facilitators. The role of the former is to help guide the process, including designing and coordinating the workshops, as well as in processing, synthesising and reporting in close coordination with the core SRAP team. The role of the WG facilitators is to facilitate participation of the multi-stakeholder workshop participants organised into small WGs

[4] The theory of change approach is the basis of the 'Open Standards for the Practice of Conservation' (Conservation Measures Partnership 2007), which is widely used by environmental NGOs for planning, monitoring and evaluation biodiversity conservation programmes, and of the 'Poverty Impact Assessment' approach (OECD 2007). See also: http://www.cgiar-ilac.org/content/theory-based-evaluation; http://monitoring.cpwf.info/background/theory-of-change; and Vogel 2012.

A key advantage of the theory of change approach is that it is intuitive and easy to understand, and is therefore conducive to stakeholder participation. A participatory theory of change approach was developed by Forest Trends and other NGOs for social and biodiversity impact assessment of REDD+ projects (Richards & Panfil, 2011), and has been adapted to various other natural resource management contexts. It was endorsed by a review of methods for assessing social impacts of REDD+ programmes (Kathleen, 2013). However the quality of participatory theory of change analysis, and its outputs, depends on various factors, especially:

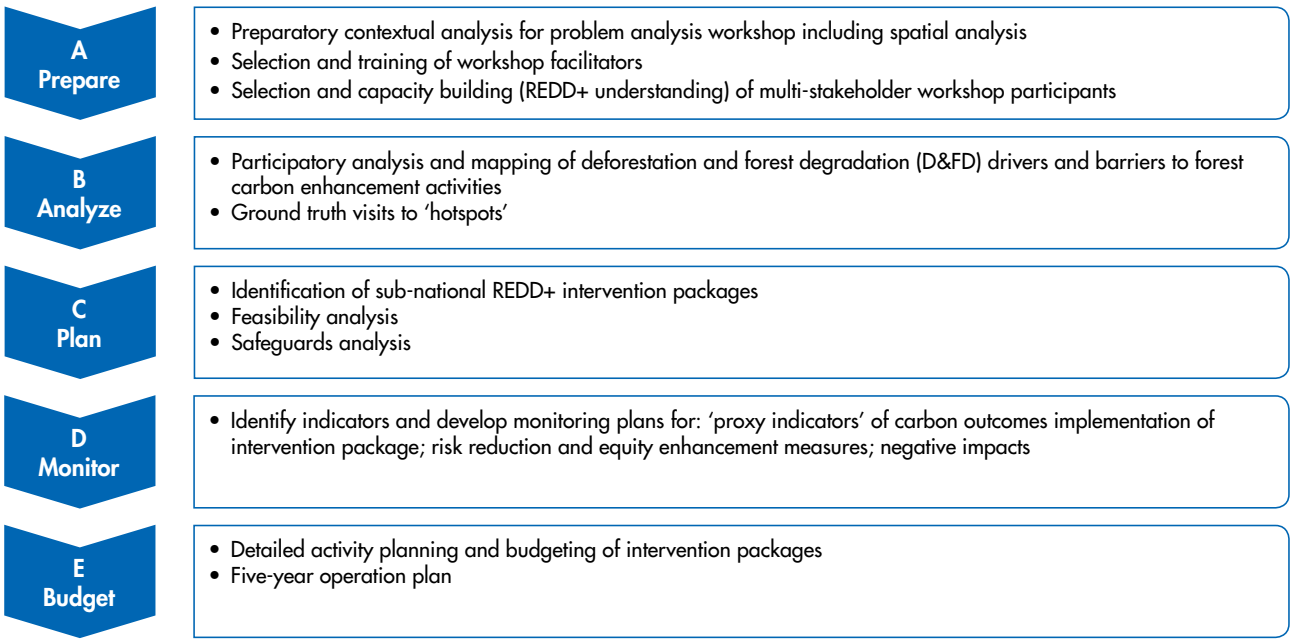
- The capacity of workshop participants, including their understanding of the technical issues under discussion, and how well informed they are in the conceptual background data presented at the workshops e.g., spatial and stakeholder analysis;
- The capacity of working group (WG) facilitators, including their ability to promote equitable participation in each WG and to manage diverse stakeholder interests and personalities. Such capacity depends on both selection of the facilitators and how well they are trained;
- The length and intensity of the workshops. There is a tendency to try and do too much too quickly, and this causes participant fatigue and declining quality of participation. Several short workshops are better than few longer ones.

Another benefit of the theory of change approach is that it will generate monitoring indicators with a good level of attribution[5] (or being able to show 'what causes what'); a review of the theory of change approach in development has noted that it "provides the basis for collecting evidence, checking other possible explanations as counterfactuals and presenting a case from which cause can be reasonably inferred and linked back to the programme" (Vogel, 2012).

Outline of the SRAP Process

The SRAP process has five main stages as outlined in Figure 2: **(A) Prepare**, **(B) Analyse**, **(C) Plan**, **(D) Monitor** and **(E) Budget**. The **Analyse** stage **(B)** takes place mainly in two multiple stakeholder workshops of 20–30 participants: the 'Problem Analysis Workshop' (SW1) and the 'Solution Analysis Workshop' (SW2). The remaining stages **(C-E)** happen in smaller 'expert group' workshops, except if the SRAP team decides to hold a third multi-stakeholder workshop for safeguards analysis (SW3) (see discussion).

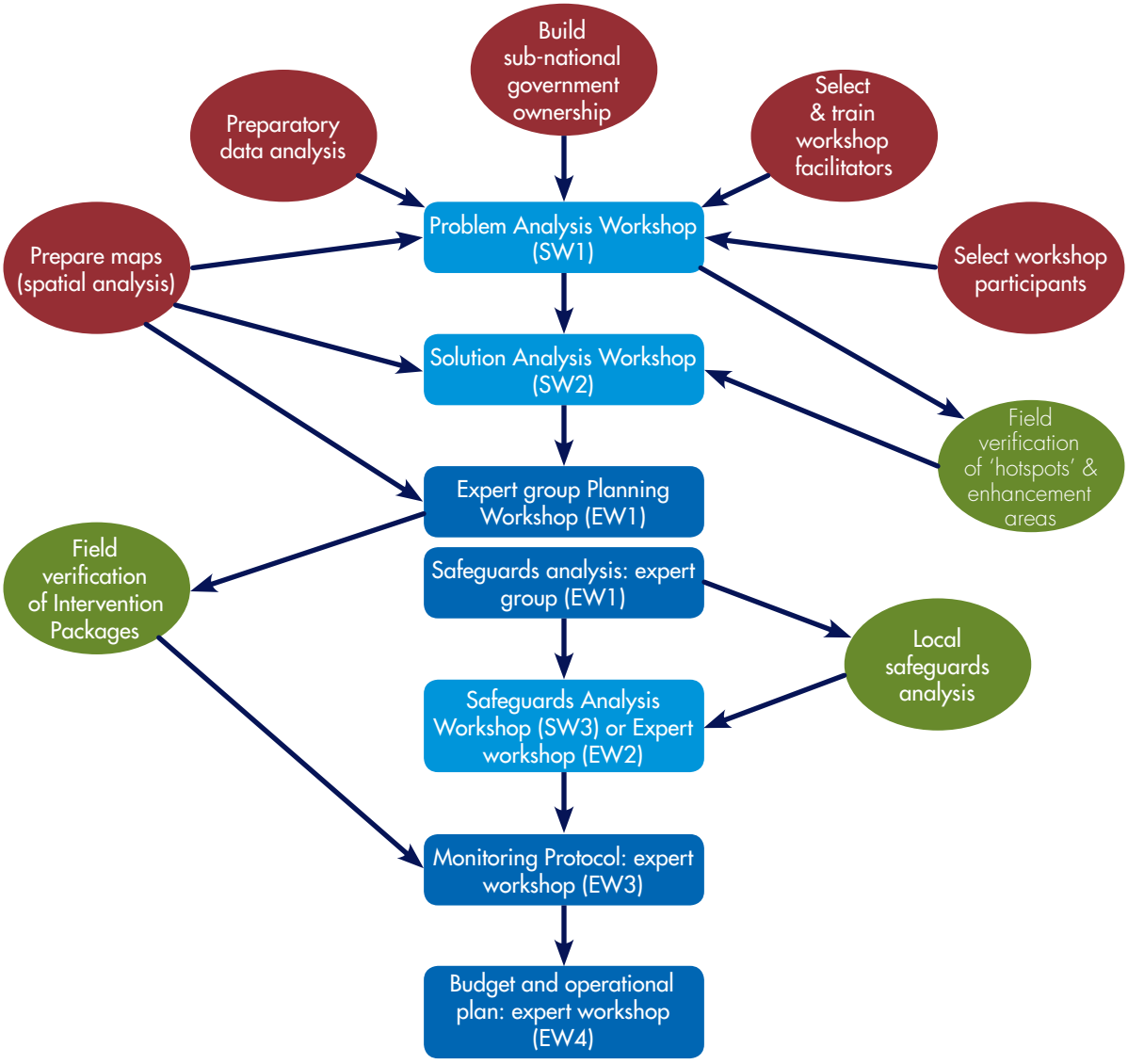
Figure 2: **SRAP Process stages (UN-REDD)**



[5] Showing attribution is the biggest challenge for any kind of impact assessment, monitoring or evaluation (M&E). Theory of change based M&E is a less complex and more participatory approach to attribution than high cost 'quasi-experimental' statistical methods that are inappropriate for 'ex ante' planning situations.

It should be noted that this manual focuses only on the planning and design of a SRAP and does not cover subsequent stages, such as approval, implementation, ongoing monitoring and adaptive management. The sequence of multiple stakeholder workshops (SW) and smaller expert group workshops (EW) and stages is outlined in relation to the five SRAP stages in Figure 3. Annex 1 lists all the proposed SRAP steps, sub-steps and outputs.

Figure 3: **Stages, workshops and activities in the SRAP process**



Stage A: Prepare

Step A1 Ownership and SRAP Core Team[6]

The first step is to clarify who owns and takes responsibility for the SRAP planning process. In many cases this is self-evident; it is likely to be the regional (i.e., pertaining to a sub-national department, district or province) state department of forestry and/or agriculture, as in Nepal and Vietnam. This includes formation of the SRAP core team, which should include staff not only from the forestry department, but from departments of agriculture, planning, finance, social development, etc., as well as at least one from civil society and the private sector. Training or capacity building of the core team in REDD+ and the SRAP process will be needed, for example, not all SRAP team members are likely to have a good understanding of REDD+. It is also desirable to set up a multiple stakeholder sub-national REDD+ Working Group comprised mainly of civil society and private sector stakeholders. This should have a governance monitoring role, but could also support the planning process at key points in the process. Members of the REDD+ Working Group can be trained alongside the SRAP core team.

Experience from Vietnam and Nepal also shows that strong sub-national government leadership and ownership of the SRAP process are essential for good cross-sectoral collaboration between departments.[7] This is vital due to the cross-sectoral causes of D&FD, including agriculture, hydro projects, infrastructure, etc. Such cooperation is especially needed in Stage A since it is vital for data collection and preparation of maps or 'spatial analysis' (Step A2).

Ownership of the SRAP process would also be greatly increased if sub-national authorities, rather than a national body such as the national REDD+ office, take responsibility for planning the SRAP process, including hiring consultants to support the work, following appropriate training and capacity building. They should however be supported and guided by an experienced consultant (centrally recruited).

Step A2 Preparatory Data Collection and Spatial Analysis

A2.1 Preparatory spatial analysis

Maps and spatial analysis have a vital role in the SRAP process. While this Manual focuses on a participatory planning process, this is not presented as an alternative to more technical or consultant-led planning methods, but rather as a complementary approach to developing a SRAP and a way of coordinating and integrating the various components in a coherent manner. Indeed, maps and statistics, often generated by a combination of remote sensing or Geographical Information Systems (GIS), desk-based research and fieldwork, should inform the workshops and participatory analysis, and complement the participatory workshop outputs to provide a stronger planning basis. Large-scale maps should be developed as working tools to be annotated during the workshops and these new digitised maps can be developed by a spatial analysis team for further participatory analysis or inclusion in the final SRAP document.

Spatial analysis is essential for integrated land-use planning. Usually there are already considerable mapped data kept in various government departments and other organisations (of different sectors, especially agriculture). Bringing together this data, along with internationally collated datasets and other relevant sources, can help to inform, highlight and complement local knowledge in the participatory workshops. Prior knowledge of an area from

[6] It is important to clarify that this refers to the first step as regards the sub-national REDD+ planning process, but at the country level this should be preceded by the REDD+ National Strategy (NS) process, which will provide essential guidance and orientation to the sub-national process. For example, the SRAP can draw on much of the national level analysis (such as the analysis of deforestation and forest degradation drivers and the NS monitoring protocol), and the national level PAMs are likely to be an important guide for the design of the sub-national REDD+ intervention packages (IPs), e.g., local REDD+ activities that will be supported or complement the national PAMs.

[7] This was a key finding from the Vietnamese Provincial REDD+ Action Plan (PRAP) Review workshop held to evaluate five SRAP processes (Vietnam UN-REDD Programme 2016).

secondary sources or maps produced through GIS or remote sensing assessment should result in more informed workshop analysis.

GIS maps can be used in several ways that enhance the quality of participation, such as by assisting with awareness-raising of REDD+ and facilitating discussions between stakeholders. Input from spatial analysis and GIS is required at various stages of the SRAP process, including between workshops in order to process and validate the participatory data and analysis. This could include further spatial analysis or even statistical analysis, for example, to check whether areas prioritised as future driver hotspots are in fact likely to be under pressure.

The SRAP core team, if it does not already have GIS capacity, should identify and commission technical assistance to undertake spatial analysis that will inform the multiple stakeholder workshops. It will be the responsibility of these technicians to provide support and prepare appropriate large-scale maps for use and annotation in the workshops and for the development and presentation of maps in the final SRAP.

A starting point can be to identify what maps are already available at the national and local levels, and identify what is missing for spatial analysis at the sub-national level. The generation of appropriate maps and statistics, for example in the analysis of D&FD trends, will normally require some basic data collation and analysis, although this will be the same data as needed for Step A2.2. Due to the cross-sectoral causes of D&FD, collaboration between government departments and with other organisations holding different sources of data is vital. Seeking permission and obtaining data can be a lengthy process; it is therefore important to plan on sufficient time for data collection and analysis.

In the preparatory stage, the main need is for maps that can inform and help workshop participants, and support preliminary analysis (for example, of forest cover change and drivers of D&FD). Most important is a 'basic planning map' for use by workshop participants. This should show, if possible, key data on the forest resource, such as current forest/land cover, administrative boundaries, and forest management/tenure type.

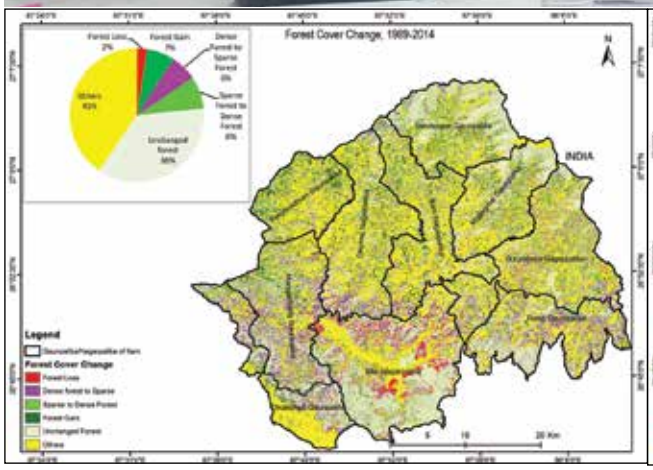
Figure 4: **Use of transparent overlaps in a workshop in Mongolia**

Photo by UNEP-WCMC

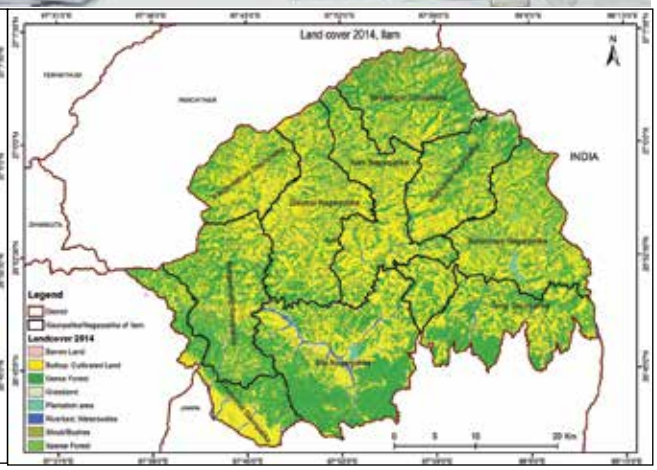
Maps showing changes in forest cover and/or quality over time are also very useful, for example, forest loss, gain and degradation (if data are available). These maps can be complemented by additional layers that provide information on forest threats or D&FD drivers and other important planning factors (e.g., future land use plans, population density, poverty rates, protected areas and forest reserves, infrastructure development). These can be provided during the workshops either in printed form or as transparent overlays (see Figure 4). Additionally, printed copies of high resolution Google Earth images (Figure 5) provide a three-dimensional view of the area and, together with administrative/village boundaries, result in clearer delineation of the D&FD hotspots. During the SRAP preparatory stage, the core team should become competent with the software and participatory mapping procedures for demarcating current and future D&FD hotspots and high potential areas for forest carbon enhancement activities.

Preparatory spatial analysis maps, such as in Figure 6, should help orientate and add to the participants' own knowledge, and will help engage participants at all levels. During the Problem Analysis Workshop, participants need to consider both the current and future situation, i.e., identifying areas currently affected by key drivers and barriers,

Figure 5: **Demonstrating use of Google Earth images for identifying D&FD hotspots, SRAP Training Workshop, Biratnagar, Nepal**



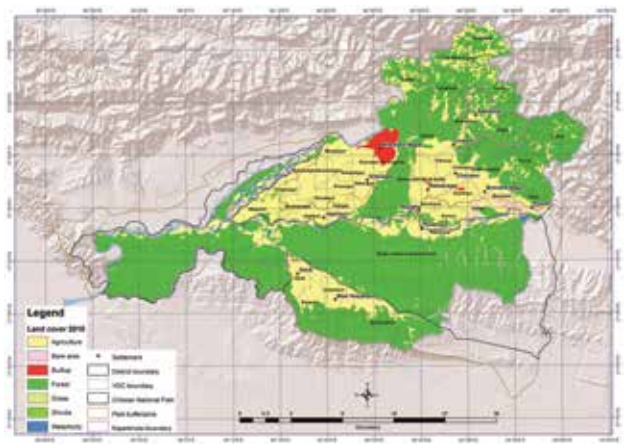
Land cover of Ilam (2014)



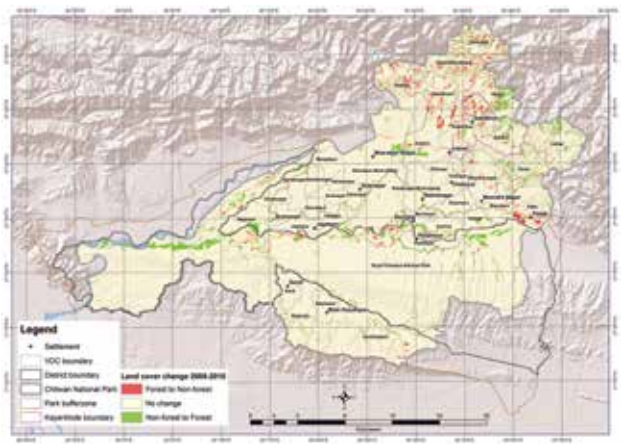
Forest Cover Change of Ilam (1989-2014)

Source: photos and maps by ICIMOD, Nepal

Figure 6: **Maps prepared for Problem Analysis Workshop, Chitwan District, Nepal**



Current forest cover



Forest cover change 2000-2010

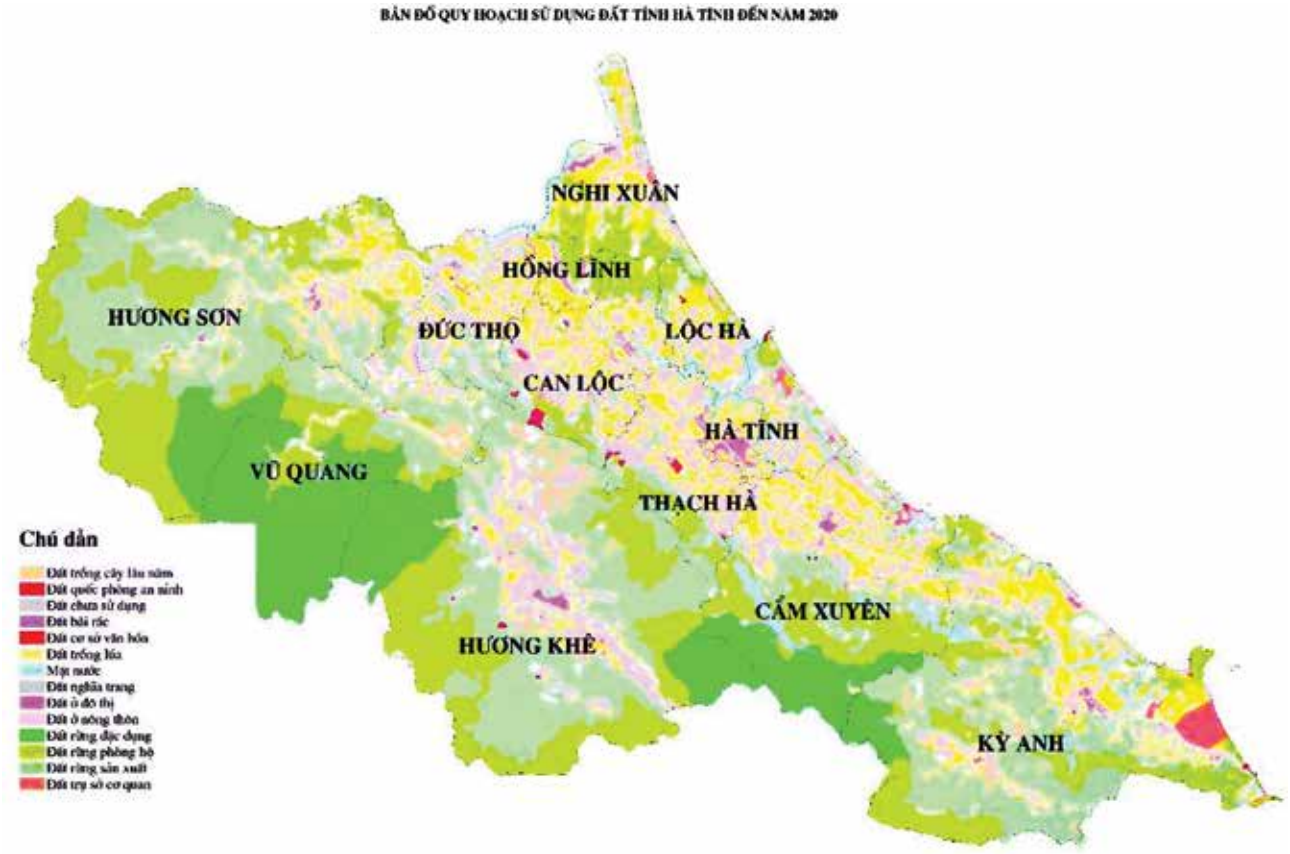
as well as areas that are most likely to be impacted in the future (or where there is potential for enhancement activities). This is essential for the later development of maps of the proposed areas for SRAP interventions. Depending on the context, research capacity and data availability, potential preparatory maps for the multiple stakeholder workshops include: active and inactive land forestry concessions; (Figure 6); future land-use plans (Figure 7) and firewood consumption (Figure 8). During the workshop, such maps provide opportunities to probe gaps in the data with the participants, for example, to help reveal threats or drivers not shown on the maps.

Some tips for using maps in the participatory workshops (Hicks et al. 2016) include:

- There are many potential map layers, and too many map layers are confusing and counter-productive, so the SRAP team needs to decide which layers are needed. Additional maps could be held in reserve for use if requested by participants;
- Do not put too much information on a single map; this causes confusion rather than adding value.
- Clear maps are very important; data classification and colours should be suited to the participatory task, e.g., simplified classification of the data, and it should be easy to distinguish patterns, colours and lines.
- Workshop facilitators should understand how the maps were prepared (e.g., data sources and any information available on data quality) and what they show, so that they can answer questions and guide participants on how to use or annotate them.
- Maps developed for workshops should also include registration marks ('graticule' or 'tic points') to help input participatory maps back into the GIS version after the workshop.
- Maps need to be built into the activities and discussions. They can be used in different ways, for example, transparent maps can be overlaid and moved around; large or small printed maps can be handed out; and large maps can allow participants to annotate them. Again the SRAP team needs to decide how best to use them.
- There needs to be good communication and coordination between workshop coordinators and the spatial analysis team so that the right maps are provided at the right time.

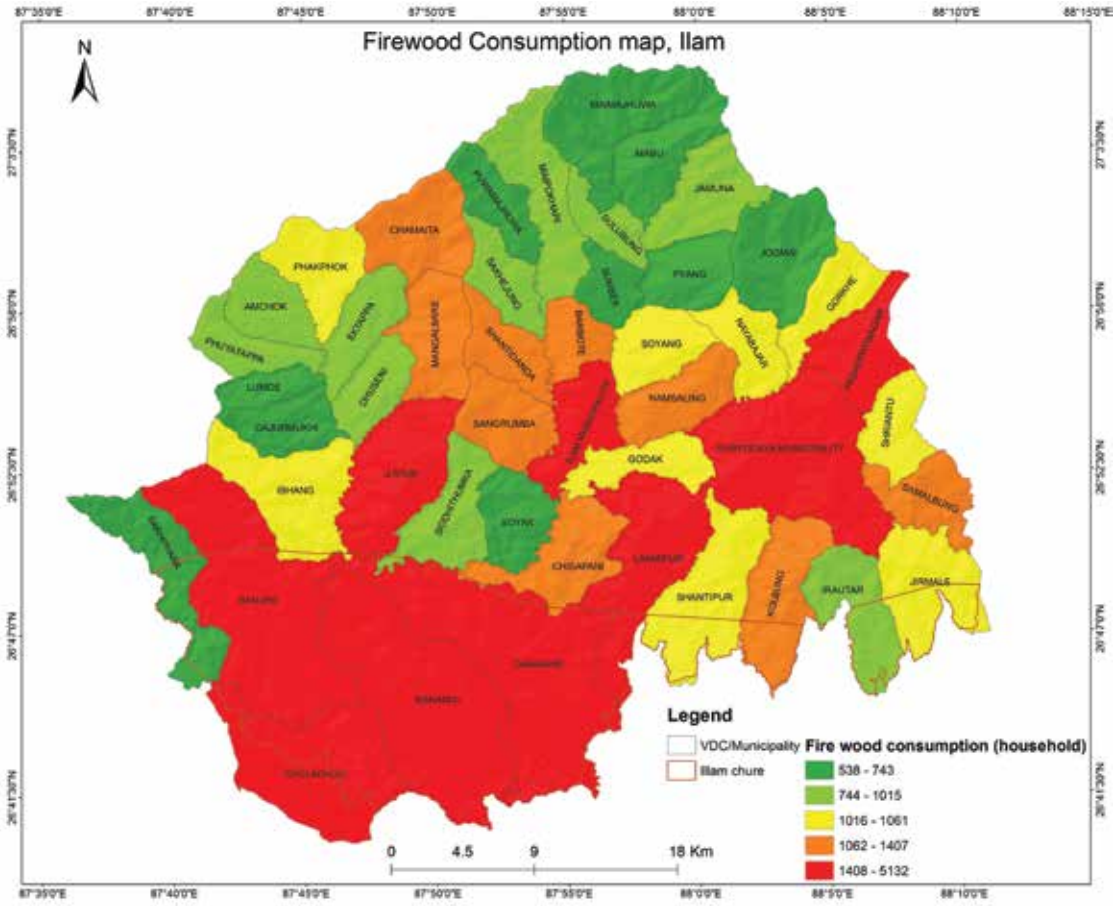
Figure 9 provides an overview of how spatial analysis can be used to support the SRAP process using examples

Figure 7: **Land use plan 2012 to 2020, Ha Tinh Province, Vietnam**



Source: Institute for Forest Ecology and Environment, Vietnam

Figure 8: **Firewood consumption in Ilam District, Nepal**



from Ha Tinh Province, Vietnam. Annex 3 also explains the 'Spatial Workflow' tool used by UNEP-WCMC to support spatial analysis in some of the Vietnam case studies. For additional guidance on spatial analysis in the SRAP process, see Hicks et al. (2016).

A2.2 Preliminary analysis of D&FD drivers and enhancement activities

An early task of the SRAP team is to commission a qualified person (or possibly a team of two) to collate and analyse (sub-national) data on deforestation and forest degradation (D&FD), as well as any information on the difficulties of scaling up enhancement and sustainable forest management activities, for presentation at the Problem Analysis Workshop. This task should be linked closely to the preparatory spatial analysis.

The SRAP process should, if at all possible, take place after development of a detailed REDD+ National Strategy (NS). The NS requires in-depth analysis of the national D&FD drivers. This analysis may include the development of conceptual models[8] or problem trees of prioritised drivers, as in the Vietnam National REDD+ Action Plan (NRAP) process; this should also include defining and separating direct drivers and underlying (or indirect) causes of D&FD. This analysis, although it will need to be adapted, should provide a strong basis for sub-national analysis and would save a lot of valuable time.

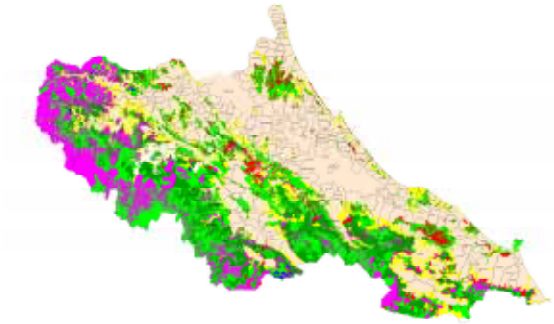
It is also vital that the SRAP takes account of what is already planned (apart from what is in the NS) so that it can incorporate these plans and/or complement them. The preparatory analysis should therefore review current and planned initiatives (e.g., NGO projects) in the area to tackle D&FD drivers and/or promote enhancement activities. Some guidance for a short study that could be undertaken by a consultant is presented in Box 1.

The main outputs should be two posters for presentation, in an interactive style, at the Problem Analysis Workshop.

[8] A 'conceptual model', a term often used in a planning context, is similar to a problem tree; it is a flow diagram that aims to diagnose a problem or challenge that needs to be overcome by a project or programme (e.g., a D&FD driver) based on cause and effect logic (for further explanation see Conservation Measures Partnership 2007).

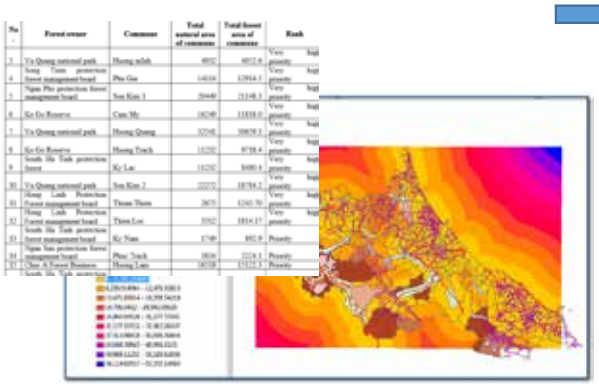
Figure 9: **Overview of steps in spatial analysis in the SRAP process (examples from Ha Tinh Province, Vietnam)**

Step 1: Preparatory analysis of forest cover change, drivers & barriers, including spatial analysis



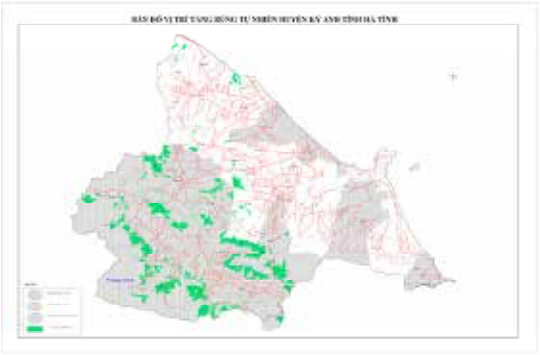
Step 2: Participatory prioritisation of drivers & barriers, and identification of priority areas

Step 3: Additional analysis to check and validate workshop results



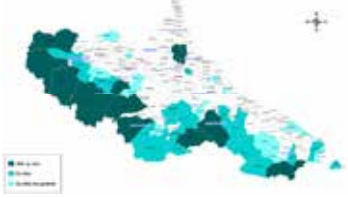
Step 4: Participatory identification of solutions and potential areas for interventions

Step 5: Field check of proposed interventions and locations



Step 6: Analysis of risks & benefits of proposed interventions, and implementation design

Step 7: Development of workflow and final mapping of priority areas for interventions



Step 8: Review and final validation of SRAP

Source: Charlotte Hicks and Corinna Ravilious, UNEP-WCMC

Box 1: **Guidance for preparatory data collection on D&FD drivers and barriers to enhancement activities**

It is suggested that the consultant, collaborating closely with the spatial analysis team:

- Present current land use and forest cover, according to different forest types, on a map, and shows changes in forest cover and land use over the past 10-20 years (if possible).
- Present secondary data on D&FD drivers (e.g., areas deforested for infrastructure projects, forest-fire affected areas), and, if there are sufficient data, estimate rates of deforestation or forest degradation by the type of driver.
- Identify actors or stakeholders (e.g. rubber plantation companies, coffee planters, etc.) associated with each driver.
- Analyse future D&FD trends (as far as possible).
- Collect any data on the progress and problems of forest enhancement activities, and on the potential for enhancement activities.
- Discuss challenges to scaling up enhancement activities with key informants, e.g., researchers working on forest enrichment, planting native species, etc.
- Review all current and planned forestry-related programmes and projects in the region, taking especial note of interventions with similar aims to the SRAP.

If there is a NS this should be a major source of data. For analysis of D&FD drivers the consultant can also obtain guidance from ARKN-FCC (2014): http://www.leafasia.org/tools/decision-support-tool-identifying-and-addressing-drivers-deforestation-and-forest-degradation. See especially pp. 6-10 and pp. 45-47 for guidance on methods for assessing historic and current D&FD, identifying drivers and assessing future D&FD trends.

These posters need to present relevant data on:

- Drivers of deforestation and forest degradation (D&FD)
- Barriers to forest carbon enhancement

The posters should be composed mainly of pictures, maps, tables and figures; text should be large and presented in bullet points.

A2.3 Preparatory stakeholder analysis

It is recommended that a qualified person conduct preliminary stakeholder analysis, also for presentation at the Problem Analysis Workshop. Box 2 provides some guidance for this. Again the main output should be an interactive poster for presentation at the Problem Analysis Workshop. An alternative approach adopted in Chitwan District, Nepal, was to undertake participatory stakeholder analysis in the Problem Analysis Workshop (see step B2.1).

Step A3 Selection and Training of Working

Box 2: **Guidance for provisional sstakeholders analysis**

A provisional stakeholder analysis can be based on secondary data supplemented by key informant and focus group interviews. A list should be made of stakeholder groups and sub-groups likely to be affected by a SRAP, as well as those who could influence the design or implementation of the SRAP, including from the private sector and state institutions (sub-national and national). The analyst should consider how each stakeholder group may be affected positively and/or negatively by the SRAP, especially as regards vulnerable stakeholder groups, such as women, resource poor farmers, and indigenous or ethnic groups.

Depending on data availability, the situation of each identified stakeholder group can be summarised under the following headings: number of people or size of stakeholder group; livelihood dependency on trees and forests; poverty/wealth status; tree/land tenure situation; organisational or institutional basis (if any); location (shown on map); causes of vulnerability (if a vulnerable stakeholder group); and any gender issues. Any available data on livelihood capital assets (human, social, financial, physical, natural and political) should be presented.

Group Facilitators

The quality of outputs from the multiple stakeholder workshops depends on the quality of participation, which in turn depends significantly on the quality of the WG facilitators. The latter must therefore be very carefully selected and trained. Not everyone has the qualities needed to be a facilitator. These include being able to encourage reticent or shy participants as well as to control the dominant ones (who are usually, but not always, more educated and male). Further guidance on facilitation methods for WG facilitators can be found in Annex 9.

WG facilitators should first receive a training course of 2–3 days that includes hands-on experience in the SRAP workshop methods. Since such trainings are often held in advance of the actual workshops,[9] there should be a 1–2 day refresher training immediately before each workshop; this can be conducted by the lead workshop coordinator.

It is also important for WG facilitators to be integrated with the SRAP core team and those undertaking the preparatory spatial analysis and studies so that they are well briefed and informed on the data, trends, maps, etc., prior to the workshops.

Step A4 Workshop Participants and Logistics

A4.1 Selection of workshop participants

The choice of participants for the multiple stakeholder workshops is important to ensure the validity and quality of the SRAP process and outcomes. With the workshop methodology, up to 30 participants are possible. The first two workshops (SW1 and SW2) should have the same participants for the workshops to be effective; therefore it is necessary to get a commitment from participants that they will attend both workshops. Ideally they could be selected through a democratic process, but in practice it is likely to be the SRAP team that chooses them. There is no formula for this, but the SRAP team should aim for a balance of the following criteria:

- Capacity or knowledge of the participants; at least some participants should have experience with multi-sectoral planning, analysis of D&FD drivers or forest enhancement activities;
- Education level of the participants so that they can participate effectively in a process that relies considerably on the written word;
- Representativeness of stakeholder groups, including: sub-national state departments, especially those responsible for agriculture, rural development and wider social issues (e.g., indigenous or ethnic communities); different types of forest owners, managers and users; representatives of indigenous or ethnic groups and other vulnerable stakeholder groups; lead NGOs in forestry and rural development sectors; women's organizations; other civil society groups working in forestry and rural development; and from the private sector. A reasonable balance could be 40% of participants from the state sector, 40% from civil society and 20% from the private sector.
- Personality or capacity to consult; for example, 'know-it-all' types should be avoided if possible since they prevent equitable participation.
- Participants from different ecological or topographical areas where forest pressures and livelihood dependency may be significantly different.
- Gender balance: at least 30% of the participants should be female. A good gender balance would allow an all-female WG to be formed in the safeguards analysis.
- Enthusiasm or willingness to participate; if people are reluctant to participate they may be disruptive and problematic for good quality consultation.
- Seniority: this process is not suitable for 'junior' staff.

A4.2 Workshop invitations

The invitation letter to workshop participants should include the following points:

- Explanation of the objectives and importance of the workshops and SRAP process;
- That the participants need to commit to both SW1 and SW2;
- That the invitation is for an individual and not for someone else in the organization unless the proposed substitute person has a similar position or rank;

[9] When something is learned but not put into practice straight away, it tends to be quickly forgotten.

- If an invited individual cannot attend they should reply as soon as possible so that an appropriate replacement can be selected in good time;
- Participants will receive a certificate of participation at the end of SW2;
- Information on travel costs, per diems or any other 'incentive'.

Invitation letters should be sent well in advance (e.g., 2–4 weeks) of the workshops. If the invitee does not reply in time (say, within a week), a follow-up phone call is needed. A reminder should also be sent to confirmed participants one week and again one day before each workshop.

A4.3 Workshop venue and materials

The SRAP team should book a suitable workshop venue taking into account the need for:

- Sufficient wall space to tape posters and charts generated by the WGs – most of the wall space will be covered with flipchart sheets by the end of each workshop (make sure the venue or hotel does not mind sheets being taped to the wall);
- Sufficient tables for 5–6 WG work stations – each work station should have space for four large flipchart sheets taped together (this often means pushing 2–3 tables together);
- A large room for plenary sessions and sufficient for 2–3 WG work stations;
- 1–2 additional rooms assuming 1–2 WGs per room;
- An agreeable location that encourages people to attend.

Workshops should preferably be held in a location that discourages participants from 'dropping in and out' to attend 'urgent meetings'. This is disruptive to the process and disrespectful to other participants who often sacrifice work commitments to attend. It may require a location that is some distance from the sub-national government offices.

Materials needed for the workshop should also be obtained in advance, e.g., flipchart paper and stands, marker pens, masking and sticky tape, card of various colours, colour pins, scissors and participant certificates (to be handed out at the end of the second multiple stakeholder workshop (SW2). A detailed list of materials can be found in Annex 2.

Step A5 REDD+ Orientation for Workshop Participants

A limitation in terms of the output of the multiple stakeholder workshops in Vietnam and Nepal was the uneven understanding of REDD+ among workshop participants. It is therefore recommended that a half-day training on REDD+ is carried out before the first stakeholder workshop (possibly the day before). If a suitable course does not already exist in the country, training materials can be adapted from the online 'REDD+ Academy' of the UN-REDD Programme: http://unccelearn.org/mod/resource/view.php?id=434

Stage B: Analyse

Step B1 Overview of SRAP Process and Problem Analysis Workshop (SW1)

Steps B1-B4 are undertaken in the first multiple stakeholder workshop – the Problem Analysis Workshop (SW1). Following an ice-breaker and setting of ground rules,[10] an overview of the SRAP design process, including the objectives and structure of the Problem Analysis Workshop, should be presented. Figure 3 can be used to explain the sequence of studies and workshops.

The main objectives of the Problem Analysis Workshop (SW1) are to:

- Prioritise deforestation and forest degradation (D&FD) drivers and potential forest enhancement activities; and,
- Develop a robust cause and effect understanding of the D&FD drivers and barriers to enhancement activities as a basis for identifying potential REDD+ interventions.

The suggested structure of the Problem Analysis Workshop is:

- Day 1: Discussion of background data and spatial analysis (Step B2), and selection of priority D&FD drivers and enhancement activities (Step B3)
- Day 2: Development of problem trees, including group exchanges and the 'museum visit' (Step B4)

Time required: about 40 minutes

Step B2 Preparatory Data Presentations

B2.1 Poster presentations

After the introductory session, the posters prepared in Step A2 can be presented. Interactive poster presentations encourage an 'active learning mode' in participants (compared to a passive mode, as while listening to a PowerPoint presentation), which increases memory retention, and can lead to enriched data and understanding. Based on the experience of using posters in Vietnam, the following sequence is suggested:

- Participants are divided randomly into three groups: the D&FD drivers' poster is presented to the first group, the barriers to enhancement poster is delivered simultaneously to the second group, and the stakeholder analysis is presented to the third group (this obviously requires three presenters);
- Participants stand around the presenter and, as the poster is explained, are encouraged to make comments; these should be noted by a workshop facilitator (not the presenter) on a flipchart or whiteboard placed next to the poster;
- 15 minutes are allowed for the presentation and 15 minutes for participant feedback;
- After 30 minutes, the three groups change and the process is repeated;
- This process is repeated a third time so all participants are reached by the three posters;
- During and after the presentations, the posters can be annotated with comments or additional information provided by participants.

As discussed in Step A2, the SRAP team may decide to undertake participatory stakeholder analysis as in the Nepal case study; in this case there would be only two poster presentations and two groups. As regards participatory stakeholder analysis, self-selected working groups can be formed to analyse each stakeholder group (Box 2 lists some key characteristics of stakeholder groups that may help structure the analysis).
Time required for presentations, discussions, participatory stakeholder analysis: about 2 hours

[10] Ground rules are important for the quality of the workshop consultation and outputs, and should cover the use (or non-use) of mobile phones, emailing, side conversations (there should be only one conversation at a time), punctuality, keeping interventions short to allow others to participate, not interrupting, etc. Agreed ground rules should be written on flipchart paper and put in a prominent place.

B2.2 Spatial analysis and maps

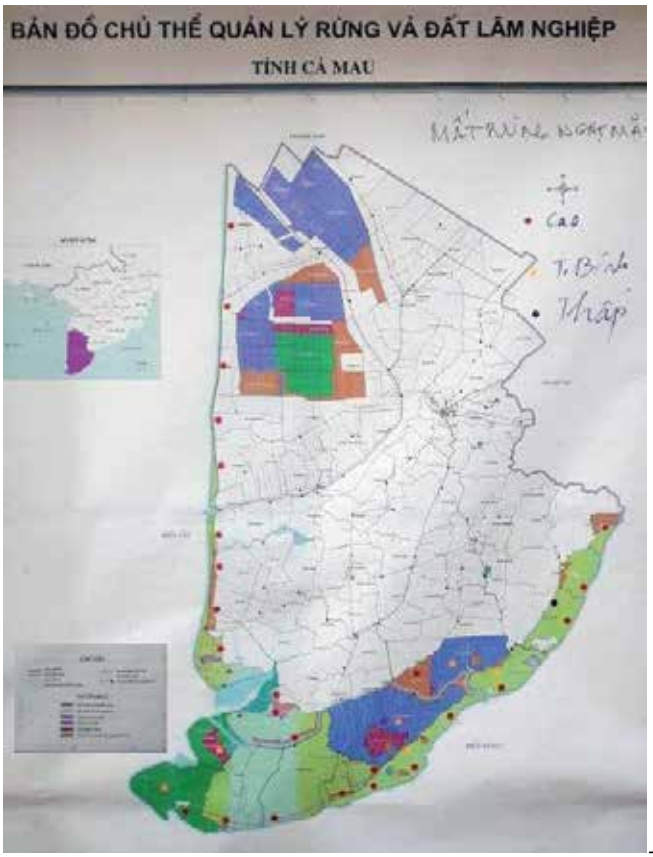
The spatial analysis or preparatory maps (from Step A2) should first be presented in a plenary session (unless already presented in the poster sessions). The maps should then be taped to the wall or kept on flipchart stands so that they are clearly visible to participants. The spatial analysis in Stage A should already be guiding the SRAP core team on the important D&FD drivers and likely enhancement potential; this can help with deciding which maps are needed for SW1. The maps presented (whether separately or in the posters) should include at least:

- A basic map of forest resources showing current forest or land cover, administrative boundaries and, if possible, forest management and tenure type. This will be the 'basic planning map' for the SRAP workshops; at least six copies of this map are needed for SW1;
- Printed copies of high resolution Google Earth images (the number of printed copies will depend partly on the size of the study area). Forest loss and gain over a recent period, say the last 5–20 years; if possible this should include an indication of forest quality or degradation, e.g., where rich forest has changed to poor forest. This map will indicate the likely D&FD hotspots;
- A map of current and planned land use, such as infrastructure projects, mines and conversion for agricultural plantations.

Figure 10: **Using maps in multiple stakeholder SRAP workshops, Vietnam**

Photos by Charlotte Hicks, UNEP-WCMC

Figure 11: **Identification of deforestation hotspots in Ca Mau Province, Vietnam**



The SRAP team should decide how best to present these maps. This will depend on how participants are expected to use the maps in the workshop. A useful approach is to provide large, printed versions of the 'basic planning map', and to develop transparent versions or layers of other mapped data. Participants can then overlay the transparent layers to explore D&FD hotspots and potential areas for enhancement activities. Figure 11 provides an example of a planning map annotated by a working group in SW1.

Time required for presentation of maps: 30–45 minutes

Note: The red pins show high deforestation communes, yellow pins show moderate deforestation communes, and blue pins show low deforestation communes (other map colours refer to forest type, rice production, hydrology, etc.). It should be noted that Ca Mau Province is on the Mekong estuary; the main DF&D drivers of the mangrove and Melaleuca forests were shrimp farming, illegal logging, farming and landslides.

Step B3 Prioritisation of D&FD Drivers and Enhancement Activities

B3.1 Identification and scoring of drivers and enhancement activities

The first task (in plenary) is to clarify the definitions of 'direct drivers' and 'indirect drivers' or underlying causes. A 'direct driver' is a ***specific land use that replaces or degrades forests***. Other causes of D&FD are indirect or underlying causes, e.g., poor governance, insecure land tenure. These definitions will hopefully already be clear due to the NS. Without this clarification, there would be a mixture of direct and underlying causes of D&FD, which would make it very difficult to identify and prioritise strategic REDD+ interventions.

The definition of each direct driver also needs to be as specific as possible, for example, 'agriculture' is too general; the crop or combination of crops causing deforestation should be specified, and whether it is smallholder or commercial agriculture. Another example of a driver that it is too general would be 'infrastructure'; the type of infrastructure should be specified, e.g., major trunk roads, reservoirs, hydro projects. Table 1 provides examples of 'direct drivers' and insufficiently specific or indirect drivers, and Table 2 lists the direct drivers and underlying causes identified by multiple stakeholders in the Chitwan District SRAP process.

Time required: about 15–20 minutes

Table 1: **Examples of 'direct drivers' and indirect or insufficiently specified drivers**

Examples of appropriately specified 'direct drivers'	Examples of insufficiently specific or indirect drivers
• Clearing of forest for commercial rubber plantations • Clearing of forest for smallholder rubber production • Encroachment into protected areas by smallholder subsistence crops • Clearing of forest for reservoirs • Illegal logging for local use	• Clearing of forests for agriculture • Clearing of forest for perennial tree crops • Clearing of forest for infrastructure • Poor governance • Weak policies • Weak law enforcement

Table 2: **Direct drivers and underlying causes identified in Chitwan District, Nepal**

	Deforestation	Forest Degradation	Barriers to Improved Forest Management
Direct drivers (or barriers to forest carbon enhancement activities)	• Illegal forest encroachment; Infrastructure, power lines, road expansion, public buildings, etc.; Rehabilitation of flood victims; • Resettlement and relocation	• Unsustainable/illegal timber and fuelwood extraction; • Shifting cultivation; • Landslides and flash floods; • Grazing; • Invasive species; • Religious activities; Infrastructure development; • Forest fire	• Economic, social, institutional and technological barriers to improved forest management
Underlying causes or indirect drivers	• High demand for land & low farm productivity; Ineffective land use policies; • Weak forest governance; Lack of employment; • Weak market infrastructure & technical inputs	• Weak policies for private forestry and agroforestry; Weak management capacity; • High price of LPG/kerosene & lack of access to clean energy; • Undersupply & high price of timber; • High fuelwood demand	• Low investment in SFM; • Weak management capacity; • Weak research, outreach & coordination; • Poor professional attitudes; • Weak governance; • Lack of good business plans

Workshop participants can then be divided into three groups:

- Group A. Deforestation drivers' group
- Group B. Forest degradation drivers' group
- Group C. Enhancement activities' group

The three groups can be formed as follows:

- Self-selection: participants can decide which group they would like to be in.
- Group C needs participants with technical expertise and/or good understanding of REDD+.
- Groups should be of similar sizes.
- Institutional or stakeholder group representatives should be distributed across the groups.

Groups A and B should first discuss and understand the rationale for the proposed scoring system. This involves scoring three variables from 1 to 5: the future threat level associated with the driver, the biomass impact level, and the forest area impacted. The total of these three scores indicates the importance of each driver in terms of its potential for GHG emission reductions or removals. Facilitators need to emphasize that the main focus of the analysis is on current and future drivers or trends (even if the preparatory data presented was mainly on the past). The challenge for participants is to predict the future; past trends can help since one scenario is continuation of an on-going trend. But past trends can be a very unreliable guide to the future.

Groups A and B should also discuss and clarify the difference between 'deforestation' and 'forest degradation' in order to avoid overlap. A reasonable definition of deforestation, based on the FAO definition of 'forest', is the clearance or felling of at least half a hectare of 'forest' (with at least 10% canopy cover).

Prioritising D&FD drivers and enhancement activities should be quicker and easier if the NS is in place. In this case the starting point for the workshop can be the drivers and carbon enhancement activities identified and prioritised in the NS. The participants should then decide which ones are most important in the (sub-national) area, and whether there are significant local drivers or enhancement opportunities that were excluded or not given sufficient importance in the NS.

Groups A and B: deforestation and forest degradation drivers

In the absence of a NS, as in the pilot Vietnam and Nepal SRAPs, Group A and Group B (separately) should:

- Brainstorm 'direct drivers' working in pairs – Group A can use **RED** cards for deforestation drivers and Group B can use **BROWN** cards for forest degradation drivers; while doing this they should be able to refer to any preparatory maps related to the drivers;
- Rationalise the cards by combining and rephrasing similar cards, and select up to about eight direct drivers;
- Locate the drivers by placing coloured pins on the 'basic planning map', using different coloured pins for each driver. If the planning map shows local administrative area boundaries (e.g., villages, parishes, sub-districts, communes), a pin can be placed in each administrative area where the driver is significant;
- Prepare a form for ranking the drivers (see example in Table 3) with seven columns on flipchart paper, and complete the columns as follows:
    1. Place up to about eight direct driver cards, after rationalising them, in column 1.
    2. Based on the mapping exercise, write the most important driver 'hotspots' in column 2.
    3. Score the future threat level (in about 5–10 years' time) for the driver in column 3 from 1 to 5: 1 = very low; 2 = low; 3 = medium; 4 = high; 5 = very high
    4. Score the likely biomass impact of the driver in column 4 from 1–5 based on the quality or condition of the forest under threat.
    5. Score the forest area likely to be impacted in column 5 from 1 to 5 with 1 = very small and 5 = very large.
    6. Obtain the total score for each driver in column 6 by adding columns 3, 4 and 5.
    7. Leave the final column blank until the plenary session.

If consensus scoring is not possible due to different opinions, the average score of the individuals in the group can be used.

Time required: about 3 hours

Since Group C members are bound to have different levels of technical understanding, the first task for Group C is to clarify the meaning of the main forest carbon enhancement activities:

- Afforestation
- Reforestation
- Agroforestry
- Forest restoration, including forest enrichment
- Improved forest management (IFM) in natural or planted forests

Table 3: **Scoring of forest degradation drivers, Chitwan District, Nepal**

Direct driver	Location[s]	Future threat (1-5)	Future biomass impact (1-5)	Future forest area impacted (1-5)	Total score	Plenary scoring
Shifting cultivation	Northern areas (Korak, Siddhi)	2	2	1	5	
Illegal occupancy due to weak law enforcement	Udaypur (near river), Padampur, Bharatpur, Rapti buffer zone area	3	4	1	8	
Landslides and flash floods	Rapti, Korak-Riu rivers; Chure/ Churiya hill areas	3	4	3	10	
Cattle grazing	Korak, Tikauli, Bharandabhar	4	5	2	11	
Invasive species [Mikania micrantha]	Buffer zone areas of Chitwan National Park	4	5	2	11	
Forest fire	Shaktikhor, Siddhi, Korak	5	5	4	14	
Other farm livelihood pressures	Bharandabhar, Udaypur, Simaldhaap, Jugedi	5	5	3	13	
Elephant safari	Buffer zone of Chitwan National Park	2	1	1	4	

Secondly, Group C needs to develop a good understanding of the rationale for analysing the barriers to expansion of enhancement activities. This includes having a basic understanding of 'additionality': this is that REDD+ activities should be in addition to what will happen anyway, e.g., commercial plantations using fast growing exotic species. In other words the SRAP should, in general, fund forest carbon stock enhancement activities that have good potential for expansion and carbon removal, but which are constrained by a lower economic viability or another constraint or barrier. For example, natural forest restoration has high potential for carbon removal, but is likely to remain small-scale without significant financial and technical support.

Group C should therefore identify where there is most potential for expansion of each potential enhancement activity. They can do this by sticking different coloured pins (for each enhancement activity) onto a basic planning map. A form for ranking each potential enhancement activity can then be prepared on flipchart sheets with six columns (see Table 4). These can be completed as follows:

- Based on the mapping exercise, list the higher potential locations for expansion.
- Score (1-5) the future potential area of the enhancement activity.
- Score (1-5) the potential for forest biomass enhancement depending on the forest type.
- Compute the total score for each enhancement activity (column 2 + column 3).
- Write the significant barriers or challenges to expansion (if there is insufficient space on the flipchart sheet, further details can be captured on a laptop).
- Leave the last column ('Plenary scoring') empty.

Time required: about 3 hours

Table 4: **Barriers to improved forest management, Chitwan District, Nepal**

Locations	Future potential area [1-5]	Future biomass impact [1-5]	Total Score	Significant barriers or challenges	Plenary scoring
Baadarjhhula, Maadi municipality, Padampur (old)	5	5	10	Forest encroachment (weak law enforcement), weak technical capacity, low investment, weak motivation, invasive species (Mikania micrantha)	
Gardaas, Daahaakhaani	4	4	8	Forest encroachment (weak law enforcement), low motivation	
Daahakhani, Chandi, Bhanbhanjyaang	4	3	7	Not analysed	
Belsar, Bharatpur, Kumroj, Khairani	3	3	6	Not analysed	

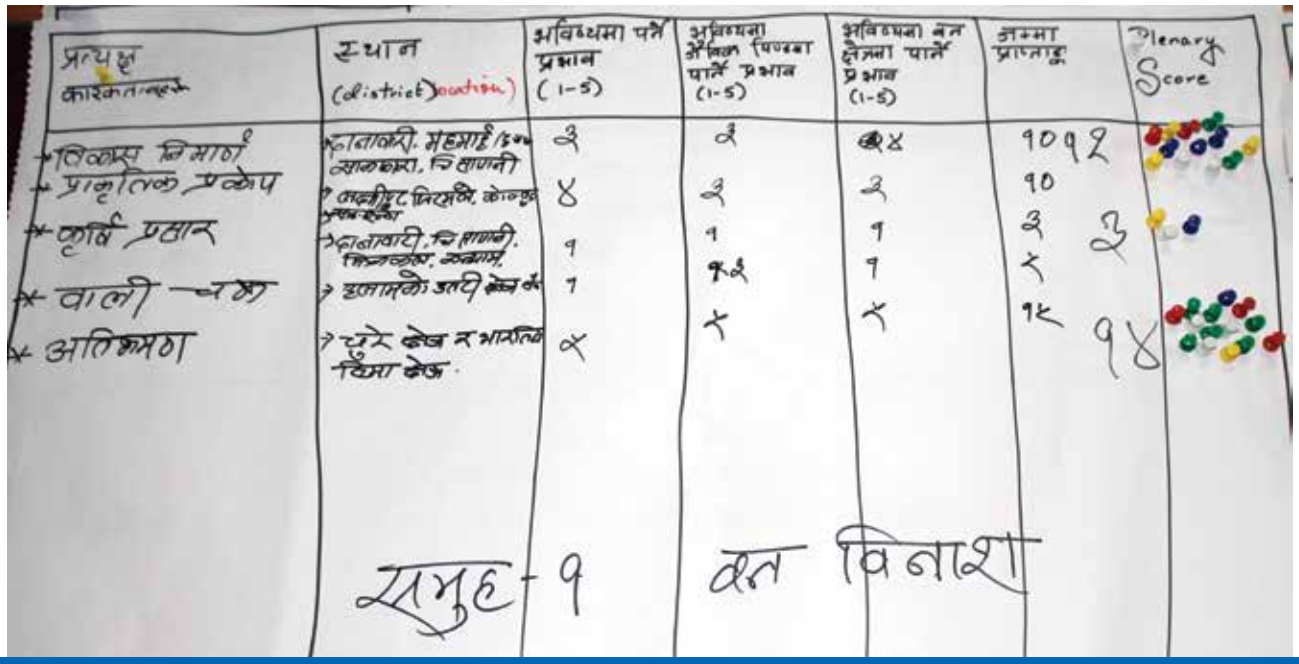
B3.2 Selection of priority drivers and enhancement activities

The three groups should now come together in a plenary session to select the priority D&FD drivers and enhancement activities. The following is suggested:

- Worksheets of the three groups are taped to the wall.
- Each group briefly presents their ranking exercise; more time may be needed for Group C in view of the slightly more complex rationale (10 minutes each for Groups A and B; 15-20 minutes for Group C).
- Each participant is given five stickers to place in the final column of the three worksheets; these stickers represent the top five priorities for each participant. Participants can only place one sticker on a driver or enhancement activity, but they could put all their stickers on one worksheet (e.g., deforestation drivers). They do not have to use all of their stickers.
- The number of stickers in the final column is added up.
- A separate flipchart sheet (see Figure 12) is developed taking only the top 6-8 scores; this should be a mixture of D&FD drivers and enhancement activities.
- Participants discuss the scores with the aim of deciding 3-5 priority drivers and enhancement activities. The scores can help this decision, but it is essential to have a serious plenary discussion about each one (see Box 3).

Time required: about 3 hours

Figure 12: **Plenary scoring of D&FD drivers and enhancement activities, Ilam District, Nepal**



Box 3: **How many priority drivers/enhancement activities should be selected?**

There is no formula for deciding the number of priority drivers and/or enhancement activities, but experience suggests five is probably the maximum for a coherent and focused programme of work. Trying to do more than five activities might not be cost-effective as efforts become diluted across many problems and activities.

For example, in the Binh Thuan Province (Vietnam) case study, workshop participants selected two deforestation drivers, one forest degradation driver and one enhancement activity; in Chitwan District (Nepal) they selected one deforestation driver, one forest degradation driver and one enhancement activity. Every SRAP is different – the point is to discusshow many drivers and enhancement activities should be included in the SRAP, and which ones have the highest potential for GHG emission reductions or removals. The stronger the focus of the SRAP on high potential opportunities, the more cost-effective it is likely to be.

It should also be noted that for the workshop methodology to work well, there should be at least five participants in each working group and that 5-7 participants per working group is a good number for equitable participation.

B3.3 Formation of Working Groups (WGs)

Working groups (WGs) for each priority driver and enhancement activity can be based on a combination of the following criteria:

- Self-selection or interest level of participant
- Technical expertise of participant (if not already covered by self-selection)
- Distribution of institutional or stakeholder group representatives across the WGs (in general there should be only one representative of an institution or stakeholder group in a WG)
- Gender balance across WGs
- WGs of similar or equal sizes

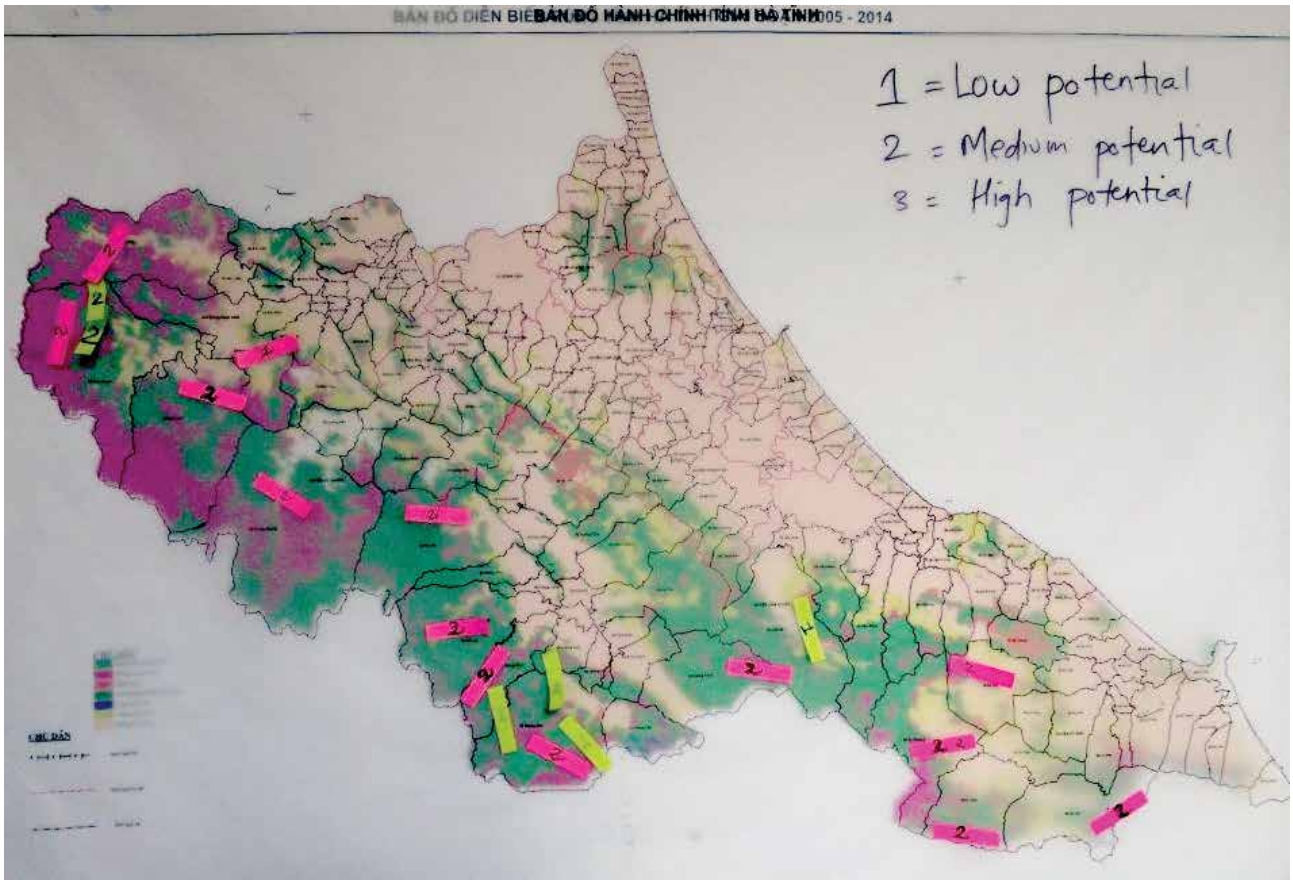
The process of forming WGs can involve negotiations between participants and moderation by workshop facilitators so as to meet individuals' preferences and to get balanced WGs.

Time required: about 10 minutes

B3.4 Mapping of drivers and enhancement activities

The first task for each WG is to identify the main locations or 'hotspots' for the driver or areas with potential for enhancement activities on the 'basic planning map' or on an appropriate map prepared by the spatial analysis team. WG members can use different coloured cards or pins to indicate the severity of deforestation or forest degradation due to the driver; for WGs analysing barriers to expansion of an enhancement activity, this will be where there is most (unrealised) potential for expansion of the enhancement activity. For example, Figure 13 is a participatory map from a Problem Analysis Workshop in Vietnam in which participants identified communes (the smallest administrative unit) with high, medium and low potential for improved or sustainable forest management following an analysis of the barriers to expansion. For this, participants used a base layer showing forest cover change in the province (2005-2014), overlaid with a transparent layer showing administrative (commune) boundaries.

Figure 13: **Participatory map of barriers, and potential, for IFM, Ha Tinh Province, Vietnam**



Facilitators need to check participants have the same understanding of what is being mapped as some participants could be thinking of the current or recent past, while others are thinking about the future. Since this is still part of the diagnostic analysis, the mapping should reflect the current and recent past situation. If it is felt that the future geographical pattern of the drivers will be significantly different, the WG can work on a second map or use a transparent 'overlay' map. Participants should also be asked whether and where they think two or more D&FD drivers are interacting, and also how they are interacting (e.g., charcoal production following clearance for shifting agriculture). It should be possible to indicate these interactions on the map.

The participatory annotated maps should also be checked with the preparatory spatial analysis maps for discrepancies; this can be done by overlaying a transparency of the preparatory map onto the annotated map. If differences cannot be resolved in the workshop through discussion with the spatial analysis team, the hotspots in question should be put on the list for field verification (Step B4.5).

Time required: about 30 minutes

Step B4 Problem Trees

Step B4.1 Explanation and practice

The first task of the WG is to develop a problem tree of a priority driver or enhancement activity. If problem trees or conceptual models for the drivers are available from the NS process, these can be used or adapted to the sub-national context, making the process quicker and easier. There may be a situation in which some drivers and enhancement activities can use conceptual models or problem trees from the NS process, but others need to be developed. In this case, the SRAP team will need to plan how to manage a situation in which some participants are still busy working on their problem trees while others are waiting to go to the next task.

The lead workshop coordinator should explain the problem tree methodology and introduce the practice exercise, explaining that this will make development of a 'real' problem tree easier and quicker. This is because the practice exercise lets participants understand the method without the added mental pressure of having to achieve an important output at the same time.

The practice problem tree involves the following steps:

1. Tape four flipchart sheets together and place them on tables or on the floor; it may be necessary to join 2-3 small tables to create enough space for spreading the worksheet. Having a large area is important: a small area tends to limit the analysis (there can be many causal factors of the problem).
2. Tape a large-scale copy of the 'Problem Tree Instructions Sheet' (Annex 5) to the wall near each work station.
3. The WGs develop problem trees around every day or 'popular' problems decided by the core team before the workshop. These practice problem trees should not be related to forestry or development, since these themes tend to result in technical discussions and analysis that detract from the learning objective of the practice exercise. Practice problem trees have included traffic congestion, alcoholism, rubbish on the streets, and youth delinquency. It has also been found that if each WG decides on their practice problem tree, considerable time can be lost discussing it, and it can provide an early opportunity for bias, as the more articulate or educated participants tend to prevail in such discussions.
4. Ensure that everyone in the WG has the same understanding of the problem, and get the WG to discuss and write the statement of the problem in ten words or less on a RED card. This should be placed at the far right hand side of the problem tree worksheet.
5. Working first in pairs, brainstorm all the causes of the problem on YELLOW cards.
6. Rationalise the cards, e.g., if there are 2-3 similar cards, make one card and throw away the rest.
7. Arrange the cards in cause and effect order – this will take most of the time.
8. Identify the most direct or immediate causes and replace these yellow cards with PINK cards. Throw away the old yellow cards.
9. Draw arrows between the cards in pencil (this makes it easier to change the problem tree later without making it messy).

10. Write the name of the problem tree at the top of the sheet and keep it in a safe place – it will be needed for the Solution Analysis Workshop (SW2).

The WG facilitator can also provide the following guidance:

- Use the cards of the right colours.
- Write only one idea per card.
- Write only 7-8 words per card.
- Use large and clear handwriting – appearance is important since many people will look at the problem tree.
- If something needs to be crossed out, throw the card away and use a new one.
- Be specific: the card must be understandable to people outside the WG.
- Group members should sit or stand in front of the worksheet (it is difficult to participate effectively when the writing appears upside down).
- Less confident or shy people, who are often female, should sit closest to the worksheet and/or in the middle (their natural inclination is to sit or stand at the back or edge).

During the practice exercise, the participants should be encouraged to ask questions to the WG facilitator so that they can better understand the method. After the activity, the WG should discuss the quality of participation. If some people did not participate much or some participants seemed to dominate, this should be discussed with the aim of achieving more equitable participation in the 'real' problem tree analysis.

Time required: about 1 hour

B4.2 Development of problem trees

The WG should first discuss their priority driver or enhancement activity till all WG members have the same understanding. They can then write the 'problem statement' on a RED card. For D&FD drivers, the RED card is often the name of the driver, e.g., "Forest clearance for rubber plantations" or "Small farmer encroachment into protected forests." For an enhancement activity, the RED card usually expresses a problem or limitation as regards expanding it, e.g. "Low uptake of reforestation with indigenous species" or "Significant barriers to scaling up improved natural forest management."

The WG can then develop the rest of the problem tree. Figures 14 and 15 provide examples of problem trees from SRAP case studies in Nepal and Vietnam. When conceptual models or problem trees are available from the national REDD+ strategy process, as in Vietnam, these can be discussed and modified according to the sub-national context.

Time required: about 3 hours

B4.3 Group exchange

When the WG has developed a first draft of the problem tree, it can be partially verified and improved through a 'group exchange' exercise. This involves members of one WG 'visiting' the problem tree of another WG, except for the WG facilitator and one WG member who should stay at their WG work station. The task of the WG facilitator and the remaining WG member is to explain the problem tree to the 'visitors'. The visitors should ask questions, point out what they think is missing or wrong, and suggest changes. The host WG facilitator or member should note down the criticisms and proposed changes. The visitors can write some potential new cards, but at this point the cards should not be changed or moved. This can take about 30 minutes.

The visiting WG then returns to its own problem tree to discuss the visitors' comments and suggested changes. The WG should carefully discuss each proposed change and decide whether to change the problem tree. It is a good idea to make a note of the rationale for not making suggested changes since the issue could be raised again in a plenary session. After making the changes, the WG can use a marker pen to draw over the pencilled arrows in ink, stick the cards firmly to the paper, and tape the problem tree to the wall.

Figure 14: **Problem tree of forest encroachment for farming and illegal settlement, Chitwan District, Nepal**

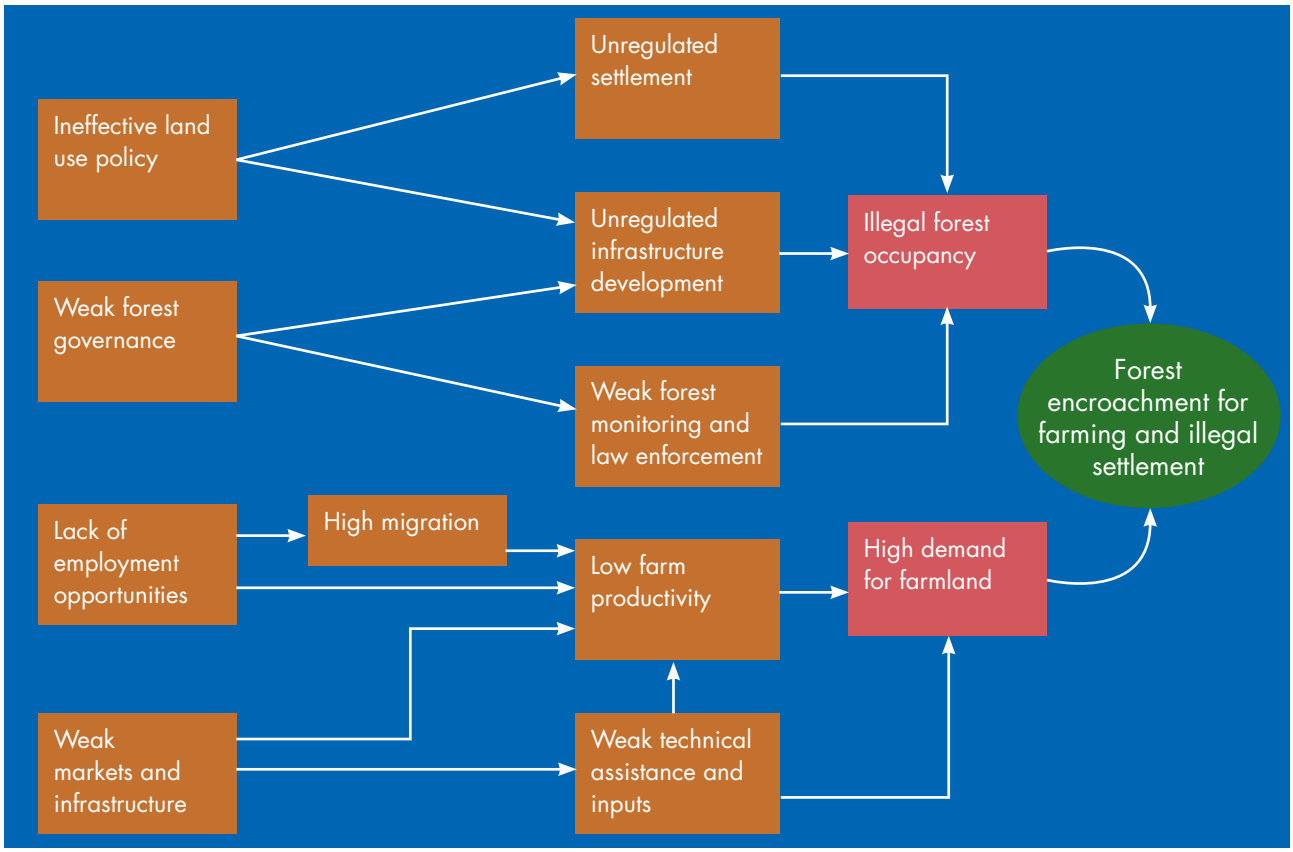
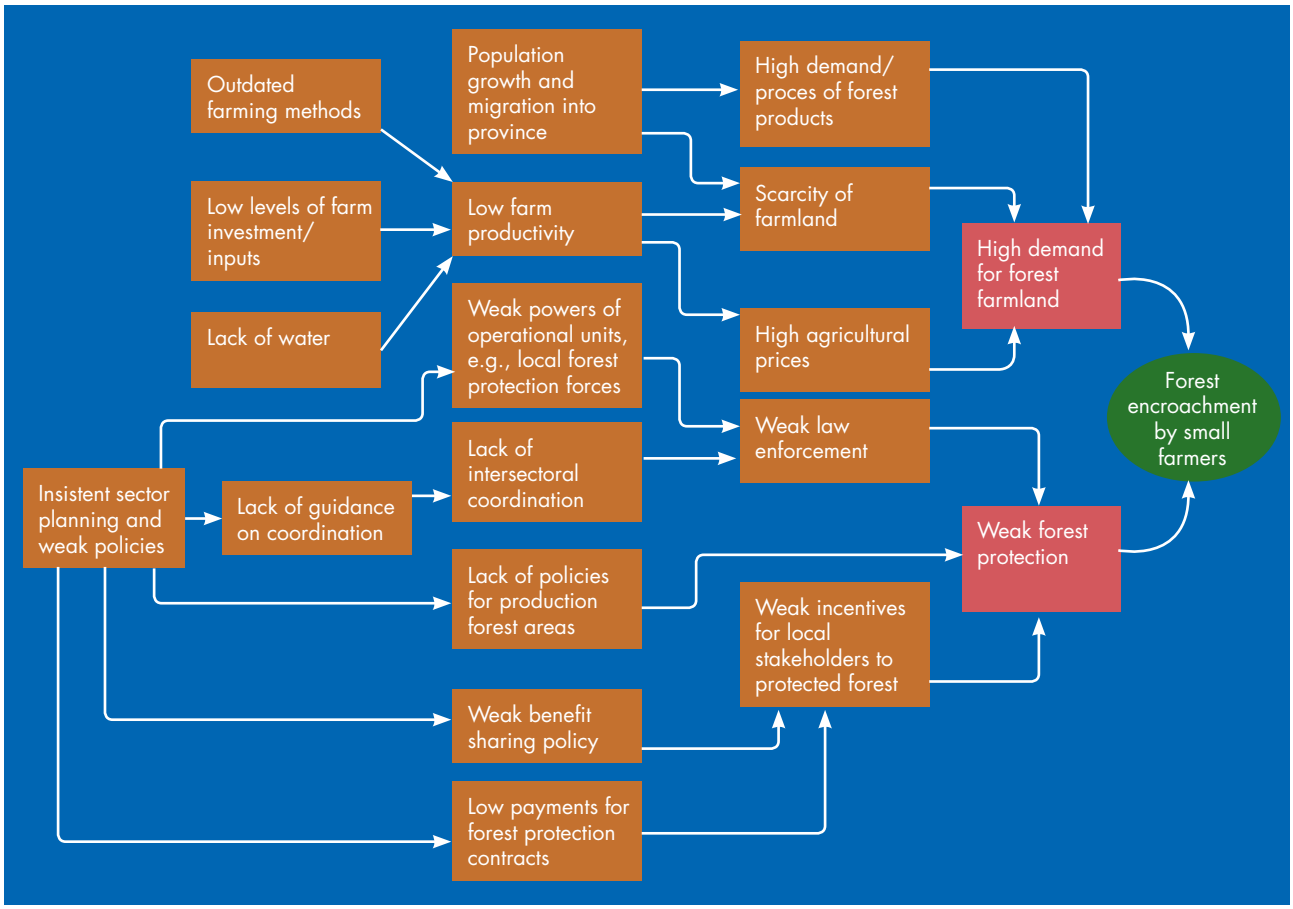


Figure 15: **Problem tree of forest encroachment by small farmers, Binh Thuan Province, Vietnam**



It is inevitable that some WGs will finish their problem tree before others, but they will need to wait for others to finish before they can do a group exchange. If a WG finishes early, a useful task is to start identifying some 'entry points' for their solution tree (to be developed in SW2). Entry points are relatively short-term and low-cost actions or activities that respond to a specific causal factor (on a yellow or pink card) in the problem tree. For example, a causal factor such as 'lack of capacity in community organization' could be tackled by a training or capacity building activity; or 'low awareness of forest laws by community members' can be tackled by an awareness raising or popular education initiative. Entry points can be written (first in pencil) on BLUE cards and placed on the problem tree.

Time required: about 1 hour

B4.4 Museum visit

In a 'museum visit' all workshop participants should have the chance to examine the problem trees of the other WGs. It is proposed that participants have 30 minutes, which they can divide between the problem trees they are not yet familiar with. This means they can spend about 10 minutes looking at each problem tree they have not seen before, assuming there are five problem trees and there has been a group exchange.

The facilitator and one member of each WG should remain at each 'WG station' to explain the problem tree semi-continuously to a stream of visitors. If possible the explanation should be repeated about every 10 minutes (or three times over the 30 minutes). The visitors can comment on the problem tree but should not move the cards. The facilitator or WG member should note down substantial suggestions.

Following the museum visit, the WG may need to meet again to discuss whether, following the museum visit, any final changes to their problem tree are necessary. After these final changes, the problem trees, maps and worksheets should be photographed and folded away very carefully since they will be needed for the Solution Analysis Workshop (SW2).

Time required: about 1 hour

B4.5 Field verification of 'hotspots'

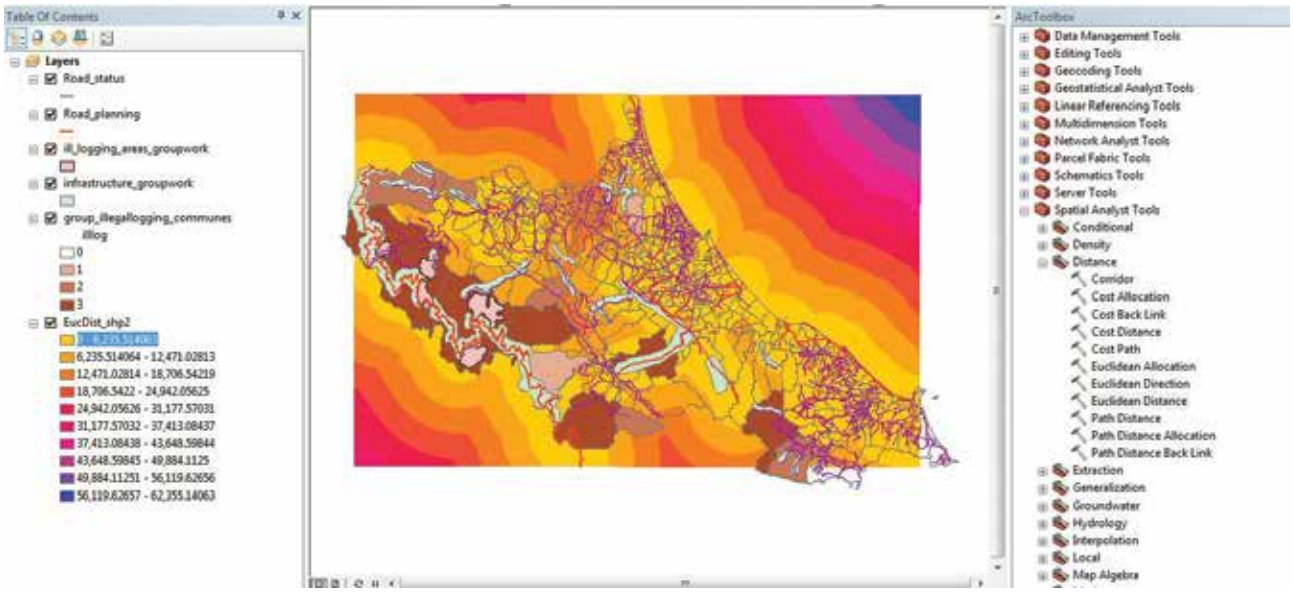
Soon after the Problem Analysis Workshop, the SRAP team should visit the hotspots and priority locations for enhancement activities identified in SW1. They should hold discussions with key informants, focus groups and local institutions (e.g., parish council, village development committee, community forestry committee) to clarify the local importance of the driver(s) and/or the potential for an enhancement activity.

Field verification should include hotspots where there is a discrepancy between hotspots identified in the preparatory spatial analysis and those identified by the SW1 participants on the annotated workshop maps. When agreement is reached between the spatial analysis team and lead workshop participants, the maps should be revised so that they coincide (to avoid confusion later).

It may also be possible, following the Problem Analysis Workshop, for the spatial analysis team to provide computer generated maps using GIS or mapping software to help check or clarify the hotspots. For example, Figure 16 shows areas potentially affected by a driver by combining participatory workshop analysis with map overlaps from further spatial analysis (Hicks et al. 2016).

Depending on their findings, the SRAP team may need to revise the location of hotspots identified in the Problem Analysis Workshop. This could necessitate another smaller meeting (probably lasting only one day) to refine the analysis with the corresponding WG. If there is insufficient budget for field verification, a last resort approach to checking the workshop results is analysis by sub-national 'experts' or key informants.

Figure 16: **Digitised map combining participatory analysis and overlays to identify areas subject to deforestation by road development in Ha Tinh Province, Vietnam**



Source: Hicks et al. 2016 p.12

B4.6 Problem Analysis Workshop report

It is essential that, following the Problem Analysis Workshop and ground truth field visits, the data and discussions are carefully written up while still fresh in the memory. The lead workshop coordinator should take primary responsibility for this, supported by the SRAP core team and the WG facilitators. In particular the latter should help process computerised versions of the problem trees using Excel or other agreed software such as Miradi.[11]

Step B5 Solution Trees

B5.1 Overview of Solution Analysis Workshop (SW2)

The Solution Analysis Workshop (SW2) can be held after a short gap (say 2-3 weeks) to allow participants to recover their energy, give time to develop the maps needed for SW2, and allow data from SW1 to be processed and written up, including the findings from the hotspot visits. The participants need to be the same as for SW1.

The main objective of the Solution Analysis Workshop is to develop a set of solution trees in response to the problems analysed in SW1. This provides the basis for an expert group workshop (EW1) to define a set of REDD+ Intervention Packages (IPs). SW2 will probably last about one and a half days and can be structured as follows:

Day 1: Development of solution trees
Day 2: Group exchange and museum visit

Time required: about 30 minutes

B5.2 Explanation and practice

The workshop coordinator should make a short plenary presentation of the solution tree methodology. Some key points to make are:

- It is called a solution tree or 'results chain' since all the cards are expressed as results or solutions that lead to a desired outcome or objective. A solution tree in the REDD+ context is a theory of change on how to reduce emissions or remove GHGs from the atmosphere.

[11] Miradi is software (www.miradi.org) developed to support the 'Open Standards for the Practice of Conservation' (Conservation Measures Partnership 2007). Miradi uses the colours in the problem trees (or conceptual models) and solution trees (results chains) proposed in this manual. It is currently available in Spanish, Portuguese, French, Chinese, Mongolian, Indonesian, Malagsay, German, Italian and some other European languages.

- The cause and effect analysis in the solution tree encourages strategic and cost-effective REDD+ interventions.
- The solution tree is not, and should not be, a mirror image of the problem tree. When developing the solution tree, the focus is on achieving a desired outcome – this will bring in new ideas.
- The solution tree reveals key assumptions, usually found in the links between the cards, that need to be checked in order to develop a successful plan or strategy.
- The starting point is to rephrase the 'problem statement' card from the problem tree as a desired result or outcome (or an achieved objective). This can be written on a **GREEN** card and placed at the far right-hand side of the flip chart. Everyone in the WG needs to agree on the wording of this card; the WG facilitator should especially check whether shy or quiet WG members are in agreement.
- It can be difficult to get started but one approach is to identify some 'entry points.' An entry point is a short- term and low-cost intervention that responds to a specific causal factor or problem, e.g., 'lack of capacity in land use appraisal' could be tackled by training in land use appraisal methods; or 'low awareness of community members of forest laws' implies the need for an awareness raising programme using popular education methods.
- The solution tree analysis should be supported by relevant maps from SW1 or the preparatory spatial analysis showing the hotspots or potential carbon enhancement locations.

The mechanical steps for developing a solution tree are to:

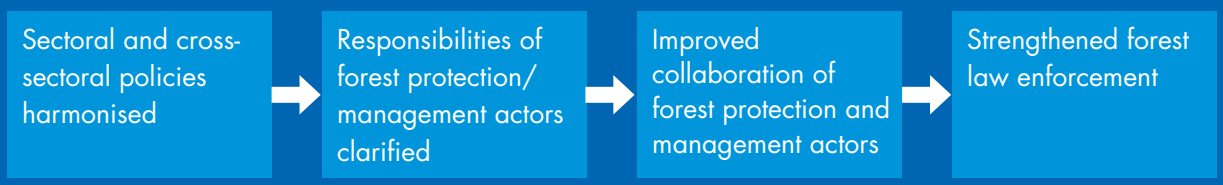
- Tape the following items to the wall (or otherwise make visible) near the WG workstation: the problem tree from SW1, a large copy of the solution tree instructions sheet (see Annex 5), a map of the relevant hotspots (or areas for enhancement) from SW1 and/or preparatory spatial analysis (it would be useful if this is available as a transparent overlay that can be placed over a map of the potential intervention activities developed in SW2).
- Tape four flipchart sheets together on the tables (joined together) or the floor.
- Rephrase the problem statement as a desired result or outcome, and write it on a **GREEN** card in less than 10 words.
- Brainstorm solutions or interventions to counteract or overcome the negative causal factors on **BLUE** cards, writing the cards as solutions or achieved results.
- Rationalise the cards.
- Arrange the cards in a cause-and-effect order.
- Decide the most direct or immediate causes of the desired result, and replace the blue cards with **PINK** cards.
- Draw arrows between the cards in pencil.

The WG facilitators should provide additional guidance for developing the solution tree:

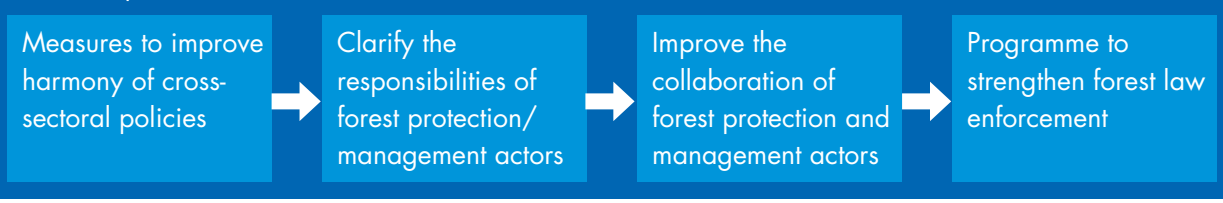
- Cards should be written as results or achieved solutions, not as activities (the normal tendency). Box 4 provides examples of the difference between expressing cards as results compared to activities. The difference is often in the verb tense used on the card.

Box 4: **Examples of correct and incorrect specification of cards in solution tree**

Correct specification of blue cards as achieved results:



Incorrect specification of blue cards:



- Try and avoid the 'mirror image' problem: the cards should not be written as the exact opposite of the cards in the problem tree. The focus should be on what needs to be achieved to achieve the desired objective or outcome.
- Try and avoid 'leaps of faith' between the cards: the WG should check for big assumptions or missing links between the solution cards: each step in achieving a solution, including intermediate steps, needs a card.

Participants should then do a short practice solution tree in their WGs. This should respond to the practice problem tree from SW1, which also needs to be taped to the wall at the WG workstation. The practice exercise is conducted in the same way as the practice problem tree, and should again focus on the methodology and quality of participation.

Time required: about 1 hour

B5.3 Development of solution trees

At this point the WG facilitator should provide a brief recap of where the WG had reached at the end of SW1, especially if there has been any further processing or analysis of the SW1 outputs. In particular the WG needs to know any relevant outcomes from the field verification and reconciliation of participatory and spatial analysis maps following SW1. The WG should develop the solution tree in the same way as the problem tree. It should not be rushed since it is the foundation of the SRAP. Several iterations may be needed before the WG is satisfied, and it could end up looking rather different to the problem tree. Figures 17 and 18 show the solution trees corresponding to the problem trees in Figures 14 and 15.

Time required: about 3 hours

Figure 17: **Solution tree of reduced forest encroachment, Chitwan District, Nepal**

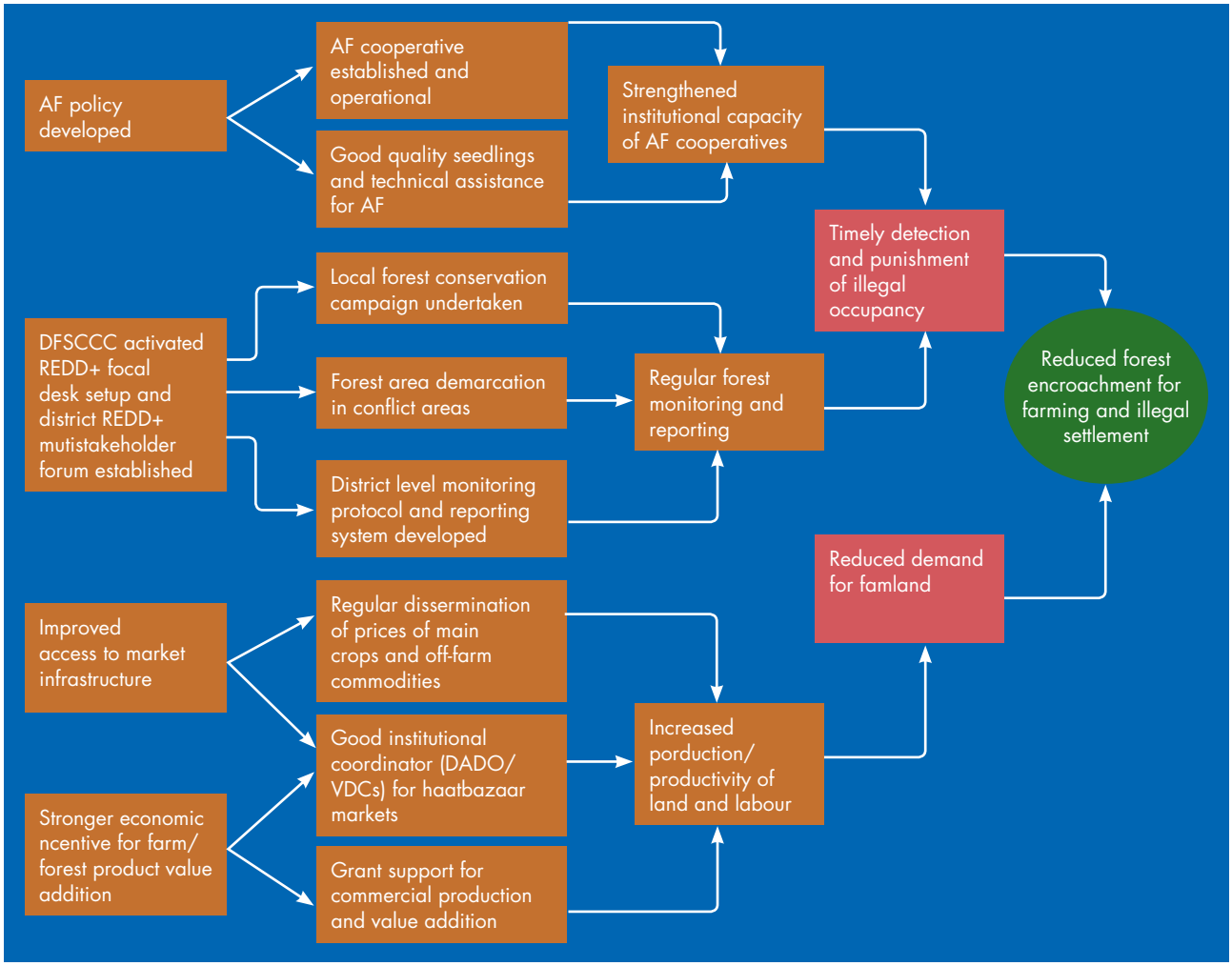
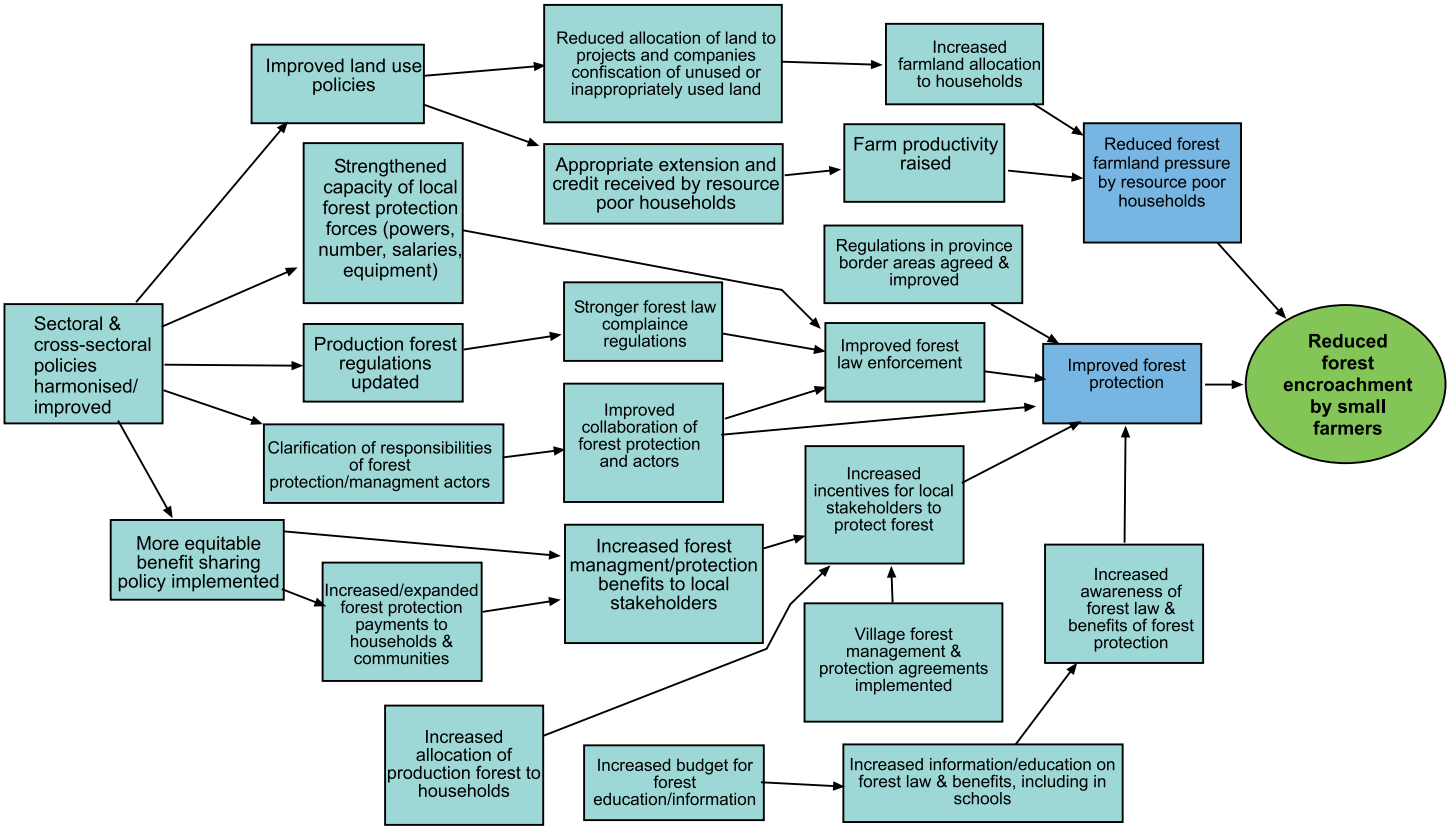


Figure 18: **Solution tree of reduced forest encroachment by small farmers in Binh Thuan Province, Vietnam**



B5.4 Group exchange

The group exchange takes place in the same way as for problem trees (Step B4.3), and is essential for validation and improvement of the solution tree.

Time required: about 1 hour

B5.5 Museum visit

The museum visit can also follow the same method as for the problem trees (Step B4.4). Following the museum visit, the WG may need to reconvene to consider substantial suggestions to the solution tree made during the museum visit. The solution tree and any maps should then be photographed and carefully folded up for processing and further use in Stage C.

Time required: about 1 hour

B5.6 Solution Analysis Workshop report

The report of the Solution Analysis Workshop will be quite short since it is mainly composed of the solution trees and maps developed by the WGs. The workshop coordinator should be mainly responsible for the report, supported by the SRAP team and the WG facilitators, who should help convert the solution trees to Excel or other agreed software.

Stage C: Plan

Step C1 Identification of Intervention Packages (IPs)

C1.1 Expert Planning Workshop (EW1)

Experience from the SRAP case studies revealed that some planning tasks are more demanding technically and difficult to do in large multi-stakeholder meetings, and that better quality planning outputs can be obtained from smaller 'expert group' workshops. Therefore, except for safeguards analysis, it is recommended that Stages C, D and E are undertaken by a smaller expert group. It is however recommended that the SRAP team and supporting consultants are joined in the Expert Group Planning Workshop (EW1) by some of the best informed workshop participants from Stage B.

C1.2 Identification and mapping of potential Intervention Packages (IPs)

The first task for EW1 is to review the solution trees from SW2. It is likely that some solution trees can be strengthened as regards the cause and effect logic and assumptions (or 'leaps of faith'). At the same time the expert group should be careful about making radical changes to the solution trees given that they are the result of a participatory process that needs to be respected. If not already done at SW2, EW1 should also review solution trees or results chains developed in the NS process that respond to sub-national level D&FD drivers and/or enhancement activities.

It is best to undertake the identification of Intervention Packages (IPs) from the solution trees in small teams or working groups. If there are, say, 10-12 people in EW1, they could form 2-3 small teams; the 'group exchange' system can also be used to validate and improve the outcomes.

An IP can be defined as a set of interlinked activities that form a coherent strategy for counteracting a D&FD driver or barriers to expansion of a forest carbon enhancement activity. Other important criteria for defining an IP are that it should:

- Have a direct and measurable impact on the forest resource;
- Be independent of other IPs (so that the carbon outcome of each IP can be separated);
- Contain a viable strategy or incentive measure[12] for changing the behaviour of stakeholders who are currently depleting (directly or indirectly) the resource or preventing expansion of an enhancement activity.

The IPs will be composed of strategies or activities that can be operationalised at the sub-national or site level; they should not include national level PAMs even though the solution trees will naturally contain these (since they respond to the policy and governance failures that are the main underlying causes of D&FD). Therefore an initial task is to identify national-level PAMs in the solution trees and separate them; if these PAMs are not already contained in the REDD+ National Strategy, the sub-national stakeholders should lobby very strongly for their inclusion, since without them the SRAP is unlikely to succeed. For example, the solution trees developed for Chitwan District, Nepal, included the following PAMs:

- Enabling national policies for private forestry, farm forestry and agroforestry;
- Deregulation of transport and marketing procedures and restrictions, especially for community forestry products;
- Improved forest law enforcement and governance, including timely detection and punishment of illegal logging;
- Improved institutional coordination;
- Simplified government procedures for alternative energy subsidies.

[12] Most national level PAMs involve incentive measures, e.g., linked to tenure, fiscal or regulatory measures. Incentive measures that could be incorporated into sub-national IPs include, for example: the transfer of forest use or management rights to local communities; employment of local individuals as forest guards; or subsidised installation of improved cook stoves.

The next task is to prioritise 'key results' in the solution trees. A 'key result's is a solution card (excluding national-level PAMs) that is essential for achieving the desired outcome or objective on the final (green) card. The key results tend to be found more on the right hand side of the solution tree, especially on the pink cards, as well as on the blue cards.

It is not feasible or sensible to try and include all the results or solution cards in the solution trees since efforts and resources would become too diluted. Effective implementation is only likely if there are a few strategic and focused IPs. To begin with, it is suggested that up to five key results are identified from each solution tree with the aim of defining 2-3 IPs per solution tree (an IP is sometimes composed of more than one key result).

Each prioritised key result can then be analysed against the above-mentioned criteria of an IP. If a key result is phrased in the form of a strategy for achieving the final objective, it may be an IP, possibly in combination with another key result. For example, from Figure 17 the key result 'Strengthened institutional capacity of agroforestry (AF) cooperatives' was combined with another solution card 'Agroforestry cooperatives established and operational' to form an IP called 'Promoting agroforestry (AF) cooperatives'. Some of the activities to be included in this IP were also drawn from the solution tree, including:

- Local campaigns or awareness raising on AF and forest conservation
- Establishing AF cooperatives
- Providing technical assistance to AF cooperatives
- Grant support for commercial AF production

In other cases, a key result may not be appropriate as an IP. For example, a key result such as 'Reduced illegal logging' is not an IP; a more specific strategy for reducing illegal logging, e.g., strengthened forest law enforcement, could however be an IP. In an SRAP training workshop in Nepal, participants identified at least two IPs for reducing illegal logging, including 'Timber tracking', involving participatory monitoring of timber movement, and 'Cross-boundary collaboration', involving an agreement between adjacent district (or equivalent) forestry departments and border authorities in Nepal and India.

In another example, one of the IPs identified from the Vietnam case study solution tree (Figure 18) was called 'Smallholder land allocation and productivity'. This IP was composed of two strongly linked key results or strategies for reducing pressure on illegal forest encroachment. It was then possible to develop a list of activities required for each key result or strategy as shown in Table 5. Although some activities can be drawn from the solution tree, it is always necessary to think through all the activities required for the IP (or its component strategies/key results) to be successful.

Table 5: **IPs, strategies and activities for reducing forest farmland pressure by resource poor households, Binh Thuan Province, Vietnam**

Intervention Package	Key results or strategies	Activities
Smallholder land allocation and productivity	1. Raised farm productivity and incomes of resource poor households	• Investigate the causes of low farm productivity; • Develop farmer training programme and improved extension materials; • Establish demonstration plots in hotspots with resource poor farmers; • Design and establish agricultural credit programme; • Implement agriculture credit programme; • Implement agricultural extension campaign with new materials; • Organise exchange visits and meetings between farmers; • Monitor changes in farm practices, output and profitability; • Monitor agricultural credit programme
	2. Increased farmland allocation to households	• Develop & approve sub-national policy to reduce allocation of farmland to projects/ companies; • Investigate unused or inappropriately used agricultural land (by companies and projects); • Develop a process to decide which households should receive re-allocated land; • Provide cadastral and legal support to land re-allocation process, etc.

If there has been a detailed NS process, and national level IPs or PAMs have been identified, the process should be quicker. In this case the expert group planning workshop needs to ensure that sub-national IPs align with or complement the NS, rather than being contradictory. This analysis should be supported, if possible, by someone who has been involved in the NS process.

In summary there is no formula for defining IPs from solution trees. In general an IP is equivalent to a strategy for achieving the desired outcome of the solution tree, or a combination of closely linked strategies that together comprise a coherent set of activities for achieving the desired outcome, as long as it meets the criteria of an IP (see above).

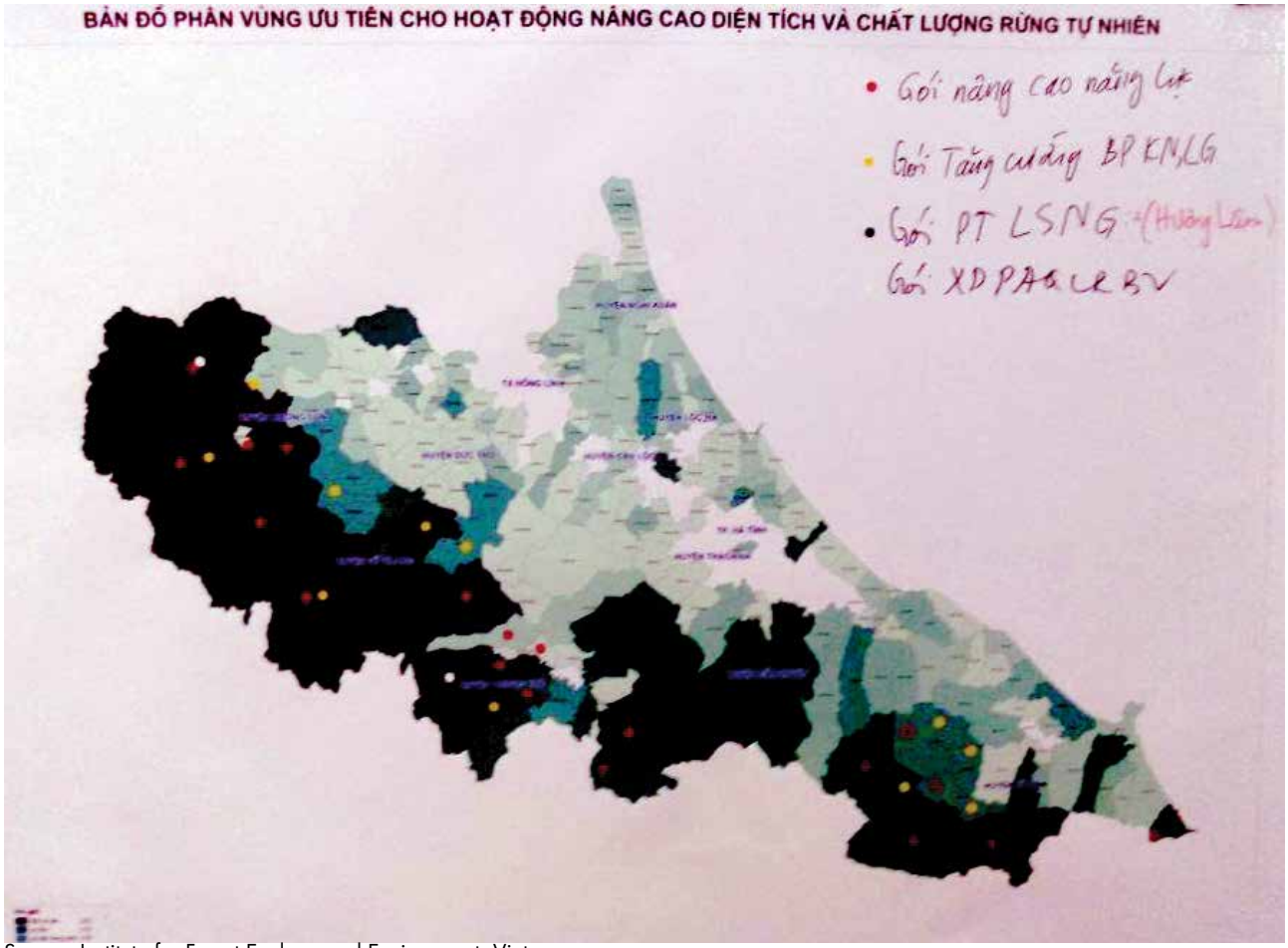
Finally it is important to map the proposed IPs since this will inform the subsequent steps, especially feasibility and safeguards analysis, and when the SRAP is agreed on, negotiation of local-level REDD+ Implementation Agreements. Figure 19 shows a participatory map of IPs to promote improved forest management (IFM) in Ha Tinh Province, Vietnam; the base layer of this map is a digitised version of Figure 13 from the Problem Analysis Workshop. Participants then prioritised areas for the IPs to tackle barriers to expansion of improved forest management. Figure 20 provides another example of mapping of IPs developed by SRAP workshop participants.

Time needed: at least half a day

C1.3 Feasibility analysis

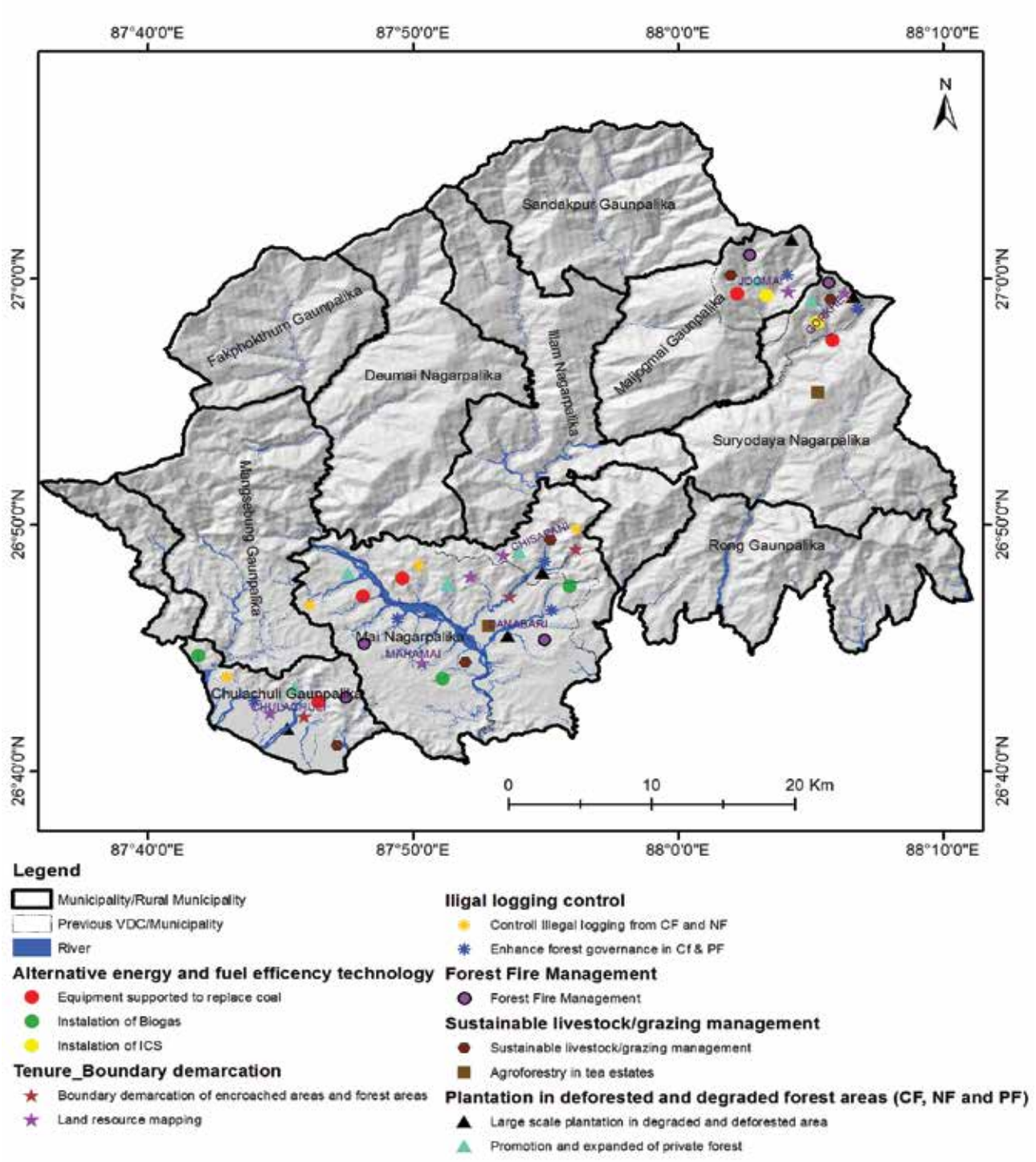
The next task for EM1 is to conduct feasibility analysis of the potential IPs. This involves analysing the risks and obstacles to implementation, and then assessing the overall feasibility of each IP. The first task in feasibility analysis is to identify and analyse risks and obstacles to implementation. This can again be done in small teams. It is important to note that the risks or obstacles should ***not*** include lack of finance or resources since the assumption is that the costs and resources required for implementation will be covered by REDD+ finance if the SRAP becomes

Figure 19: **Mapping of IPs to promote IFM in Ha Tinh Province, Vietnam**



Source: Institute for Forest Ecology and Environment, Vietnam

Figure 20: **Map of proposed REDD+ interventions in Ilam, Nepal**



operational. At the same time cost-effectiveness is a vital criterion in feasibility analysis. There are two main types of obstacles or risks:

- Implementation risks or obstacles internal to the SRAP process: e.g., management or technical capacity, the political will of sub-national government, governance problems, etc.
- External risks or threats, e.g., climate change, national policies conflicting with sub-national policies or other sorts of national level interference, social breakdown, forest disease, etc.

Some implementation risks and obstacles can be identified by analysing the links between the cards on the solution tree, and thinking about what could prevent one solution leading to the next one in the chain towards the end objective. It is suggested that a worksheet with five column titles is drawn up:

1. Key result/IP
2. Obstacle/risk
3. Likelihood of obstacle/risk
4. Impact of obstacle/risk
5. Risk reduction measures

The combination of the likelihood of a risk or obstacle, and, if it does happen, its likely level of impact, reveals how important or serious the risk is. These judgements of the likelihood and impact of risks are purely qualitative and comparative; no attempt should be made to quantify them – they should only be rated as High, Medium or Low. An example of an analysis of implementation risks and obstacles is provided in Table 6.

Table 6: **Implementation Risks and Obstacles of the IP 'Promotion of Agroforestry', Chitwan District, Nepal**

Key results/IPs	Implementation risk or obstacle	Likelihood of risk	Impact of risk	Risk reduction measures
Agroforestry (AF) cooperatives established and supported	Long, complicated government procedures	Medium	Medium	Simplified government procedures
Improved AF management practices and production systems adopted (especially by resource poor farmers most likely to encroach)	Poor access to good quality seeds/seedlings	High	High	Financial and technical support for 'high-tech' AF nurseries
	Complex regulations for the harvest and transport of forest products	High	High	• Revision of Forestry Regulation, Article 62 to promote private forestry • Guidelines for simplifying harvest & sale of forest products
	Poor access to market information & weak knowledge of AF product value chains	High	High	Regular forest/farm product market information programme on local FM radio
	Misuse of AF production grants (improved management practices)	Medium	Medium	• Transparent selection of grant recipients • Effective grant monitoring mechanism

The teams can now analyse the overall feasibility of each IP. This depends on several factors including:

- Likelihood and severity of implementation risks and obstacles
- Feasibility and cost-effectiveness of risk reduction measures
- Implementation cost of the IP
- Opportunity cost of the proposed land use, such as forest restoration, agroforestry, etc.
- Strength of incentive measures associated with the IP

Further explanation is needed for the opportunity cost and incentive measures. The opportunity cost is the net income per hectare of the land use associated with the driver (a commercial rubber plantation) or the alternative land use to an enhancement activity (e.g., illegal logging in a potential forest restoration area). The higher the opportunity cost, the lower the feasibility of the REDD+ land use. For example, if the direct driver is shifting agriculture the opportunity cost will be quite low, but if it is palm oil it will be high, and if it is a hydro project it will be very high. It is not practical at this stage to quantify the opportunity cost against the net income of the REDD+ land use, so this will need to be a qualitative judgement about the relative profitability of the different land uses (ideally an economist could be present to help facilitate these judgements).

The success of an IP depends on key stakeholders, such as land users or managers, changing their behaviour (e.g., adoption of sustainable land use practices). Although training and awareness raising can help, the determining factor in land use change is the strength of the economic incentive to change current practices. For example, an IP that combines strengthened tenure rights or land security with carbon payments can be rated as a strong incentive measure, whereas an IP that relies only on carbon payments to farmers is likely to be a weak incentive measure. A worksheet with seven columns, as in Table 7, can be completed as follows:

- Names of IPs
- Implementation risks and obstacles: Low (3), Medium (2) or High (1)
- Feasibility/cost-effectiveness of risk reduction measures: High (3), Medium (2), Low (1)
- Implementation cost of IP: Low (3), Medium (2), High (1)
- Land use opportunity cost: Low (3), Medium (2) or High (1) (i.e., low, medium or high net income per hectare from the current (driver) or alternative land use)
- Incentive measures for changing stakeholder behaviour: High (or strong) (3), Medium (2) or Low/weak (1)
- Total feasibility score.

Table 7 provides an example of overall feasibility analysis conducted in a SRAP training workshop for intervention packages identified to counteract illegal logging in Ilam District, Nepal. This implied that the IP 'Transboundary timber movement agreement' was more feasible and cost-effective than the IP 'Timber tracking'.

Table 7: **Overall feasibility analysis of IPs to reduce illegal logging in Ilam District, Nepal (practice exercise from SRAP training workshop)**

IPs	Implement-ation risks/ obstacles L=3/M=2/H=1	Cost-effectiveness of risk reduction measures H=3/M=2/L=1	Implement-ation cost L=3/M=2/ H=1	Opportunity cost L=3/M=2/H=1	Incentive measures H=3/M=2/ L=1	Total score
Timber tracking: participatory monitoring of timber movement	2	2	3	1	2	10
Transboundary timber movement agreement (Nepal & India district level government)	1	3	3	3	3	13

Although the feasibility analysis uses a crude scoring system, it can be cautiously concluded that a high score implies greater feasibility and/or cost-effectiveness of the IP, while a low score implies serious feasibility issues. For IPs with a 'low' feasibility score, the expert group should discuss whether to discard the IP at this point rather than carrying on spending time on it. This decision should depend partly on whether EW1 thinks the IP can be made more feasible and cost-effective. It may also depend on the number of IPs under consideration, given that the SRAP is likely to be more effective if it concentrates on a smaller number of well-resourced IPs.
Time needed: about half a day

C1.4 Field verification of proposed IPs

Following EW1, field verification of the proposed IPs should be undertaken. This should include clarification of any issues or discrepancies surrounding the maps or location of the IPs, for example, tenure or property boundaries. Using maps of the proposed IPs, focus group discussions can be held with local stakeholders to check for local implementation risks and obstacles (at this point try not to get too drawn into social and environmental risks since the plan is to conduct 'local safeguards analysis' at a later date). If the discussions and fieldwork reveal serious additional risks or obstacles, it will be necessary to call a further short meeting of the expert group to re-assess and possibly re-rank the proposed IPs. Annex 6 provides a checklist for field verification of IPs developed by the Vietnam UN-REDD Project Management Unit for use in the PRAP process.

If the budget and time are very limited, field verification of the IPs could possibly be combined with the Local Safeguards Analysis (Step C2.2), but care is needed to avoid overloading local stakeholders with too many meetings and questions, or meetings that go on too long so that the quality suffers. It would therefore be better to keep field verification of the IPs and local safeguards analysis as separate exercises if possible.

Step C2 Safeguards Analysis (Risks and Benefits)

C2.1 Provisional identification of risks and benefits

The first task in safeguards analysis can be the last activity of the Expert Planning Workshop (EW1). This is to check the proposed IPs against the 'Cancun' UNFCCC safeguards. Someone with a strong understanding of the

safeguards, possibly from the national REDD+ office, should explain the safeguards and how it is proposed to analyse them. The REDD+ Academy[13] provides useful online guidance for this introduction. The seven 'Cancun safeguards' for REDD+ are:

- Actions should complement or are consistent with the objectives of national forest programmers and relevant international conventions and agreements;
- Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking account of relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
- Full and effective participation of relevant stakeholders, especially indigenous peoples and local communities;
- Actions consistent with the conservation of natural forests and biological diversity, promotion of ecosystem services, and avoidance of conversion of natural forest;
- Actions to address the risk of 'reversals';[14]
- Actions to reduce the risk of 'displacement' of emissions.[15]

The expert workshop can use the UN-REDD Benefits and Risks Tool (BeRT) worksheets in Annex 7 to check the IPs against the safeguards, and brainstorm for governance, social and environmental risks and benefits. It can be noted that safeguard (a) is more relevant to national level PAMs.

It is proposed that two teams are formed for this task; team A can focus more on the social and governance issues (safeguards a–d) and team B can focus on the environmental safeguards (safeguards e–g). Experts or participants with social expertise should be in Team A, which should also have a good gender balance. Participants with stronger technical and biodiversity understanding can be in Team B; ideally Team B can be supported by a biodiversity specialist, who could make a short presentation on the status of biodiversity and ecosystem services in the sub-national area. The two teams should also be able to refer to large-scale maps showing the provisional location of the IPs.

The main aim is to identify risks or threats to the safeguards, and, secondly to identify where an IP can contribute significant governance, social or environmental benefits. Many of the social and environmental risks will be side effects or 'trade-offs' between multiple objectives, e.g., a trade-off between carbon and livelihood benefits. A useful criterion for a social risk is whether it will impact a 'vulnerable stakeholder group'.

The risks and benefits should be as specific as possible. The benefits should also be quite selective, and should be chosen with a view to thinking how key benefits, such as gender equity, improved governance and biodiversity conservation, could be enhanced; a long list of potential benefits is unhelpful. When both teams have finished they can use the 'group exchange' method to question and improve their analysis. The outcome of this step will be a list of potentially important risks and benefits for each proposed IP.

Time needed: at least half a day

C2.2 Local safeguards analysis

The SRAP team or sub-set of EW1 participants should then conduct risks and benefits analysis with local stakeholder representatives in the proposed IP locations or hotspots. This could be done in one day workshops or focus groups (e.g., women's groups) and using other participatory rural appraisal methods. Maps of the proposed IPs should be taken to inform these meetings.

[13] http://www.unredd.net/index.php?option=com_docman&view=list&slug=redd-academy-learning-journals&Itemid=134

[14] This can happen if a REDD+ intervention is not sustainable or does not tackle underlying causes of D&FD, so that the SRAP only results in a short-term reduction in emissions, and in the longer term the drivers reassert themselves and emissions rise again.

[15] This is also known as 'leakage'. Leakage or displacement happens when a REDD+ intervention reduces emissions in one place, but the agents or stakeholders who caused those emissions move somewhere else causing increased emissions in the new location that cancel out the initial reduction in emissions.

This exercise requires a careful explanation and justification of the proposed IPs. The discussions will probably focus more on social and governance issues, but local stakeholders should also have the opportunity to identify environmental risks and benefits. Two simple forms for Local Safeguards Analysis are proposed in Annex 4 for 'Local Risks Analysis' and 'Local Benefits Analysis' using large sheets of paper (or a blackboard/ whiteboard if there is one). Since some participants may be illiterate or have poor literacy, a local artist can be hired, so that pictures can be added if necessary for better understanding.

The proposed Local Risks Analysis form has three columns:

- **Column 1:** when writing a proposed IP, it should be broken down into its component activities so that it is as clear as possible;
- **Column 2:** write a short description of the risk, including why people think it is a risk; in the case of social risks include vulnerable stakeholder groups affected;
- **Column 3:** while identifying how a risk can be reduced or prevented, it should be emphasised that 'risk reduction measures' need to be feasible and cost-effective.

The Local Benefits Analysis form is similar except that the last column is for benefit enhancement measures, e.g., an activity to enhance gender equity benefits. Again these need to be feasible and cost-effective. It is important not to rush these exercises; local stakeholders will need time to digest and discuss these new ideas.

If there is time after this exercise, the SRAP team can present the list of risks and benefits from EW1 for discussion. This should not be done before the local risks and benefits analysis since it would limit independent thinking, and some local stakeholders may not like to disagree with state officials, e.g., they could have a perception that they would be less likely to be selected as future 'project beneficiaries'.

C2.3 Safeguards analysis workshop (SW3 or EW2)

Introduction and participants

The SRAP team can decide whether the Safeguards Analysis Workshop should be conducted as a third multiple stakeholder workshop (SW3) or in a second expert group workshop (EW2). The following questions may help the core team to make this decision:

- Was the Local Safeguards Analysis sufficient in terms of local stakeholder participation or is further participation in safeguards analysis desirable and necessary?
- Would local stakeholders be adequately represented in a multiple stakeholder workshop?
- Would local stakeholders or their representatives participate effectively in the workshop, or will their participation make it difficult to achieve the outcomes?

For the purposes of this manual, it is assumed that the SRAP team has decided to hold a third multiple stakeholder workshop (SW3). The main objectives of SW3 are to decide on 'serious' risks and benefits, which could lead to modification or even elimination of an IP, and feasible risk reduction and benefit enhancement measures for inclusion in the SRAP.

Some participants in SW3 could be different to SW1 and SW2, although it would be best if at least half of them are the same in order to maintain continuity and due to their familiarity with the workshop methods and dynamics. Also at least one third of them should be female given the importance of gender equity. There should be enough female participants both to form an all-female WG to analyse social risks and benefits, and for other women to participate in other WGs. There should be sufficient representation of vulnerable stakeholder groups though the need for literacy should also be taken into account.[16] The local stakeholder representatives could be selected from among those who participated constructively in the local safeguards analysis.

After describing the objectives, methods and structure of the workshop, the SRAP team should present the proposed IPs, including how they were defined. This should be followed by short presentations from the safeguards analysis in

[16] There is scope for creative solutions to low literacy such as using local artists, but these tend to be time consuming and it could be difficult to prevent educated participants from shaping the outcomes.

EW1 and the local safeguards analysis; these should focus more on the process than on the outcomes (long lists of risks and benefits should be avoided). It would also be desirable to present the stakeholder analysis prepared for, or conducted at, SW1.

It is again very useful to have large-scale maps on the walls, especially ones showing socio-economic or environmental characteristics, for example: poverty distribution, location of ethnic and indigenous groups, population density, forest livelihood dependency, protected areas, biodiversity hotspots, etc.

Time needed: about 2 hours

Risks and benefits analysis by working groups (WGs)

It is suggested that WGs of about 5-7 participants are formed to analyse the IPs; therefore, depending on the number of participants and IPs, each WG could have two or more IPs. Stakeholder group representatives should be spread equitably across the WGs.

The first main task of the WGs is to prioritise the risks and benefits identified in the Expert Workshop (EW1) and Local Safeguards Analysis. Each risk can be written on a red coloured card. If a risk was identified in both EW1 and the Local Safeguards Analysis, it should have an asterisk; also risks that are strongly related to the UNFCCC safeguards should be identified (e.g., two asterisks). The cards should then be rationalised, rephrased (if necessary) and written out on new cards. It is suggested that a maximum of 10 risks are selected for each IP; if WG members have different views this may require a vote.

The next task is to make a worksheet with five columns with the following headings – IP/key result; Risk; Likelihood of risk; Impacts of risk; and Risk reduction measures. This is the form used for the analysis of implementation risks. The WG can then complete the columns as follows:

- Name of IP or key result.
- Place or tape the agreed **RED** cards.
- Rate the likelihood or probability of the risk as High, Medium or Low. If the likelihood of the risk is Low, there is no need to continue with the analysis since it will not be rated as a 'serious risk'.
- Assess the impact of the risk,[17] assuming it has happened, as High, Medium or Low. If the impact is Low, discontinue the analysis. Remaining risks are 'serious risks' since they have at least a medium likelihood, and at least a medium level of impact if they happen.
- For each 'serious risk' identify one or two risk reduction measures. These should be realistic and cost-effective.[18]

Some examples of risk analysis are presented in Tables 8 and 9. In these case studies, social risks were separated from environmental[19] and governance risks, but this is unnecessary. In the Vietnam case study an all women working group (Figure 21) was formed to assess gender impacts, reflecting good international practice, and the tendency of men to dominate discussions and/or treat gender issues lightly. No serious gender equity risks were identified, but this will not always be the case.

Maps can also be very helpful for safeguards analysis. For example, maps showing natural forests and biodiversity hotspots are important if conversion of natural forest or loss of biodiversity is a risk, and if an option is to modify the location of an IP to avoid a negative impact. This could also necessitate a further field trip by the SRAP team after the Safeguards Analysis Workshop.

Benefits analysis uses the same process and a similar form (see example in Table 10). In general there should be a very selective identification of benefits for enhancement through REDD+ activities. The benefit should be specified

[17] For social risks a key criterion is whether a vulnerable stakeholder group would be impacted.
[18] There was a tendency in the Vietnam and Nepal case studies to identify unrealistic or over-ambitious risk reduction and benefit enhancement measures, and for these measures to be very similar or a repetition of the planned IP activity. As a rule of thumb, risk reduction measures should be less ambitious and costly than the IP activities they correspond to.
[19] Another tendency in the pilot case studies was for participants to list environmental risks or problems when they were unlikely to be present given that most REDD+ interventions (except for some enhancement activities) are compatible with or promote biodiversity and other ecosystem services.

Table 8: **Social risks of IP to reduce forest encroachment from farming and illegal settlement, Chitwan District, Nepal**

IP/key result	Risk	Likelihood of risk	Impact of risk	Risk reduction measures
Agroforestry cooperatives established and supported	Poor/marginalised households excluded	Medium	Medium	Reserve equity share in cooperatives for target groups
Agroforestry promoted by technical and financial assistance	Reduced traditional crop food production by poor households	Medium	Medium	Promote multi-layer agroforestry practices including traditional food crops
	Elite capture	Medium	Medium	Expand pro-poor leasehold forestry in public and community forests
Boundary demarcation of forest and private land boundaries in conflict areas	Relocation of poor and increased social crime	Medium	High	Vocational training for evicted households; Increased access to public land
Grant support for diversification in Livelihood Improvement Plans	Elite capture	Medium	Medium	Transparent grant approval, monitoring and reporting mechanisms

Table 9: **Environmental risks analysis in Binh Thuan Province, Vietnam**

IP/key result	Environmental risks	Likelihood of risk	Impact of risk	Risk reduction measures
Forest encroachment legislation enforced	Leakage: deforestation in other provinces with weaker forest governance	Medium	Medium	Improved coordination with adjacent provinces
Increased farmland allocation to poor households (most likely to encroach)	Loss of fauna and flora habitats	Medium	High	Stricter control of forest conversion; Support for agroforestry, forest regeneration and afforestation
	Loss of biodiversity	Medium	Medium	
	Soil erosion	High	High	
Increased timber plantation areas	Soil erosion	Medium	Medium	Diversify species and planting methods; Reduced impact logging
	Soil and water pollution due to pesticides	High	High	Biological pest management
	Loss of biodiversity	Medium	Medium	Mixed species' plantations; Promote indigenous species
Ecotourism development	Garbage and waste problems	High	Medium	Develop and implement garbage regulations; Awareness raising campaign

Table 10: **Benefits analysis in Binh Thuan Province, Vietnam**

IP/key result	Benefits	Likelihood of benefit	Impact of benefit	Benefit enhancement measures
Forest encroachment legislation enforced	Social order maintained/improved	High	High	Improved supervision and monitoring of law enforcement
Agricultural extension and credit received by farmers	Increased farm productivity and income of poor and ethnic minority households	High	High	Community consultation mechanism to select poor farmers as extension/credit beneficiaries
Increased areas and payment norms for household forest protection contracts	Increased income of poor households with forest protection contracts	High	Medium	Preferential selection of poor/ ethnic community households for forest protection contracts

as clearly as possible. These benefit enhancement measures require a strong rationale and are most likely to relate to the 'multiple benefits' of REDD+, especially as regards additional measures to alleviate poverty, promote gender equity and meet biodiversity conservation priorities. Again feasibility and cost are key criteria when identifying benefit enhancement measures for inclusion in the SRAP, and the enhancement measure should not be more ambitious than the key result or IP.

Time required: about 4 hours

Figure 21: **All-women group analysing social risks and benefits, Binh Thuan Province, Vietnam**

Photo: Michael Richards

Group exchange and museum visit

As in the other workshops, pairs of WGs should undertake a 'group exchange' so that the analysis of risks and benefits is checked and improved. The museum visit can also take place in the same way as in SW1 and SW2. Based on comments and suggestions gathered during the museum visit, some WGs may need to re-form in order to make final changes to their risk and benefit analysis tables.

Time required: about 2 hours

Safeguards Analysis Workshop report

As for SW1 and SW2, data processing, analysis and reporting should take place as soon as possible. The lead workshop coordinator should be primarily responsible for the report, supported by the SRAP core team and WG facilitators.

Step C3 Review of Intervention Packages

C3.1 Analysis of existing sub-national plans and projects

A further important step for the SRAP team (or in an expert group meeting) is to compare the proposed IPs with forestry-related plans and projects, especially those already approved and/or budgeted. Most sub-national areas have a natural resources or forestry development plan, e.g., Vietnamese Provinces have a Forest Protection and Development Plan (FPDP), and there are also likely to be NGO sustainable resource use projects. There are two main reasons for making this comparison:

- To avoid duplication and reduce SRAP costs
- To check and resolve conflicts between the SRAP and other sub-national plans and projects

If the IPs have activities that are already partially or fully covered by existing plans and projects, the resource and cost requirements of the SRAP can be correspondingly reduced. This can be approached as a 'gaps analysis.' At this point it will be a preliminary gaps analysis; a more thorough gaps analysis is needed in Stage E for calculating the funding requirements of the SRAP.

An example of a possible conflict is where a strict or 'fences and fines' forest protection strategy, which prohibits extraction of any sort, clashes with an IP that promotes community-based sustainable management in buffer zones; another possible tension could be (in specific areas) between high profit plantations based on fast-growing exotic species and SRAP enhancement activities. Such situations may need careful negotiations between the SRAP team and the sub-national forestry programme or project proponents (there will probably be an overlap between the two parties). This may need to go to the national level if it cannot be resolved sub-nationally.

If there is an overlap between the IPs and other plans or projects, this needs to be carefully noted for the budgeting stage. It is fine for part of the SRAP to be implemented under another plan or project, but it would clearly be

preferable if the SRAP contributing activities can be included in the operation plan of the SRAP and be subject to the SRAP monitoring protocol.

C3.2 Selection of IPs for detailed planning

Following the feasibility and safeguards analysis, and the 'gaps analysis' with existing plans and projects, the SRAP team or expert group should carry out a final revision of the IPs before proceeding to the monitoring (D) and budgeting stages (E). The key question for the SRAP team is: can the IP be cost-effectively modified or re-designed to reduce the risks, including through the proposed risk reduction measures,[20] or would it be better to discard the IP? Reference should also be made to the maps to check the potential to modify the location of the IPs in order to reduce or eliminate the risks.

Selecting the IPs is not straightforward since the potential of the IPs for 'additional' emission reductions or removals should be taken into consideration, together with the feasibility and cost-effectiveness of each IP. In theory a SRAP should not pay for carbon removal or reductions that would happen anyway, e.g., due to commercially viable forest plantations. In practice the SRAP can involve a combination of activities and interventions that will:

- Incentivize or compensate carbon removal activities that would probably not happen without REDD+ funding, such as natural forest restoration and community-based sustainable forest management; and,
- Support and influence forestry and land use activities that would happen anyway so that they are more successful and effective as regards carbon removal.

Other key criteria for defining an IP (as already stated) are: it will have a direct impact on the resource; the IP is independent of other IPs; and there is a sufficiently strong incentive[21] for land users or managers to change their current practice.. It is also important to restate that the SRAP should be as focused as possible, therefore a maximum of six IPs is advisable. A geographical focus within the sub-national area would also lower costs and make it easier to implement and manage the SRAP, especially in view of the need for 'REDD+ Implementation Agreements' (RIAs) with local stakeholders.

If the SRAP team (or expert workshop) thinks there are more than five viable IPs following a careful study of the feasibility and safeguards analyses, and there is disagreement on which ones to discard, the expert group might need to resort to voting. Alternatively the SRAP team could seek the advice of the national REDD+ office.

C3.3 Revision of IP location maps

The SRAP team or expert group should then make the final revision of the IP location maps to ensure that there are no remaining discrepancies or issues following the feasibility and safeguards analysis, e.g., tenure boundaries. If there is a spatial analysis team, they could be asked to develop a computer-generated map showing the location of all of the IPs on one map. This will be especially useful to show to the decision-makers.

C3.4 Communication with multiple stakeholders

Finally, the process and rationale for selecting the IPs needs to be communicated to the stakeholders who participated in the three multiple stakeholder workshops. Ideally they would be invited to a one-day meeting to present and discuss the selected IPs. If budgetary restrictions prevent this, at least a letter and/or email should be sent to each workshop participant.

[20] As long as they are viable and cost effective, risk reduction measures in response to 'serious risks' should be included in the SRAP on the precautionary principle, and to pre-empt negative impacts. It can also be noted that risk reduction measures are usually 'no regrets' activities or measures.

[21] Most IPs will depend to some extent on national level PAMs for their successful implementation. The SRAP team may have more confidence in IPs that can be achieved mainly through sub-national level PAMs rather than where the incentive for change depends on an effectively implemented national PAM.

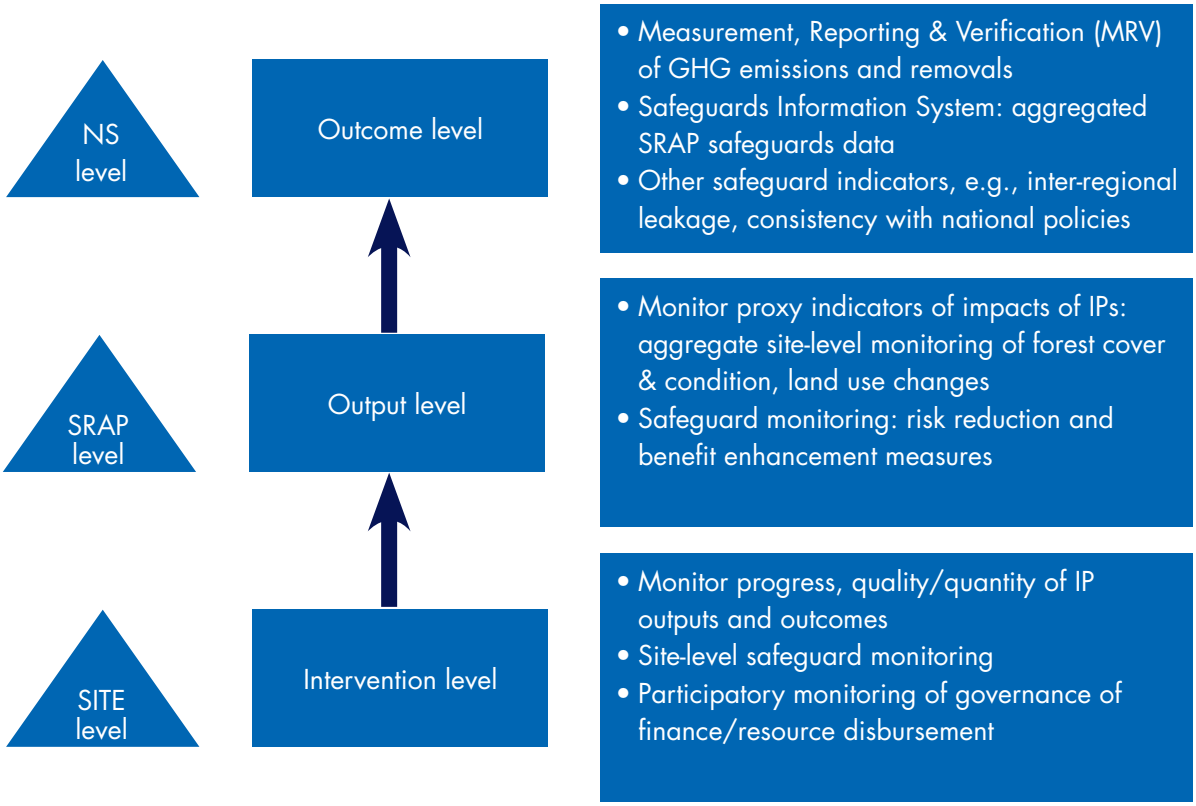
Stage D: Monitor

Step D1 Overview of Monitoring for REDD+ and SRAP

D1.1 REDD+ monitoring levels

There are three main levels of REDD+ monitoring, as shown in Figure 22: the national or NS level, the sub-national or SRAP level, and the local or IP activity implementation level.

Figure 22: **Three levels of REDD+ Monitoring**



National level monitoring

At the national level there are three main monitoring tasks or functions:

- Under the UNFCCC all international REDD+ payments or compensation must be 'results-based' and therefore REDD+ countries must have a system of Measuring, Reporting and Verification (MRV) of GHG emissions at the national level. This has to be compared to a 'benchmark' or Forest Reference Level (FRL) in order to calculate the REDD+ gains that a country can claim payments for.
- Monitoring progress and, as far as possible (given the attribution challenge) the outcomes of national level PAMs.
- Showing that the country is striving to meet the UNFCCC safeguards: all countries have to develop a 'Safeguards Information System' (SIS) and submit a 'Summary of Information' on how this system is being implemented.

Sub-national level monitoring

Monitoring and reporting of emission reductions and removals at the sub-national level is not required by the UNFCCC. A national level accounting system means that in theory, aspects such as leakage (or displacement of

D&FD) are not an issue for the SRAP, although it is necessary to check for and mitigate leakage risks of the IPs. It is also clearly desirable that all important forestry regions have SRAPs that can be coordinated to achieve national (NS) objectives.

The main role of REDD+ monitoring at the sub-national level is to assess the impacts of the IPs on carbon emissions and removal by monitoring 'proxy indicators' (e.g., changes in forest area and condition, although 'attribution' can be problematic). This is also vital for adaptive management of the SRAP. Weak achievement of targets and outcomes should alert SRAP managers and decision-makers to the need to revise or redesign the IPs. Adaptive management requires timely data on the implementation progress and negative impacts of the IPs.

Intervention level monitoring

Although a SRAP may be approved, implementation of the IPs still require the agreement of any local partners or stakeholders whose participation is required or whose livelihoods or rights are affected (as identified through the safeguards analysis). The negotiation between the SRAP implementing agencies and local stakeholders is not covered in this manual, but the process should ensure free, prior and informed consent (FPIC). The outcome of this will be a 'REDD+ Implementation Agreement' (RIA) with local stakeholders. The components of the RIA will include those found in a standard service provision agreement, such as:

- Responsibilities of all involved parties;
- Deliverables required for release of payments or incentives (if required); and,
- Consequences of any breach of the terms of agreement.

The RIA provides the basis for monitoring implementation of the IPs at the site level. RIA implementation and outcome indicators at the site level can then be aggregated at the sub-national level. Site level monitoring is critical for effective implementation of the SRAP since it:

- Informs 'adaptive management' leading to timely revision of IPs;
- Allows compliance with RIAs to be checked;
- Provides triggers for payments or incentives as negotiated under the RIAs;
- If local stakeholders participate strongly in the monitoring process, it contributes to transparency and stakeholder ownership;
- Informs the national Safeguards Information System (SIS).

In addition to the implementation and safeguard-related indicators, the SRAP needs a 'qualitative' monitoring system for identifying unexpected or perverse impacts. Adaptive management demands a regular flow of informal data from the grassroots that provides an early warning of unplanned or unexpected effects (negative and positive). This can be achieved through regular meetings between the SRAP monitoring office, local field staff and local stakeholders, who can be informally organised into focus groups. These should include an all-women focus group to pick up on gender issues.

D1.2 Indicators

Indicators are at the heart of any monitoring system. An indicator is something that can be measured to show progress towards achieving a target or objective. A more formal definition of 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). An indicator is not itself a target or goal, but rather shows progress towards achieving a target or goal. Therefore the specification of clear and quantifiable (if possible) targets or objectives is vital for the identification of appropriate indicators.

A key quality of an indicator is that it should show 'attribution.' Attribution is the capacity to show cause and effect or explain WHY something has changed, e.g., why has there been a change in forest condition? Without attribution, an indicator can be misleading, for example, an improvement in forest condition could be due to other factors such as macro-economic conditions or an NGO project rather than the PRAP. Indicators derived from the 'theory of change' approach, especially when they are derived from different points along a causal chain, have a

good level of attribution.

It is useful to distinguish between output, outcome and impact indicators:

- Output indicators are usually immediate or short-term, easy to identify and have high levels of attribution;
- Outcome indicators tend to be short to medium term, are harder to identify and tend to have a moderate level of attribution; and,
- Impact indicators are usually long-term, difficult to identify and with a low attribution level.

Some examples of output, outcome and impact indicators are shown in Table 11. A good monitoring plan should have a mixture of output, outcome and impact indicators.

Table 11: **Examples of output, outcome, and impact indicators**

Indicator types	Examples
Output Indicators	• numbers of jobs created • number of people trained in community organisation • number of trees planted • number of participants in environmental education workshops
Outcome Indicators	• number of households adopting a new livelihood activity • % increase in household income • eduction in hours spent by women collecting fuelwood • % of women serving on community forest management committees • improved monitoring systems for protected areas established • number of hectares of a rare ecosystem protected
Impact Indicators	• % reduction in infant mortality • % reduction of households living on < $2 per day • significant increase in female participation in decision making • reduction in domestic violence • % increase in population of an endangered species • improved watershed protection

D1.3 SMART targets

Specific, Measurable, Achievable, Realistic and Time-bound (SMART) targets or objectives are essential for identifying indicators. A SMART target is:

- Specific – the target should have a specific outcome or impact
- Measurable – the target should be measurable
- Achievable – the target needs to be achievable, as well as cost-effective
- Realistic – the target should be realistic as regards the resources and capacity needed to achieve it (allowing for the potential of REDD+ funding to increase this capacity)
- Time-bound – the target should have a clear and realistic timeframe

Table 12 provides an example of SMART targets and indicators for a REDD+ project (for the voluntary carbon market) in Guatemala (undertaken in 2011). A clear SMART target makes it much easier to identify an indicator; when a target is unclear it is difficult to identify appropriate indicators.

The cost of a monitoring system depends mainly on the data collection method needed for the indicator. In many cases the indicators will have a low cost for the SRAP since data already exists (sometimes in published form) or can be easily collected. For example, the indicators in Table 12 are relatively low cost assuming there are records of court cases, training courses, etc., in Guatemala.

Step D2 Targets and indicators

D2.1 Expert Monitoring Protocol Workshop (EW3)

A two-day expert group monitoring workshop is needed to develop a monitoring plan or protocol for the SRAP. This should not happen until the IPs have been finalised (Step C3). If there is enough funding, an experienced consultant can be hired to develop the monitoring plan, or a monitoring expert could be invited to participate in the workshop.

Table 12: **Targets and indicators from a REDD+ project in Guatemala**

Key result	SMART targets	Indicators
Strengthened governance in community forest concession areas	By June 2014, at least 50% of judiciary operators in the Biosphere Reserves are applying their specialized understanding of environmental legislation	Number of judiciary operators trained in environmental legislation
	By December 2014, at least 80% of legal environmental actions brought to court result in criminal sentences	Number of criminal sentences due to environmental infractions
Women significantly involved in forest management	By the end of 2014, 100 women receive forest management training courses in the project area	Number of women receiving forest management training courses
	By the end of 2014, 25% of the members of community forestry committees are women	Number of women on community forestry committees

Developing the monitoring system involves two main tasks:

- Identification of targets and indicators
- Development of monitoring plans

The process can be further broken down based on indicators required:

- 'Proxy indicators' for carbon outcomes of IPs
- Implementation progress (IP output indicators)
- Implementation risk reduction measures
- Risk reduction and benefit enhancement measures
- Negative impacts

D2.2 Proxy indicators for carbon outcomes of IPs

The proxy indicators for carbon outcomes of the IPs require targets and indicators that can show evidence of changes in the forest biomass and area due to the IP. Table 13 shows the forest biomass related targets and proxy indicators identified in the Nepal SRAP case study.

Table 13: **Targets and proxy indicators in Chitwan District, Nepal (selected IPs)**

Key results/IPs	Targets*	Proxy indicators
Improved agroforestry (AF) management practices & production systems adopted	17,500 additional standing AF trees per annum in land of AF cooperative members	No. of saplings and trees in land of AF cooperative members
	50% increase in proportion of on-farm (vs off-farm) fuelwood consumed (AF coop members)	Proportion of fuelwood consumed obtained from on-farm sources (AF coop members)
Delineation of national forest and private land boundaries in conflict areas	25 km boundary between forest and private land in conflict areas delineated	Length of boundary between forest and private land in conflict areas delineated
	50% of encroached forest in conflict areas restored	Area of forest land recovered after boundary delineation
Alternative (to fuelwood) energy-efficient options	60% reduction in average household (HH) fuelwood consumption in HHs receiving improved cookstoves or alternative energy source	Average weight of fuelwood consumed per household receiving improved cookstoves or alternative energy source
Expansion of community-based forest management (CBFM) areas adopting SFM	80% of community-based forest management (CBFM) groups with revised and new Operational Plans (OPs) based on SFM	No. of CBFM groups with new or revised OPs based on SFM
	5,000 ha of CBFM area using SFM practices	Hectares of CBFM using SFM practices
	10% average increase in Mean Annual Increment (MAI) in CBFM with new or revised Ops	MAI from CBFM with new or revised Ops

Abbreviations: AF = agroforestry; CBFM = community-based forest management; SFM = sustainable forest management; OP = operational plan; MAI = mean annual increment; HH = household

* Note: the targets in this case were not time-bound.

D2.3 Implementation progress (IP Outputs)

Targets and indicators of implementation progress of the IPs can be most easily identified from the Outputs of the IP, assuming these have been defined. If the Outputs are already specified as targets, the indicators can be defined directly from the Outputs. Table 14 shows implementation targets and indicators for an IP from the Chitwan District SRAP, Nepal. Most progress implementation indicators will need to be measured at the 'hotspot' or site level.

Table 14: **IP implementation targets and indicators for Chitwan District SRAP (IP: Expansion of community-based forest management (CBFM) areas practicing SFM)**

IP Outputs	Targets	Indicators
District Forest Sector Plan (DFSP), with an emphasis on SFM and expansion of CBFM areas, prepared and approved by Ministry of Forests	Modified DFSP approved by Ministry of Forests by end 2016	Approved DFSP
SFM components integrated into the District Forest Office (DFO) Annual Plan and budget	Approved DFO Annual Plan with SFM component by end of 2016	Approved DFO Annual Plan with SFM component
Stakeholder capacity for SFM enhanced, including DFO and support agency staff	200 SFM training events (25 individuals per training)	No. of SFM training events
New or revised Operational Plans (OPs) including SFM	25 CBFM OPs revised by mid-2017	No. of revised CBFM OPs
	New OPs prepared for 80% of other CBFM groups by mid-2017	No. of new CBFM OPs
SFM piloted in CBFM areas in two hotspots	SFM successfully piloted in 2 hotspots by mid-2017	No. of CBFM groups with new/ revised OPs adopting recommended silvicultural practices
	No net biodiversity loss in SFM pilots	Biodiversity status in SFM pilots
CBFM Operational Plans	80% of CBFM user groups in hotspots adopt SFM practices	Mean annual increment in new CBFM SFM areas
implemented	5,000 ha of CBFM area using SFM practices	Hectares CBFM area using SFM practices
	No net biodiversity loss in new CBFM SFM areas	Biodiversity status in new CBFM SFM areas

Additional abbreviations (see also footnotes to Table 13): DFSP = District Forest Sector Plan; DFO = District Forest Officer.

D2.4 Risk reduction and benefit enhancement measures

Targets and indicators are also required for the risk reduction and equity enhancement measures identified in Step C2, including for the implementation risk reduction measures identified in Step C1.3. The indicators will show that the SRAP is pro-actively trying to meet the UNFCCC safeguards, reduce negative impacts and enhance the benefit opportunities. They will provide essential evidence for the national Safeguards Information System. Example of targets and indicators for risk reduction measures in the Nepal case study are provided in Tables 15 and 16 (analysis of social and environmental risks were conducted separately in this case study, though this is not necessary).

Table 15: **Targets and indicators for social risk reduction measures in Chitwan District SRAP (IP: Expansion of CBFM area practicing SFM)**

IP Outputs	Risks	Risk reduction measures	Risk reduction targets	Indicators
District Forest Sector Plan (DFSP), with emphasis on SFM and expansion of CBFM areas, prepared and approved by Ministry of Forestry	'Weaker' communities excluded from CBFM	Full adherence to 2009 Community Forestry Guidelines for handover for CBFM	80% of new CBFMs handed over without disputes and/or after a successful dispute resolution process	No. of new CBFMs handed over without disputes and/or after a successful dispute resolution process
Stakeholder capacity for SFM enhanced, including DFO and support agency staff	'Stronger' CBFM groups get most SFM support and resources	Transparent and clear set of selection criteria for SFM support	Clear set of selection criteria approved and implemented	No. of CBFM groups aware of selection criteria for SFM support
CBFM Operational Plans (OPs) implemented	Elite capture when revenue of CBFM SFM group increases	Train CBFM groups to develop clear & transparent accounts	80% of CBFM groups have clear and transparent accounts	No. of CBFM groups with clear and transparent accounts

Table 16: **Targets and indicators for environmental risk reduction measures, Chitwan SRAP, Nepal**

IP/key result	Outputs	Risks	Risk reduction measures	Risk reduction targets	Indicators
Promotion of Agroforestry (AF)	Improved AF management practices adopted	Hybrid /exotic spp. replacing indigenous spp.	Grants & input provision: at least 50% must be indigenous spp.	No net decline in crop & tree diversity in AF systems	Status of crop/ tree diversity in AF systems
Alternative (to firewood) more efficient energy options	Energy gardens established in hotspots	Introduction and spread of invasive species	Prioritise bamboo and other native spp. in energy gardens	Zero spread of exotic spp. outside energy garden area	No. of energy gardens with exotic spp. that have spread outside garden

D2.5 Negative impacts

As well as monitoring the progress of implementation targets and risk/benefit measures, it is very advisable to monitor for likely risks or negative impacts. This will provide an early warning system to SRAP managers and enable better adaptive management. Indicators of negative impacts will 'sound the alarm bells' that something is wrong and corrective measures are urgently needed.

In this case there is no need for targets and the indicators can be identified directly from the risk analysis tables. For example, a risk identified in the Binh Thuan (Vietnam) SRAP was of local stakeholders being abused by newly empowered (by the SRAP) local forest protection forces. A negative impact indicator in this case could be the number of conflict incidents involving local protection forces reported to the SRAP monitoring office, the police and the relevant local government office.

Step D3 Monitoring Plans

A standard Monitoring Plan form with eight columns (see Table 17) can be used for compiling the monitoring plans.[22] These can be completed as follows:

- IP or key result
- Target: for the risks and benefits, these are risk reduction and benefit enhancement targets.
- Indicator: it is possible to have more than one indicator for each target, although this increases the cost of monitoring.
- Data source or data collection method: if data for the indicator already exists (e.g., in a report) note the source; if not, decide on a data collection method (see below).
- Identify WHERE the data will be collected.
- Decide WHEN or how frequently the data will be collected.
- Establish WHO will be responsible for collecting the data.
- Relative cost of data collection: High, Medium or Low.

Most indicators do not require costly data collection methods; quite often the data already exist or are relatively easy to collect. Wherever possible the data collection method should build on existing monitoring systems, e.g., using periodic forest inventory data or annual household surveys conducted by the department of agriculture or the national statistical office (these surveys sometimes have data on the consumption, sale or purchase of forest products). If a household survey is needed, a statistician's help may be needed for the sample survey design. Provisional monitoring plans from the Nepal case study for proxy indicators (Table 17), implementation progress (Table 18) and risk/benefit monitoring (Table 19) are presented below based on the targets and indicators from Tables 13, 14 and 15/16 respectively.

Step D4 Budgeting of monitoring activities

It is essential to include the cost of the monitoring activities in the SRAP budget. These may be quite substantial. Monitoring costs, including data analysis and reporting costs, can be estimated at the end of EW2 if there is

[22] For the monitoring plan for negative impacts, the target column can be omitted or left blank.

sufficient time or in Stage E. If the former is decided, the guidance in Stage E can be followed. The advantage of calculating monitoring costs in EW2 is that it will stay fresh in the minds of the SRAP team or expert group.

Table 17: **Monitoring plan for proxy indicators in provisional Chitwan District REDD+ Action Plan, Nepal (selected IPs)**

IP/key result	Targets	Proxy indicators	Source or data collection method	WHERE	WHEN	WHO	Relative cost H/M/L
Improved agroforestry (AF) management practices & production systems adopted	17,500 additional standing AF trees per annum in land of AF cooperative members	No. of saplings and trees in land of AF cooperative members	Farmer records (following training) and random sample checks	Forest land of AF coop. members	Baseline, end 2018, and end 2020	SRAP Evaluation Officer + farmers	M-H
	50% increase in % of on-farm (vs off-farm) fuelwood consumed (AF Coop members)	Proportion of fuelwood consumed by AF coop. members from on-farm sources	Farmer records (following training) and random sample checks	AF coop. member households (HHs)	Baseline, end 2018, end 2020	Evaluation officer + farmers	M-H
Delineation of national forest and private land boundaries in conflict areas	25 km boundary between forest and private land in conflict areas delineated	Length of boundary between forest and private land in conflict areas delineated	District Forest Office (DFO)	DFO	Annual	Evaluation officer	L
	50% of encroached forest in conflict areas restored	Area of forest land recovered after boundary delineation	DFO	DFO	Annual	Evaluation officer	L
Alternative (to fuelwood) and more efficient energy options	60% reduction in mean fuelwood consumption in HHs with improved cookstove or alternative energy source	Average weight of fuelwood consumed per HH with improved cookstove or alternative energy source	Records of beneficiary HHs of improved cookstove or alternative energy source	Households (HHs) in hotspots	Baseline, end 2018, end 2020	Beneficiary HHs + Evaluation officer	M-H
Expansion of Community Based Forest Management (CBFM) areas adopting SFM	80% of CBFM groups with revised and new Operational Plans (OPs) based on SFM	No. of CBFM groups with new or revised OPs based on SFM	DFO Monitoring Report (compiled from CBFM reports)	DFO	Annual	Evaluation officer	L
	5,000 ha of CBFM area using SFM practices	Hectares of CBFM using SFM practices	Permanent Sample Plot (PSP) data, self- reporting and random sample field observations	CBFM plots	Baseline, end 2018, end 2020	Evaluation officer, farmers, forestry staff	H
	10% average increase in Mean Annual Increment (MAI) in CBFM with new or revised OPs	MAI from CBFM with new or revised OPs	PSP records + random sample checks	PSPs in CBFM areas	Baseline, end 2018, end 2020	Forestry staff, farmers, evaluation officer	H

Table 18: **Monitoring plan for implementation of IPs in Chitwan District, Nepal (IP: Expansion of Community-Based Forest Management (CBFM) area adopting SFM practices)**

Targets	Indicators	Source or data collection method	WHERE	WHEN	WHO	Relative cost H/M/L
Modified District Forestry Sector Plan (DFSP) approved by Ministry of Forests by end 2016	Approved DFSP	Ministry and District Forestry Office (DFO) websites	Evaluation office	End 2017	SRAP Evaluation Officer	L
Approved DFO Annual Plan with SFM component by end 2016	Approved DFO Annual Plan with SFM component	DFO Annual Report	DFO	Annual	Evaluation officer	L
200 SFM training events (25 individuals per training)	No. of SFM training events	Training reports	DFO	Annual	Evaluation officer	L
25 CBFM Operational Plans (OPs) revised by mid-2017	No. of revised CBFM Operational Plans	DFO	DFO	Annual	Evaluation officer	L
New OPs prepared for 80% of other CBFM groups by mid-2017	No. of new CBFM Operational Plans	DFO	DFO	Annual	Evaluation officer	L
SFM successfully piloted in 2 hotspots by mid-2017	No. of CBFM groups with new/ revised OPs adopting recommended silvicultural practices	Self-reporting, Permanent Sample Plot (PSP) data & field inspection	CBFM forest land	Baseline, end 2018, end 2020	Evaluation officer, CBFM members, forestry staff	H
No net biodiversity loss in SFM pilots	Biodiversity status in SFM pilots	Biodiversity status survey in random sample of CBFM plots	CBFM forest land	Baseline, end 2018, end 2020	Evaluation officer, forestry staff	M-H
80% of CBFM user groups in hotspots adopt SFM practices	Mean annual increment in new CBFM SFM areas	PSP records	CBFM forest land	Baseline, end 2018, end 2020	Evaluation officer, CBFM members, forestry staff	H

Table 19: **Monitoring plan for risk reduction measures in Chitwan District REDD+ Action Plan (various IPs)**

Intervention Package	Target (risk reduction)	Indicators	Source or data collection method	WHERE	WHEN	WHO	Relative cost H/M/L
Expansion of Community-Based Forest Management (CBFM) area adopting SFM	80% of new CBFM areas created without disputes and/or after a successful dispute resolution process	No. of new CBFMs created without disputes and/or after a successful dispute resolution process	District Forestry Office (DFO) records	DFO	Annual	SRAP Evaluation Officer	L-M
	Clear set of selection criteria approved and implemented	No. of CBFM groups aware of selection criteria for SFM support	Census of CBFM focus groups	CBFM locations	Baseline, end 2018, end 2020	Evaluation officer, CBFM focus groups	L-M
	80% of CBFM groups have clear and transparent accounts	No of CBFM groups with clear and transparent accounts	Inspection of CBFM accounts by finance specialist	CBFM offices	Baseline, end 2018, end 2020	Finance specialist, Evaluation Officer	M
Promotion of Agroforestry (AF)	No net decline in crop & tree diversity in AF systems	Status of crop/tree diversity in AF systems	Farmer records & random sample checks	AF coop. members' plots	Baseline, end 2018, end 2020	Farmers, forestry staff, Evaluation Officer	M-H
Alternative (to fuelwood) and more efficient energy options	Zero spread of exotic spp. outside energy garden area	No. of energy gardens with exotic spp. that have spread outside garden	Focus group discussion and field observations	Beneficiary households of energy gardens	End 2018, end 2020	Beneficiary focus groups, forestry staff, Evaluation Officer	M

Stage E: Budget

Step E1 Targets and Activities

The aim of the budgeting workshop (EW3) is to develop a five-year operational plan (OP) for the SRAP. It can directly follow the monitoring workshop although a short break is desirable since these tasks require a lot of mental energy. This step needs the participation of finance or accounting staff who know the current prices and costs. The guidance here is based on the 'Open Standards for the Practice of Conservation' (Conservation Methods Partnership, 2007), although in many situations the planning team can use well-established national budgeting systems and templates for developing the OP.

The starting point for the budget and OP is the list of activities identified for each strategy and key result or IP in Step C1.2. The SMART targets (including the timeframe part of the target) defined in Step D1.3 are also needed for this step. For example, referring to Table 5, for the key result 'Reduced forest farmland pressure by resource poor households', which forms part of the IP 'Smallholder land allocation and productivity' in the Binh Thuan Province SRAP, Vietnam, two strategies were identified:

1. Raise farm productivity and incomes of resource poor households
2. Increase farmland allocation to households

For Strategy 1, a SMART target could be:
Small farmers, within 10 km of forest reserves, who have received agricultural extension, training and credit, will increase 50% yield of food crops per hectare by the end of 2018.

The activities for achieving this target should have been identified in Step C1.2; the risk reduction and monitoring activities defined in Step C1.3 need to be added to these. For example, for the strategy 'Raise farm productivity and incomes of resource poor households', the following activities can be identified for the first two years of operation:

1. Investigate the causes of low farm productivity (Year 1, Quarter 2)
2. Develop farmer training programme and improved extension materials (Year 1, Quarter 3-4)
3. Establish demonstration plots in hotspots with resource poor farmers (Year 2, Quarter 1)
4. Design and establish the agricultural credit programme (Year 2, Quarters 1-2)
5. Implement the agricultural credit programme (Year 2, Quarter 3)
6. Implement agricultural extension campaign with new materials (Year 2, Quarter 2)
7. Organise exchange visits and meetings between farmers (Year 2, Quarters 3-4)
8. Monitoring of community consultation mechanisms to select poor farmers as credit/extension beneficiaries (risk reduction measure) (Year 2, Quarters 2-4)
9. Monitor changes in farm practices, output and profitability (Year 2, Continuous)
10. Monitor the agricultural credit programme both as regards delivery/coverage and repayment/defaults (Year 2, Quarters 3-4)

Step E2 Operational Plan

The next step is to develop an OP worksheet. This can be done either on large sheets of flipchart paper taped together or using a laptop with a projector to allow good participation of the expert group. The OP worksheet (see example in Table 20) can be developed and completed as follows:

- Having made sure that the OP worksheet is labelled correctly as regards the IP and strategy, the list of activities (from Step E1) can be put into Column 1. For identification purposes, the activities are numbered as S1a (Strategy 1, activity (a)), S1b (strategy 1, activity (b)), etc.
- Each activity requires a set of more detailed tasks for effective implementation. These can be identified in small group brainstorm sessions, arranged in chronological order, and entered in Column 2 as T1 (task 1), T2, T3,

etc., for each activity.

- A person, official or organisation should be allocated or given responsibility to undertake each activity and task in Column 3.
- The number of days needed per 'event' or unit of implementation (e.g., training workshop, consultancy study, etc.) can be entered in Column 4.
- The human resource cost per 'event' can be calculated in Column 5.
- Material resources needed for each task, e.g., transport, per diems, hire of equipment, farm inputs, communications, materials, etc., can be specified in Column 6.
- The cost of material resources per 'event' can be estimated and put into Column 7.
- The total unit cost (the combined human resource and material costs per event) can be entered in Column 8.
- The number of events per year can be entered in the remaining columns.
- Five more columns are needed for the total cost per year (equal to number of events per total unit cost).

In practice a larger Excel spreadsheet than the one shown in Table 20 might be required for developing the budget and OP. If the IPs are partially covered by other programmes and projects, additional columns are needed to show the financial contribution of these sources and the amount to be covered by the government or donors.

Table 20: **Operational Plan worksheet example. (Key result: Reduced forest farmland pressure from resource-poor households. Strategy 1: Raise farm productivity and income of resource-poor households)**

Activities	Tasks	Responsibility	Person days per event	Labour cost $/event	Material resources	Material cost $/event	Total unit cost $/event	Number of events					Cost per year $				
								Yr1	Yr2	Yr3	Yr4	Yr5	Yr1	Yr2	Yr3	Yr4	Yr5
S1a. Investigate causes of low farm productivity	(Activity 1 responsibility)	Senior Extension Officer	5														
	T1. Hire consultant	Senior Extension Officer + Admin. Staff	1		Advertising, office costs												
	T2. Consultant undertakes study/ report	Consultant	20		Stationery, transport, per diems												
	T3. Report reviewed & priorities decided	SRAP team/Senior Extension Officer	5		Communications, office costs												
S1b. Train farmers in improved farming practices	(Activity 2 responsibility)	Senior Extension Officer	5														
	T1. Design curriculum	Lead trainer	10		Stationery												
	T2. Develop course training materials	Lead trainer	40		Materials, office costs												
	T3. Select and invite farmers to courses	SRAP Team + Admin. Staff	3 x 2		Stationery, office costs, communication												
	T4. Undertake training courses	Lead trainer + other trainers	5 x 4		Transport, venue, per diems, materials												
S1c. Establish demonstration plots	(Activity 3 responsibility)	Senior Extension Officer	10														
	T1. Select farmers, meetings to plan demonstration plots	Extension Officers	10 x 4		Transport, venue, per diems, materials												
	T2. Provide technical assistance	Extension Officers	30 x 4		Transport, per diems, seeds, other inputs												
	T3. Measure yields	Agronomist	15		Transport, per diems												
	T4. Data processing and reporting	Agronomist and Economist	20 x 2		Office support, materials												

The SRAP Report

A possible generic structure for the SRAP report is presented in Table 21. The structure and layout of the SRAP report will however vary from country to country. For example, in Vietnam there is now a government directive that sets out the Provincial REDD+ Action Plan (PRAP) report structure and contents: Ministry of Agriculture and Rural Development (MARD) Decision 5414. In Nepal, the preference is for an Annex in which each REDD+ Intervention Package is presented in a succinct way, including tables of the feasibility analysis, safeguards analysis, monitoring plans and budget, as shown in Annex 8.

Table 21: **Possible structure for SRAP report**

Section title	Contents to include
Executive Summary	List of Intervention Packages, summary of budget
List of Abbreviations	List of acronyms and other abbreviations used in the report
Introduction	REDD+ National Strategy and legal context for SRAPs; Outline of SRAP methodology and process; SRAP leadership, etc.
Diagnosis	Prioritisation of D&FD drivers and enhancement activities; Map with location of drivers/enhancement activities; Summary of problem tree analysis
Interventions	Summary of solution tree analysis and derivation of IPs; Table of IPs, including IP outputs and activities; Map with location of IPs; Summary of feasibility analysis; Summary of gaps analysis with existing plans and projects
Safeguards analysis	Summary of safeguards analysis process; Table of (serious) risks and benefits, including risk reduction and benefit enhancement measures
Monitoring	Summary including Table of monitoring targets and indicators
Budget	Summary of budget and Operational Plan, including 'gaps analysis' showing what is already funded and funding requirement
References	List of references or bibliography
Annexes	• Lists of workshop participants • List of members of SRAP core team, Expert Group, Spatial analysis team, Multiple Stakeholder Working Group, etc. • Tables with ranking of D&FD drivers and enhancement activities, Problem trees, • Solution trees • Feasibility Analysis tables • Safeguards Analysis tables • Monitoring Plan tables • Operational Plan and Budget

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Annexes

Annex 1: Srap Stages, Steps and Outputs

Stages and Steps	Sub-steps	Outputs
Stage A: Prepare		
A1. Ownership and SRAP core team		SRAP core team established Multi-stakeholder SRAP Working Group established
A2. Spatial analysis and background data collection	A2.1 Preparatory spatial analysis A2.2 Preliminary analysis of D&FD drivers and enhancement activities A2.3 Preparatory stakeholder analysis	Maps informing stakeholder workshops Basic planning map for workshop annotation Poster on D&FD drivers Poster on enhancement activities Poster on stakeholder analysis
A3. Selection and training of working group facilitators		Trained WG facilitators
A4. Workshop participants and logistics	A4.1 Selection of workshop participants A4.2 Workshop invitations A4.3 Workshop venue and materials	List of invited workshop participants
A5. REDD+ orientation for workshop participants		Workshop participants with a better understanding of REDD+ and SRAP process
Stage B: Analyse		
B1. Overview of SRAP process and Problem Analysis Workshop (SW1)		
B2. Preparatory data presentations	B2.1 Poster presentations B2.2 Spatial analysis	Annotated maps and posters of drivers and stakeholder analysis
B3. Prioritisation of D&FD drivers and enhancement activities	B3.1 Identification and scoring of drivers and enhancement activities B3.2 Selection of priority drivers and enhancement activities B3.3 Formation of Working Groups (WGs) B3.4 Mapping of drivers and enhancement activities	3-5 prioritised drivers and enhancement activities; Working groups (WGs) formed Annotated maps of D&FD hotspots and enhancement activity locations
B4. Problem trees	B4.1 Explanation and practice B4.2 Development of problem trees B4.3 Group exchange B4.4 Museum visit B4.5 Field verification of hotspots B4.6 Problem Analysis Workshop report	Problem trees Report of Problem Analysis Workshop (including findings from field verification)

B5. Solution trees	B5.1 Overview of Solution Analysis Workshop (SW2) B5.2 Explanation and practice B5.3 Development of solution trees B5.4 Group exchange B5.5 Museum visit B5.6 Solution Analysis Workshop report	Solution trees Maps with potential REDD+ interventions Report of Solution Analysis Workshop
Stage C: Plan		
C1. Identification of Intervention Packages	C1.1 Expert Planning Workshop (EW1) C1.2 Identification and mapping of potential IPs C1.3 Feasibility analysis C1.4 Field verification of proposed IPs	List of proposed IPs including strategies and activities Maps of proposed IP locations Table of analysis of risks and obstacles Feasibility analysis table Short report of IP field verification
C2. Safeguards analysis (risks and benefits)	C2.1 Preliminary identification of risks and benefits (in EW1) C2.2 Local Safeguards Analysis C2.3 Safeguards Analysis Workshop (SW3) or Expert group safeguards workshop (EW2)	BeRT worksheets Local Safeguards Analysis tables Safeguards Analysis Workshop tables and report
C3. Review of Intervention Packages	C3.1 Analysis of existing sub-national plans and projects C3.2 Selection of IPs for detailed planning C3.2 Revision of IP location maps	Revised IPs following 'gaps analysis' with existing plans and projects List of selected IPs, strategies and activities Revised IP location maps
Stage D: Monitor		
D1. Overview of monitoring for REDD+ and SRAP	D1.1 REDD+ monitoring levels D1.2 Indicators D1.3 SMART targets	
D2. Targets and indicators	D2.1 Expert Monitoring Plan Workshop (EW3) D2.2 Proxy indicators (for carbon outcomes) D2.3 Implementation progress (IP Outputs) D2.4 Risk reduction and benefit enhancement measures D2.5 Negative impacts	Monitoring targets & indicators for: (a) Carbon outcomes (proxy indicators) (b) IP Outputs (c) Implementation risk reduction measures (d) Risk reduction and benefit enhancement measures (e) Negative impacts
D3. Monitoring plans		Monitoring Plans for: (a) Proxy indicators (carbon outcomes) (b) Implementation progress (c) Implementation risk reduction measures (d) Risk reduction and benefit enhancement measures (e) Negative impacts
D4. Budgeting of monitoring activities		Cost needed to monitor the plans
Stage E: Budget		
E1. Targets and activities		List of targets and activities for each IP
E2. Operational Plan		5 year Operational Plan for SRAP

Annex 2: List of Materials for Multiple Stakeholder Workshops

The following materials or equipment are needed for the multiple stakeholder workshops SW1 and SW2:

- 1 PowerPoint projector
- 1 Printer
- 200 sheets of large size flipchart paper
- Medium thickness coloured card. A4 size card should be cut into three for the workshops (i.e. 100 A4 sheets = 300 cards). The following numbers of A4 sheets should be obtained:
  - Yellow – 150
  - Light blue – 150
  - Light brown – 100
  - Light green – 100
  - Light red – 100
  - Orange - 50
  - Pink – 50
- 6 flip chart stands (mainly for spatial analysis maps and posters)
- 6 soft boards to put on flipchart stands so that pins can be stuck into maps
- 50 black[1] marker pens
- 12 pencils
- 6 scissors
- 6 erasers
- 6 rulers
- 12 rolls of thin masking tape (for taping coloured cards to the flipchart paper)
- 6 rolls of strong/wide sticky tape or other material suitable for taping flipchart sheets and maps to the walls without damaging them, especially when the sheets are removed
- 500 coloured pins for scoring or sticking into maps – these pins should be in 8 different colours
- 40 name tags
- 35 participant certificates
- 6 waste paper baskets
- 7 printed copies of 'SRAP Design Process – Step by Step Guide'

[1] If a different coloured card or paper is used in the flow diagrams, it is best to use the same colour marker pen (black is best) for all the work. It looks very messy and is harder to read when there are different coloured marker pens and different coloured card/paper.

Annex 3: The 'Spatial Workflow' Tool (Unep-Wcmc)

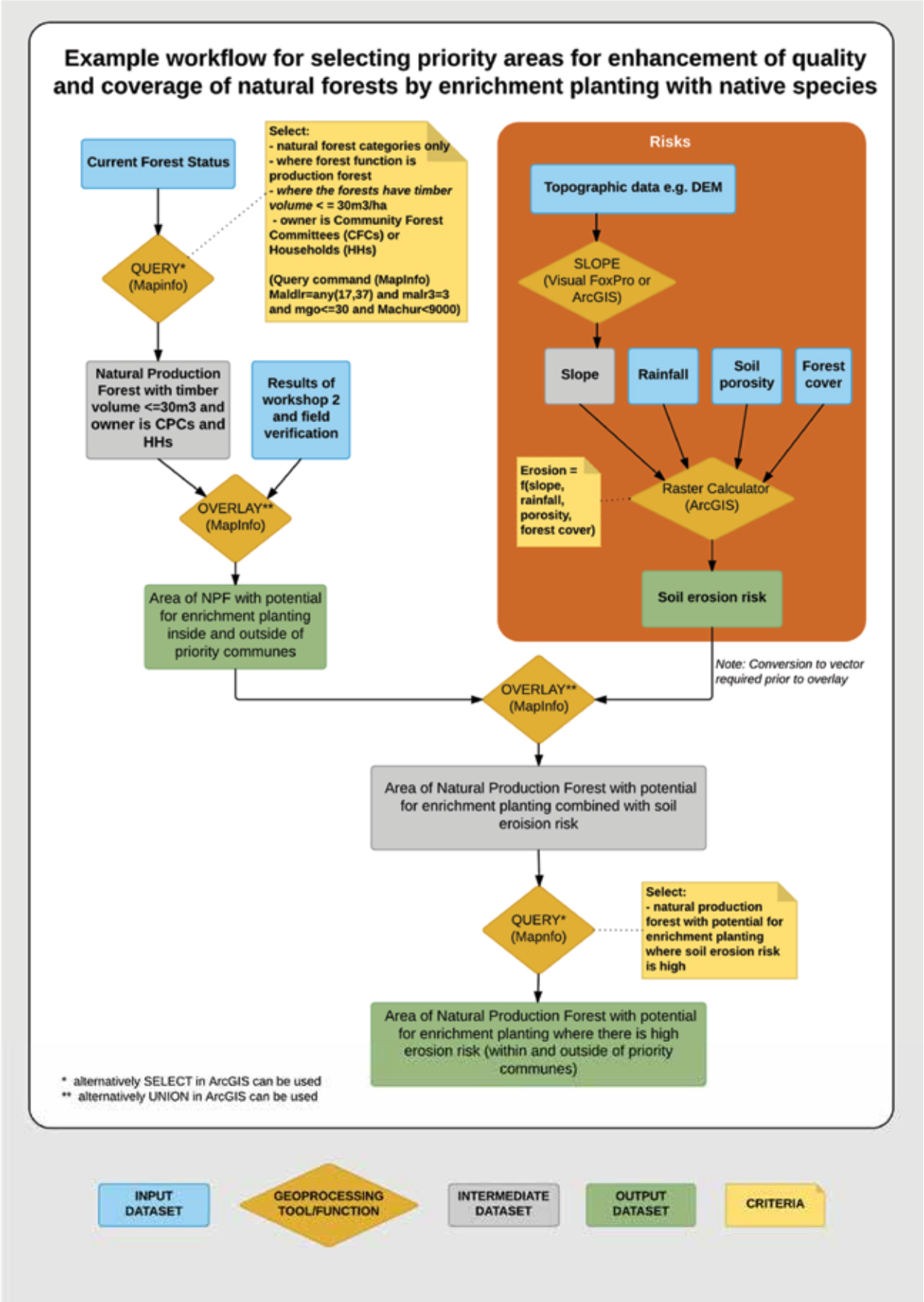
A 'spatial workflow' defines the flow of work required to carry out a task or piece of work, in this case how to undertake spatial analysis. This can help define the spatial logic to answer planning related questions, and in identifying the input layers and data needed, the technical/GIS process and tools to be used, and the sequence of steps.

Defining a logical workflow for spatial analysis can help ensure that:

- Appropriate areas for IP intervention are selected;
- Information collected during the workshops is appropriately used; and,
- Appropriate spatial analysis methods are used.

The workflow therefore defines the sequence of steps to undertake the analysis, the datasets required (at appropriate scales) and the geoprocessing tools needed at each step to produce the desired output maps. A workflow can also incorporate multi-criteria analysis to help with deciding areas that are more or less suitable for implementation of the IP in question, and will help document how the final IP locations are determined. An example of a spatial workflow, developed for a capacity building exercise, is provided below. This is a relatively complex workflow, but workflows can also be simple, with few input layers and basic GIS processes.

Source: Information provided by Charlotte Hicks and Corinna Ravilious, UNEP-WCMC



Source: Ravilious, Hicks & Blyth. 2016

Annex 4: Multiple Stakeholder and Expert Group Workshop Analysis Forms

Form to score deforestation/forest degradation drivers

Direct driver	Actual or potential location[s]	Future threat (1-5)	Future biomass impact (1-5)	Future forest area impacted (1-5)	Total score	Plenary score

Form to score forest carbon enhancement activities

Forest carbon enhancement activities	Actual or potential locations	Future potential area [1-5]	Future biomass impact [1-5]	Total score	Significant barriers or challenges	Plenary score

Form to identify key results, strategies and activities from solution tree

Key results	Strategies	Activities

Form for analysis of implementation risks and obstacles

Key results/IPs	Implementation risk or obstacle	Likelihood of risk	Impact of risk	Risk reduction measures

Form for overall feasibility analysis of proposed IPs

IPs	Implementation risks/obstacles L=3/M=2/H=1	Cost-effectiveness of risk reduction measures H=3/M=2/L=1	Implementation cost L=3/M=2/H=1	Opportunity cost L=3/M=2/H=1	Incentive measures H=3/M=2/L=1	Total score

Form for local risks (safeguards) analysis

IPs/activities	Risks	Risk reduction measures

Form for local benefits analysis

IPs/activities	Benefits	Benefit enhancement measures

Form for workshop analysis of risks (safeguards)

IP/key result	Risks	Likelihood of risk	Impact of risk	Risk reduction measures

Form for workshop analysis of benefits

IP/key result	Benefits	Likelihood of benefit	Impact of benefit	Benefit enhancement measures

Form for identifying proxy indicators

Key results/IPs	Targets*	Proxy indicators

Form for implementation progress (IP Output) targets and indicators

IP outputs	Targets	Indicators

Form for risk reduction targets and indicators

IP outputs	Risks	Risk reduction measures	Risk reduction targets	Indicators

Form for benefit enhancement monitoring targets and indicators

IP outputs	Benefits	Benefit enhancement measures	Benefit enhancement targets	Indicators

Form for monitoring plans

IP/key result	Target	Indicator	Data source or data collection method	WHERE	WHEN	WHO	Relative cost (H/M/L)

Annex 5: Problem and Solution Tree Instruction Sheets

Problem Tree Instructions Sheet

- Tape four flipchart sheets together.
- Write the name of the problem tree at the top.
- Clarify and discuss the problem that needs to be overcome.
- Summarise the problem in < 10 words on a **RED** card, and place it at the far right hand side.
- Ensure everyone has the same understanding of the **RED** card.
- Brainstorm causes of problem/challenge and write them on **YELLOW** cards (working in pairs).
- Only use black or blue marker pens.
- Rationalise the cards.
- Arrange the cards in cause and effect order.
- Draw arrows between the cards with a pencil (not a marker pen).
- Identify direct or immediate causes – replace the yellow cards with **PINK** cards.
- After the group exchange, tape down the cards and ink in the arrows with a marker pen.

Solution tree instructions sheet

- Tape four flipchart sheets together.
- Rephrase the problem statement or key challenge as a desired outcome or objective on a **GREEN** card using < 10 words.
- Brainstorm solutions or interventions and write them on **BLUE** CARDS.
- Rationalise blue cards.
- Arrange blue cards in cause and effect order.
- Check for 'leaps of faith' or assumptions between the cards.
- Check blue cards are written as solutions or results.
- Identify direct or immediate causes of the desired outcome, and rewrite them on **PINK** cards (throw away replaced blue cards).
- Draw arrows between cards **in pencil**.
- Write the name of the solution tree at the top.

Annex 6: Checklist for Field Verification of IPs from Vietnam Prap Process (Modified)

Introduction

Field verification is one of the most important steps of the PRAP process. This step should be undertaken after the Stakeholder Workshop (SW1), following the preparation of maps and brief reports, and with a detailed technical and logistical plan for field verification. Here are some suggested checklist items for the verification of the Intervention Packages (IPs).

Preparation

As for PRAP workshops, the consultant team should be responsible for technical preparation and the Provincial Project Management Unit (PPMU) should make the logistical arrangements.

1. Technical preparation

- A brief report should be prepared for each site where field verification will be carried out. Each report should contain:
  - Background study regarding the site – history of forest management, issues, future forestry plans, etc.
  - Major drivers of deforestation and degradation, and barriers to enhancement of forest carbon stocks in the site, as identified in the Problem Analysis Workshop.
  - A list of the proposed IPs with identified information gaps that require verification for each site.
  - A list of the possible social and environmental risks of the proposed IPs in the site as identified by the Safeguards Analysis Workshop (if available).
  - A list of forest owners and stakeholders who can fill the information gaps identified. This list should be based on the proposed IPs involving forest owners. The list can be changed after meeting with local stakeholders.
- Bring enough copies of the report to hand over to the meeting participants.
- A poster on the main drivers and proposed IPs in the site would be very useful.
- Map of drivers (updated from workshops)
- Map of IPs (updated from workshop)
- A3 size map of the site, including the names of forest owners if possible

2. Logistical arrangements

- Invitations sent to local stakeholders for meetings;
- Stationery items needed;
- Nomination of PPMU staff to join the verification team

Whom should the core team meet during the field verification process?
As the field verification team has limited time, they should meet with key stakeholders at each site. There are two key stages in the field verification process:

1. Half-day meeting with stakeholder representatives (e.g., Commune People Committees (CPCs), forest owners (Forest Management Boards, companies, etc.) who would be involved in the proposed IPs. The purpose of this meeting is to present and verify the proposed IPs at the local or commune level.
2. Depending on the results of the half-day meeting, the verification team should continue the verification process with the CPCs, forest owners, household groups, villages, etc.

What to verify and how?

In these meetings the verification team should conduct the following activities:

- Introduction: objectives and contents of the meeting, and proposed schedule of verification field visit; brief local stakeholders with a PowerPoint or in plenary discussion on the outcomes of the PRAP process. The brief report can be used for this purpose.

- Provide each participant with a copy of the brief report of the site and allow 15-30 minutes for them to read it. If there is a poster on the drivers and the proposed IPs for the site, hang it on the wall to facilitate the discussion.
- Discuss and verify the drivers and barriers to carbon stock enhancement identified during the PRAP process. Ask them if there are other drivers at the site, and specific causes of these drivers.
- If the drivers have been mapped at the commune level, verify the location of the drivers and the potential for enhancement activities as specifically as possible on the map.
- Discuss and verify the proposed IPs, and try to locate the IPs to specific areas on the map. During this process, make a list of the potential forest owners and other stakeholders that should be involved or participate in a 'Site Level REDD+ Planning' (SiRAP) process to be conducted before implementing the IPs.
- Discuss key issues/problems (social, economic, environmental, cultural, etc.) of the relevant stakeholders.
- When the proposed IPs and the specific locations have been verified, discuss the potential social and environmental impacts, risks and benefits, drawing from the Safeguards Analysis Workshop if it has been conducted.

Main outputs of the field verification

- Verified drivers, underlying causes and their specific locations (shown on map)
- Verified IPs with their specific locations shown on map
- List of potential social and environmental risks and possible risk reduction and benefit enhancement measures
- List of stakeholders who should be involved in the SiRAP process (including development of detailed activities, work plan, budget, incentive packages, etc.).
- Description of local stakeholders to be potentially involved in the PRAP/SiRAP implementation phases.

Annex 7: Un-Redd Benefits and Risks Tool (BeRT) Worksheets

BeRT Worksheet Safeguard (a) - Which actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements?

Key Issues
■ Consistency and complementarities with the objectives of the national forest programme. ■ Consistency with international commitments on climate; contribution to national climate policy objectives, including those of mitigation and adaptation strategies. ■ Coordination among agencies and implementing bodies for REDD+, national forest programmes and national policy(ies) for enacting relevant international conventions and agreements. ■ Consistency with the achievement of the Sustainable Development Goals; contribution to national poverty reduction strategies. ■ Consistency with international commitments on the environment; contribution to national biodiversity conservation policies (including National Biodiversity Strategies and Action Plans), other environmental and natural resource management policy objectives. ■ Consistency with the state's human rights obligations under international law, including key international human rights treaties and ILO 169, where applicable. ■ Consistency with other relevant international conventions and agreements.

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
Could any of the candidate IPs: ■ Make a specific contribution to achieving the objectives of the national forest programme? ■ Make a specific contribution to achieving policy objectives on climate change adaptation or objectives for additional climate change mitigation? ■ Make a specific contribution to achieving the Sustainable Development Goals or other commitments on poverty reduction? ■ Make a specific contribution to achieving the objectives of the Convention on Biological Diversity? **Is there a risk of conflict between the candidate IPs and:** ■ Other climate change mitigation strategies (e.g., concerning land or woody biomass requirements for bioenergy production, or alternative energy development such as hydropower)? ■ National poverty reduction strategies (e.g., plans for infrastructure development or agriculture)? ■ Other environmental policy objectives and strategies (e.g., plans for community forests under the national forest programme)? ■ The state's human rights obligations under international law, including the nine key international human rights treaties and ILO 169? **Could any of the candidate IPs:** ■ Make a specific contribution to achieving the Sustainable Development Goals or other commitments on poverty reduction? ■ Have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups?		

BeRT Worksheet Safeguard (b) - Transparent and effective national forest governance structures, taking into account national legislation and sovereignty

Key Issues
■ Access to information ■ Accountability ■ Land tenure ■ Enforcement of the rule of law ■ Adequate access to justice, including procedures that can provide effective remedy for infringement of rights, and to resolve disputes (i.e., grievance mechanisms) (NB: Overlaps with Safeguard (c)) ■ Gender equality ■ Coherence of national/subnational legal, policy and regulatory framework for transparent and effective forest governance ■ Corruption risks ■ Resource allocation/capacity to meet institutional mandate ■ Participation in decision-making processes (NB: overlaps with Safeguards (c) & (d))

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
To be considered for each IP: ■ Is it clear where stakeholders can go to access information relevant to this IP? ■ Will the information be easily accessible to all stakeholders, even the most remote? ■ Will the information be presented in a format they will understand? ■ Are those who will be making decisions about this IP informed by and representing those that will be impacted (i.e. the stakeholders) ■ Will stakeholders participating in this IP have access to recourse mechanisms? ■ Does this IP have sufficient capacities (financial, human and institutional) to be effectively implemented? ■ Will there be a system in place to monitor the implementation of this IP against clear, measureable and time-bound targets? ■ Is there a risk of corruption related to this IP? **Could any of the candidate IPs:** ■ Have potentially inequitable adverse impacts on gender equality and/or the situation of women and girls? ■ Potentially discriminate against women or other groups based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? ■ Potentially adversely affect women's and men's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?		

BeRT Worksheet Safeguard (c) - Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the UNGA has adopted the UNDRIP

Key Issues
■ Definition/determination of indigenous peoples and local communities ■ Recognition of rights to land, territories and resources ■ Right to compensation and/or other remedies in case of involuntary resettlement and/or economic displacement ■ Right to share benefits when appropriate ■ Right to self-determination ■ Right to participate in decision making on issues that may affect them ■ Free, Prior and Informed Consent (FPIC) ■ Recognition and protection of indigenous peoples' and local communities' traditional knowledge, cultural heritage, intellectual property

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
Could any of the candidate IPs: ■ Affect the rights, lands and territories of indigenous peoples and/or local communities (regardless of whether indigenous peoples possess the legal titles to such areas)? ■ Involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples and/or local communities? ■ Result in forced eviction or the whole or partial physical displacement of indigenous peoples and/or local communities, including through restrictions on access to lands, territories, and resources? ■ Result in economic displacement of indigenous peoples and/or local communities (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)? ■ Adversely affect the development priorities of indigenous peoples and/or local communities as defined by them? ■ Affect the traditional livelihoods, physical and cultural survival of indigenous peoples and/or local communities? ■ Affect the cultural heritage of indigenous peoples and/or local communities, including through the commercialisation or use of their traditional knowledge and practices? ■ Result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, practices)? ■ Affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources? ■ Discriminate against indigenous peoples and/or local communities regarding participation in design and implementation or access to opportunities and benefits?		

BeRT Worksheet Safeguard (d) - The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the [REDD+] actions

Key Issues
■ Full and effective participation of relevant stakeholders ■ Legitimacy and accountability of bodies representing relevant stakeholders ■ Participatory mechanisms or platforms ■ Access to justice, grievance mechanisms ■ Transparency and accessibility of information related to REDD+ (NB: overlaps with Safeguard (b))

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
■ Could any of the candidate IPs exclude any affected stakeholders, in particular marginalised groups, from fully participating in decision making that may affect them? ■ Could any of the candidate IPs exacerbate conflicts among and/or the risk of violence for project-affected communities and individuals? ■ Has a process/platform been established for the relevant stakeholders to engage fully and effectively (e.g., in a gender-responsive, culturally sensitive, non-discriminatory and inclusive manner)? ■ Has a process been established to outline how the government will secure the free, prior and informed consent of relevant rights-holders for REDD+ actions that will impact their rights, lands, territories or resources? ■ Have the relevant stakeholders identified their own representation structures, including representatives? ■ Have the relevant stakeholders been consulted fully and effectively in the design and agreement of the IPs? ■ Has a process been established for those impacted/affected by IPs to have their complaints heard and addressed? ■ Has a process been established to ensure the timely dissemination of information about IPs to relevant stakeholders in an accessible form and language?		

BeRT Worksheet Safeguard (e) – That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the [REDD+] actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits.

Key Issues
■ Definition of natural forest and understanding of the distribution of natural forest. ■ Understanding the potential impacts of REDD+ policy options on biodiversity and forest ecosystem services. ■ Conservation of natural forests; avoiding degradation, or conversion to planted forest (unless as part of forest restoration). ■ Management of planted and natural forests to maintain or restore biodiversity and ecosystem services (e.g., soil erosion control, water purity, non-timber forest products). ■ Identification and enhancement of social benefits (e.g., improved livelihoods, benefit sharing). ■ Conservation of biodiversity outside the forest.

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
Could any of the candidate IPs: ■ Result in enhanced conservation of biodiversity, natural forests and their ecosystem services by improving the status of areas of biodiversity importance (e.g., through better management of protected areas, or targeting REDD+ actions in areas of biodiversity importance)? ■ Result in enhanced conservation of biodiversity, natural forests and their ecosystem services by avoiding soil erosion and maintaining water quality (e.g., through targeted reduction of forest clearance or of intensive logging on steep slopes and riverine forests)? ■ Pose risks to the conservation of biodiversity, natural forests and their ecosystem services, through conversion (e.g., establishment of plantations in degraded or secondary forest)? ■ Pose risks to the conservation of biodiversity, natural forests and their ecosystem services, by contributing to the degradation of biodiversity and ecosystem services (e.g., by intensifying the use of forests leading to increased hunting pressure on vulnerable species)? ■ Pose risks to biodiversity outside the forest, through displacement of land use (e.g., new grazing land in other ecosystems rather than in the forest)? ■ Pose risks to biodiversity outside the forest, through unintended impacts on neighbouring lands (e.g., from pesticide drift from intensified agriculture, water abstraction, or fire resulting from forest management)? ■ Pose risks to biodiversity outside the forest, through afforestation in areas of conservation importance? ■ Pose risks to biodiversity in other countries (e.g., through increased imports of timber or agricultural products to offset reductions in domestic production)? ■ Improve local communities' access to forest products, such as fuelwood, forest foods and medicinal plants? ■ Restrict availability, quality of and access to forest products, particularly with respect to local communities? ■ Enhance communities' capacity to adapt to climate change and hence reduce their vulnerability to climate change? ■ Provide incentives related to the conservation of natural forests and their ecosystem services (e.g. benefit sharing, Payments for Ecosystem Services (PES))? ■ Provide livelihood opportunities for local communities (e.g., development of alternative income generating opportunities that reduce pressures on forests)? ■ Negatively impact local livelihoods (e.g., through loss of livelihoods due to closures in timber and timber-related industries)? ■ Conserve forests and forest products of traditional and spiritual importance for indigenous and local communities (e.g., through conservation of sacred sites, medicinal plants)?		

BeRT Worksheet Safeguard (f) - Actions to address the risks of reversals

Key Issues
■ Analysis of the risk of reversal of emission reductions, also referred to as 'non-permanence'. ■ National Forest Monitoring System (NFMS) may be designed to detect and provide information on reversals. ■ Plausible reference scenarios for REDD+ that give a reasonable indication of the risk of deforestation in the absence of REDD+. If this is underestimated, then REDD+ successes may be at a greater risk of reversal.

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
Could any of the candidate IPs be vulnerable to: ■ Climate change (e.g., more frequent drought, flooding)? ■ Wildfire? ■ Institutional failure? ■ Projected demographic trends and changing demands on land, including through international trade? ■ Instability in neighbouring countries (e.g., REDD+ actions in troubled border areas)?		

Worksheet 2.1: Safeguard (g) - Actions to reduce displacement of emissions

Key Issues
■ Addressing direct and indirect drivers of land-use change. ■ Displacement of emissions at the local level (e.g., across REDD+ project boundaries) may result from some REDD+ options. ■ Displacement of emissions at the national level (to other locations within the country) may result from some REDD+ options. ■ National Forest Monitoring System (NFMS) may be designed to detect and provide information on displacement at national, regional and local levels.

Risk/Benefit Analysis	Yes / No / I don't know	If yes, which IP?
■ Are there drivers of land-use change and forest degradation that are likely to persist despite REDD+ actions? **Could any of the candidate IPs:** ■ Result in displacement of land-use change at the local level (e.g., forest protection leading to agricultural conversion of bushland)? ■ Give rise to displacement of land-use change within national borders? ■ Is the significance of the carbon storage role of non-forest ecosystems in the country/region understood (i.e., the extent of damage to climate from displaced land use)? ■ Is the vulnerability of non-forest ecosystems to land-use change understood (e.g., agricultural suitability, accessibility, protection status, potential importance for extractive uses, fragmentation)?		

Annex 8: Example of Summarised IP Description in Nepal Drap Report Appendix

Intervention Package: Promotion of Agroforestry (Chitwan DRAP)

A. General Information	
IP Name	**Promotion of Agroforestry (AF)**
Drivers or barriers addressed	■ Deforestation: Forest encroachment for farming and settlement ■ Forest degradation: Unsustainable extraction of timber and fuelwood
Description of IP	■ Clearing of forests for agriculture and illegal settlement by poor and marginalised people is a major driver of deforestation. Productive and efficient agroforestry systems can reduce forest encroachment pressures by diversifying the livelihoods of households involved in forest encroachment, and reduce forest degradation by increasing on-farm sustainable timber, fuelwood and fodder production.
Objectives of IP	■ Reduce forest encroachment from agriculture and illegal settlement by increased livelihood diversification due to increased uptake of new or improved AF systems. ■ Reduce unsustainable timber and fuelwood extraction through increased production of sustainable timber and fuelwood production from new or improved AF systems.
Strategies of IP	■ Establish effectively functioning AF cooperatives. ■ Promote and establish efficient and higher productivity AF systems. ■ Increase farmers' access to market information on AF products.
Incentives for participation & changing stakeholder practices	■ Reserving shares in cooperatives for poor and marginalised households; ■ Providing grants/soft loans to poor and marginalised households for AF practices; ■ Ensuring participation of women, poor and marginalised people in training activities.
Outputs and activities/tasks	**Output 1: AF producer cooperatives established and functioning effectively** ■ Carry out consultation with target communities resulting in formation of ad hoc committees with particular attention to the inclusion of women, poor and marginalised households. ■ Train interested community members in cooperative principles, administration and management using existing training packages, and mobilising government resource persons. ■ Provide technical, institutional and material support, e.g., office equipment. ■ Submit simplified AF cooperative registration procedure to District Cooperatives Office. ■ Support cooperative registration process (e.g., preparation of required documents). ■ **Output 2: Farmers in target areas, most likely to encroach, trained in improved AF practices** ■ Identify appropriate improved AF practices for the hotspot areas, and capable government resource persons. ■ Provide logistical support for training farmers in improved AF practices using existing training materials and government resource persons. ■ Train selected cooperative members in tree measurement and reporting.

	Output 3: Improved AF management practices and production systems adopted ■ Establish AF nurseries • Train women and men in nursery management. • Provide seedlings, tools and fertilizers (grants) for basic areas. • Facilitate farmers' access to loans for larger areas. ■ Broadcast FM radio programs with information on technical issues, government AF programs, services and support available to farmers, loan opportunities, market information, etc. ■ Provide improved AF varieties/seeds for basic areas (for larger areas, facilitate farmer access to soft loans). **Output 4: Fair prices obtained by farmers for their AF products** ■ Develop mobile apps with AF product market information • Design and develop mobile apps for AF market information. • Train farmers in the use of mobile apps. • Coordinate with the Ministry of Agriculture to feed market information. ■ Install price hoarding boards for AF products managed by AF cooperatives ■ Design price hoarding boards (24 sq. ft.). ■ Orientate AF cooperatives on appropriate board management. ■ Establish and support effective management of weekly market by Haatbazar management committees • Form and train Haatbazaar management committees. • Organise 'exposure visits' of target communities to communities with functioning *Haatbazar* management committees.

B. Feasibility analysis				
IP outputs/ activities	**Risks or obstacles**	**Risk reduction measures**	**Risk reduction targets**	**Indicators**
Establish, support agriculture forest producers cooperatives	Long and complicated government procedure	Simplification of regulation;		
Provide material and technical support to promote agro-forestry	Poor access to quality seeds and seedlings; Weak research and outreach service; Limited access to formal credit	Financial and technical support to establish high-tech AF nursery; Regular monitoring and reporting; Partial support to develop AF project, & insurance premium		
Local campaign for agro-forestry and forest conservation	Stringent procedure to regulate harvesting and transport of private forest products	Revise Forest Act. 62 to promote private forestry, & provide guidelines to simplify harvest & sale of forest products; Establishment of district level AF networks; Awareness raising program to promote AF/tree planting		
Forest area demarcation in conflict area	Potential resistance from local community; Limited support from stakeholders	Alternative livelihoods program in encroachment area; Prepare maps showing trends in forest cover change to educate stakeholders;		
Develop District forest monitoring protocol and reporting system	Lack of coordination, Limited financial resources; Often priority is only given to accessible areas.	Participatory monitoring plan for district and VDC level; Provision on ERPD to mobilise REDD+ revenue		
Regular price dissemination of major Farm and off-farm commodities	Poor access to market information; Weak knowledge of value chain; No mechanism for continuous price update.	Periodic dissemination of market price information by local FM radio in coordination to FNCCI and local traders		
Overall feasibility and cost effectiveness score of IP (H=High; M=Medium; L=Low)				
Implementation risks/ obstacles	Cost-effectiveness of risk reduction measures	Implementation cost	Land use opportunity cost	Incentive / change measures
L=3/M=2/H=1 Total score	H=3/M=2/L=1	L=3/M=2/H=1	L=3/M=2/H=1	H=3/M=2/L=1

C. Safeguards Analysis (risks and benefits)				
Serious risks	Risk reduction measures	Risk reduction targets	Indicators	
Poor/marg. HHs excluded (or elite capture)	Reserve shares in Coop. for poor/ marg. HHs. Expand pro-poor leasehold forestry in government managed forests. Lease private land to poor/marg. HHs for AF.	1200 shares (10/HH = 15 HHs/hotspot) distributed to poor/ marg. HHs 500 poor/marg. HHs using leasehold forest land 100 poor/marg. HHs using leased private land	% of poor/marg. HHs who are members of AF coops. No. of poor/marg. HHs with leasehold state forest land No. of poor/marg. HHs with leased private land	
Reduction in indigenous crops that are staple food of poor	Implement multi-level AF practices with a focus on indigenous crops.	600 HHs consuming indigenous crop products form AF systems	% of total AF area under hybrid/exotic spp cultivation	
Elite capture of grants	Establish a transparent grant approval, monitoring & reporting mechanism.	100 poor/marg. HHs receiving grants	No. of poor/marg. HHs receiving AF grants	
Biodiversity risk due to hybrid/exotic spp replacing indigenous spp.	At least 50% of trees in AF extension/credit packages are indigenous species.	% of total AF area under hybrid/exotic spp cultivation	Grants & input provision with at least 50% indigenous spp.	
Benefits	The focus of IP1 on AF cooperatives, improved management practices, better market information, the flow of government services, provision of inputs, etc., should benefit poor and marginalised households. Women are likely to be key actors in new or improved AF production systems.			
Benefits	Benefit enhancement measures	Benefit enhancement targets	Indicators	
Clarity on forest boundary and access rights	Establish forest boundary monitoring system			

D. Monitoring protocol				
How will the IP ensure effective monitoring	▪ Regular monitoring by the DRWG, DFO and CNP ▪ Allocation of adequate budget for monitoring			
Implementing partners	DRWG, DFO, CNP, DADO, DCO and local forest user groups			
Monitoring protocol (example targets and indicators)		**Quantified Targets or Outputs**	**Indicators**	**Data source/ collection methods**
	Proxy indicators	17,500 additional standing AF trees per annum on the land of AF cooperative members;	No. of saplings and trees* on the land of AF cooperative members;	Self-reporting and random sample checks
		50% increase in on-farm fuelwood (AF Coop members);	Weight/volume of on-farm fuelwood (AF coop members)	Farmer recording system
	IP Output/ Intervent-ion indicators	8 AF cooperatives established and functioning effectively;	No. of AF cooperatives legally registered;	Certificates at District Cooperative Office
			No. of AF cooperatives with a functioning cooperative office;	Physical inspection of Office
			No. of meetings of AF coop board of directors;	Meeting minutes
			No. of AF coop shares distributed;	Annual audit report
		400 AF coop members trained in improved AF practices;	No. of AF cooperative members trained in AF practices;	List of participants from each training
		10 FM radio programs on AF broadcast;	No. of FM radio programs on AF broadcasted;	CD or other recording of broadcasts
		40 AF mass awareness campaign events;	No. of AF mass awareness events;	Cooperative office
		8 AF nurseries established using certified seed;	No. of AF nurseries established;	Field observation
		25,000 seedlings per AF nursery per annum produced;	No. of seedlings/AF nursery per annum;	Nursery records
		17,500 additional standing AF trees per annum;	No. of additional standing AF trees per annum;	Farmer record keeping system + Sample AF plots (at least 10%)
		8 functioning Haatbazar management committees;	No. of functioning Haatbazaar management committees;	Haatbazaar management committee meeting minutes

		24 price hoarding boards displayed in public places with AF product prices;	No. price hoarding boards with AF product prices displayed at public places	Cooperative office and field observation
		300 AF farmers in hotspots using an app with AF product market information;	No. of farmers using App with AF product market information	Household questionnaire
	Risk reduction indicators	1200 shares (10/HH = 15 HHs/hotspot) distributed to poor/ marg. HHs;	No. shares in AF Coops received by poor/marg. HHs	List of share certificates
		500 poor/marg. HHs using leasehold forest land;	No. of poor/marg. HHs using leasehold forest land;	DFO records
		100 poor/marg. HHs using leased private land;	No. of poor/marg. HHs using leased private land;	AF Cooperative records
		600 HHs consuming indigenous crop products form AF systems;	No. of HHs consuming indigenous crop products from AF systems;	Focus groups or other RRA method
		100 poor/marg. HHs receiving grants;	No of poor/marg. HHs receiving AF grants;	AF Cooperative records
		% of total AF area under hybrid/exotic spp cultivation.	Status of crop/tree diversity in AF systems.	Survey of level of crop & tree diversity in AF systems

E. Budget Plan (5 years)				
Introduction	Standard government price norms are used Annual increase in costs by 15% to allow for inflation factored in			
Implement-ation cost including monitoring	**Activity**	**Number/Event**	**Budget (NPR)**	**Remarks**
	Establishment of agroforestry cooperatives	8	4,000,000	At 8 hotspots
	Broadcast FM programs	2	100,000	At district level
	Develop mobile apps for updating the price of agricultural products	1	200,000	At district and national level
	Installation of price hoarding board for agricultural products;	8	400,000	At 8 hotspots size of hoarding board (4'*6')
	Formation of Haatbazaar management committee	8	288,000	At 8 hotspots
	Establish agroforestry nursery	8	4,000,000	At 8 hotspots
	Capacity development of local people, especially poor and marginalised social groups	480	320,000	At 8 hotspots
	Conduct mass awareness campaign on AF	8	180,000	At 8 hotspots
	Total		9,488,000	
Total Budget			**NPR 9,668,000**	

Annex 9: Skills and Tips for SRAP Working Group Facilitators

Introduction

The quality of participation is vital to the credibility and quality of the outputs from the SRAP process. The quality of participation also depends on the quality of the facilitators. The purpose of this section is to help the facilitators with the task of maintaining the quality of participation in the workshops, especially in the context of achieving equitable participation in the working groups.

There is a large body of literature on facilitation methods. For example, research[2] has shown that the quality of the learning process depends on whether the teaching method is 'student/participant-centred' or 'teacher-centred'.

A PowerPoint presentation is an example of a teacher-centred method – it is very convenient for the teacher, especially since it acts as a memory aid,[3] but not very effective for the student's or participant's learning process. Participants become passive and tend to get tired quickly during a PowerPoint presentation. If the PowerPoint presentation is long or detailed, they may get what is called 'cognitive overload' (see below). Participant-friendly methods such as a 'learning by doing' exercise or a role-play allow participants to get actively involved their own learning process. As a result they are more active, do not tire quickly, and the learning experience is more enjoyable and effective.

Using a practice exercise to avoid 'cognitive overload'

Cognitive overload occurs in workshops when participants try to understand a new concept or method while also trying to apply it to a technical issue or problem. Our brain can only process a limited amount of information at a time. Participants often find it difficult to simultaneously understand the method or concept and apply it to a technical issue or problem (e.g., causes of illegal logging). If they attempt to do both at once, the quality of participation and outputs tends to suffer, and the technical analysis takes too much time – the time factor also increases fatigue.

The solution is to separate the two processes – the learning process and the application process. For the first part, participants can do a practice exercise on something that is completely unrelated to the technical issues. If the exercise is light and fun,[4] it helps create a favourable environment for consultation and builds group unity. It can also speed up the learning process. The aim of the practice exercise is not to achieve a perfect result (e.g., a comprehensive problem tree) – it is only to aid the understanding process. Mistakes or 'errors' during the practice exercise are good since they help the learning process.

During a practice exercise the group facilitator or trainer can promote the understanding process in several ways:

- Use guided questions to get participants to say what they understand about a method or concept – the facilitator can congratulate the participant on their explanation, and in a non-corrective way clarify their understanding.
- Get participants to work in pairs – this is especially helpful when some participants are shy or there are individuals likely to dominate the group discussions or work.
- Provide one or two examples of the concept or idea and then ask the group – individually or in pairs – to think of another example (if the example is local or from their own lives, this is more powerful for the individual learning process).
- When the facilitator thinks that one of the participants has understood the concept or idea, ask the participant to explain it to the rest of the group.
- After a discussion, request a person or pair of participants to summarise the main points or conclusions.

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[2] For example, Mascolo, M.F. 2009. Beyond student-centered and teacher-centered pedagogy: Teaching and learning as guided participation. Pedagogy and the Human Sciences, 1, No. 1, 2009, pp. 3-27 http://www.academia.edu/1027631/Beyond_student-centered_and_teacher-centered_pedagogy_Teaching_and_learning_as_guided_participation

[3] Another problem with PowerPoint is that if the participant does not properly understand something when they hear it for the first time, it can create a learning barrier. This can be due to a loss of confidence – the listener feels bad they did not understand the concept or idea properly. PowerPoint presentation needs to be as short and simple as possible.

[4] For example, a practice example for a problem tree could be why Chinese food is not more popular in Vietnam or why foreigners are no good at karaoke.

Time spent on a practice exercise is an investment – it pays interest later because the participants do the real work faster, more effectively (in the quality of outcomes) and with more enthusiasm.

Working in 'teacher mode' and 'facilitator mode'

Facilitators should understand the difference between working in 'teacher mode' and 'facilitator mode.' These require different skills and techniques. Sometimes a facilitator needs to switch rapidly between them.

Normally at the beginning of an exercise they need to be in the teacher mode as they give instructions or explanations. At this point they are the experts because they know the concepts, vocabulary, importance of the overall process, etc. They need to find the most effective way of explaining things. This usually involves giving an example that is as simple as possible. They could then give a more complex example, or even better, ask the participants to give examples.

When the 'real work' starts, the participants are the experts – they have local knowledge and understand the context. Facilitators sometimes still think they are the experts – when this happens they tend to stop facilitating and begin to dominate the group. The tendency is that the more the facilitator participates the less the group members participate, especially shy ones. Even when a facilitator knows a lot about an issue and the local context, they need to restrain themselves because their primary role is to facilitate equitable participation of the group.

A dominant or over-active facilitator is in fact operating in the teacher mode – the main signs of this are that they talk a lot, stand over the group or group work, are quick to move the cards and in general tend to be directive and corrective. A group with a facilitator in the teacher mode tends to lack confidence. It has been observed they will only start engaging more actively with the issue or task, e.g., suggesting or moving cards, when the facilitator goes away.

In fact it is good practice for all facilitators to leave the group to work on its own for a significant period (e.g., 20 minutes), once the group has grasped the methods. (This is not necessary for the practice exercise since the facilitator, being an 'expert' in the method, is a vital resource). This gives participants time to think and act on their own.

Time away from the group can be spent observing or supporting another working group or facilitator. Facilitators should work as a team, providing support to each other. They should meet at the end of each day to discuss experiences and problems so they can learn from each other.

Meeting the challenges of equitable participation

A facilitator will normally identify early on the more confident (or overconfident) people in the group and the shy or timid ones. They know there are many reasons why someone is shy or timid – it can be personality, but may also be that they are in the presence of senior people, have a lower education level, have a lower professional or social status or because they are female.

The facilitator therefore needs a strategy for increasing the participation of shy participants, and controlling more confident and talkative ones. Some tips for promoting equitable participation are:

- When the group forms, point out that equitable participation is very important for the credibility of the process and quality of outputs, and it is the responsibility of everyone in the group to encourage it.
- Give shy people a task. Although the task may appear simple, like taping the cards onto the worksheet, this can make them feel valued and encourage them to participate more. Sometimes people who do not talk very much like to write; if they have good handwriting, they can write the cards.
- If some members are dominating the discussion, get the participants to work in pairs. This dilutes the influence of any one individual. Shy people will also participate more if paired with a less shy but sympathetic group member. You can also try pairing two talkative people – to some extent they should balance each other out .
- If the quality of consultation continues to be poor, suggest some basic rules of good consultation: not interrupting; no side-discussions (see photo 2 below – there should be only one discussion in the group); keep

contributions as short as possible; give more time to shy people to talk, etc. If necessary, ask people raise their hands before speaking or get people to speak in turns going round the table.

Hopefully these basic techniques will improve group consultation and participation, but sometimes there can be an egoistic person who continues to dominate. There may also be a clash of egos or personalities. If this becomes disruptive or prevents equitable participation, talk to the person individually to see if they are aware of what is happening, and whether they are prepared to change their behaviour for the good of the workshop objectives.

If this does not work, the group facilitator should discuss the problem with the workshop facilitator and see if the person can be moved to another working group. Sometimes changing the composition of a working group can work, but this is a last resort – it may only transfer the problem from one group to the next.

Positioning of shy people

With shy people, it is very important to observe and manage where they are sitting. A shy person is likely to sit at the back or in a spot that draws least attention. If the person is sitting at the side, such as the lady in Photo 3, they will be looking at the writing sideways or even upside down. This makes their participation very difficult. Also note that in these photos most of the men are standing up and actively engaged in the task, and most of the women are seated and not so active (or are distracted, bored, etc.).

Is there a problem?

Photo 1: Exchange of working groups, Brazil

Photo 2: Developing problem tree, Indonesia

Photo 3: Museum visit in Guatemala

The facilitator should therefore place shy people and women in the middle of the group and in front of the work sheet. And if people are standing, for example, during the museum visit (Photo 4), make sure that short people, especially women, are at the front!

The power of the pen

The written word has a very important role in the SRAP process. Therefore the person writing the cards can have a big influence. In fact he/she is the most powerful person in the group and can be the cause of bias. Sometimes the cards are written by everyone, such as during a brainstorm session. But at other times there is a group discussion and someone will write the card summarising the discussion. The risk is when

the scribe writes down their own idea and not what the group has agreed on and other people in the group do not question what is written on the card.

The facilitator needs to be vigilant about this. If the card does not seem to reflect the idea the group has agreed on, he/she should ask the group members if they agree with what is written on the card. It may also be necessary to rotate the scribe to allow less room for individual bias.

Power of the pen!

Photographs: Michael Richards

Photo 4: Brazil

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