



Myanmar **REDD+** Readiness Roadmap

UN-REDD PROGRAMME

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ANNEX 1: PROCEEDINGS OF THE REDD+ READINESS ROADMAP CONSULTATION PROCESS	Error! Bookmark not defined

ABBREVIATIONS

AAC	Annual Allowable Cut
AIPP	Asian Indigenous Peoples Pact
BANCA	Biodiversity and National Conservation Association
CBNA	Capacity Building Needs Assessment
CCVfV	Central Committee for the Management of Vacant, Fallow and Virgin Land
CDM	Clean Development Mechanism
CF	Community Forest(ry)
CFI	Community Forestry Instructions (1995)
COP	Conference of Parties
CSO	Civil Society Organisation
DGTTF	Democratic Governance Thematic Trust Fund
DNA	Designated National Authority
DZGD	Dry Zone Greening Department (MoECAf)
ECD	Environmental Conservation Department (MoECAf)
EFDB	Global Emissions Factor Database
EIA	Environmental Impact Assessment
EITI	Extractive Industry Transparency Initiative
ETWG	Environmental Technical Working Group
FAO	Food and Agricultural Organization of the United Nations
FD	Forest Department (MoECAf)
FDI	Foreign Direct Investment
FLEGT	Forest Law Enforcement, Governance and Trade
FPIC	Free, Prior and Informed Consent
FRA	Forest Resources Assessment
FREDA	Forest Resources, Environmental Development and Conservation Association
FRI	Forest Research Institute (MoECAf)
FSWG	Food Security Working Group
GHG	Greenhouse Gases
GIS	Geographic Information System
ICIMOD	International Centre for Integrated Mountain Development
ICS	Improved Cook Stoves
INC	Initial National Communication
IPCC	Inter-governmental Panel on Climate Change
ITTO	International Tropical Timber Organisation
JICA	Japan International Cooperation Agency
KFS	Korean Forest Service
KOICA	Korean International Cooperation Agency
LULUCF	Land-use, Land use Change and Forestry
MERN	Myanmar Environmental Rehabilitation-conservation Network
MNPED	Ministry of National Planning and Economic Development
MoAI	Ministry of Agriculture and Irrigation
MoECAf	Ministry of Environmental Conservation and Forestry
MoEP	Ministry of Electric Power
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFL	Ministry of Fisheries and Livestock
MoHA	Ministry of Home Affairs
Mol	Ministry of Industry
MoM	Ministry of Mining
MRV	Measurement, Reporting and Verification
MTE	Myanmar Timber Enterprise
NAPA	National Adaptation Plan of Action
NECC	National Environmental Conservation Committee
NFI	National Forest Inventory

NFMP	National Forest Management Plan
NFMS	National Forest Monitoring System
NGO	Non-governmental Organization
NORAD	Norwegian Development Agency
NSDS	National Sustainable Development Strategy
PFE	Permanent Forest Estate
PLR	Policies, Laws and Regulations
PSD	Planning and Statistics Department (MoECAf)
RECOFTC	Regional Community Forestry Training Centre for Asia and the Pacific (The Centre for People and Forests)
REDD+	Reducing Emissions from Deforestation and Forest Degradation, and the role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks
REL	Reference Emissions Level
RL	Reference Level
RS	Remote Sensing
SD	Survey Department (MoECAf)
SFM	Sustainable Forest Management
SIS	Safeguards Information System
SLRD	Settlement and Land Record Department (MoAI)
TF	Task Force
ToR	Terms of Reference
TWG	Technical Working Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD+ programme (UNDP, FAO and UNEP)
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

Having signed the United Nations Framework Convention on Climate Change (UNFCCC) on 11 June 1992 and ratified the convention on 25 November 1994 and the Kyoto Protocol in 2003 as a non-Annex 1 party, Myanmar is fully aware of the causes and potential impacts of climate change. Hence, whilst undertaking political reform and aiming at rapid economic development, Myanmar is striving to reduce its greenhouse gas (GHG) emissions. The government of Myanmar has recognised the potential of the REDD+ initiative to contribute to green development by protecting global environmental resources (forest carbon stocks, but also biodiversity), helping to reverse land degradation, helping to improve the livelihoods of the rural poor and aiding adaptation to climate change.

Although still largely a poor country, Myanmar is rapidly opening up to Foreign Direct Investments (FDI) in the energy, mining and agricultural sector. Unless astutely managed, economic growth may have negative impacts on the environment and the natural resource base. In addition, climate change threatens to reverse socio-economic advances. Recognizing these inter-related challenges, the Government increasingly views the forestry sector as a key component and driver of sustainable and climate resilient economic growth and rural development. Myanmar has significant potential to reduce its forest carbon emissions, and enhance and sustainably manage its forest carbon stocks, by implementing REDD+ activities.

Summary of Roadmap components

Myanmar became a partner country of the UN-REDD Programme in December 2011 and has quickly taken steps to start implementing REDD+ readiness activities. This Roadmap, divided into six components, sets out how Myanmar will implement its REDD+ Readiness activities.

Under **Component 1 “Management of REDD+ Readiness”**, Myanmar will establish the institutional structure to manage the REDD+ Readiness process. It will build on existing structures established by the government before or during the Roadmap development process. Component 1 will also cover the actual management of the REDD+ Readiness phase, including the support to key components of the management structure. Under the overall guidance of the existing multi-sector National Environmental Conservation Committee chaired by MoECAF, an inclusive but streamlined REDD+ Task Force (TF) will manage and coordinate the Readiness process. The REDD+ TF, chaired by the Forestry Department (FD) of MoECAF, will be supported by the three existing and three additional multi-stakeholder Technical Working Groups (TWG). A new REDD+ TF Office, established within the Planning and Statistics Division of the FD will provide secretarial, technical and day-to-day operational support. Key stakeholders identified prior and during the Roadmap development process and involved in the different National and Regional Roadmap Consultation Workshops will form an open National REDD+ Stakeholder Network which will become the main forum for stakeholder consultation during the Readiness Phase. Linkages between the different institutional layers will be reinforced by the participation of TWG members in all TF meetings and the inclusion of TWG members in the National REDD+ Stakeholder Network.

Under **Component 2 “Stakeholder Consultation and Participation”**, the Stakeholder Consultation and Safeguards TWG will undertake annual stakeholder reviews to update and strengthen the membership of the National REDD+ Stakeholder Network. The TWG will ensure appropriate Civil Society participation and representation of women and ethnic groups by actively promoting corresponding Network membership. A National REDD+ Readiness Stakeholder Consultation Guidelines and Consultation Plan will be developed based on 5 levels of consultation: meetings of the multi-stakeholder TWGs; meetings of the REDD+ TF attended by the TWG members; electronic consultations of the National REDD+ Stakeholder Network; National Consultation Workshops involving Network members and National Consultations Processes involving national and regional

consultation workshops. The level of consultation will depend on the subject matter and will be outlined in the consultation plan. Under this component, National Guidelines on Free, Prior and Informed Consent (FPIC) will be developed based on a study into traditional decision-making systems. These FPIC Guidelines will be field-tested prior to and as part of the development of REDD+ pilots.

Under **Component 3 “Development and selection of REDD+ Strategies”**, Myanmar will assess, select and pilot REDD+ strategies for both inside and outside the forestry sector. The assessment of the initial or proposed Candidate Strategies identified during the Roadmap development phase will be refined based on further studies and reviews. A quantitative assessment of emissions and carbon stock removals from major drivers of forest degradation and deforestation, will include estimates or trends of future emissions for each of the main drivers identified. A Forestry Sector Institutional and Context Analysis, the review of policies, laws and rules outside the forestry sector and a UN-REDD “Corruption Risk Assessment” will inform the further consolidation of the list of candidate strategies. A review of the existing forest management programmes and their current or potential funding, together with a cost-benefit analysis for the different candidate strategies, will lead to the final selection of candidate strategies to be piloted during the Readiness Phase. The Readiness phase will include the planning of the up-scaling of REDD+ Strategy pilots.

Under **Component 4 “Implementation framework and safeguards”** the Institutional, Legal and Financial Frameworks for REDD+ implementation will be developed or consolidated. An initial Competency Framework will be established for different stakeholders contributing to the different elements of the REDD+ Institutional Structure. This framework will be used to conduct a Capacity Building Needs Assessment (CBNA) which will guide the development and implementation of the stakeholder training and awareness building activities. The CBNA and corresponding training activities will be repeated based on an interim and final review of the REDD+ Institutional Structure. This component will include the development of a National REDD+ Communication Strategy to ensure effective and transparent information sharing and to support stakeholder consultation processes. The development of REDD+ specific information and communication materials will be based on a review of existing materials. The national legal framework will be adapted and consolidated based on policy and legal reviews conducted under Component 3. Initial national consultations will validate possible amendments, focusing on obvious, urgent and easily enacted changes needed to facilitate REDD+ implementation. A second round of national consultations will be held to review and validate a list of proposed amendments and additions to legal framework. This consultation will focus on more fundamental, complex and long term changes to the national legal framework. The necessary Financial Framework, including a financial mechanism for the management of potential REDD+ income and the distribution channels to ensure equitable benefit sharing, will be developed based on the review of existing financial mechanisms and fund distribution systems. Component 4 will include the development of a REDD+ Social and Environmental Safeguard System based on existing and new national Policies, Laws and Regulations (PRL) to address the Cancun Safeguards. The establishment of a REDD+ Safeguard System will include the development of a transparent information and monitoring system. The validation of the proposed Safeguard System and a corresponding National REDD+ Grievance Mechanism will be done through a national consultation process.

Under **Component 5**, Myanmar will establish its **“National Forest Reference Emission Level and/or Forest Reference Level (REL/RL)”**, with sub-national forest RELs/RLs as potential interim measures. RELs/RLs will provide the benchmarks against which future forest carbon emissions reductions and removals will be measured. The emphasis of this Component will be the collection of data on historical land use trends and the analysis of relevant national circumstances, as well as the development of specific capacities to further develop and implement these activities under a full National REDD+ Strategy.

Under **Component 6**, Myanmar will develop a “**National Forest Monitoring System**”, comprising a monitoring function and a Measurement, Reporting and Verification (MRV) function. The monitoring function will serve to assess whether REDD+ activities are results-based, while the MRV function will be the tool used to assess and report on the mitigation performance of REDD+ activities to the UNFCCC.

Summary Work plan and Budget

National Programme Components	Budget (4 years)
Component 1: Management of REDD+ Readiness	
Output 1.1 National REDD+ Readiness Management Structure established	100,000
Output 1.2 REDD+ TF Office in place and functional	4,420,000
Output 1.3 REDD+ TF and TWGs supported	1,300,000
TOTAL Component 1	5,820,000
Component 2: Stakeholder Consultation and Participation	
Output 2.1: Stakeholder representation and consultation strengthened	200,000
Output 2.2: National FPIC Guidelines Developed	500,000
TOTAL Component 2	700,000
Component 3: Development and selection of REDD+ Strategies	
Output 3.1: Proposed candidate strategies outside the forestry sector confirmed (see Section 3.4.3.2)	900,000
Output 3.2: Candidate strategies piloted and supporting or enabling activities completed (see Section 3.4.3.2)	5,500,000
Output 3.3: Process for piloting of REDD+ Strategy implementation planned	800,000
TOTAL Component 3	7,200,000
Component 4: Implementation framework and safeguards	
Output 4.1: Institutional Structure operationalised	1,020,000
Output 4.2: Legal Framework Adapted and reinforced	200,000
Output 4.3: Financial Framework developed	260,000
Output 4.4: REDD+ Social and Environmental Safeguards System developed	400,000
TOTAL Component 4	1,880,000
Component 5: Developing a national REL and/or RL	
Output 5.1: Methodologies for establishing national REL/RLs reviewed	230,000
Output 5.2: Historical land use change trends analysed at the national scale	75,000
Output 5.3: Relevant national circumstances reviewed and data collected	150,000
Output 5.4: National REL/RL tested and demonstrations sites for piloting selected	620,000
TOTAL Component 5	1,075,000
Component 6: Development of a National Forest Monitoring System	
Output 6.1: Capacity building and NFMS Action Plan development	2,962,000
Output 6.2: Satellite Land Monitoring System developed and operationalised	1,020,000
Output 6.3: Multipurpose NFI designed and piloted	842,000
Output 6.4: National capacity built for undertaking GHG Inventory for the LULUCF sector	166,000
Output 6.5: NFMS-related research supported	130,000
TOTAL Component 6	5,120,000
GRAND TOTAL Components 1-6	21,795,000
Administrative costs and overheads (7%)	1,525,650
Total Cost of the 4-year REDD+ Readiness Programme	23,320,650

INTRODUCTION

Country Profile

Location, territory and administrative Regions

The Republic of the Union of Myanmar is located in South-East Asia between north latitudes 9° 32' and 28° 31' and east longitudes 92°10' and 101°10'. The country has a total land area of 676,577 km². The width from east to west is 936 km and the length from north to south is 2,051 km (including

a 1,200 km-long peninsular in the south east). Myanmar shares a border of 2,192 km with China, 224 km with Laos and 2,096 km with Thailand to the east. To the west it shares a 1,331 km border with India and 256 km with Bangladesh. The country's 2,832 km coast faces the Bay of Bengal in the west and the Andaman Sea in the south and south west. The topography of Myanmar can roughly be divided into three parts: the Western Hills, the Central Valley and the Eastern Hills. Seven States and seven Regions constitute the Union of Myanmar. The Central Valley of the River Ayeyawady consists of the Sittoung Valley and the Chindwin Valley. The seven States are Kachin, Kayah, Kayin, Chin, Mon, Shan and Rakhine. The seven Regions are Magway, Mandalay, Sagaing, Bago, Tanintharyi, Ayeyarwady and Yangon. Nay Pyi Taw, the recently created new capital city of Myanmar



located in the southern part of the Mandalay Region represents a new administrative Region.

Climate

The climate of Myanmar is influenced by the south-west and the north-east monsoon. Myanmar has three distinct seasons namely, the rainy season, the winter, and the summer. The rainy season starts with the onslaught of the south-west monsoon winds in early May and ends in October. The winter starts from November and ends in February. The summer begins in March and continues to the end of April. The coastal regions have about 5,000 mm of annual rainfall but the dry zone areas of Central Myanmar have less than 750mm. The temperatures generally vary between 10°C and 32°C with an average mean temperature of 21°C in the northern lowlands. Temperatures can drop down to -1°C or 0°C in the highlands and reach up to 32°C in coastal areas and 40°C or more in the central dry zone.

Population

In 2008, the population of the Union of Myanmar was estimated at 57.5 million, registering a growth rate of 2.02%. About 70% of Myanmar's population lives in rural and remote areas. The most populous cities are Yangon, the former capital, and Mandalay, the ancient capital of Myanmar. The most populated Regions are Mandalay, Ayeyarwady and Yangon. Myanmar is ethnically very diverse with a population classified into eight groups namely Bamar, Chin, Kachin, Kayah, Kayin, Mon, Rakhine and Shan. The Bamar constitute the largest group or about 69% of the total population. The people of Myanmar are primarily Buddhists but include important Christian, Hindu, Muslim and Animist populations.

Level of Economic development

Since 1988, Myanmar has moved to a more liberal and market oriented economy, opening up to foreign investment. The country's Gross Domestic Product increased from 3% in 1988 to about 13% in 2007. Agriculture, livestock, fishery and forestry jointly contribute to more than 50% of the national GDP and about 30% of export earnings. The forestry sector's contribution to the national GDP is less than 1 per cent, but timber exports alone contribute to 10% of the total exports. Myanmar's forests are also socially and economically significant to the country. Over 70% of the population lives in rural areas and is highly dependent in forest resources such as food, fodder, fuel and timber.

Background of Myanmar REDD+ Readiness Roadmap

The development of this document, and its structure, has been designed to align with the FCPF/UN-REDD Readiness Preparation Proposal (R-PP) template. It also draws substantially on the experience of other countries in the Asia-Pacific region, particularly with reference to the following documents:

- Lao PDR Readiness Preparation Proposal, August 2010
- Cambodia Readiness Plan Proposal on REDD+ (Cambodia REDD+ Roadmap), March 2011
- Bangladesh REDD+ Readiness Roadmap, April 2012

The implementation of the REDD+ Readiness Roadmap constitutes the initial stage of the REDD+ process which is divided into three phases:



Figure: Three-Phased Approach to REDD+ under UNFCCC Framework

Phases 1 and 2 together comprise the “REDD+ Readiness” Phase, during which countries build capacity, develop strategies and action plans, test different approaches to REDD+ implementation at demonstration/pilot sites and subsequently refine their approaches based on feedback. In practice, the three phases overlap to an extent, e.g. with demonstration/piloting and capacity building activities overlapping. Myanmar is presently in the early stages of Phase 1. It is focusing on building initial capacity and planning for REDD+ and the development of strategy documents. These latter include the present REDD+ Readiness Roadmap.

Phase 1 (Readiness): Implementation of the Roadmap, during which Myanmar will put in place the necessary frameworks, capacities and institutions to implement REDD+ at the national level. This phase also includes the identification of the possible actions (or ‘candidate strategies’) that may achieve net emission reductions from the forest sector. This phase can begin as soon as the Roadmap is endorsed by the Government of Myanmar. This phase is expected to take four years and is expected to be financed by donor-based grants.

Phase 2 (Implementation): This phase will involve field testing of candidate strategies through demonstration activities, to establish which of the strategies may achieve efficient and cost-effective results on a national scale without undermining any of the REDD+ safeguards. This phase could also include further capacity-building, and development of new policies and legislation. Some demonstration activities may begin in specific areas of the country before all phase 1 activities are completed at the national level. The country will fully enter phase 2 when all Readiness activities have been completed, within two years of the completion of the Roadmap. Phase 2 may be financed through donor-based grants, payments from funds, and sale of carbon credits on markets.

Phase 3 (Performance-based payments): Only during this phase would Myanmar start to implement REDD+ activities, through a national performance-based system of resource (benefit) distribution. The implementation of phase 3 depends on decisions taken by the UNFCCC. Phase 3 may be financed through payments from funds and sale of carbon credits on markets.

The Roadmap is a **living document**. It is not intended to be a fixed and unchangeable set of instructions for REDD+ Readiness activities. It should be reviewed and updated on a regular basis to reflect the developing experiences and capacities within Myanmar and the progression of REDD+ tools and approaches internationally.

The Government of Norway and the UN-REDD programme provided the necessary funding for the preparation of the Myanmar REDD+ Readiness Roadmap. Technical support was provided by the UN-REDD programme, RECOFTC and the many government, CSO and private sector organisations involved in the different Technical Working Groups in charge of drafting the Roadmap.

The Myanmar REDD+ Roadmap has six Sections:

1. Management of REDD+ Readiness Arrangements
2. Stakeholder Consultation and Participation
3. Development and Selection of REDD+ strategies
4. Implementation Framework and Safeguards
5. Development a National Reference Level and Reference Emissions Level
6. Development a National Forest Monitoring System

SECTION 1: MANAGEMENT OF REDD+ READINESS

Rationale: How REDD+ Readiness activities will be coordinated and managed in Myanmar

Key parts:

- Pre-existing and relevant (forestry, environment, climate change and land management) government institutions, multi-stakeholder coordination mechanisms and networks;
- Pre-existing institutional framework for REDD+ Readiness and potential partners in REDD+ Roadmap implementation;
- Gaps and weaknesses in the existing REDD+ Management Structure which REDD+ Readiness must address;
- Proposed REDD+ Readiness management arrangements: composition and preliminary ToRs for key bodies, such as REDD+ Task Force, Task Force Office, Technical Working Groups and National REDD+ Network;
- Indicative work plan and budget.

1.1 Pre-existing institutional framework for forest and land management relevant to REDD+

1.1.1 The Ministry of Environmental Conservation and Forestry (MoECAF)

The Ministry of Environmental Conservation and Forestry (MoECAF) is responsible for managing all forestlands in the country including the Permanent Forest Estate (PFE) and Public Forests. MoECAF develops the forest policy and legal frameworks and coordinates Climate Change related policy analysis and development. The ministry contributes to UNFCCC negotiations through the Ministry of Foreign Affairs (MOFA) and is in charge of developing the National Communications to the Convention. MoECAF is also in charge of environmental protection including the development and implementation of rules relating to Environmental and Social Impact Assessments (ESIA). Figure 1.1 illustrates structure of MoECAF.

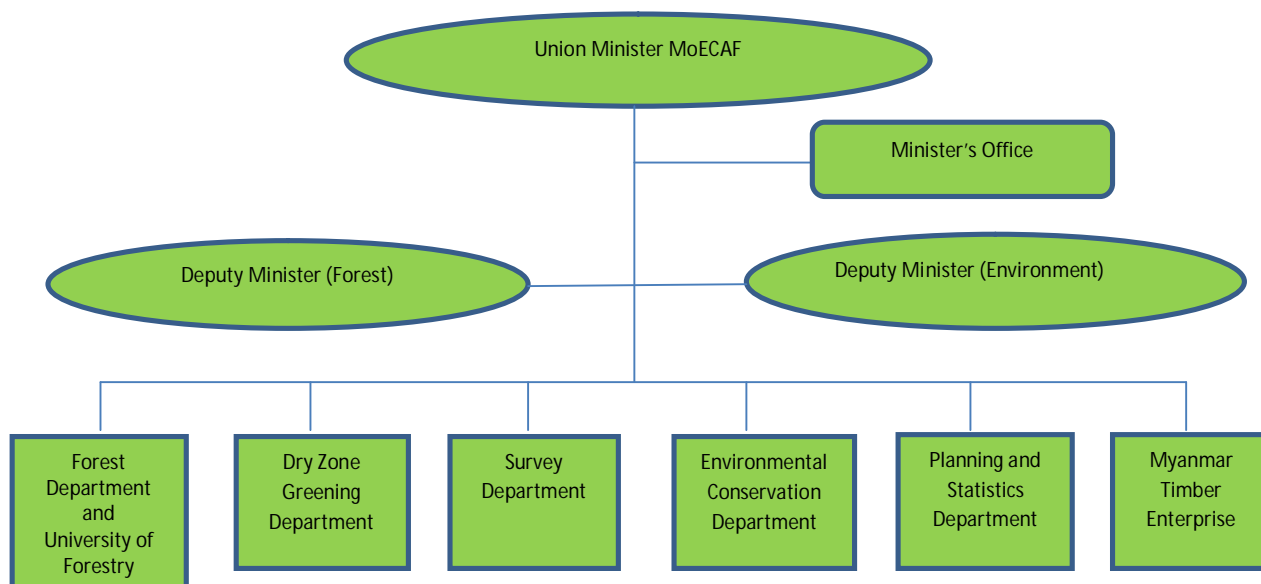


Figure 1.1: Organogram MoECAF

- 1) **Forest Department (FD):** Primary authority responsible for administering Reserved Forest lands. The Forestry Department also has delegated authority over areas of land classified as Protected Public Forest and Public Forest. The FD is responsible for the protection and

conservation of biodiversity and the sustainable management of forest resources in the country; The FD is divided into:

- Planning and Statistics Division
- Watershed Management Division
- Extension Division
- Training and Research Division
- Budget Division
- Wildlife Conservation Division
- Natural Forest and Plantation Division
- Administrative Division
- Zoological Gardens
- Forest Research Institute
- Inspection Division
- University of Forestry
- 15 sub-national Offices covering all States and Regions and including 64 District Offices covering the management of Reserved Forests around the country. District Offices are sub-divided into township offices.

2) **Dry Zone Greening Department (DZGD):** Responsible for reforestation of degraded forest lands, protection and conservation of remaining natural forests, and restoration of the environment in the Dry Zone of Central Myanmar; The DZGD is divided into:

- Projects Division
- Engineering Division
- Administrative Division
- 3 sub-national Offices covering the Mandalay, Sagaing and Magway Regions

3) **Survey Department (SD):** Is responsible for producing UTM maps and for conducting land surveys in major cities; The SD is divided into:

- Administration Division
- Training Division
- Boundary Survey Division
- Aerial Survey Division
- Photogrammetry Division
- Map Reproduction Division

4) **Environmental Conservation Department (ECD):** Is a newly created Department responsible for Environmental and Social Impact Assessments (EIA) of investments and the development of the National Communications to UNFCCC; The ECD is divided into:

- Administrative Division
- Policy, International Relations, Training and Research Division
- Pollution Control Division
- Natural Resources Conservation and EIA Division
- 5 sub-national Offices (Yangon, Mandalay, Ayeyawady, Sagaing and Tanintharyi Regions with plans to expand in all States and Regions).

- 5) **Planning and Statistics Department (PSD):** Coordinates and facilitates the tasks of other MOECAF Departments and deals mainly with policy matters; The PSD is divided into:
 - Policy and Planning Division
 - Commerce and International Cooperation Division
 - Environment Division
- 6) **Myanmar Timber Enterprise (MTE):** Responsible for timber harvesting, milling and downstream processing and marketing of forest products. The MTE's Extraction Department has sub-national Offices in all States and Regions but presence at district and township level depends on the potential and intensity of timber harvesting operations.

Forest management is primarily the responsibility of four MoECAF Departments: FD, PSD, DZGD and MTE. These four departments represent the majority of MoECAF staff dedicated to the forestry sector (see Table 1.1):

Table 1.1: Manpower in Forestry Sector under MoECAF

No.	Institutions	Officers	Staff	Total
1.	Minister's Office	16	19	35
2.	Planning and Statistics Department	42	105	147
3.	Forest Department	567	14,862	15,429
4.	Dry Zone Department	137	3,094	3,231
5.	Myanmar Timber Enterprise	1,131	45,280	46,411
6.	Survey Department	63	420	483
	Total	1,956	63,780	65,736

Source: Administration Division, Forestry Department in "Forestry in Myanmar", October 2-11

Forestry sector education and research is conducted by several institutions under the responsibility of the FD or the MTE (Table 1.2):

Table 1.2: Forestry Sector Education and Research Institutions

Institution	Comments
Under the FD	
University of Forestry	In Yezin and offers Bachelor of Science, Post-graduate diplomas, Master's and PhD degrees in Forestry. Annual intake around 200 students to Bachelor degree. Total staffing of 180.
Forest Research Institute	Created in 1978 (Yezin) and consists of three divisions: the Forestry Development Division, the Administration and Budget Division and the Forest Utilization Division. Total staffing of 173 including 53 researchers.
Myanmar Forest School	In Pyin Oo Lwin and trains graduates who are generally recruited as junior Forestry Staff and who play a significant role in the implementation of forest management activities in the country.
Central Forestry Development Training Centre	Established in Hmawbi (Yangon) in 1990 with sub-centre (established more recently) focused on Community Forestry and Community Participation in Mandalay.
Under the MTE	
Training School No.1	Established in Nanchun in 1980 and with annual intake of 20-25 trainees. Subjects: timber harvesting, elephant care and management, field work and office procedures.
Training School No.2	In Nay Pyi Taw with annual intake of 25-30 trainees. Subjects: basic driving and handling and operator course (heavy forestry machinery)
Training School No.3	Established in Yangon. Annual intake of 25 trainees. Subjects: timber milling, marketing, export and management

1.1.2 The Ministry of Agriculture and Irrigation

The Ministry of Agriculture and Irrigation (MoAI) is responsible for the management of agricultural land and develops the corresponding policy and legal frameworks. The strategic objectives of the MoAI are to:

- 1) Fulfil local food consumption needs;
- 2) Increase export of surplus production to increase foreign exchange earnings;
- 3) Assist rural development through agricultural development.

MoAI's five strategies for agricultural development are:

- 1) Development of new agricultural land;
- 2) Provision of sufficient irrigation water;
- 3) Provision and support for agricultural mechanization;
- 4) Application of modern agro-technologies;
- 5) Development and utilization of modern varieties.

MoAI includes the following departments or institutions:

- 1) Irrigation Department;
- 2) Water Resources Utilization Department;
- 3) Department of Agricultural Research;
- 4) Department of Agricultural Crop Development;
- 5) Agricultural Mechanization Department;
- 6) Settlement and Land Records Department;
- 7) Survey Department;
- 8) Yezin Agricultural University;
- 9) Myanmar Agricultural Development Bank.

The MoAI is responsible for implementation of the Farmland and Vacant, Fallow and Virgin (VFV) Land Laws and can therefore allocate land (including Public Forest or non PFE) for small and large scale agricultural development. MoAI's Settlement and Land Records Department (SLRD) is responsible for updating and maintaining land records, especially for lands used by farmers for agricultural and settlement purposes. With passage of the new Farmland and VFV Land Laws, this Department has become responsible for recording and registering interests in farmland and VFV land, and issuing Land Use Certificates to farmers who have received approval to use farmland from the Farmland Administration Body at the appropriate level.

The Farmland Administration Body (FAB) is a structure within the MoAI designated under the Farmland Law (2012). The FAB replaces the former Land Committee which had a similar mandate. The Minister of MoAI is the chairperson of the FAB. The Deputy Minister of MoAI is deputy chairperson and the Director General of Settlement and Land Record Department (SLRD) is the secretary. This structure is replicated at the State / Region level where the Chief of the State / Region is the chairperson of the Committee; and the head of SLRD at the State / Region level is the secretary. At both the district and township level the head of General Administrative Department is the chairperson and the head of SLRD will be the secretary. All other departments associated with land are part of FABs at different levels. The precise roles and responsibilities of FABs at various administrative levels of Government (Ward, Village Tract, Township, District, Region, and State) are not clearly defined. However duties of the FAB at the Central level are listed in Article 17 of the

Farmland Law. It is the responsibility of the FAB at the Central Level to delegate specific roles and responsibilities to lower-level FABs. FABs are responsible for:

- 1) Reviewing applications for the use of farmland;
- 2) Formally recognizing/approving rights to use farmland;
- 3) Submitting approved rights to use farmland to the SLRD for registration;
- 4) Conducting valuations of farmland for tax and acquisition compensation purposes;
- 5) Issuing warnings, imposing penalties or rescinding use rights if conditions for use of farmland are not met; and,
- 6) Resolve disputes that arise over the allocation and use of farmland use rights.

1.1.3. Other Line Ministries

REDD+ implementation will fall within the responsibility of MoECAF. The MoAI will be another key REDD+ institution playing a major role in land use planning and management. However, several other line Ministries have responsibilities that are relevant for the management of a REDD+ programme, as outlined in Table 1.3.

Table 1.3: Roles of Line Ministries in relation with REDD+ Readiness and implementation

Ministry	Current REDD+ related roles
MNPED (National Planning and Economic Development)	<ul style="list-style-type: none"> - Coordinates amongst ministries on development issues; - Responsible for meeting national economic development targets (e.g. poverty reduction targets); - Links national and local development plans and planning processes; - Promotes and manages Foreign Direct Investments.
MoFA (Foreign Affairs)	<ul style="list-style-type: none"> - Represents Myanmar at UNFCCC; - Coordinates with ASEAN.
MoHA (Home Affairs)/Attorney General	<ul style="list-style-type: none"> - Responsible for law enforcement; - Administration at state/region level.
MoF (Finance)	<ul style="list-style-type: none"> - Budget allocation, distribution and control; - Auditing national budget and ODA.
MoM (Mining)	<ul style="list-style-type: none"> - Management of mining companies (prospecting and extraction).
MoEP (Electric Power)	<ul style="list-style-type: none"> - Management of hydro-power development.
MoFL (Fisheries and Livestock)	<ul style="list-style-type: none"> - Management of fisheries resources within mangrove forest; - River management within forest areas; - Rural development and livelihoods improvement programmes in mangroves.
Mol (Industry)	<ul style="list-style-type: none"> - Established industrial plantations for the production of raw materials; - Oversees biofuel policy development and programme implementation.

1.1.4 The National Environmental Conservation Committee (NECC)

A National Commission for Environmental Affairs (NCEA) was established in 1990 to: i) advise the government on environmental policies; ii) act as a coordinating body for environmental affairs; and iii) promote environmentally sound sustainable development. The NCEA was reorganized into the National Environmental Conservation Committee (NECC) in April 2011 based on Notification No.21/2011, (20/04/2011) of the Office of the President. The NECC is considered responsible for guiding national activities to tackle climate change-related problems. Furthermore, the NECC manages and coordinates all climate change related activities in Myanmar, including the

development of climate change related policies and strategies and corresponding programmes of action (e.g. NAPA). The overarching responsibilities of the NECC are:

- 1) To take actions to prevent environmental damage and ensure environmental sustainability;
- 2) To supervise and oversee rehabilitation activities in relevant areas based on the magnitude and intensity of impacts caused by government projects and activities or commercial and private activities;
- 3) To participate in and promote actions towards international collaboration & cooperation relating to environmental conservation;
- 4) To approve activities on Urban Management Planning;
- 5) To facilitate and negotiate among government agencies and institutions to find solutions to environmental problems;
- 6) To organize Special Task Force(s) with ToRs to implement conservation activities effectively and efficiently, if necessary;
- 7) To take actions on task and duties given by Cabinet.

The NECC is allowed to undertake the following activities & actions to fulfil these responsibilities:

- 1) Conducting various types of awareness campaigns;
- 2) Coordinating with relevant departments to amend or add environmental conservation in the curriculum of the National Education System;
- 3) Receiving donations (funds and materials/equipment) from national and international sources and managing these for environmental protection & conservation;
- 4) Advocating and providing recommendations to government agencies and institutions;
- 5) Requesting proposals and comments from government agencies and institutions in order to promote environmental conservation;
- 6) Prohibiting activities of government agencies and institutions which do or could cause environmental damage and debriefing the President's Office to develop corresponding policies;
- 7) Prescribing National Environmental Policy and other environmental related policies with approval of the President;
- 8) Issuing Notifications, Orders and Instructions with approval of the President, if necessary.

The NECC is in a position to establish working committees at the Union Level and sub-committees at the State & Division levels. This includes the development of corresponding ToRs. The NECC submits reports to the Cabinet when appropriate. The composition of the NECC is as follows:

- 1) Chairman: Union Minister, MoECaF
- 2) Vice Chairman: Union Minister, President Office
- 3) Member: Deputy Minister, Ministry of Home Affairs (MoHA)
- 4) Member: Deputy Minister, Ministry of Foreign Affairs (MoFA)
- 5) Member: Deputy Minister, MoAI
- 6) Member: Deputy Minister, Ministry of Construction (MoC)
- 7) Member: Deputy Minister, Ministry of Transport (MoT)
- 8) Member: Deputy Minister, Ministry of Hotels and Tourism (MoHT)
- 9) Member: Deputy Minister, Ministry of Industry No.1 (MoI)
- 10) Member: Deputy Minister, Ministry of Industry No.2 (MoI)
- 11) Member: Deputy Minister, Ministry of Rail Transport (MoRT)
- 12) Member: Deputy Minister, Ministry of Energy (MoE)

- 13) Member: Deputy Minister, Ministry of Electrical Power No.1 (MoEP)
- 14) Member: Deputy Minister, Ministry of Electrical Power No.2 (MoEP)
- 15) Member: Deputy Minister, Ministry of Education (MoE)
- 16) Member: Deputy Minister, Ministry of Health (MoH)
- 17) Member: Director General, General Administrative Department, MoHA
- 18) Member: Director General, Department of Development Affairs, Ministry of National Planning and Economic Development (MNPED)
- 19) Member: Director General, Directorate of Water Resources & Improvement of River Systems, MoT
- 20) Secretary: Director General, Planning and Statistic Department, MoECAF
- 21) Joint Secretary: Director of President Office

1.1.5 The CDM Designated National Authority (DNA)

The Government of Myanmar signed the UNFCCC on 11 June 1992 and ratified the convention on 25 November 1994 and the Kyoto Protocol in 2003 as a non-Annex 1 party. The Clean Development Mechanism (CDM) Designated National Authority (DNA) was created in 2006 to develop CDM-related policy and to review and approve CDM project proposals. The DNA is chaired by the Union Minister of MoECAF and the vice-Chair is MoECAF's Deputy Minister. The 22 members are Director Generals or Deputy Director Generals of the 15 concerned Ministries including MoECAF, MoAI, MNPED, MoEP, MoI, MoEP, MoC, and MoM. Secretarial support is provided by MoECAF's Forest Department.

1.1.6 The Central Committee for the Management of Vacant, Fallow and Virgin Lands (CCVFL)

The Central Committee for the Management of Vacant, Fallow and Virgin Lands (CCVFL) is a national level multi-ministerial committee formed at the President's discretion, in accordance with Article 3 of the VFV Law. The Minister of Agriculture and Irrigation is appointed as Chairperson of the CCVFL; and the Director General of the SLRD acts as the Secretary of the CCVFL. The MoECAF is a member of the CCVFL.

The CCVFL oversees the granting and monitoring of use rights over VFV lands in the country for agriculture, mining and "allowable other purposes" under the law, in coordination with concerned Ministries and Regional or State Governments. VFV lands do not include the gazette Permanent Forest Estate (PFE) under the direct responsibility of MoECAF but does include forest lands which are not gazette or reserved and therefore not included in the PFE (see Section 3). The CCVFL is specifically responsible for:

- Receiving recommendations for the use of VFV land from various Ministries and Regional or State Governments;
- Receiving applications for the use of VFV land from public citizens, private sector investors, government entities and NGOs;
- Rejecting applications or Grant "Permission Orders" for the use of VFV lands;
- Rescinding or modify rights to use VFV land;
- Coordinating with MoECAF and other Ministries to prevent damage or destruction to forest lands and conserve natural regions, watershed areas and natural fisheries;
- Submitting semi-annual monitoring reports on the use of VFV to the Cabinet of the Union Government;
- Providing input on the formulation of National Land Policy;
- Fixing the rate of security fees to be deposited for use of VFV land;

- Fixing the annual land revenue rate and suitable period for tax exemption in connection with the use of VFV land;
- Organizing and delegate responsibilities to Task Forces and Special Groups for use of VFV land at the Regional and State level of Government;
- Helping those with rights to VFV land secure assistance upon request (technical assistance, inputs, loans etc.);
- Resolving disputes related to the use of VFV land in coordination with other government departments and agencies.

1.1.7 Cabinet Level and Parliamentary Committees /Commissions on Land

The Legislative and Executive branches of Government have recognized that there are issues relating to land classification, land tenure security and land conflict in the country. In response, one committee and one commission have been established.

1.1.7.1 Inter-ministerial National Committee on Land Scrutiny and Land Allocation

This cabinet level committee was established in July 2012 and is chaired by the MoECAf. The Committee's work focuses on issues related to national land-use policy, land-use planning and allocation of land for investment including in agricultural projects in the country. At State/Region, District, and Township levels, Land-use Advisory Committees are to be established, which will include civil society and private sector representatives, although in many locations these committees do not yet exist.

1.1.7.2 Land Confiscation Inquiry Commission

This parliamentary commission was established in July 2012 and will focus on issues relating to land confiscation in the country, specifically whether land confiscation has been carried out in compliance with existing law, if land acquired has been utilized for its intended purpose, and if adequate compensation was paid to those whose land was acquired. This commission could provide lessons learned or even a building block for a Grievance and Redress Mechanism to be established as part of the National REDD+ Social and Environmental Safeguards System (see Section 4.5).

1.2 Pre-existing multi-stakeholder coordination mechanisms and networks

1.2.1 The Environmental Thematic Working Group

The creation of the Environmental Thematic Working Group (ETWG) was facilitated by UNDP and established in May 2009. It comprises government departments, I/LNGOs, academic institutions, UN agencies, private companies, bilateral and multilateral aid and development agencies, embassies and media organizations. The ETWG members usually meet once per month with the assistance of UNDP. Some ETWG members are representatives from INGOs/NGOs networks, e.g. the Food Security Working Group which comprises of 53 local and international NGOs. The ETWG is a basic platform for information and knowledge sharing among members. The group is chaired and co-chaired by UNDP and FAO. This current coordination mechanism will remain the main sector coordination mechanism until a new and formal mechanism is established. The MoECAf's Forest Department will become the focal government agency for this new Thematic Working Group which will play a major coordination role in the sector.

1.2.2 The Food Security Working Group

The Food Security Working Group (FSWG) is a member-based network of non-governmental organizations, community based organizations and individuals addressing food security in Myanmar, directly engaging with members to build their knowledge and skills on food security and mobilization of the collective capacities of the network to identify and formulate issues for research, dialogue and policy advocacy that will benefit the lives of vulnerable communities in Myanmar. The FSWG has a dedicated "Land Core Group". The FSWG's strategic objectives are:

- To build the capacities of members to improve practices in food security programming;
- To develop the knowledge, evidence base and approaches of strategically important and emerging issues affecting food security in Myanmar;
- To promote dialogue, debate and policy advocacy between stakeholders concerned with food security in Myanmar; and
- To institutionally strengthen the internal governance, management and operational procedures of the FSWG.

1.2.3 The Myanmar Environment Rehabilitation-conservation Network (MERN)

The Myanmar Environment Rehabilitation-conservation Network (MERN) was established to promote networking among local environmental NGOs working on the rehabilitation and conservation of mangrove resources and other critical eco-systems which are important for the livelihoods, food security and resilience to natural disasters. The MERN has 16 member organizations and its main or immediate objectives are:

- To enhance environmental sustainability and biodiversity;
- To increase community adaptive capacity and resilience;
- To reduce poverty and mangrove dependency; and
- To promote environmental governance.

1.3 Pre-existing institutional framework for REDD+ Readiness

1.3.1 The informal Afforestation/Reforestation CDM and REDD+ Core Unit

The Forest Department created an informal CDM Core Unit in 2009 to support the forestry sector work of the CDM DNA. REDD+ programme development was added to the Core Unit's mandate. The Unit is now composed of 21 forestry experts covering a range of subjects such as silviculture, carbon accounting, growth and yield, forest inventory, extension, environmental conservation, Remote Sensing (RS), Geographic Information Systems (GIS), community forestry etc. Major tasks of the Core Unit include capacity building of staff within MoECAF and line ministries, awareness raising regarding the Afforestation/Reforestation CDM and REDD+ mechanisms, the development of project proposals, research and extension activities and support to REDD+ Readiness. Under the direct supervision of the FD, the Core Unit has focused on the mainstreaming of climate change mitigation into resource management activities and policies. The Core Unit contributed to strengthening institutional and implementation capacity through the organization of seminars, workshops and meetings. The Core Unit is not institutionalized and all members have their own tasks and responsibilities which do not include REDD+ related activities. Many of the Core Unit members are members of the three Roadmap Technical Working Groups (TWG).

1.3.2 The REDD+ Technical Working Groups

The REDD+ Readiness Roadmap development process was initiated during a national multi-stakeholder workshop organized in December 2012. One of the outcomes of this workshop was the creation of three multi-stakeholder Technical Working Groups (TWG) each responsible for the development of key sections of the REDD+ Readiness Roadmap. The Stakeholder Consultation and Safeguards TWG was also tasked with the design of the national Roadmap consultation and validation process. During the December 2012 workshop draft TWG ToRs were endorsed, TWG composition was confirmed and corresponding work plans were developed. The three TWGs created at the time were the:

1.3.2.1 Drivers and Strategies Development TWG

Objective: To identify and quantify the key drivers of deforestation and forest degradation in Myanmar and their underlying causes; and to identify potential strategies to address them.

Drivers and Strategies TWG Members
Planning and Statistics Division, Forest Department, MoECAF
Settlement and Land Record Department, MoAI
Union Attorney General Office
Environmental Conservation Department, MoECAF
Rural Development Department, MNPED
Myanmar Timber Enterprise, MoECAF
Planning Department, MNPED
Planning and Statistics Department, MNPED
General Administration Department, MoHA
Department of Meteorology and Hydrology
Forest Research Institute, MoECAF
Myanmar Environment Rehabilitation-conservation Network (MERN)
EcoDev
SPECTRUM
UNDP

1.3.2.2 National Forest Monitoring System (NFMS) and Forest Reference Emission Levels/Reference Levels (RELS/RLs) TWG

Objectives: 1) To assess baseline national technical capacities and institutional arrangements related to the forest monitoring and measurement, reporting and verification (M&MRV) functions of the national forest monitoring system (NFMS) for REDD+ activities; and 2) to identify potential strategies for the development of Myanmar's forest RELS/RLs.

National Forest Monitoring System and Forest RELS/RLs TWG Members
Forest Research Institute (x3), MoECAF
Forest Department (x7), MoECAF
Dry Zone Greening Department, MoECAF
WCS
Royal Tree Service (Private Sector)

1.3.2.3 Stakeholder Consultation and Safeguards TWG

Objectives: 1) To establish a process for stakeholder engagement during the development of the Roadmap, and to set out a broad strategy for further stakeholder engagement during the preparation of a comprehensive national REDD+ strategy, 2) to identify current measures in respect to the Cancun safeguards applying to forest management in Myanmar, and propose measures to strengthen those safeguards.

Stakeholder Consultation and Safeguards TWG Members
Forest Department (x4), MoECAF
Forest Research Institute, MoECAF
SPECTRUM
WCS
FREDA
Dry Zone Greening Department, MoECAF
RECOFTC
Private Sector

1.3.3 The informal REDD+ multi-stakeholder network

An informal REDD+ multi-stakeholder network was established as part of the initial REDD+ awareness-raising and consultation activities conducted in 2010-12. The current network consists of a mailing list of interested individuals, primarily from government and civil society organizations. This mailing list has so far been used to disseminate REDD+ related information, to establish lists of invitees for REDD+ related workshops and events (including the national Roadmap Consultation workshops) and to establish the membership of the different Roadmap TWGs. The network includes members of other existing environmental networks (see Section 1.2).

1.4 Potential Partners in REDD+ Roadmap

There are a number of REDD+ initiatives and complementary baseline projects/programmes underway. On-going projects will enable Myanmar to move forward swiftly and effectively with implementation of the REDD+ Readiness Roadmap. Many of the stakeholders involved in these projects or initiatives have contributed to the development of the Roadmap, as member of the TWGs or during the National Consultation Process.

1.4.1 Existing and pipeline REDD+ Projects

REDD+ Roadmap implementation will benefit immensely from the work that has been or will be initiated by different REDD+ projects:

1.4.1.1 International Tropical Timber Organization (ITTO)

Project Title: Capacity building for developing REDD+ activities in the context of sustainable forest management

Implementing Agency: REDD+ Core Unit, Planning and Statistics Division and Forest Research Institute, FD, MoECAF

Duration: 2012-15. 3 years (budget: 571,890USD)

Location: Toungoo District, Bago/Yoma Region

Project Objective: To strengthen individual and institutional capacities to implement REDD+ in Myanmar

Main activities:

- Prepare REDD+ national strategies;
- Strengthen institutional setting for capacity building on REDD+;
- Build capacity to conduct MRV of carbon stocks;
- Capacity development and awareness raising;
- Pilot REDD+ activities in Toungoo District.

1.4.1.2 Korea Forest Service (KFS)

Project Title: Mitigation of climate change impacts through restoration of degraded forests and REDD+ activities in Bago Yoma Region, Myanmar

Implementing Agency: REDD+ Core Unit, Planning and Statistics Division and Forest Research Institute, FD, MoECAF

Duration: November 2011 until November 2012 and March 2013 until February 2014 (budget: 2x 100,000USD)

Location: Bago Division, Toungoo District, Yedashe Township, Yoma Unclassified Forest

Project Objectives:

- To initiate pilot activities for restoration of degraded forests and conservation of eco-systems for mitigating climate change impacts and supporting sustainable forest management;
- To measure baseline carbon stocks and set reference scenario of carbon emissions through a reliable MRV system focusing on REDD+ readiness; and
- To strengthen capacity and enhance awareness of FD staff and relevant stakeholders in REDD+ readiness and eco-systems conservation.

Main activities:

- Awareness raising about REDD+, climate change and forests;
- Capacity building and development of MoECAF and relevant stakeholders;
- Rural development activities as an initial step of formulating a performance based benefit distribution system;
- Demonstration of enhancing forest carbon stock with people's participation (establishing community woodlots, arboretum, forest conservation);
- Measuring, reporting and verification (MRV) and carbon measurement according to IPCC guidelines;
- Forest Inventory and forest cover change assessment (ground check, RS/GIS);
- Research on major drivers of deforestation and forest degradation (at district level).

1.4.1.3 Asia Air Survey Co. Ltd. (Japan)

Project Title: Study on the strengthening methodological and technological approaches for reducing deforestation and forest degradation within the REDD implementation framework: application in Myanmar

Implementing Agency: REDD+ Core Unit, Planning and Statistics Division and Forest Research Institute, FD, MOECAF

Duration: 2012-2013 (12 months) and 2013-2014 (12 months)

Location:

Project Objectives:

- To strengthen RS/GIS capacity of FD staff in order to support the REDD+ readiness process;
- To demonstrate the preparation of carbon mapping in selected areas;

- To share and exchange knowledge and experiences regarding REDD+ readiness activities.

Main activities:

- Organise RS/GIS training in Myanmar (20 participants) and in Japan (3 participants);
- Organise REDD+ workshop in Myanmar;
- Conducting surveys (socio-economic, forest cover and community forestry activities) in Nyang Shwe and Kalaw Townships;
- Developing carbon mapping of some selected areas (e.g. Community forests and some areas of Nyaung Shwe Township).

1.4.1.4 UNDP Democratic Governance Thematic Trust Fund (DGTTF)

Project Title: DGTTF project

Implementing Agency: UNDP in partnership with FD and National and International NGOs

Duration: January 2013-December 2014 (budget; 300,000USD)

Location: Kachin State

Project Objectives: Increased youth participation in REDD+ and enhanced Narga ethnic minority youth rights and measure to reduce the risk of corruption

Main activities:

- Strengthen networking of Civil Society (CSOs) with enhanced roles for youth, advocating for a rights-based approach for REDD+;
- Enhance awareness of Narga ethnic minority youth on climate change, REDD+, the UNDRIP, and implications for rights-based development and anti-corruption;
- Train youth representatives on anti-corruption measures, and approaches to promote transparency and equity in benefit distribution.

1.4.1.5 Regional Community Forestry Training Center (RECOFTC), NORAD

Project Title: Grassroots Capacity Building for REDD+

Implementing Agency: RECOFTC in partnership with local NGOs, CSOs, Govt. Agencies.

Duration: 2013-2015

Location: To be determined

Project Objectives: Grassroots stakeholders in Asia are enabled to actively contribute to the REDD+ planning and policy process by effectively participating and communicating their perspective to policy makers and are well positioned to take advantage of potential benefits from REDD+ for local socio-economic development.

Main activities:

- Conducting a CBNA for grassroots level stakeholders;
- Develop a set of training packages;
- Deliver training programs for project implementing partners, and national and sub-national level facilitators, and other key stakeholders on how to effectively raise grassroots stakeholder awareness and knowledge on climate change;
- Implement training and capacity building programs for grassroots stakeholders.

1.4.1.6 FAO-GEF

Project Title: Sustainable cropland and forest management in priority agro-ecosystems of Myanmar

Implementing Agency: FAO in partnership with MoAI and MoECAF

Duration: To be defined during project formulation

Location: To be defined during project formulation

Project Objectives: To build the capacity of farming and forestry stakeholders to mitigate climate change and improve land condition by adopting climate smart agriculture and sustainable forest management policies and practices.

Main activities:

- Develop and strengthen enabling institutional, policy and regulatory framework for SFM through: 1) Modifications of forest regulations, policies and standards for SFM, 2) piloting of district and township level Land Use Advisory Committees regulations for land-use planning, 3) updating national forestry master plan with SFM/REDD+ and community forestry, and 4) training in SFM at national, state, and district levels (FD staff, forest user groups, farmers and local government);
- Demonstrate models for sustainable forest management and enhancing carbon storage in priority agro ecosystems through: 1) the revision of pilot District Forest Management Plans and elaboration of guidelines for improved District level forest management planning, 2) reduced forest degradation and increased carbon sequestration through strengthening of CF used groups;
- Scaled-up sustainable and Participatory Forest Management (PFM) systems integrating SFM practice, resulting in improved land condition and carbon sequestration.

1.4.1.7 IUCN-Smithsonian Institute-NORAD

Project Title: Mapping Forest Cover Change in Myanmar 2000-2013: a National Baseline for Forest Management and REDD+ Development

Implementing Agency: IUCN in partnership with FD, MERN and the Smithsonian Institute

Duration: 2013-2015 (budget 250,000USD)

Location: Country wide

Project Objectives: To (1) develop a countrywide forest cover change database for Myanmar from 2000-2013 using standardized remote sensing and change detection methods, and (2) build national capacity for using satellite-based forest monitoring to support REDD+ development and expand civil society participation in forest management.

Main activities:

- Data collection and pre-processing
- Image analysis and interpretation
- Capacity building and outreach.

1.4.1.8 World Markets AG and Simplon Services GmbH

The government of Myanmar invited Simplon Services GmbH to evaluate the opportunity to undertake a REDD+ project in the country. Following a period of research and negotiations 180,000 hectares of prime forest were allocated to the project. World Markets AG and Simplon Services GmbH are currently finalizing details in their negotiation of the project.

1.4.2 Other baseline projects relevant to REDD+

Coordination and collaboration with current forestry programmes described under Section 3.4.2 and covering Community Forestry development, biodiversity conservation, community afforestation or

woodlot establishment, agroforestry development, stabilization and improvement of shifting cultivation, agricultural productivity enhancement and energy, will enable the mainstreaming of REDD+ approaches and pilots into the existing development baseline. REDD+ implementation will benefit from long term experiences and leveraging existing investments.

Developing synergies with programmes working on the improved management of private investments in the agricultural, mining and hydro-power sectors, will also be essential as these sectors represent major drivers of deforestation (see Section 3.4). Close coordination between Roadmap implementation and the development of the Second National Communication to the UNFCCC will also be essential (see Section 6).

1.5 Gaps and weaknesses in the existing REDD+ Management Structure

The REDD+ Readiness Roadmap development process was led by the FD's Planning and Statistics Division and the multi-stakeholder TWGs which include most members of the A/R CDM and REDD+ Core Unit. The existing REDD+ multi-stakeholder network, established in 2010-11, has been enlarged through the in-depth REDD+ stakeholder analysis undertaken by the Stakeholder and Safeguards TWG during the Roadmap development phase. This has allowed a much wider participation in the different national and regional consultation workshops organized to review and validate the REDD+ Roadmap.

These arrangements were adequate to develop the REDD+ Readiness Roadmap Development but the REDD+ management structure will need to be strengthened and completed to effectively implement the Readiness Roadmap and to eventually implement a national REDD+ programme which will be different from the usual donor programme or project. There will be multiple sources of funding (projects, compliance and voluntary markets), multiple activities at the central level and throughout the country (research, assessments, pilot field activities, training, consultations, awareness raising, etc.) promoted by multiple stakeholders. This will require a strong and broadened institutional arrangement, stronger administrative capacity, timely decision-making processes and mechanisms which allow stakeholders to provide inputs into policy development and decision making. The REDD+ Roadmap must address the following shortcomings in the existing institutional architecture in order to effectively proceed with a REDD+ Readiness process:

1.5.1 Limited cross-ministerial representation and supervision

Despite the active participation of representatives of several key line ministries other than MoECAF in different TWGs, other ministries are currently not involved in decision making regarding REDD+. The informal A/R CDM and REDD+ Core Unit led by the Planning and Statistics Division of MoECAF's FD is exclusively composed of forestry staff and is currently the main decision making structure. This situation does not adequately reflect the different roles and responsibilities the various ministries will have in REDD+ readiness and implementation and the consequent need for cross-ministerial guidance and supervision of the programme. The formal participation of other key ministries (see Section 1.1.3) should be secured, as their active and formal involvement will become necessary during the REDD+ Readiness phase and beyond.

1.5.2 Insufficient multi-stakeholder representation

Representation from the private sector and the civil society stakeholder groups should also be improved. The MTE, despite being part of MoECAF, is seen as a private sector stakeholder and is currently represented in both the A/R CDM and REDD+ Core Unit and existing TWGs. Nevertheless, more private sector representation (from the agriculture, forest plantation, bio-energy, mining and hydro-power sectors, etc.) at relevant levels of the REDD+ Management Structure is required. There

is representation of national civil society at TWG and the larger REDD+ Stakeholder network levels but membership is currently dominated by national environmental NGOs. There is a need to expand this representation to other civil society organisations representing women and ethnic groups and representing specific regions of the country. There is no civil society representation in the present A/R CDM and REDD+ Core Unit.

1.5.3 Human resources, time and financial constraints

The implementation of REDD+ has been recommended since 2010 but a number of staffing, technical support, time and financial constraints had so far delayed the developed of a Readiness Roadmap. An International Roadmap Coordinator and a National Facilitator were recruited to support the development of a Roadmap and further technical backstopping was provided by the regional UN-REDD Programme Advisors and RECOFTC. Additional financial resources were made available to convene the TWGs and to conduct the National Roadmap Consultation Process. With the start of the implementation of the Roadmap and considering the multiple tasks and duties already assigned to the members of the present and future REDD+ decision making structures, continued technical and managerial support will be required. Substantial financial resources will also be needed to finance the proposed readiness activities and pilots. In addition to this catalytic support, MoECAAF will need to assign staff dedicated to Roadmap implementation.

1.6 Proposal for Management of Readiness

A REDD+ Readiness Institutional Structure (Fig. 1.2) was developed and reviewed during the National Consultation Process. The structure below was finally endorsed during the National Roadmap Validation Workshop held in June 2013. It addresses the weaknesses of the present REDD+ management structure identified in Section 1.5. Institutional reviews planned under Section 4 will allow this structure to improve or evolve if and when needed.

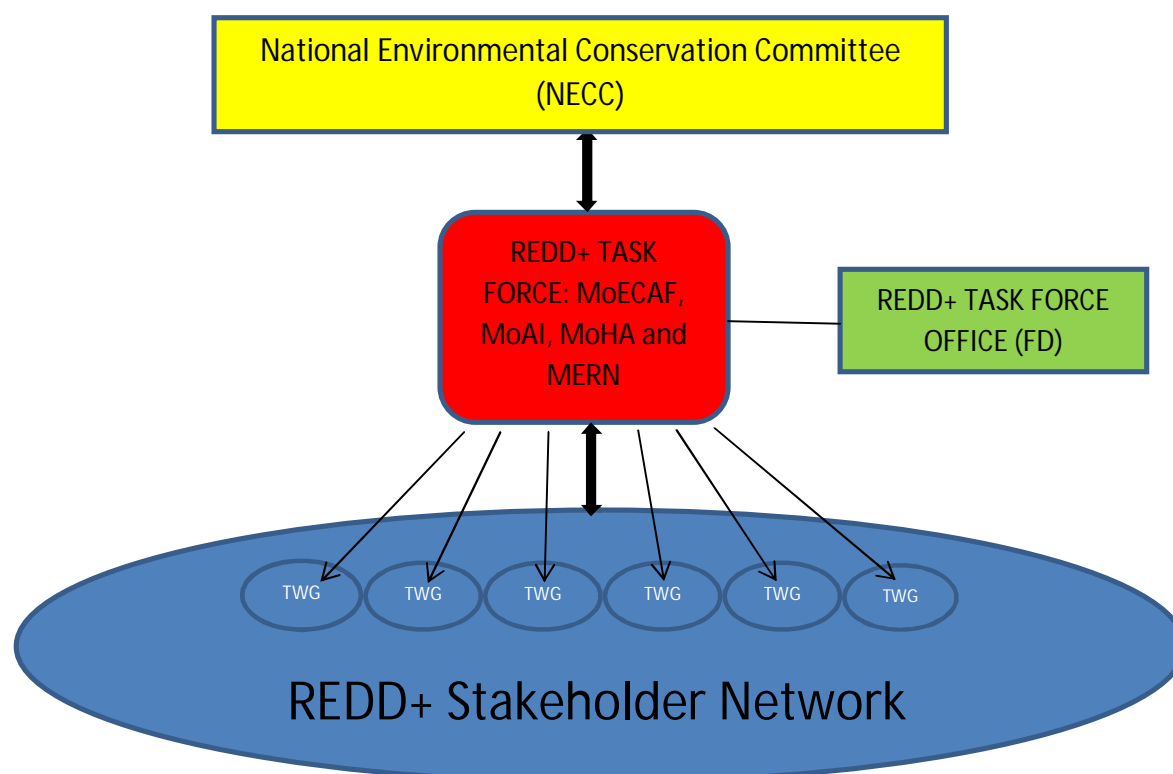


Figure 1.2: REDD+ Institutional or Management Structure:

1.6.1 The National Environmental Conservation Committee (NECC)

The effective supervision of the REDD+ programme requires cross-sector coordination and political guidance from an appropriate inter-ministerial structure. The NECC, chaired by the MoECAf, is the existing central level committee responsible for guiding national activities to address climate change-related problems. Furthermore, the NECC manages and coordinates all climate change related activities in Myanmar, including the development of climate change related policies and strategies and corresponding programmes of action (NAPA). The NECC also has the political mandate to liaise with the UNFCCC. The composition and ToR of the NECC is provided in Section 1.1.4. The NECC will act as a Programme Advisory Board and will:

- Review and endorse the REDD+ Readiness annual work plans and progress reports;
- Review and endorse proposed changes, harmonization or development of institutional, financial and policy/legal frameworks for REDD+ implementation;
- Review and endorse the assessment of REDD+ strategies (activity packages and policies and measures);
- Review and endorse other REDD+ Readiness milestone developments (e.g. development of a safeguards system, establishment of a grievance mechanism, FPIC guidelines, REL/RL, etc.) which went through national consultations (see Section 2.5);
- Facilitate the coordinated implementation of REDD+ Readiness activities by all concerned line ministries;
- Report on status of REDD+ Readiness to the President Office and UNFCCC.

1.6.2 The REDD+ Task Force (TF)

A REDD+ Task Force (TF) will be officially created by the NECC, immediately after the approval of the Roadmap. It will be placed under the overall inter-ministerial guidance of the NECC and the immediate supervision of MoECAf. The REDD+ TF will include Director General-level representation from MoECAf, MoAI and MOHA and a representative of MERN. The TF will be chaired by MoECAf. The limited number of members will allow the TF to remain fully functional. TF meetings will be open to all members of the TWGs to enable a wider stakeholder group to directly contribute to TF decisions and tasks. The TF will also be able to permanently or temporarily expand its membership to include representatives of other line ministries and networks, based on a unanimous decision among TF members. The REDD+ TF will initially meet monthly and later at least quarterly. The TF will undertake the following tasks:

- Supervise the implementation of all REDD+ Readiness activities including the development and monitoring of consolidated work plans and corresponding reporting by the TWGs, the REDD+ TF Office and whoever is involved in Roadmap implementation;
- Coordinate and monitor all REDD+ relevant initiatives in the country to ensure new initiatives or projects are “nested” into the implementation of the REDD+ Readiness phase and contribute to the development of national REDD+ systems and approaches;
- Consolidate and/or validate technical reviews and proposals generated by TWGs, the REDD+ TF Office, REDD+ projects or the National REDD+ Network and submit them to the NECC for further review and endorsement if required;
- Provide guidance on overall capacity building and adherence to safeguards under REDD+;
- Advise on issues brought to the attention of the TF by key stakeholders through TWGs, consultations and other channels;
- Ensure that community-level concerns are heard and acted upon, that FPIC principles are applied and that community partners are given due recognition in benefit sharing;

- Facilitate NECC meetings by preparing meeting agendas, presenting summaries of work plans, progress reports and technical reports and by summarizing policy level recommendations as required;
- Monitor the implementation of NECC recommendations and decisions by line ministries and report back to NECC for further action when needed;
- Advise the NECC and MoECAf on resource mobilization for REDD+ Readiness implementation and piloting of selected REDD+ strategies, if needed;
- Inform the NECC about the latest international agreements and developments related to REDD+ implementation and recommend possible feedback to the UNFCCC through the NECC.

If needed, the TF will develop more detailed ToR based on the indicative tasks mentioned above. These detailed ToR will be submitted by e-mail to all members of the National REDD+ Network for comments.

1.6.3 Technical Working Groups

The REDD+ TF will be supported and advised by a number of Technical Working Groups (TWG). Six TWGs were identified by stakeholders during the REDD+ Roadmap consultation process. Three TWGs already exist and were created to support the development of the Roadmap. Nevertheless, their ToRs will have to be adapted to reflect the change from Roadmap development to implementation. Participation in new TWGs will be open to all members of the National REDD+ network but the REDD+ TF will ensure that the number of TWG members remains practical, participants are able to contribute meaningfully and that relevant representatives from government, civil society and private sector are included in each TWG. The six TWGs will have the following tasks:

1. The existing Drivers and Strategy Development TWG (see work plan Section 3):
 - To provide technical oversight and to guide the different steps required for the assessment of REDD+ strategies;
 - To guide the piloting of candidate REDD+ strategies;
 - To advise the TF on the integration of REDD+ strategy into existing forestry and development programmes;
 - To review technical reports and advise the REDD+ TF on issues related to strategy development and implementation;
 - To facilitate stakeholder consultations related to the assessment of REDD+ strategies;
 - To contribute to annual Readiness work plan development, budgeting and reporting;
 - To assist with the development of ToRs or concept notes for studies and assessments and the recruitment of qualified consultants or institutions.
2. The existing Stakeholder Engagement and Safeguards TWG (see work plan Sections 2 and 4)
 - To conduct the annual stakeholder review to strengthen the membership of the National REDD+ Stakeholder Network (see Section 1.6.5);
 - To develop Stakeholder Consultation guidelines, FPIC guidelines and Communication guidelines;
 - To guide institutional reviews and associated capacity building needs assessments;
 - To guide stakeholder consultation activities;
 - To pilot FPIC guidelines;
 - To oversee training and awareness-raising activities;
 - To guide the development of a safeguards system and grievance mechanism;

- To advise the National REDD+ Stakeholder Network, TWGs and REDD+ TF on issues related to stakeholder consultation and safeguards system and grievance mechanism development;
 - To contribute to annual Readiness work plan development, budgeting and reporting;
 - To assist with the development of ToRs or concept notes for studies and assessments and the recruitment of qualified consultants or institutions.
3. The existing National Forest Monitoring System (NFMS) and REL/RL TWG (see Sections 5 and 6)
 - To establish national REL/RL based on a review of historical Land use data and national circumstances;
 - To test REL/RL and select demonstration sites;
 - To develop a NFMS;
 - To facilitate consultations on REL/RL and NFMS;
 - To advise the National REDD+ Stakeholder Network, TWGs and REDD+ TF on issues related to NFMS and REL/RL;
 - To contribute to annual Readiness work plan development, budgeting and reporting;
 - To assist with the development of ToRs or concept notes for studies and assessments and the recruitment of qualified consultants or institutions.
 4. The new REDD+ Project TWG will assist with the selection, development, monitoring and evaluation of REDD+ pilot projects (including private sector), to ensure that projects are undertaken in a way that allows them to be nested into or contribute to the national REDD+ systems.
 5. The new Finance and Benefit-sharing TWG will guide the development of the REDD+ financial framework and revenue distribution system in Myanmar and guidelines for local benefit-sharing arrangements. Specific tasks of the TWG will include (see Section 4):
 - To review the existing financial mechanisms relevant to REDD+;
 - To guide the development of financial management and benefit sharing mechanisms;
 - To facilitate consultations related to the development of financial management and benefit sharing mechanisms;
 - To pilot financial mechanisms and to provide the necessary advice to the REDD+ TF;
 - To contribute to annual Readiness work plan development, budgeting and reporting;
 - To assist with the development of ToRs or concept notes for studies and assessments and the recruitment of qualified consultants or institutions.
 6. The new Legal TWG will review the existing legal framework and will be responsible for the development of new legal instruments to facilitate the implementation of the REDD+ programme. Specific tasks of the TWG will include (see Section 4):
 - To guide the legal review contributing to the assessment of REDD+ strategies and the development of the REDD+ legal framework (see Sections 3 and 4);
 - To draft proposed amendments to the existing legal framework or to develop new legal instruments and to provide corresponding recommendations;
 - To facilitate consultations regarding REDD+ legal framework development;
 - To assist with the development of a national REDD+ safeguards system and grievance mechanism;
 - To contribute to annual Readiness work plan development, budgeting and reporting;

- To assist with the development of ToRs or concept notes for studies and assessments and the recruitment of qualified consultants or institutions.

If needed, the REDD+ TF will develop more detailed ToR for each TWG based on the indicative tasks mentioned above. These detailed ToR will be submitted by e-mail to all members of the National REDD+ Stakeholder Network for comments before they are consolidated and finalised. The TF will propose nominations from government institutions for each of the new TWGs. The non-government and private sector members of the new TWGs will be identified as the result of an open invitation and self-selection process. The TWGs will be accountable to the REDD+ TF and will receive technical, financial and logistical support from the REDD+ Task Force Office. TWG group meetings will meet in Nay Pyi Taw, initially monthly. The frequency of their meetings will later be adapted based on respective work plans. When possible, TWG meetings will happen simultaneously to facilitate synergies and exchanges between the groups but also to facilitate the logistics related to the participation of members coming from Yangon. As indicated in the REDD+ Management Structure diagram above, members of the multi-stakeholder TWGs are also members of the National REDD+ Stakeholder Network. Their participation in the TF meetings will ensure an effective link between the REDD+ TF and wider Stakeholder Network. The TF will be able to create new TWGs (permanent or ad-hoc) or to merge existing TWGs based on new requirements and work load. TWGs will be able to invite additional members (permanent or temporary) as necessary based on a unanimous decision taken during a TWG meeting.

1.6.4 The REDD+ Task Force Office

A REDD+ Task Force Office will be created within in Planning and Statistics Division of FD and will be added to the official organogram of the FD. The general mandate of the new Office will be to provide the necessary secretarial, managerial, operational and technical support to the TF. It will also provide assistance to TWGs and the National REDD+ Stakeholder Network. The specific tasks of the TF Office will be:

- To submit a draft agenda for TF meetings for review and endorsement by the TF;
- To submit all documents (e.g. agenda, minutes of previous meetings, proceedings of recent workshops, technical reports, etc.) to TF and TWG members at least 2 weeks prior TF meetings;
- To submit the agenda of the TF meeting to National REDD+ Stakeholder Network members for comments at least 2 weeks prior TF meetings, summarise/present network comments at TF meeting and minute the responses;
- To organize (including the provision of logistical support to members of TF and TWG who are not based in Nay Pyi Taw) and document (draft minutes) of TF meetings;
- To develop, populate, update and maintain the web based Information Management System (see Section 4.2.3);
- To draft concept notes (together with relevant TWG) for all consultation activities and to facilitate the organization of events;
- To facilitate the development of annual work plans by the TF, TWGs and the National REDD+ Stakeholder Network and consolidate into an annual Readiness work plan and budget;
- To develop and implement monitoring and evaluation mechanisms for financial, administrative, and operational activities and ensure timely submission of progress and financial reports by consolidating relevant inputs;
- To assist with the development of training and communication materials and the organization of training and communication events or activities;
- To assist with the procurement of equipment and services including the drafting of ToRs and recruitment of national and international consultants;

- To develop agreements with implementing agencies and ensure their execution to the expected standards in a timely manner;
- To maintain database of REDD+ related support programmes and pilot projects and to facilitate coordination and information exchange;
- To facilitate the establishment of sub-national REDD+ Offices based on the location of Roadmap pilot activities, REDD+ programmes and pilot projects.

The staffing of the REDD+ Task Force Office will be composed of government and external staff. External staff support will address the extra workload linked to Roadmap implementation and the inclusion of dedicated government staff will ensure effective knowledge transfer and long term sustainability of the Office. Detailed ToRs for each of REDD+ TF Office staff will be developed by MoECAf with support of the UN-REDD programme. Staff members of the National REDD+ Programme Unit should include the following staff:

- Office Manager (government)
- International Senior Technical Advisor (external)
- National Assistant Office Manager (external)
- International National Forest Monitoring System Specialist (external)
- National Staff Officer Remote Sensing/Forest Inventory (government)
- National Communications Officer (external)
- 2 National Staff Officer Training and Planning (government)
- National Administration Officer (external)
- 2 Secretaries (1 external and 1 government)
- 2 Drivers (1 external and 1 government)

1.6.5 The National REDD+ Stakeholder Network

The National REDD+ Stakeholder Network will serve as the principle multi-stakeholder outreach, communication and consultation platform for REDD+ readiness in the country. It will be a major channel for dissemination of information, decisions, reports, meeting minutes, workshop proceedings, etc. The network will be consulted in different ways (see Section 2.5) based on the subject.

Initial membership will be based on the list of participants who contributed to the national and regional level Readiness Roadmap Consultation Workshops held in May and June 2013. Participants will be requested to confirm their interest in participating in the Network. There will be no restriction to new membership which will be the result of an open invitation and self-selection process, ensuring that all major stakeholder groups are represented, and that these individuals can accurately and faithfully represent the views and interests of their respective constituents. The Network will be open to representatives from the private sector, civil society, media, government organizations, community-based organizations, local and international NGOs, donors, academia, research organizations, and all stakeholders interested in the climate change and the REDD+ process. The Stakeholder Participation and safeguards TWG will undertake annual stakeholder mapping to identify additional key stakeholders (especially in under-represented stakeholder groups) and will encourage their involvement in network activities. The Network will enhance multi-stakeholder ownership of the REDD+ Readiness process and act as the main guarantor of compliance with social and environmental safeguards.

1.7 Indicative work plan and budget

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 1: Management of REDD+ Readiness				
Output 1.1 National REDD+ Readiness Management Structure established	UNDP, FAO, UNEP	NECC, REDD+ TF and SP&S-TWG	<ul style="list-style-type: none"> • Create REDD+ TF (by NECC); • Review of REDD+ TF ToR (if needed); • Review of TWG ToRs (if needed); • Create 3 new TWGs (project, legal and financial); • Develop ToR for government and external staff of the REDD+TF Office; • Create REDD+ Task Force Office: creation of administrative unit within FD with mandate and staff. Creation reflected in MoECAF decision; • Confirm initial membership of National REDD+ Stakeholder Network. 	100,000
Output 1.2 REDD+ TF Office in place and functional	UNDP and FAO (note: for FAO related components, TF Office budgets are reflected under Sections 5 and 6)	REDD+ TF and REDD+ TF Office	<ul style="list-style-type: none"> • Recruitment of TF Office staff; • Procurement of equipment and vehicles; • Provision of secretarial, managerial, operational and technical support (staff, administrative and travel costs) to the REDD+ TF, TWGs and National REDD+ Stakeholder Network. 	4,420,000
Output 1.3 REDD+ TF and TWGs supported	UNDP, FAO, UNEP (note does not include consultation workshops covered in other sections)	REDD+ TF Office	<ul style="list-style-type: none"> • REDD+ TF meetings and logistical support including travel • TWG meetings and logistical support including travel 	1,300,000
TOTAL				5,820,000

SECTION 2: STAKEHOLDER CONSULTATION AND PARTICIPATION

Rationale: *How stakeholders – government agencies, local people, and civil society – will be consulted and involved throughout implementation of the Roadmap. Engaging all stakeholders transparently and effectively is essential for the national REDD+ programme to achieve broad support.*

Key parts:

- *Background to stakeholder consultation in the forest sector;*
- *REDD+ stakeholder consultation process to date;*
- *General stakeholder mapping and analysis plus mapping of stakeholders representing or working with women and ethnic minorities;*
- *Framework for stakeholder engagement and consultation;*
- *Stakeholder consultation mechanisms or levels;*
- *Consultation and participation and of women and ethnic minorities;*
- *Compliance with FPIC;*
- *Indicative work plan and budget.*

2.1 Background to stakeholder consultation in the forest sector

The work of the multi-sector National Environmental Conservation Committee and the development of cross-ministry plans such as the National Adaptation Plan of Action (NAPA) for Climate Change or the National Biodiversity Strategy and Action Plan (NBSAP), provided lessons learnt and working models for the development of the REDD+ Readiness Roadmap. The Environment Thematic Working Group (ETWG) provided an important model of a multi-stakeholder coordination and consultation mechanism where government, CSOs and Development Partners contribute to planning and policy development. The creation of Technical Working Groups (see Section 2.2) for the development of the REDD+ Readiness Roadmap drew from these previous multi-sector planning experiences and the composition of these groups was based on the multi-stakeholder membership of the ETWG. Multi-stakeholder consultation for national level policy processes is not common practice in Myanmar and the REDD+ Readiness Roadmap Development thus represents an example for policy and strategy development in the forestry sector. This major change reflects MoECAF's understanding of REDD+ implementation principles in terms of multi-stakeholder participation.

The MoECAF has demonstrated a willingness to recognize the rights of ethnic minority groups and local communities, for instance, by acknowledging their rights to Free, Prior and Informed Consent (FPIC) or by engaging in community forestry development. Though CSOs have until recently been fewer in number than in other countries, the civil society sector is expanding rapidly. Many CSOs are already represented at national, state/regional and district/township levels and tend to have some degree of engagement with government. There is a need to build upon or go beyond the strong informal communication and networking between MoECAF staff and key or specialised national and international NGOs. Recognising the value of CSOs – not only the ones working in the forestry or conservation sectors but also those representing or working with ethnic minority, religious and women's groups and farmers' associations - and engaging with them at all levels will be essential for successful REDD+ readiness and implementation processes.

Knowledge institutions in Myanmar, despite having operated in relative isolation with limited resources for a number of years, have substantial technical capacities and high calibre human resources at their disposal. For MoECAF to engage and seek consensus among other ministries, knowledge institutions, CSOs but also the private sector, will be essential in the REDD+ readiness process.

2.2 REDD+ Stakeholder consultation process to date

Myanmar joined the UN-REDD Programme in December 2011. Since mid-2010, despite not being a UN-REDD Partner Country, the UN-REDD Programme sought to support Myanmar, for example, by involving representatives in regional meetings on various topics, by sharing information on REDD+, and providing resource people for national REDD+ meetings. National and regional workshops have convened organizations interested in supporting REDD+ readiness in Myanmar in keeping with a common vision and collaborative approach.

With the active participation of civil society, line departments and UN agencies, two national level workshops (REDD+ national level workshop in April 2010 and climate change adaptation and disaster risk reduction national level workshop in December 2010) were organized and attended by over 50 people. The participants were from the MoECAF, MoAI, MNPED, MoLF, the Department of Meteorology and Hydrology, Ministry of Transport (MoT), Ministry of Social Welfare (MoSW), Ministry of Health (MoH), Ministry of Science and Technology (MoST), FAO, UN-Habitat, UNDP, and L/INGOs including FREDIA, BANCA, REAM, SPECTRUM, World Vision and the Food Security Working Group. In addition, the Forest Department and Korea Forest Service (KFS) jointly organized a Regional Level Workshops on REDD+ in May 2011 in Nay Pyi Taw. About 80 participants from ASEAN Member States, UN-REDD Programme, representatives from line ministries, and local NGOs or civil society members attended.

Mindful of the continued constraints on donor support, the need for a carefully planned and collaborative approach involving all relevant partners is especially important in Myanmar. An initial UN-REDD scoping mission (July 9th-13th, 2012) yielded recommendations on the process to be followed in preparing a Roadmap and funding proposal. One recommendation was that, based on previous experiences, three Technical Working Groups (TWG) be formed, consisting of selected individuals from different sectors and representing different stakeholder groups. These three TWGs are as follows: 1) Drivers and Strategies, 2) National Forest Monitoring System and forest Reference Emission Levels (RELs)/Reference Levels (RLs), and 3) Stakeholder Consultation and Safeguards. A national workshop marking the start of the REDD+ Readiness Roadmap development process was held in December 2012. The objectives of this workshop were to raise awareness about REDD+, to review and approve the proposed TWG ToRs, to agree on the composition of the groups and to elaborate a work plan for the development of the REDD+ Readiness Roadmap. Section 2 of the Roadmap is based upon the work of the Stakeholder Consultation and Safeguards TWG. The main tasks of this TWG were:

- 1) To undertake an in-depth stakeholder mapping exercise and to establish an inclusive national consultation and validation process as the final step of the REDD+ Roadmap development process;
- 2) To propose a broad strategy for further stakeholder engagement during the Readiness phase;
- 3) To identify current measures in respect to the Cancun safeguards applying to forest management in Myanmar, and propose measures to strengthen those safeguards.

The main tasks of the Drivers and Strategy Development TWG were:

- 1) To identify key drivers and underlying causes of deforestation and forest degradation;
- 2) To review of current strategies and programmes;
- 3) To identify potential REDD+ strategies: activity packages or, policies and measures;

- 4) To develop a methodology and work plan to assess the pre-identified REDD+ strategies.

The main tasks of the National Forest Monitoring System and REL/RL TWG were:

- 1) To assess baseline national technical capacities and institutional arrangements related to the forest monitoring and measurement, reporting and verification (M&MRV) functions (GHG Inventory, remote sensing/GIS, forest inventory) of the national forest monitoring system (NFMS) for REDD+ activities;
- 2) To identify potential strategies and activities for the development of Myanmar's National Forest Monitoring System and forest RELs/RLs.

Under the overall guidance of the REDD+ Core Unit of MoECAF and with support from regional UN-REDD and RECOFTC advisors, an International Roadmap Coordinator, the UNDP and FAO country offices and a number of national facilitators, the three TWGs held four meetings between January and May 2013. These meetings were used to increase awareness and understanding of REDD+, to gather and review relevant information and to develop and discuss the different sections of the REDD+ Roadmap.

The draft REDD+ Readiness Roadmap developed by the TWGs was consequently reviewed and validated through a national multi-stakeholder consultation process. The entire process consisted of an initial National Consultation workshop held in Nay Pyi Taw on the 15th of May, four Regional Consultation Workshops held in Bago (Bago Region, 30/05), Taunggyi (Shan State, 05/06), Bogalay (Ayeyarwaddy Delta, 11/06) and Kathar (Sagaing Region, 18/06) from mid-May till mid-June and a final National Validation Workshop held in Nay Pyi Taw on the 25th of June 2013. Comments and feedback collected during these workshops is summarized in Annex 1. Full proceedings and participant lists are available on the UN-REDD workspace, Myanmar country page (www.unredd.net). Figure 2.1 below provides an overview of the consultation during the Roadmap development process:

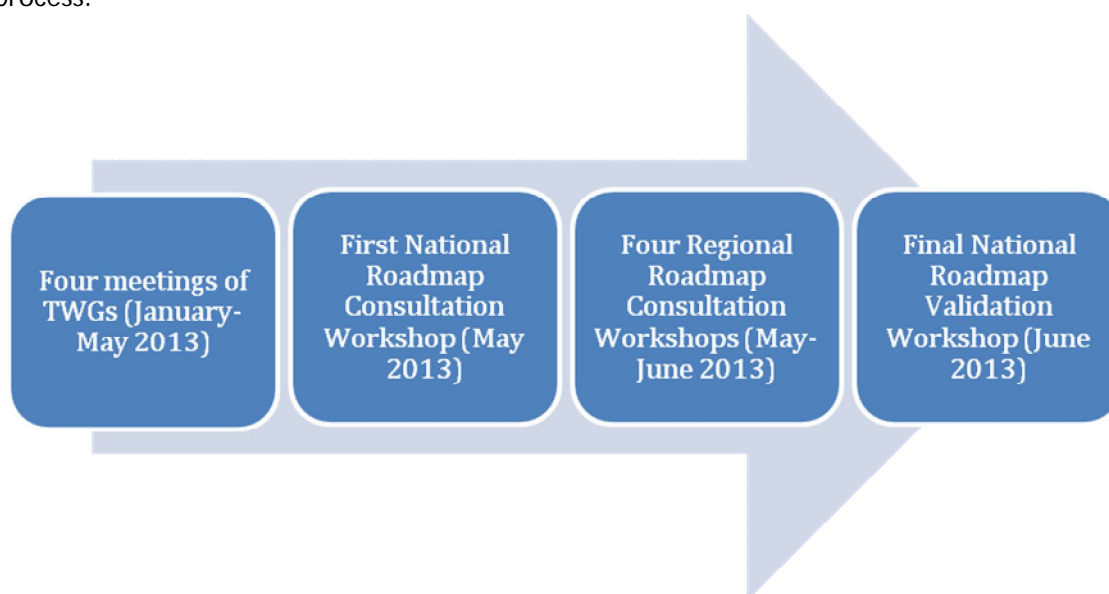


Figure 2.1: Myanmar REDD+ Roadmap Consultation Process

2.3 Stakeholder mapping

2.3.1 General stakeholder mapping and analysis

A comprehensive understanding of the categories of stakeholders involved in, and affected by, the forest sector is essential for the effective implementation of a REDD+ programme. In particular, such an understanding underpins:

- **Consultation:** by allowing for verification that all positions are transparently and accurately represented in the decision-making process;
- **Capacity Building:** by ensuring that all stakeholders are equipped with the skills and knowledge that they need to fulfil their roles in the REDD+ programme (see Section 4.2.2);
- **Communication:** by allowing for appropriate targeting of materials and information networks (see Section 4.2.3).

The Stakeholder Consultation and Safeguards TWG undertook a stakeholder mapping exercise during the Roadmap development process. In addition to forest dependent communities, key members or networks within each of the following provisional stakeholders categories were identified:

- Government institutions and agencies
- Private Sector
- National Forestry and Environmental NGOs or networks
- International or regional NGOs
- Women's and Youth groups and networks
- Knowledge Institutions
- NGOs and networks working with Ethnic Groups/minorities

This stakeholder mapping (see Table 2.1) was presented and reviewed during the national and regional consultation workshops as well as the final validation workshop. It was also used to establish lists of invitees for the different National and Regional Workshops organized during the National Roadmap Consultation Process:

Table 2.1: REDD+ Stakeholder Mapping

StakeholderGro	Members/networks
Government agencies (see also Section 1.1)	MoECAF: Environmental Conservation and Forestry MoAI: Agriculture and Irrigation MNPED: National Planning and Economic Development MoFA: Foreign Affairs MoHA: Home Affairs MoF: Finance MOM: Mining MoE: Energy MoFL: Fisheries and Livestock Mol: Industry MoT: Transport MoD: Defence MoB: Border Affairs Attorney General's Office Auditor General's Office
PrivateSector	Myanmar Forest Products and Timber Merchants Association UNFCCI: Chambers of Industry Forest Joint Venture (FJV) Myanmar Fishery Federation (MFF) Myanmar Shrimp Association (MSA)

National Forestry and Environmental NGOs or networks	<p>NGOs:</p> <ul style="list-style-type: none"> • Forest Resource Environment Development and Conservation Association (FREDA) • EcoDev • SPECTRUM • The Ecosystem Conservation and Community Development Initiative (ECCDI/FORM) • Biodiversity And Nature Conservation Association (BANCA) • AEGD • Metta Foundation Development • Promotion of Indigenous and Nature Together (POINT) • Social Vision Service (SVS) <p>Networks:</p> <ul style="list-style-type: none"> • Myanmar Environmental Rehabilitation-conservation Network (MERN) • Mangrove Service Network (MSN) • Kachin Conservation Working Group (URM, Shan Literature, KMSS, Shalom, Anglican, KRDC) • Network Activities Group (NAG)
International or regional NGOs	<p>RECOFTC WCS WWF FFI IUCN Care Myanmar Social Vision Services FAO UNDP UNEP UN-Habitat ITTO DFID (Pyo Pin Project) KOICA (KFS) GIZ NORAD JICA</p>
Women's groups and networks	<p>Self Help Groups (organized by UNDP, PACT and other donor/projects) Women Empowerment Project/ Jieeyah Service (Mon) Kachin Women Peace Network Gender Development Initiative (GDI) Women's League of Burma (WLB)</p>
Knowledge Institutions (see also Sections 1.1.1 and 1.1.2)	<p>MoECAF</p> <ul style="list-style-type: none"> • University of Forestry • Forest Research Institute <p>MoAI</p> <ul style="list-style-type: none"> • University of Agriculture • Department of Agricultural Research
Youth groups	<p>KanBawZa Youth Librarian Reading Class (Shan/ Taungyi) Day LoeKalo</p>
NGOs and networks working with Ethnic Groups/minorities (Kachin, Karen, Kayar, Chin, Mon, Rachine, Shan)	<p>Shalom Karen Baptist Church (KBC) Kachin Conservation Working Group (URM, Shan Literature, KMSS, Shalom, Anglican, KRDC) Women Empowerment Project/ Jieeyah Service (Mon) Kachin Women Peace Network</p>

Stakeholder groups were assessed (Table 2.2) by the Stakeholder Consultation and Safeguards TWG according to the following variables:

- **Interest** or degree of engagement: Are forest issues central to the stakeholder's livelihood or institutional goals or are they peripheral?
- **Potential roles**: What specific roles or responsibilities would the stakeholder perform within a future national REDD+ programme?

Table 2.2: Stakeholder assessment according to interests and potential roles in REDD+

#	Stakeholders	Interests	Potential Role in REDD+ Implementation
1	Government institutions and agencies	Development, CCM&A, Forest Conservation	Coordination, policy formulation, implementation, awareness raising, facilitation of stakeholder consultation, monitoring, fund raising
2	Private Sector	Sustainability of investments, complementary income generation and environmental costs	Funding (payment for environmental services), contribution to policy and legal framework development, promotion of REDD+ implementation (carbon sequestration and avoided emissions)
3	National Forestry and Environmental NGOs or networks	Development, SFM, conservation, poverty reduction	Coordination, policy formulation, implementation, awareness raising and training, facilitate consultation, monitoring and safeguards
4	International or regional NGOs	Development, SFM, conservation, poverty reduction, CCM	Coordination, awareness raising, facilitating stakeholder involvement and consultation, funding and supporting implementation, technical support
5	Women's groups and networks	Income generation, empowerment of women	Mobilisation and participation of women, policy development, development of benefit sharing mechanisms, monitoring and safeguards
6	Knowledge Institutions	Research to contribute to implementation, policy development, knowledge sharing and education	Policy development, awareness raising and training, research and monitoring in support of implementation.
7	Youth Groups	Promotion and participation of youth, creation of economic opportunities and capacity building for youth	Awareness raising and capacity building, facilitate consultation, participatory monitoring and safeguards
8	NGOs and networks working with Ethnic Groups/minorities	Protection of rights of ethnic minorities, SFM, rural development and income generation	Awareness raising and capacity building, facilitating consultation, implementation, participatory monitoring and safeguards

The Stakeholder Consultation and Safeguards TWG will undertake an annual stakeholder review to update and strengthen the membership of the National REDD+ Network. Special attention will be given to stakeholders representing women and ethnic minorities. Some of the annual stakeholder reviews will be undertaken in conjunction with the institutional reviews defined under Section 4.2.1.

2.3.2 Engaging women and ethnic minorities

To ensure the stakeholder engagement for effective implementation of REDD+ in Myanmar, systematic incorporation of gender and ethnic minority considerations is crucial. Gender inclusiveness in REDD+ implementation and decision-making processes is of great importance and there is a need to view women as a stakeholder group with specific interests that are often quite different to those of men. Moreover, as Myanmar is signatory to Convention on All Forms of Discrimination against Women (CEDAW) and an active member of the ASEAN Committee on Women and Children (ACWC), the inclusion of gender perspectives ensures that the REDD+ framework respects international law.

The reference guideline, the Cancun Safeguards, highlights the importance of indigenous people's participation in REDD+. As mentioned in the safeguards, the consideration of concerns of ethnic minorities can for example reduce risks of the displacement of emissions by shifting cultivation or other activities outside of the project area. Thus, action needs to be consistent with the needs of local people and especially those of ethnic minorities often heavily dependent on forest resources.

The Stakeholder Consultation and Safeguards TWG therefore commissioned a more in-depth analysis or identification of stakeholders that support or represent women and ethnic minorities in Myanmar. The aim was to promote the participation and representation of these specific stakeholder groups during the National Roadmap Consultation Process and to ensure their future involvement in Roadmap implementation through their membership of the National REDD+ Network. The results of this focused stakeholder identification are summarized in Table 2.3.

Table 2.3: Interests and potential roles in REDD+ of stakeholders representing or supporting gender/women and ethnic minorities:

Stakeholder group	Interest	Potential roles in REDD+ implementation
Local level stakeholders: Ethnic Minority groups or CSOs		
Kachin minority	Main activity is shifting cultivation and forest resources exploitation. Main interest/concerns are SFM, sustainable water resources, land and biodiversity management and benefits from REDD+ and other PES	REDD+ piloting, implementation and community monitoring, contribution to readiness activities through local level consultations and pilot activities.
Karen minority		
Kayar minority		
Chin minority		
Mon minority	Main activities are permanent farming (paddy, rubber, palm oil), shrimp farming, fishing and shifting cultivation. Main interests are sustainable farming, water and land management, access to NR and where possible benefit from REDD+ and other PES.	
Rakhine minority		
Shan minority		
KanBawZa Youth Librarian Reading Class (Shan/ Taungyi)	Capacity building Coordination (for CF) Environmental Conservation (plantation forestry)	Awareness raising, capacity building and facilitation of local consultation
Day LoeKalo	Youth education Health education Awareness raining Fund raising	Awareness raising, capacity building and facilitation of local consultation.
Local level stakeholders: Women CSOs		
Self-help groups	Saving/credit Income generation activity	Information sharing, piloting participation and monitoring of REDD+, development of benefit sharing mechanisms.
Local level stakeholders: Women CSOs of Ethnic Minorities		
Women	Awareness raising (women right, climate	Contribution to reviews and studies,

Empowerment Project/Jieeyah Service	change impact) Capacity building Training (gender equity, land use right, CEDAW); Ethnic based organization (Mon minority) with experience in Environmental impact assessment (rubber processing industry).	facilitate consultation and contribution to REDD+ framework development, awareness raising, mobilization and facilitation of piloting, implementation and monitoring.
Kachin Women Peace Network	Securing and protection of women in conflict area Participation in peace making process. Focus on Kachin ethnic minority.	Contribution to reviews and studies, facilitate consultation and awareness raising.
State / Division Level Stakeholders: Ethnic Minorities		
Kachin Conservation Working Group (URM, Shan Literature, KMSS, Shalom, Anglican, KRDC)	Environmental Conservation Sustainable development Policy advocacy relating with environmental resource use Strong gender component empowering women's participation in Community Forestry committees. Multi-ethnic (Kachin, Shan, Karen, Myanmar) organization targeting beneficiary from different ethnic groups.	Contribution to reviews and studies, facilitate consultation and contribution to REDD+ framework development, awareness raising, mobilization and facilitation of piloting, implementation and monitoring.
National Level Stakeholders: Ethnic minorities , women/ gender NGOs		
Karen Baptist Church (KBC)	Environmental conservation, plantation establishment, income generation activities; Ethnic & religious based organization	Awareness raising, capacity building and mobilization
Shalom	Organization focused on ethnic groups, promoting peace building, environmental conservation and capacity building (Community Forestry establishment) Provide gender training to FUG through GDI and integrate gender mainstreaming in CF program Promote income generation activity for women group	Contribution to reviews and studies, facilitate consultation and contribution to REDD+ framework development, awareness raising, capacity building and mobilization.
Metta Development Foundation	Community Forest Contract Farming	Contribution to reviews and studies, facilitate consultation and contribution to REDD+ framework development, awareness raising, mobilization and facilitation of piloting, implementation and monitoring.
Promotion of Indigenous and Nature Together (POINT)	Training (FPIC, REDD+, UNDRIP) Awareness raising (Environment, climate change impact)	Contribution to reviews and studies, facilitate consultation and contribution to REDD+ framework development, awareness raising, capacity building
Gender Development Initiative (GDI)	Provides training services to other organisations (e.g. gender analysis & gender training to FUG, REDD+ and FPIC) Expertise in: gender based analysis, women's rights & customary law and gender & forest resource management, protection of IP rights and customary law of ethnic minorities (Rakhine & Chin)	Awareness raising, advocacy to ethnic political party (REDD + AIPP), capacity building (Gender and FPIC)

Food Security Working Group (FSWG)	Works on food security, fishery research and development, Land tenure rights (focus on ethnic minorities), contract farming. Supporting information exchange and Resource Centre	Contribution to reviews and studies, facilitate consultation and contribution to REDD+ framework development, capacity building, advocacy and Information sharing (publications).
Mangrove Service Network (MSN)	Rural Energy (fuel wood saving training focused on women and improved stoves); Forest conservation (nursery operation & mangrove plantation establishment) Implementation in Kachin, Kayar, Kayin, Mon areas.	Contribution to quantitative study of emissions from forest degradation (fuel wood collection), development, piloting and implementation of REDD+ strategies for the reduction of emissions from fuel wood consumption.
SPECTRUM	REDD+ training and development of REDD+ and FPIC awareness raising materials in local languages (Myanmar and Ethnic Minorities). Promoting role of women in REDD+ Expertise in Ethnic Minority rights, gender participation forest resource use and land tenure rights.	Awareness raising and capacity building, contribution to REDD+ implementation framework development.
EcoDev	Community Forest, environmental conservation, climate change awareness raising, gender equity and income generation, land tenure rights (expertise with Kachin Ethnic Minority)	Contribution to reviews and studies, facilitating consultation and contribution to REDD+ framework development, awareness raising, mobilization and facilitation of piloting, implementation and monitoring.

The above stakeholder mapping shows that most organizations emphasize forest resource management, gender equity or ethnic minority development and few specifically work at the intersection of all three. National level gender groups in Myanmar engage in activities related to trafficking or the empowerment of women. Some international organizations (UNDP and PACT Myanmar) have implemented project activities through women's groups, such as self-help group or saving and loans groups. EcoDev initiated women conservation groups in three townships within the dry zone area. Even though the formation of these groups is not yet institutionalized at the regional or national level, the further model of these groups will generate potential partners for field level REDD+ implementation.

Ethnic groups mostly engage through local CSOs working on the promotion of the socio-economic development of ethnic groups. Except for the Rakhine and Mon, most ethnic minority groups reside in upland areas and rely on shifting cultivation; this means their livelihoods are highly dependent on the state of the local environment.

2.4 Framework for stakeholder engagement and consultation

The Draft Guidelines on Stakeholder Engagement in REDD+ Readiness, jointly produced by UN-REDD and FCPF in May 2011, define the **outcome** of consultation processes under the Roadmap as a state where: *All stakeholders are fully aware of the potential impacts of a REDD+ programme on their work and livelihoods and enabled to influence the development of the programme according to the principles of FPIC.* During REDD+ Roadmap implementation, the consistent engagement of all stakeholders will be maintained through:

1. **A functional and inclusive Institutional Structure** (see Section 1.6) with clear communication channels and feedback systems, ensuring that all stakeholder opinions and priorities are adequately and accurately represented within the REDD+ management and reflected in the decision-making process;

2. **Capacity Building and Awareness Raising activities** (see Section 4.2.2) to ensure that all stakeholder groups are kept fully abreast of Roadmap developments and equipped with the information they need to engage and participate constructively;
3. **The implementation of a Communication Strategy and a the establishment of a functional and transparent information management system** (see Section 4.2.3) to ensure that all stakeholders have access to the information they need, as determined by their existing roles in the forestry sector and their potential roles in the REDD+ programme;
4. **Stakeholder consultation mechanisms and activities** (see Section 2.5) including consultation and validation workshops and other feedback mechanisms to ensure that all elements of REDD+ implementation developed during the Readiness phase are based on consensus or FPIC principles.

2.5 Stakeholder consultation mechanisms or levels

Meetings organized by the multi-stakeholder TWG will represent the **first level** of consultation. The role of the **TWGs** is to propose or provide information and not to take important decisions. Minutes of the TWGs will nevertheless be posted on the REDD+ webpage to allow any stakeholder to review the minutes or to make comments. Comments will be addressed during the next TWG or REDD+ Task Force meeting as required and the response will be minuted.

Meetings of the multi-stakeholder **REDD+ Task Force**, open to all TWG members, will constitute the **second level** of stakeholder consultation. Minutes of these meetings will be posted on the REDD+ webpage to allow any stakeholder to review the minutes or to make comments. Comments will be addressed during the next REDD+ Task Force or TWG meeting as required and the response will be minuted.

The **third level** of stakeholder consultation will be achieved by actively seeking feedback from all members of the **National REDD+ Network**. This mechanism called “**electronic consultation**” will be used by the REDD+ Task Force or TWGs when consolidating and validating draft reviews, studies or proposed decisions. The concerned documents will be disseminated by e-mail by the REDD+ Task Force Office and made available on the REDD+ webpage. Comments will be collected from e-mails or online and be discussed during the next TWG and/or REDD+ Task Force Meetings and/or incorporated into final versions of these documents. Final versions of these documents will finally be posted online where any stakeholder will be able to provide additional comments or feedback. This “electronic consultation” mechanism will be used for consolidation of technical documents that do not require extensive stakeholder discussions. The advantages of this mechanism are 1) to allow for wide stakeholder consultation (even outside the country if needed) but without the logistical constraints of a workshop, 2) to be able to collect detailed feedback on full drafts of documents, and 3) to speed up stakeholder consultation. To translate a document from English to Myanmar language or vice versa and the deadline for the submission of comments will be decided by the REDD+ Task Force or the concerned TWG.

The **fourth level** of stakeholder consultation will be done through the organization of a **National Consultation Workshop**. All members of the **National REDD+ Network** will be invited to attend the workshop. This method of stakeholder consultation will be used to discuss elements of REDD+ Readiness which require stakeholder discussions as part of the review and validation process (see Table 2.4). Where decisions are required, the chair of the workshop will seek consensus. Proceedings of the workshop, including all the comments made by participants and the final decision(s) or recommendation(s) if applicable, will be shared by e-mail among participants and posted on the REDD+ webpage to allow any stakeholder to review the minutes or to make further comments. Comments will be addressed in the final version of the proceedings which will again be posted online or during the next REDD+ Task Force meeting where the response will be minuted.

A **fifth level** of consultation will be a **National Consultation Process**, including a National Consultation Workshop, Regional Consultation Workshops and a Final National Validation Workshop. The model will be the National Consultation Process used for the review and validation of the present Roadmap (see Section 2.2.) but the REDD+ Task Force will be able to elaborate (e.g. number and locations of Regional Consultation Workshops, pre-consultations for women or ethnic groups, etc.), based on needs. This level of consultation will be applied to the review and validation of Readiness related strategies or any policy or mechanism of strategic importance and requiring the highest level of multi-stakeholder consultation (see Table 2.4). Where decisions are required, the chair of the workshops will seek consensus, especially during the Final Validation Workshop which will be an opportunity to review all comments and feedback provided during prior consultation workshops. Proceedings of workshops will be shared by e-mail among participants and posted online for comments. Comments will be addressed in the final version of the proceedings which will again be posted online or during the next REDD+ Task Force meeting where the response will be minuted.

Consensus or consent must be sought at key stages of the REDD+ Readiness phase. As suggested by the UN-REDD Draft Guidelines on FPIC, topics which will trigger national consultation (levels 3, 4 or 5) will include without being restricted to:

- Decisions on land tenure regulations or forest land use rights;
- Design of new forest management policies and programmes;
- Design of benefit sharing or revenue distribution mechanisms, where those benefits or resources are derived from forest lands;
- Trials and research activities to support the design of REDD+ strategies;
- Measurement and monitoring activities to support the design of RLs/REs for REDD+;
- Measurement of forest carbon stocks as part of an MRV system under REDD+.

Table 2.4: Proposed list of subjects requiring level 4 and 5 consultations

Subject	Level of consultation
Section 2: Stakeholder Participation and Consultation	
Review and validate National FPIC guidelines	5
Section 3: Development and Selection of REDD+ Strategies	
Review and validate the proposed revised candidate REDD+ strategies for both the forestry and non-forestry sectors.	4
Review and validate proposed final list of candidate REDD+ Strategies	5
Section 4: REDD+ Implementation Framework and Safeguards	
Review (optional, after 1 year of roadmap implementation) of proposed Institutional Structure including ToRs, Capacity Building Needs Assessment and Communication Strategy (see section 4.2.1)	4
Further review and validate proposed Institutional Structure including ToRs, Capacity Building Needs Assessment and Communication Strategy (see section 4.2.1)	4
Review and validate of proposed changes and additions (urgent and easily enacted) to the national legal framework	5
Review and validate proposed changes and additions (complex and long term) to the national legal framework (at the end of readiness phase)	5
Review and validate proposed financial management and benefit sharing mechanisms;	5
Review and validate the selected PLR or safeguards standards and the proposed SIS and provide guidance for the development of a grievance mechanism	4

Review and validate the proposed grievance mechanism	4
Section 5: Developing a National RELs/RLs	
Endorsement of Myanmar's Forest RELs/RLs Action Plan	4
Consultation on the selection of RELs/RLs methodological approaches	4
Section 6: Developing a National Forest Monitoring System	
Endorsement of Myanmar's National Forest Monitoring System Action Plan	4
Consultation on Myanmar's NFI methodology to account for forest carbon stocks	4

The Stakeholder Consultation and Safeguards TWG identified the following guidance or steps for the organization of National Consultation Workshops or National Consultation Processes (multiple workshops, including national and regional level workshops) for REDD+ Readiness in Myanmar. Each consultation workshop or process will require the preparation of a short concept note including:

1. Definition of desired outcomes of the Consultation Workshop(s);
2. Identification of stakeholders (if membership of National REDD+ Network is not sufficient or adequate for concerned subject or if regional perspectives are required);
3. Definition of the terms of consultation (review and/or validation, quorum, decision making);
4. Selection of the consultation and outreach method (agenda with special attention to separate or organize pre-consultation of women and ethnic groups where needed);
5. Ensuring stakeholders have sufficient capacity to engage fully and effectively in consultation (initial or prior awareness raising and information sharing);
6. Conducting consultation (facilitation including specific expertise in gender and ethnic minorities if required, date, venue, logistics and organisers);
7. Analysing and disseminating results, seek final feedback (reporting responsibilities).

Additional consultation will take place through the permanent online feedback mechanism (REDD+ Webpage) allowing any stakeholder to provide comments or feedback on any of the documents or data provided on the REDD+ webpage. The Stakeholder Consultation and Safeguards TWG will elaborate on the mechanisms and levels mentioned above and will develop a National REDD+ Readiness Stakeholder Consultation Guidelines, including a Stakeholder Consultation Plan, to guide all consultation processes undertaken during Roadmap implementation. The guidelines will provide specific guidance on how to ensure or improve consultation and participation of women and ethnic minorities and their representatives. The development of these national guidelines will be undertaken in conjunction with the elaboration of ToRs for the different elements of the REDD+ Implementation Structure (see Section 1). Both guidelines and ToRs will be subjected to "electronic" or level 3 consultation.

The REDD+ Task Force must make every effort to build trust, particularly through transparency in decision-making, by ensuring participation, contribution and representation of local people throughout the Roadmap implementation. All members of the different bodies within the Institutional Structure will need to maintain the engagement of stakeholders as a priority. National REDD+ Network members will be encouraged to consult grassroots level stakeholders including local partners, beneficiaries or local communities. Opinions voiced in respective constituencies are expected to enrich national level consultations. Feedback from grassroots level stakeholder will also be collected during awareness raising and capacity building activities or during implementation of pilot activities. For the actual implementation of REDD+ pilots, project proponents will have to apply Free, Prior and Informed Consent (FPIC) as the required consultation mechanism (see Section 2.7).

2.6 Consultation and participation and of women and ethnic minorities

A more thorough analysis of stakeholders representing or working with women and ethnic minorities has enhanced their participation in the National Consultation Process to review and validate the REDD+ Readiness Roadmap and will be used to widen the membership of the National REDD+ Network which will be a key element of the REDD+ Institutional Structure and a key contributor the Roadmap implementation.

The promotion and integration of gender and ethnic minority issues in REDD+ implementation also requires further strengthening through the knowledge of gender and ethnic minority rights and inclusion within the organizations engaged with environmental conservation programs. In turn, gender or ethnic minority focused groups' interest in forestry and environmental conservation programs needs to be promoted. Some religious or faith-based organizations have earned the trust of local ethnic groups. The government's proactive and effective coordination through engaging frequent consultation process with specialized NGOs, CBOs and local representatives of ethnic minority and women's groups is required.

REDD+ needs to assure the promotion of gender equality and the respect of indigenous people's rights into the REDD+ Readiness activities and future implementation. The REDD+ implementation process should abide by inclusive participatory practices requiring the inclusion of gender experts and indigenous people experts in consultation processes. Experience on gender integration in forest resource management in particular is still in a juvenile state. The process should employ gender analysis to acknowledge the different needs, roles and responsibilities of men and women, in order to create appropriate mechanisms that enable women's meaningful participation in REDD+ readiness and implementation. Consultation of women and ethnic minorities might require different or additional mechanisms or approaches such as the systematic translation into local languages or separate pre-consultations prior to the organization of national or regional consultation workshops.

2.7 Compliance with FPIC

Free, Prior and Informed Consent (FPIC) is the principle that a community has the right to give or withhold its consent to proposed projects that may affect the lands they customarily own, occupy or otherwise use. It is a key principle in international law and jurisprudence related to indigenous peoples, however in Myanmar as with other UN-REDD countries, FPIC would be applied broadly to all affected local communities (UNDRIP, ILO169). The right to FPIC encompasses not only the right to be fully informed and consulted before activities are implemented, but also to withhold consent from these activities altogether. This does not imply that forest-dependent people hold a veto over all aspects of a national REDD+ programme. As suggested by the UN-REDD Draft Guidelines on FPIC, topics which will trigger local level FPIC will include without being restricted to:

- Activities or decisions involving relocation or eviction;
- Activities or decisions involving occupation or damage of forest land;
- Decisions on location and design of pilot REDD+ activities;
- Decisions on access to forest lands, and enforcement of such regulations.

This list comprises activities for which withholding of consent must be considered binding on all stakeholders. While there is commitment in Myanmar to the application of FPIC, the implementation of this in practice remains unclear. A key point raised during the Roadmap development process has been that of timing and the exact sequence of FPIC within the REDD+ project cycle. Concerns were raised that should FPIC be conducted too early in the process, communities would lack sufficient capacity to make informed decisions and similarly REDD+ project proponents would not have the complete information to be provided to communities. The Stakeholder Consultation and Safeguards TWG has determined that the

most appropriate point in the project cycle to undertake FPIC is once project proponents have completed an initial feasibility study and once it is determined that local communities have sufficient capacity and awareness of REDD+. Capacity building is to be triggered in the event that it is not.

Although there is as yet no internationally agreed upon process that would ensure that the principles of FPIC are upheld, a number of detailed guidelines for conducting FPIC exist. These include guidelines developed by UN-REDD, RECOFTC, AIPP and OXFAM. While FPIC has yet to be applied in Myanmar, there is already considerable existing capacity and familiarity with FPIC, the AIPP FPIC Guidelines already having been translated by SPECTRUM and a number of trainings conducted. This will constitute the basis for the development of National REDD+ FPIC Guidelines which will the triggers, roles and responsibilities for FPIC. The Stakeholder Consultation and Safeguards TWG will be responsible for commissioning a study into traditional decision-making systems and the negotiation and communication mechanisms around them, to inform the development of these National FPIC Guidelines. The review and validation of the National FPIC Guidelines will be done through a National Consultation Process.

2.8 Indicative work plan and budget

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 2: Stakeholder Consultation and Participation				
Output 2.1: Stakeholder representation and consultation strengthened	UNDP, DGTTF-UNDP	SP&S-TWG	<ul style="list-style-type: none"> Undertake annual stakeholder review to update and strengthen the membership of the National REDD+ Network; Develop National REDD+ Readiness Stakeholder Consultation Guidelines and Consultation Plan; Develop concept notes for each consultation workshop. 	200,000
Output 2.2: National FPIC Guidelines Developed	UNDP	SP&S-TWG	<ul style="list-style-type: none"> Study into traditional decision-making systems; Develop National FPIC Guidelines; National Consultation Process on National FPIC guidelines; Piloting of FPIC guidelines (as part of pilot project implementation). 	500,000
TOTAL				700,000

SECTION 3: DEVELOPMENT AND SELECTION OF REDD+ STRATEGIES

Rationale: A logical process must be followed to confirm the impact of the of deforestation and forest degradation on GHG emissions and carbon stocks and, second, to establish which of these drivers can be addressed by strategies based on one or more of the five REDD+ activities, as outlined in the Cancun Agreements.

Key parts:

- Evolution of forest cover in Myanmar and initial assessment of drivers and underlying causes of deforestation and forest degradation: Based on studies and consultations, and differentiated by forest type;
- Review of relevant policies, laws and rules and the past and present forest management programmes to assess the effectiveness of the forest governance system, projects and programmes in achieving policy objectives;
- Initial identification of candidate REDD+ strategies: “activity packages” and “policy measures”
- Feasibility assessment or process to review and confirm candidate REDD+ strategies;
- Description of initial piloting of “activity packages” and list of proposed readiness activities needed to support implementation of both “activity packages” and “policy measures”;
- Planning for the piloting of REDD+ implementation: A methodology for objective identification of potential sites for demonstration activities, development of location-specific activity packages and cost norms;
- Indicative work plan and budget.

3.1 Evolution of forest cover in Myanmar

3.1.1 Definitions

The definition of **forest** in Myanmar follows the international FAO definition and is therefore acceptable in the context of REDD+: “Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.” **Closed forest** has a crown cover of over 40%.

In the context of this Roadmap, **deforestation** is taken to mean the conversion of forests to another land use or the long-term reduction of the tree canopy cover below 10%. **Forest degradation** concerns processes that negatively affect the density of a forest stand, or otherwise affect the quality of the stand or the site, but leave the tree canopy cover above 10%.

3.1.2 Main forest types

Myanmar has diverse landscapes, supporting a variety of forest types (Table 3.1) with distinct vegetation composition. These types are grouped into six broad categories of forest:

Table 3.1: Main forest types in Myanmar:

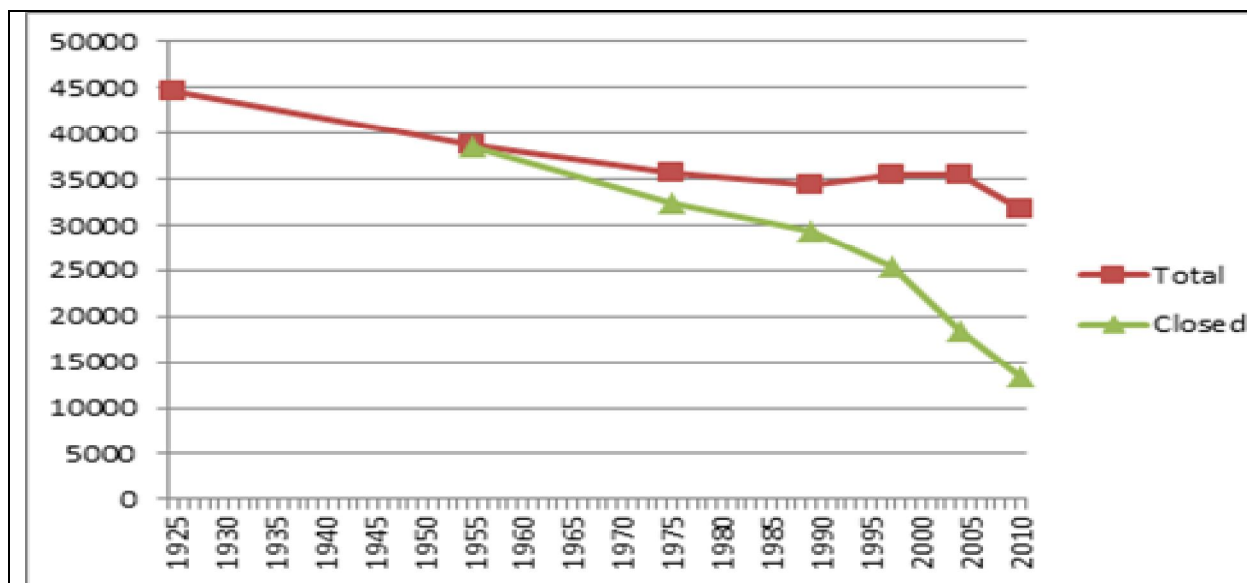
Forest type	#	Sub-categories	% of total forest area (2000)
Dry Forest	D		10
Coastal Forest	C	Mangrove or Tidal Forest, Beach and Dune Forest, Swamp Forest	4
Tropical Evergreen Forest	T		16
Mixed Deciduous Forest	M	Moist Upper Mixed Deciduous Forest MUMD Lower Mixed Deciduous Forest (LMD), Dry Upper Mixed Deciduous Forest (DUMD)	39
Hill and Temperate Evergreen Forest	H	Includes Pine Forest	26
Indaing Forest	I	Deciduous Dipterocarp Forest	5

3.1.3 Overall deforestation and forest degradation trends

According to past assessments (Table 3.2), the forest cover of the country decreased continuously from 65.8% to 50.8% of the total land area between 1925 and 1989. This corresponds to a decrease of 15% in 65 years. From 1989 onwards, forest cover started to increase to reach 52.4% in 2004, indicating an increase of 1.6% in 15 years. According to the FRA 2010, the loss of overall forest cover amounted to 5.5% of the total land area during 2004-2010. This corresponds to a total loss of 3,721,190ha or 744,238ha per year. The annual deforestation rate of 1.1% during 2004-2010 indicates that the forest cover is now declining at a far higher rate than at any time previously. Several sources (Table 3.2) also indicate an accelerating loss of closed forest due to continuous forest degradation. Despite these negative and accelerating deforestation and forest degradation trends, the Forest Resources Assessment (FRA) indicates that Myanmar is still endowed with a substantial forest area covering 47% of the country's total land area of 67,658,000 ha.

Table 3.2: Forest cover at different periods

Year of appraisal	Forest cover (ha)	% of total land area	% of closed forest (crown cover>40%)
1925	44,518,700	65.8	
1955	38,700,300	57.2	57.0
1975	35,665,600	52.7	47.8
1989	34,370,100	50.8	43.2
1997	35,374,700	52.3	37.4
2004 (FRA 2005)	35,478,000	52.4	27.3
2010 (FRA 2010)	31,773,000	46.9	19.9
Total land area	67.658,000	100,0	



Source FRA 2010 (Current state of REDD+ Readiness preparation in Myanmar) and Myanmar Forestry Department, 2000 (Brief on National Forest Inventory (NFI), Myanmar, FAO 2007)

3.1.4 Deforestation trends per forest type

The analysis of forest cover data for each of the main forest types (Table 3.3) provides a more detailed overview of deforestation in Myanmar. The data is scattered but there are clear localized deforestation trends linked to population increase and corresponding expansion of agriculture, settlements and private or public infrastructure. The forest types most affected are the Dry Forest, the Mixed-deciduous and Deciduous (Indaing) Forests located in and around the central region or the Coastal Forest in the delta and coastal regions. Other forest types often located at higher elevations seem to have expanded slightly, due to lower pressure in these less populated and often less accessible boarder regions.

Table 3.3: Evolution of forest cover per forest type

Forest type	ha (1995*)	% of total forest area (1995)	ha (2000**)	% of total forest area (2000)	ha (2010***)	% of total forest area (2010)
Dry Forest	3,442,400	10	3,455,400	10	3,114,710	9.80
Coastal Forest:	1,376,900	4	1,382,160	4	467,330 only Mangrove	1.47
Tropical Evergreen Forest	5,507,800	16	5,528,640	16	5,470,600	17.22
Mixed Deciduous Forest	13,425,300	39	13,476,060	39	12,157,300	38.26
Hill and Temperate Evergreen Forest	8,950,100	26	8,984,040	26	8,541,190	26.88
Indaing Forest:	1,721,200	5	1,727,700	5	1,321,870	4.16
Scrub Land	na	-	na	-	700,000	2.21
Total	34,423,700	100	34,554,000	100	31,773,000	100

* Source: Myanmar Forest Department Statistics, 1995 (Brief on National Forest Inventory (NFI), Myanmar, FAO 2007)

** Source: Planning and Statistic Division, Forest Department, Myanmar, 2000 (Chapter 2, National Circumstances, INC Myanmar)

*** Source: FAO FRA 2010 (Forestry in Myanmar, MoECAf, October 2011)

An assessment of forest cover change patterns (1990-2000) conducted by the Smithsonian Institution¹ seems to confirm these regional deforestation trends. Forest loss rates were highest in Ayeyarwady, Mandalay and Sagaing Divisions, ranging from 0.4% to 1.2% a year. All three Divisions encompass densely populated areas in the central dry zone. The Ayeyarwady Delta region in particular experienced unprecedented levels of forest cover change during this period, losing about 12% of its remaining forest cover in only 10 years. Remote regions, such as Kachin State, Tanintharyi Division and Chin State had losses below the national average. This dichotomy was partly explained by the increasing resource demands of large populations in central areas and decreasing state control over forest resources in remote and sometimes contested regions. The most threatened forest types were mangroves and tropical dry forests including Dry Forests, Deciduous and Mixed or Semi-Deciduous Forests.

The 1990-2000 assessment conducted by the Smithsonian Institution considered Myanmar's forests to be in much better condition than the forests of almost any other country in mainland South-East Asia, partly due to the country's long political and economic isolation. The study also anticipated dramatic change with global trade reaching Myanmar.

3.2 Initial assessment of drivers of forest degradation and deforestation

Whilst historic changes in forest cover under Section 3.1 provide an overview of overall and regional deforestation trends, the figures only provide limited information on the exact drivers of deforestation and forest degradation and even less on the underlying causes of these changes. Many reports and studies show that drivers and underlying causes in Myanmar are similar to those in other developing countries. Unsustainable illegal or legal logging, fuel wood collection and pioneering or unsustainable shifting cultivation are often listed as the main drivers of forest degradation. The main drivers of deforestation are considered to be the expansion of subsistence and commercial agriculture, urbanization and infrastructure development, mining and hydro-power development. The establishment of planted forests, including commercial timber plantations (e.g. Teak, hardwoods) and industrial plantations (e.g. pulpwood, palm oil, rubber, etc.) is often referred to as a major contributor to the decline of natural and diverse forests.

A growing population and the increasing demand for food, wood products and other commodities from domestic and international markets put additional pressure on remaining forest resources and are driving rapid land-use change in favor of agriculture and extractive industries. This situation is further exacerbated by a vicious cycle of poverty, heavy reliance on increasingly scarce common access resources such as forest and other natural resources, low agricultural productivity and the lack of alternatives available to rural populations. Poor forest governance and law enforcement, conflicting institutional mandates, unclear policy frameworks, limited natural resource management capacities and insufficient financial resources all have major repercussions on deforestation and forest degradation. The lack of secure tenure over forest and forest lands is a major obstacle to the essential local or community participation and long term investment in forest management.

An initial assessment of the drivers and underlying causes of deforestation and forest degradation was undertaken by the "Technical Working Group on Drivers and Strategies". This assessment, based on inputs from group members and a review of available literature, was presented to national and regional stakeholders during the National REDD+ Readiness Roadmap Consultation Process. Inputs and comments received (see proceedings of national and regional consultation workshops, Annex 1) were included in the final assessment below. Drivers were ranked in terms of their contribution to or

¹Forest cover change patterns in Myanmar (Burma) 1990-2000, PETER LEIMGRUBER, DANIEL S. KELLY, MARC K. STEININGER, JAKE BRUNNER, THOMAS MÜLLER AND MELISSA SONGER, Smithsonian Institution, National Zoological Park, Conservation and Research Center, Front Royal, VA 22630, USA, and Conservation International, 1919M Street, NWSuite 600, Washington, DC 20036, USA, September 2005

impact on deforestation or forest degradation and were segregated according to whether they lay within the control of the forest sector (Table 3.4), or lay outside the sector (Table 3.5). The listed forest sector drivers are contributing to forest degradation whilst those outside the sector are the primary causes of deforestation. The analysis provides an indication of which of the six main forest types are affected by each of the drivers.

Table 3.4: Forestry Sector Drivers, Forest Degradation

Drivers	Impact	Driver specific underlying causes	Forest types					
			D	C	T	M	H	I
Over-exploitation of forest timber (legal-illegal)	1	<ul style="list-style-type: none"> • Weak implementation of MSS: need for more focus on pre-harvest inventories to identify harvestable trees and calculate a more accurate and conservative AAC; need to differentiate management system for natural forests and patches of enrichment plantations within; • Insufficient coordination between government (MOECF) entities, especially between FD assessing the resource and the Myanmar Timber Enterprise (MTE) harvesting it; • Subcontracting of logging operations to Private Sector by the MTE, too many intermediaries; • Outside or political interference; • Lack of transparency and accountability; • Localised security issues and conflicts; • High demand for timber in domestic, regional and international markets; • Logging bans in several countries in the region and lack of enforcement of chain of custody regulations in countries buying Myanmar timber; • Trade restrictions leading to lower timber prices and laundering of illegal timber; • FD target/contribution to government budget combined with limited added value/process efficiency/access to markets providing higher price; • Lack of sustainable or alternative supply of timber, especially in local markets. • Limited investment in the wood processing industry leading to excessive wastage and unnecessary over-consumption. 			X	X		X
Over-harvesting of wood biomass as a source of energy	2	<ul style="list-style-type: none"> • High and increasing demand for wood energy for domestic use and industrial/ cottage industry (e.g. brick making, sugar production/jaggery, restaurants); • Lack of sustainable or alternative supply of fuel wood/charcoal; • Lack of technology or programmes for 	X	X	X	X	X	X

		reducing fuel wood consumption and increasing efficiency of charcoal production.						
Unstable or pioneering shifting cultivation (Not permanent conversion of forest into agricultural land)	3	<ul style="list-style-type: none"> • Loss of traditional land due to investments (e.g. hydropower, agriculture); • Growing population; • Lack of land tenure over shifting cultivation land and surrounding forests; • Lack of viable alternatives to shifting cultivation and acceptable technologies or practices to improve or diversify slash-and-burn agriculture. 	X		X	X	X	X
Forest fires	4	<ul style="list-style-type: none"> • Natural fires; • Shifting cultivation and conversion; • Use of fire is support of hunting and pasture management; • Lack of forest tenure rights providing limited incentives to local communities to prevent and control forest fires; • Prolonged droughts exacerbated by climate change; • Limited awareness, resources and infrastructure (e.g. fire breaks, access roads. etc.) to prevent and fight forest fires. 	X			X		X
Over-grazing	5	<ul style="list-style-type: none"> • Increasing demand for meat products; • Use of farm animals due to lack of mechanization; • Increasing number of cattle grazing in a decreasing forest area; • No alternative to forests as source of fodders and lack of integrated farming systems promoting on-farm fodder production. 	X					X
Storms	6	<ul style="list-style-type: none"> • Degraded mangrove ecosystems affected by an increasing intensity and frequency of extreme climatic events. 		X				
Pests	7	<ul style="list-style-type: none"> • Expansion of planted forests (monoculture) • Climate change causing increasing temperatures and frequency of droughts. 				X		
		General underlying causes	D	C	T	M	H	I
		<ul style="list-style-type: none"> • Lack of incentives for implementing sustainable forest management; • Insufficient international support in the forestry sector (capacity building and programme implementation); • Low institutional capacity; • Weak policy implementation; • Inadequate forest law enforcement; • High opportunity costs of sustainable management of forests at the local level • Lack of national budgets/finance to support 	X	X	X	X	X	X

		<p>sustainable forest management activities by line agencies, local authorities and local communities</p> <ul style="list-style-type: none"> • Insufficient consultation in establishment and revision of forest boundaries; • Lack of local and participatory land use planning; • Low levels of stakeholder participation and involvement in forest management and inadequate revenue sharing. • State ownership of forests or the lack of local forest tenure rights and management responsibilities lead to poor forest management. 						
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Table 3.5: Drivers outside Forestry Sector, Deforestation

Drivers	Impact	Driver specific underlying causes	Forest types					
			D	C	T	M	H	I
Expansion of Agriculture (Subsistence and Commercial)	1	<ul style="list-style-type: none"> • Low agricultural yields and insufficient agricultural land for increasing population; • Increasing accessibility of forest areas and migration into forest areas; • Social norms (claiming land through utilization or cropping); • Weak forest land tenure encouraging conversion of forests into agriculture; • Promotion of commercial agriculture (including industrial plantations such as palm oil, rubber, pulp wood etc.) by decision makers who compare relatively low direct economic benefits provided by forests to other alternatives such as agriculture (no valuation of environmental services); • Ambitious production targets for the agricultural sector (contribution to national income); • Increasing national and regional demand for agricultural commodities (e.g. rubber, oil palm, sugar cane) and influx of Foreign Direct Investment (FDI) have resulted in large-scale agri-industrial development; • Lack of or poor S/EIA (Environmental Conservation law), and lack of implementation and monitoring of corresponding mitigation plans; • Lack of inter-ministerial coordination in areas such as land-use planning, private investment management (screening, approval and monitoring), policy and legal framework development (e.g. Ministry of 	X	X	X	X	X	X

		Agriculture and Irrigation has issued Farm Land Law (2012) and the Fallow, Vacant and Virgin Land Management Law (2012)).						
Mining	2	<ul style="list-style-type: none"> • High global and regional demand • Lack of or poor S/EIA and lack of implementation and monitoring of corresponding mitigation plans; • Weak coordination of Mining sector with Forestry Sector (laws, approval process). 	X	X	X	X	X	X
Hydro-power Development	3	<ul style="list-style-type: none"> • High national and regional demand for electricity; • Lack of or poor S/EIA and lack of implementation and monitoring of corresponding mitigation plans; • Weak Coordination with Energy sector. 			X	X	X	
Infrastructure (road, pipeline, Special economic zones, power lines)	4	<ul style="list-style-type: none"> • Lack S/EIA regulations for public infrastructure and lack of implementation and monitoring of mitigation plans; • Lack of coordination among relevant ministries. 	X	X	X	X	X	X
Urbanization and resettlement	5	<ul style="list-style-type: none"> • Population increase; • Lack of urban/land-use planning • Resettlement of people displaced by Mines, Hydro-power dams, infrastructure • Refugees and migrants 	X	X				X
Development of aquaculture	6	<ul style="list-style-type: none"> • Increasing demand (national, tourism, export) 		X				
		General underlying causes	D	C	T	M	H	I
		<ul style="list-style-type: none"> • Current institutional setup (Central Land Management Committee headed by the Ministry of Agriculture and Irrigation and sub-national Land Management Committees at township level headed by the Ministry of Home Affairs/General Administration Department) makes it easier to convert forest which is not included in the Permanent Forest Estate (non-reserved or un-classified forest); • Overlapping and conflicting mandates of different land management committees: 1. Central and sub-national Land Management Committees (based on Farm Land Law and headed by MoAI), 2. National Committee on Land Scrutinising and Land Allocation (created by Presidential Decision and headed by MOECAP) and 3. Central Vacant, 	X	X	X	X	X	X

		<p>Fallow and Virgin Land Management Committee (based on the new VFVLM law and headed by MoAI) reduces efficiency of land management and land use planning.</p> <ul style="list-style-type: none"> • Weak enforcement of the law; • Land grabbing facilitated by insufficient or ineffective protection of traditional land or forest tenure rights coupled with the lack of fair and transparent land conflict resolution mechanisms and structures; • Poverty and lack of alternative livelihoods; • Increasing demand for resources from growing middle class; • Eco-system services of forest undervalued and/or not considered in policy and investment decisions. 						
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Based on the initial analysis of drivers and underlying causes of forest degradation and deforestation, the Technical Working Group on Drivers and Strategies made an attempt to quantify future trends (5-15 years) or impacts for the main drivers and for each of the main forest categories (Table 3.6). A population growth of 2% and the expected influx of foreign investment explain some of the future trends identified by the group. This analysis was reviewed and further consolidated during the National REDD+ Readiness Roadmap consultation process.

Table 3.6: Possible future trends in forest degradation and deforestation

Driver	D	C	T	M	H	I	Comments		
							Decrease	Status quo	Increase
Forest Degradation									
Over-exploitation (legal logging)	na	na	-	-	na	-	Review of AAC and strict implementation of MSS		
Over-exploitation (illegal logging)	na	na	+/-	+/-	na	+/-	Positive political change and improved access to better and more demanding markets (FLEGT-VPA, due diligence regulations EU/AUS/USA), EITI (Extractive Industry Transparency Initiative) but effects will remain limited in unstable border areas where most illegal logging occurs.		
Over-harvesting of wood biomass	+	+	+	+	+	+	Increasing energy demand and lack of alternatives		
Shifting cultivation	na	na	+/-	+/-	na	+/-	Stabilization programme (promotion of alternatives based on better tenure: Agro-forestry, Community Forestry) is likely to reduce the need for additional land.		
Deforestation									
Expansion of agriculture	+/-	+	+	+	-	+	Lack of additional land available in traditional agricultural areas and rapid increase in demand for agricultural commodities accompanied by influx of FDI.		

Mining	+	+	+	+	+	+	High demand and influx of FDI
Hydro-power development	na	na	+/-	+/-	+/-	na	Large scale hydropower development is likely to continue but is no longer a priority for government. There is a desire to focus on smaller scale low impact hydropower development.
Infrastructure development	+	+	+	+	+	+	Will increase due to general population increase and development, plus will accompany influx of FDI in NR or extractive sectors.
Urbanization	+	+	na	na	na	+/-	Central dry zones and coastal area have high population density and increase.

3.3 Further quantitative study on drivers of deforestation and forest degradation

The initial assessment of drivers and underlying causes of deforestation and forest degradation is based on inputs from a large number of national and regional stakeholders and should therefore reflect the reality on the ground. What is currently lacking is the collection and verification of quantitative data resulting in a more evidence-based ranking of the main drivers listed in Tables 3.4 and 3.5. There is a need to assess respective Greenhouse Gas (GHG) emissions or carbon stock removals for each driver. A corresponding study will build on the GHG Inventory included as part of Myanmar's Initial National Communication (INC) to the UNFCCC (2012). The GHG Inventory indicates 1) activities causing loss of carbon or annual decrease in carbon stock (e.g. wood removal) and 2) activities contributing to direct GHG emissions (e.g. biomass burning). GHG Inventory data in Table 3.7 provides an initial quantitative assessment of drivers of forest degradation but would need a further breakdown for the main drivers of deforestation. The reference year for the INC is 2000. The proposed study will be based on the most recent data available.

Table 3.7: Annual decrease in carbon stocks and GHG emissions by different activities for the year 2000

Activity	Loss of Carbon (GgC)	GHG Emissions (GgCO ₂ e)	Comments
Wood removal	2,176.888	na	Total amount of industrial round wood harvested in the year 2000 was 2,161,980m ³ (Statistical yearbook 2007,Central Statistical Organization, Myanmar)
Harvested Wood Products	Not estimated	na	-
Fuel wood removal	26,936.418	na	Total amount of fuel wood production in Myanmar for the year 2000 was 33,442,200 m ³ (Statistical Year Book 2007,Central Statistical Organization, Myanmar)
Site preparation for forest plantations	na	1,863.207	The total forest plantation (commercial forest plantations or timber plantations) area established in 2000 was 30,731 ha. During land preparation, not all the selected areas are burnt (e.g. watershed conservation plantations). The actual burnt area for site preparation in the year 2000 was 23,277 ha.
Shifting cultivation	na	1,200.674	Forest areas that were slashed and burnt for growing cash crop but left for natural regeneration after some years, and

			that do not change permanently to other land use (estimated 15,000ha/yr.).
Deforestation	na	37,340.947	Deforestation in the year 2000 was 466,500ha (FRA2005). All the deforested areas were not burnt. However the reliable data on the land use change pattern (from forest land to grassland, cropland, settlement, water body, etc.) was not available. Therefore, all the deforested lands were assumed to be burnt in this study for conservative estimation.

Source: Chapter 3, GHG Inventory, INC Myanmar

This further quantitative assessment or study of drivers of deforestation and forest degradation will be completed during the initial stages of the Roadmap implementation. The level of assessment will depend on the nature of the driver and will therefore be: 1) at state level for mining, hydro-power and infrastructure development and urbanization and, 2) at district level for over-exploitation (legal and illegal), agricultural expansion, shifting cultivation and fuel wood harvesting. The study will cover all states but only a representative sample of districts. The selected districts will, where possible, coincide with REDD+ pilot projects or relevant forest management programmes so that assessments can be used as baseline data. To capture recent trends, assessments will be done against the most recent reference data. The assessments will also include an estimate or trends of future GHG emissions or for carbon stock removals for each driver. Results of this study will guide the further refinement (see Section 3.4.3.2) of the pre-identified candidate REDD+ strategies listed under Section 3.4.3.1). This assessment will also contribute to the development of RELs/ RLs which requires information on drivers and activities at work and their specific potential contribution(s) to future national emissions (see Section 5.2.3).

3.4: REDD+ Strategy options

3.4.1 Review of relevant policies, laws and rules

Myanmar has a very comprehensive and forward-looking policy and legal framework for the forestry sector. Existing policies, laws and rules that will contribute to or are relevant to the implementation of REDD+ include, but are not limited to, those listed in Table 3.8:

Table 3.8: Sector policies, laws and rules relevant to REDD+

Policies	Laws	Rules
National Environmental Policy (1994)	Customary Land Laws ²	Timber Board Extraction Manual 1948, Standing Orders for Extraction Staff 1970, Departmental Instruction for Extraction Department 1986
The Forestry section of Myanmar Agenda 21 (1997)	Duties and Rights of the Central Committee for the Management of Culturable Land, Fallow Land and Waste Land (1991)	Forest Rules 1995
Myanmar Forest Policy (1995)	Forest Law 1992	Community Forestry Instructions 1995
National Forestry Action Plan (1995)	Protection of Wildlife and Conservation of Natural	Format and Guidelines for District Forest Management Plans 1996

²Customary law, as opposed to statutory law, is the written and unwritten rules which have developed from the customs and traditions of communities.

	Areas Law (1994)	
National Forest Master Plan (NFMP 2001-2031)	Environmental Conservation law (2012)	Criteria and Indicators for Sustainable Forest Management 1999
National Sustainable Development Strategy (2009)	Vacant, Fallow, Virgin Lands Management Law (2012)	National Code of Practice for Forest Harvesting 1999
NBSAP (2012)	Foreign Investment Law (2012)	S/EIA guidelines/rules
Integrated Management Plan (Dry Zone)		

Nevertheless, the analysis of the underlying causes of the drivers of deforestation and forest degradation clearly demonstrates that there is insufficient implementation or enforcement of this framework. Limited financial resources, technical and institutional capacity, awareness and adequate planning, low government salaries and general governance issues contribute to this poor level of implementation and enforcement.

Some of the critical underlying causes driving deforestation and degradation are insecure tenure and weak forest and land governance and related institutions. These are areas where the current forest sector policy and legal framework needs further strengthening. The Community Forestry Instruction (CFI) issued by the FD in 1995 allowed communities to access common and certified use rights to forest land for the first time. The objective of the CFI was to engage local populations in forest management. The FD issued an instruction, avoiding a lengthy legal review process and allowing the rapid initiation of CF. CF was prioritized in the National Forestry Action Plan (1995) to contribute to SFM and to address the national fuel wood demand. The experience³ gained so far shows that Forest Users Groups (FUG) seem unable to compete for land against other departmental claims as effectively as if the CFI was enshrined in law. Considering the important potential of CF and the initial barriers to its development, there seems to be an urgent need for a clearly defined national CF policy supported by an amended 1992 Forest Law and specific CF rules to scale up CF in the country. Amendments to the 1992 Forest Law are currently being drafted by the FD and the content of the CFI is being reviewed. Although external consultation is not being explicitly sought in these processes, suggestions from the Environmental Technical Working Group (ETWG) are being submitted through informal channels. This review is an opportunity to improve the enabling framework needed for wider CF implementation and to promote participatory forest management to a wider forest landscape by including swidden agriculture or taungya. The systematic and accompanied handover of tenure but also management responsibilities to local communities could bring transformational change in the way forests and associated swidden agriculture are managed in Myanmar.

Another major underlying cause of deforestation and forest degradation are inconsistencies and conflicts with ex-sector policies. In the drive for agricultural development and power generation, dams and reservoirs are being constructed at a rapid rate. This, in turn, has submerged large forest areas, adversely affecting forest and biodiversity conservation. Likewise, encouraging deep water paddy cultivation and aquaculture of fish and prawns usually impacts mangrove forests while rubber and palm oil plantation in the reserved forest area result in the loss of natural forests. The current forest policy prescribes the expansion of the Permanent Forest Estate to 40% of the total land area but the available land is limited and there is an inevitable tradeoff among the various sectors. It is clear that forest sector development and its long-term sustainability is constrained due to lack of close interaction with other sectors of the economy and the lack of a holistic vision which incorporates sustainable development as an imperative in all policies and sustainable resource management as a central goal along with the provision of employment, income and food security.

³Community Forestry in Myanmar: *Progress & Potentials*, Kyaw Tint, Oliver Springate-Baginski and Mehm KoKo Gyi, 2011

There is a clear recognition at the highest level of government that uncoordinated and top-down land-use and socio-economic development planning are inappropriate. Since July 2011, the Ministry of National Planning and Economic Development has moved to broadly bottom-up planning with responsibilities devolved to Townships, Districts and Regions/States. The Inter-Ministerial Land Scrutiny Group chaired by MOECA, has been mandated by the President to devise national-level regulations of land-use planning. At State/Region, District and Township levels, Land-use Advisory Committees including civil society and private sector representatives, have been or are to be established.

As in many developing countries, the forestry sector has traditionally faced many corruption challenges and REDD+ is equally susceptible to corruption risks at various levels. Corruption can lead to decreases in REDD+ effectiveness (e.g. continued or increased deforestation and forest degradation), efficiency (by creating distortions in markets) and equity (by unfairly denying certain communities benefits from REDD+ payments), overall failing to deliver REDD+ development outcomes and leading to decreased confidence by local actors and international investors, therefore making the REDD+ mechanism unsustainable.

Countries undertaking REDD+ activities are required by the United Nations Framework Convention on Climate Change (UNFCCC) 2010 Cancun Agreements to develop both transparent forest governance systems as well as systems for providing information on how this governance safeguard and the others are promoted, addressed and respected. Myanmar ratified the UN Convention Against Corruption (UNCAC) on 20 Dec 2012, under which it is obliged to (*inter alia*):

"...develop and implement or maintain effective, coordinated anti-corruption policies that promote the participation of society and reflect the principles of the rule of law, proper management of public affairs ... endeavour to establish and promote effective practices aimed at the prevention of corruption ... endeavour to periodically evaluate relevant legal instruments and administrative measures with a view to determining their adequacy to prevent and fight corruption."

Corruption is defined as "the misuse of entrusted power for private gain"⁴ and occurs in public and private sectors. Corruption hinders countries' sustainable development and has detrimental impacts on the poor, marginalized and oppressed communities, such as women and indigenous peoples. There are different 'forms of corruption'⁵ (Box 3.1).

Box 3.1: Forms of Corruption

Bribery refers to the act of offering someone money, services or other inducements to persuade him or her to do something in return. Bribes can also be referred to as kickbacks, hush money, or protection money.

Cronyism and **clientelism** refer to the favorable treatment of friends and associates in the distribution of resources and positions, regardless of their objective qualification.

Embezzlement is the misappropriation of property or funds legally entrusted to someone in their formal position as an agent or guardian.

Extortion is the unlawful demand or receipt of property, money or sensitive information to induce cooperation through the use of force or threat.

⁴ UNDP (2008), 'Corruption and Development: Anti-corruption Interventions for poverty reduction, realization of the MDGs and promoting sustainable development', Primer on Corruption and Development, New York, USA at pp.7.

⁵ UNDP (2008), 'Corruption and Development: Anti-corruption Interventions for poverty reduction, realization of the MDGs and promoting sustainable development' pp. 231.

Fraud refers to an intentional misrepresentation which is done to obtain an unfair advantage by giving or receiving false or misleading information.

Grand corruption involves bribery or the embezzlement of huge sums of money by those at the highest levels of government.

Nepotism is a form of favoritism that involves family relationships. Its most usual form is when a person exploits his or her power and authority to procure jobs or other favors for relatives.

Patronage refers to the support or sponsorship by a patron (a wealthy or influential guardian), e.g. to make appointments to government jobs, or to distribute contracts for work.

Petty corruption, also called bureaucratic corruption, involves low level contacts between citizens, businesses and officials and generally takes place where public policies are being implemented. It is common in service delivery, such as in health care, where people use public services.

Political corruption is the misuse of political power for private gain for preserving or strengthening power, for personal enrichment, or both.

State capture is where the state is held captive to the actions of individuals, groups, or firms who influence the formation of laws, rules and regulations to serve their own private interests. This is a way of 'legalizing' corruption.

A number of analytical frameworks have been now released to unpack what is comprised in the broad term of "corruption in REDD+" at the national level. Without attempting to be exhaustive, these include:

- 1) An initial analysis of different risks classified according to the three phases of REDD+, by UNDP⁶;
- 2) A framework by U4 classifying risks into three main categories (a) Land grabbing and tenure rights, b) Fraud and conflict of interest in MRV activities, and c) Embezzlement and elite capture of REDD+ revenues⁷;
- 3) A framework by "thematic areas" (a) policy, b) legislation and regulation, c) financial and economic flows, d) application activities, e) monitoring and reporting and f) enforcement), by Transparency International⁸.

At an early stage of Roadmap implementation, a UN-REDD "Corruption Risk Assessment" will be undertaken to ensure:

- That all relevant stakeholders understand corruption risks in REDD+ and are clear on their roles and responsibilities to mitigate these risks;
- That corruption risks are adequately represented in the developing safeguards information systems for REDD+;
- That a monitoring mechanism for corruption risks in REDD+ is initiated;
- That the National REDD+ Strategy incorporates effective measures to address REDD+ corruption risks that fully reflect national and international requirements.

3.4.2 Review of past and present forest management programmes

The existing policy and legal framework for the forestry sector together with the National Forest Master Plan (NFMP, 2000-30) guide the development and implementation of forest management programmes in Myanmar. The NFMP strategic areas are: a) management of natural forests; b) establishment of forest plantations; c) establishment of community forests; d) growing trees in

⁶ Staying on track : Tackling Corruption risks in Climate Change, UNDP, December 2010

⁷ Corruption and REDD+- Identifying Risks Amid Complexity, U4/CMI May 2012

⁸ Keeping REDD+ clean, Transparency International, October 2012

homestead and non-forested areas; and e) promotion of wood-based industry value-added forest products. The sections below provide an overview and assessment of major forestry programmes, and analyses the results obtained to date. Some of these programmes have been identified as potential candidate REDD+ strategies (see Section 3.4.3.1) by the Drivers and Strategies Technical Working Group and the different stakeholders consulted during the National REDD+ Readiness Roadmap Consultation process. REDD+ will be an opportunity to improve and upscale these existing approaches or programmes.

3.4.2.1 Management of Natural Forests

The management of the Permanent Forest Estate

Myanmar's Permanent Forest Estate (PFE) is divided into "Reserved Forests", "Protected Public Forests" and "Protected Areas" and its management is the responsibility of the MoECAF. This classification system defines the way government manages natural forests in Myanmar. The PFE currently covers approximately 30% of the total land areas (see Table 3.9) but the 1995 Forest Policy envisages a further expansion of the classified forest to a total of 40% of the land area.

Table 3.9: Status of the Permanent Forest Estate in Myanmar

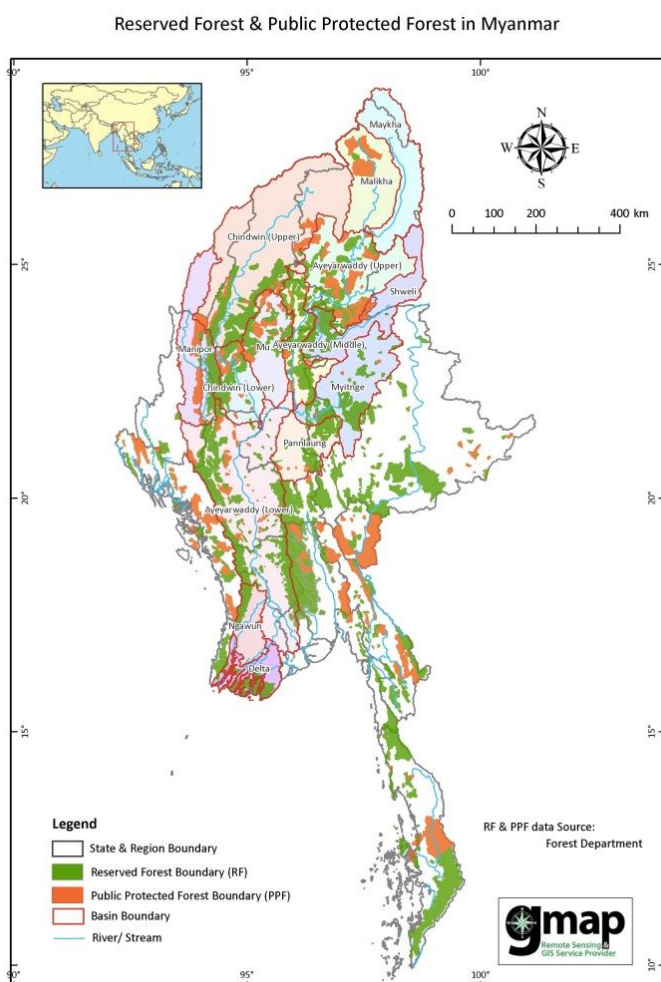
Category	Area (ha)	% of land area	Forest Policy target
Reserved Forests	12,184,291	18.00	30% of land area
Protected Public Forests	4,094,960	6.05	
Protected Area System ⁹	3,510,685	6.67	10% of land area
Permanent Forest Estate	19,789,936	30.73	40% of land area

Source: Planning and Statistics Division, FD, 2010 (Forestry in Myanmar, October 2011)

⁹By September 2012 there were 36 Notified Protected Areas (33 terrestrial and 3 aquatic)

Reserved Forests fall under provisions found in the Forest Law (1992). It is a protected class of forestland that is intended primarily for the production of forest products. Under existing law, it may be used for various types of local village production or Community Forestry. Many areas of Reserved Forest land in the country have been converted to agricultural production by smallholder farmers or village settlement without a change in the classification of the land. In many areas, land classified as Reserved Forest land on existing maps does not match current use.

Protected Public Forests fall under provisions found in the Forest Law (1992) and the Protection of Wildlife and Conservation of Natural Areas Law (1994). As opposed to Reserved Forest, these areas of forestland are intended primarily for conservation purposes. These areas tend to be well demarcated, so the problems related to encroachment are not as prevalent as with Reserve Forest land. The establishment of new Protected Public Forests on land already occupied by local communities could lead to conflict.



With an estimated forest cover of 47% of the total land area (FRA 2010), the above figures show that a substantial area of forest is not classified as PFE. It is in fact expected that as much as 50% of the PFE no longer qualifies as 'forest' due to long-term agricultural encroachment. A recent presidential decision has recommended the revision of the boundaries of the PFE to reflect this ground reality. This would reduce the real PFE to 15% of the total land area, leaving over 30% of the total land area as unclassified forest. To reach the PFE policy target of 40% would still be feasible but would require the accelerated gazetting of remaining forest last. It would also require the sustainable management and protection of an increasing PFE which will become challenging considering the steady deforestation¹⁰ rates and ongoing forest degradation.¹¹ What becomes very clear and what has already been recognised in the 1995 Forestry Policy is that state management of forests needs to evolve. Local communities and where appropriate the private sector, need to become major partners in forest management.

Sustainable Forest Management

The Myanmar Selection System and

¹⁰ From 65% of the total land area in 1925 to 47% in 2010

¹¹ Dense forests went from 45% of the total land area or the single largest land use in 1990 to 19.9% in 2010.

The Myanmar Selection System (MSS) has been the main silvicultural system practiced in the management of practically all the natural forests in the country. The MSS (Fig. 3.1) is merely a Selection-cum-Improvement system to exploit tree species from a complex multi-species forest and is designed to maintain a high yield of quality timber and enhance the natural regeneration of commercially valuable trees. The main features are to selectively extract mature trees, to carefully protect the immature stock and assist it to attain maturity. The MSS defines the Annual Allowable Cut (AAC), fixing the annual yield (number of trees) and prescribed exploitable girth. The process for working out the AAC through the MSS is shown below:

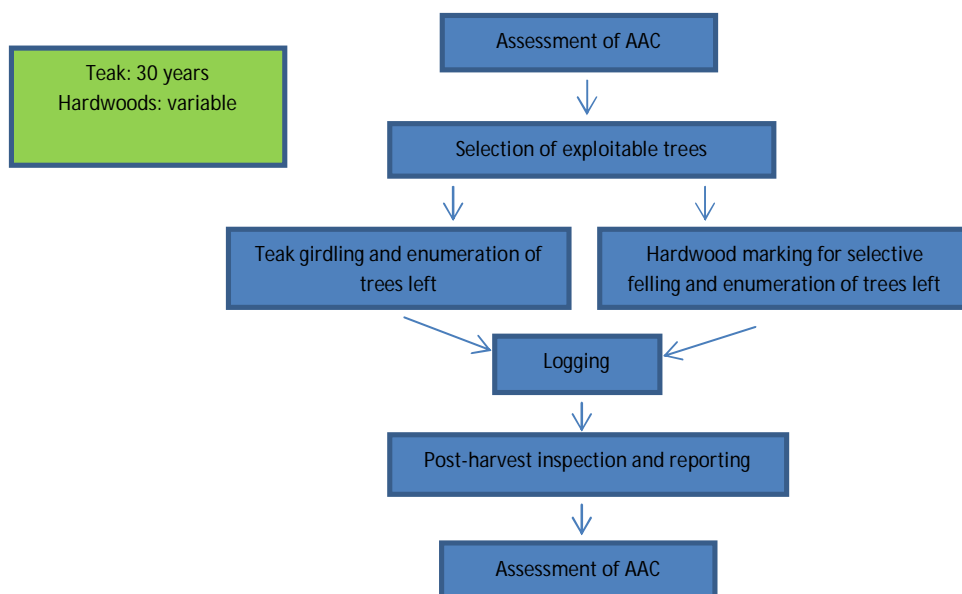


Figure 3.1: The Myanmar Selection System (MSS) process (Source: Forest Department)

To further improve state management of natural forests, Criteria and Indicators (C&I) for Sustainable Forest Management (SFM) at national and Forest Management Unit (FMU) levels were developed in 1999. The FD has been testing the adequacy and application of Myanmar's C&I at FMU level for further improvement. Successful models were established in Pauk-khaung Township (Pyi District, Bago Region) but the FD has so far unable to replicate this model more widely. Myanmar's C&I will be used to develop a FMU level checklist which will become the basis for a national timber certification scheme. A National Code of Forest Harvesting Practices was developed in 1999 but will need further revisions to enable wider application.

The reality of forest exploitation in Myanmar is that the MSS is often overlooked or poorly applied. Forest exploitation above the AAC and permission to cut trees of immature size are common (Fig. 3.2) and as harmful as illegal practices. This over-exploitation is partly due to the ambitious annual income targets set for the sector and which undermines efforts to achieve SFM of natural forests. The recognition of this problem is one of the factors which contributed to a government decision to impose a log export ban from 2014 onwards.

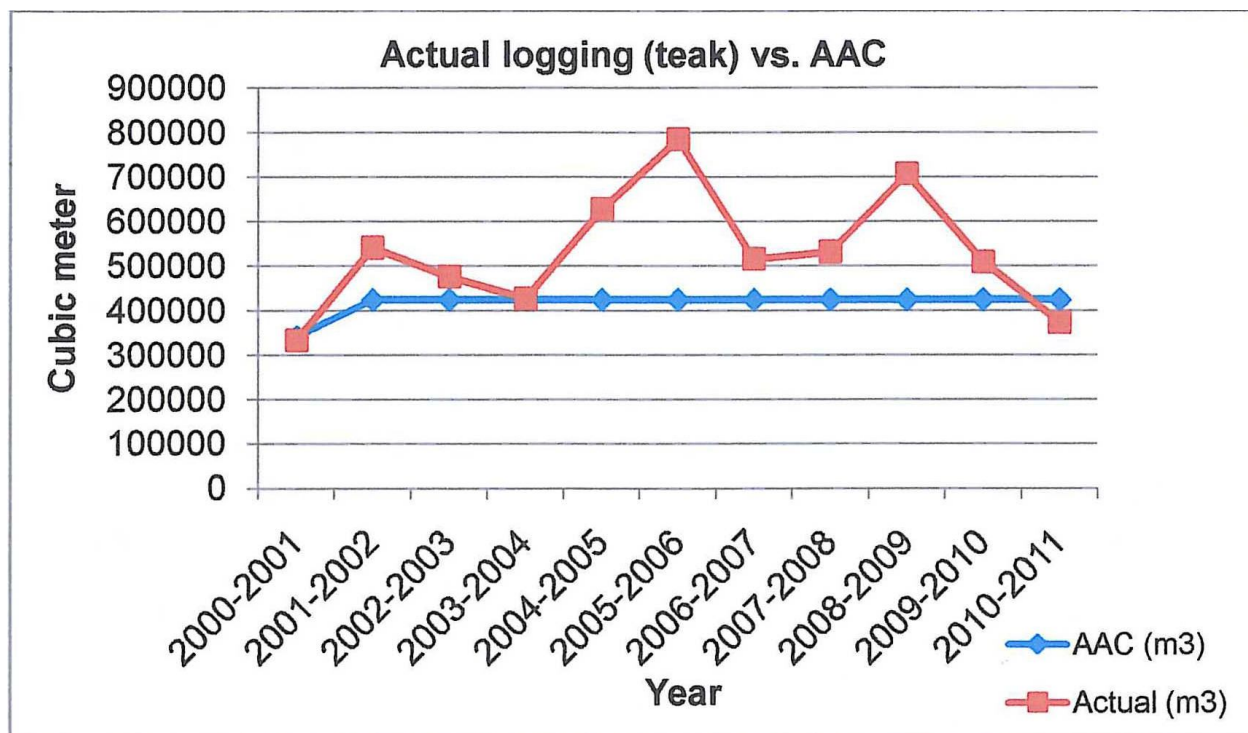


Figure 3.2: Comparison between actual logging and ACC at national level for teak

Source: Forestry Department 2012, Current Status of REDD+ Readiness Preparation in Myanmar

Control of illegal logging

The following measures are being intensified to reduce this driver of forest degradation:

- Improved enforcement of existing forest law, rules and regulations;
- Establishment of forest checkpoints across the country;
- Increased inspection of logging operations to ensure compliance with prescribed rules and regulations;
- Adoption of an incentive system to encourage detection, enforcement and reporting;
- Partnership with local communities to combat illegal logging;
- Promoting cooperation with media, NGOs and CSOs for improving transparency;
- Strengthening of coordination and cooperation among relevant government agencies;
- Cooperation with neighbouring countries to curb illegal logging along national borders (including the Forest Law Enforcement Governance and Trade (FLEGT) Initiative in collaboration with ASEAN members and the European Union);
- Participation in Extractive Industry Transparency International (EITI);
- Reducing the contribution of the forestry sector to the national economy to a sustainable level (phased reduction of harvesting levels of Teak and other hardwoods);
- Planned log export ban;
- Introducing alternative fuel wood production and further development of efficient cook stove programmes;
- Development of (Payment for Environmental Services (PES) approaches including REDD+.

Stakeholder consultations held during the development of the present roadmap confirm that incidence of forest crime remains high despite the intensification of current enforcement procedures. It also appears that forest-dependent communities are obliged to break the law in order to earn income. This indicates there is a need to adapt relevant legislation and corresponding enforcement

procedures, leaving ample room for more formal involvement of local people in forest product value chains. Stakeholders also recommended concentrating law enforcement efforts on the eradication of serious forest crime.

The Community Forestry Programme

The FD issued the Community Forestry Instruction (CFI) in 1995 to engage local populations in forest management. Under the CFI, community members from Forest User Groups (FUGs) form a committee and develop a management plan. Upon approval of the plan by the FD, the FUG receives 30 year (renewable) use rights documented in a Community Forestry Certificate. The 30 year National Forest Master Plan (NFMP 2001) mandated that 2.27 million acres (equivalent to 920,000 ha or 1.36% of the total land area) be handed over to FUGs by 2030-31. The total area of community forests had reached up to 41,950 ha by March 2010 which is an average of 2,800ha of forest handed over to communities every year since the enactment of the CFI. To meet the FMP 2031 target, some 50,000ha would have to be enrolled under CFO every year. There are now over 500 FUGs with more awaiting their certificate. Implementation progress has been highest in Shan, Rakhine, Magway and Mandalay.

A recent evaluation¹² of the CF programme indicated that most FUGs (out of a sample of 16) were established with donor support and only a small proportion were self-starters. Some 50% of the FUGs were well institutionalized and 31% were moderately well institutionalized. In general, CF did improve regeneration and forest condition. According to the study forest protection from outsiders remained a challenge for FUGs and backing from the local FD officials was often insufficient. Effects in terms of improvements to livelihoods varied but the overall picture was very positive with most FUGs applying highly to moderately equitable benefit sharing. Post-formation support was generally perceived to be moderate or poor.

This recent evaluation of the CF programme is very encouraging but also shows that the development of the programme and support from FD officials on the ground does not match the visionary and ambitious targets of the FMP 2001. CF is still in its infancy and the gains made to date are fragile. CF is primarily seen as a way to restore degraded forests which very often delays the generation of benefits for the members of FUGs. There is a lack of experience among FD staff in planning, facilitating, implementing and supporting CF. There are also no real incentives to hand over and support CF. Despite the clear priority given to the programme in the NFMP, there are often no corresponding targets in District Forest Management Plans. This could illustrate the lack of stakeholder and community involvement in the development of these plans.

Management of forests outside the PFE

Public Forest lands are forests which have not been gazetted or classified as Permanent Forest Estate but fall under provisions found in the Forest Law (1992) and remain under the responsibility of the MoECAF. Areas of Public Forest land fall within the definition of virgin land under the VFV Law (2012). The Central Committee for the Management of Vacant, Fallow and Virgin Lands, headed by the Minister of Agriculture and Irrigation (MoAI), may make a request to the Ministry of Environmental Conservation and Forestry (MoECAF) that these lands be used for State economic development under the VFV Law. Currently the most common land use in public forest land is by smallholder farmers in the uplands practicing shifting cultivation.

“Virgin land” is defined in Article 2 of the VFV Law as “new land or other woodland, in which cultivation has never been done before.” The land may or may not be covered in forest, and includes

¹²Community Forestry in Myanmar: *Progress & Potentials*, Kyaw Tint, Oliver Springate-Baginski and Mehm KoKo Gyi

land that has been “cancelled legally from Reserved Forest land”. The Forest Department of MoECF and the MoAI currently have overlapping authority over these areas of land.

“Vacant and Fallow Lands” are areas of land defined in Article 2 of the VFV Law as land which was cultivated and consequently abandoned. This land classification includes fallows and therefore shrub land and secondary forests in shifting cultivation areas.

There are mechanisms by which Community Forests can be established within VFV land. Requests for CF establishment have to be submitted through the General Administration Office (township level) to the General Administration Department of the Ministry of Home Affairs.

Stabilisation of shifting cultivation

Shifting cultivation is often cited as a major cause of forest degradation. Nevertheless, the FD recognizes swidden agriculture as a traditional way of life for many ethnic groups living in upland areas but also a survival strategy for the landless poor living in and around forest areas. A growing body of research also shows that shifting cultivation, especially on a sufficient rotational basis, is sustainable and supports survival of natural forests, wildlife, ecosystems and biodiversity. The taungya system, which was in fact the fore-runner of agro-forestry and community forestry, began with shifting cultivators. One family uses an average of one hectare of land annually with an average fallow period of 7 years. The shifting cultivation area in the country was estimated¹³ at 22.8 % of total land area with approximately 2 million families involved in this practice.

With a rapidly growing population and the loss of traditional shifting cultivation land to private investment and other developments, fallow periods have been shortened. This has led to changes in the vegetation structure and increased the area of degraded secondary shrub or grassland with reduced regeneration potential. This problem is more acute in the coastal zone and in eastern and north eastern Myanmar. Since shifting cultivation is no longer remunerative in the existing areas and because farmers are losing their traditional land, pioneering shifting cultivation into new forest land is becoming a growing problem.

To stabilize shifting cultivation there is a need to establish a well-defined tenure system to serve as an incentive for the shifting cultivators to improve the productivity of the land. “Farmland” as defined under Article 3 of the Farmland Law includes “taungya land” or upland farms but only when it is not in a rotational fallow or shifting cultivation system. Rotational fallows are defined as “vacant and fallow land” in Article 2 of the VFV Law. They are not considered as “farmland” and therefore fall outside the land surveys conducted by the SLRD resulting in weak land use rights. Customary land tenure linked to shifting cultivation is not officially recognized.

In addition to improved tenure, taungya farmers need support by way of an in-situ development approach. A national level and multi-stakeholder programme for the reclamation of highlands has been developed. The programme encourages the upkeep of traditional land use systems, customary rights and cultural values. The FD, in cooperation with other sectors, has initiated the following activities:

- Community Forestry based on traditional agro-forestry systems;
- Introduction of new technologies to complement traditional forest-based knowledge;
- Recruitment of shifting cultivators to implement routine forestry operations such as plantation establishment;
- Introduction of income generating activities and improved access to markets and credit;

¹³ An Experience Gained in Organising Shifting Cultivators, An Win, 2000.

- Demonstrations of contour planting and soil improvement in upland areas;
- Free distribution of seedlings (trees and crops) for agro-forestry development by upland communities;
- Awareness raising.

Experience from researchers and development programmes working in upland areas indicate there is a need to adopt an integrated approach when supporting slash-and-burn framers. These approaches, such as the one indicated above, should combine improved tenure, the introduction of new technologies and livelihoods improvement activities. There is also a wealth of indigenous knowledge which should be better documented, shared and encouraged locally and regionally among concerned stakeholders as part of the strategy to develop better and more intensive agroforestry systems. Categories of knowledge to be shared include:

- Local institutions for land tenure systems and natural resources management regulations;
- Approaches to participatory decision making and conflict resolution;
- Technologies for intensification of agriculture and forestry on sloping lands.

3.4.2.2 Reforestation/afforestation

Reforestation in Myanmar gained momentum in the early 1960s and large scale plantations forestry began in the 1980s. By the end of 2000, the total area of various forest plantations exceeded 675,000 ha (Table 3.10). The National Forest Policy 1995 stipulates that regeneration, either natural or artificial, must be carried out to produce forest products from natural forest, and to plant in degraded areas to repair the environment and ecology and to fulfill local and industrial uses. Commercial plantations, established to compensate for the decline of timber production from the remaining natural forests, constituted 55% of the total planted area and teak constituted 42% of all the planted species. Village supply plantations were primarily established to produce firewood and to decrease the pressure on natural forests. Industrial plantations were established to produce raw material for the industry and watershed plantations were aimed at avoiding excessive siltation of hydro-power reservoirs.

Table 3.10: Status of forest plantations at the end of year 2000 by type of plantation

Type of plantation	Area (ha)	%
Commercial	371,074	55
Village supply	188,703	28
Industrial	50,356	7
Watershed	65,610	10
Total	675,743	100

Source: PSD, FD (Chapter 2, INC Myanmar)

The rate of commercial or timber plantation establishment is increasing but with less direct involvement of the FD. Financial and human resources available to the FD are limited and forest plantations require long term investments. The private sector is now increasingly taking over the role establishing commercial plantations. The responsibility for the establishment of industrial plantations is now increasingly handed over to the concerned ministries through a system of leases or concessions. Nevertheless, the FD has a plan to increase the rate of watershed plantation establishment. Watershed plantations are established as part of the rehabilitation of forest around hydro-power reservoirs. Unlike plantations established through the taungya system, initial or preparatory burning of remnant vegetation is avoided to reduce the risk of soil erosion.

The taungya system and establishment of commercial plantations

The establishment of Teak plantations using the taungya (agro-forestry) method started in 1856. The success with this method led to a widespread planting of Teak, *Acacia catechu*, and *Xylocarpus* and by 1930, a total of over 19,000 ha had been planted. Taungya cutters or slash-and-burn cultivators were allowed to practice taungya cultivation wherever they pleased, on condition that they planted Teak seedlings provided by the Forest Department (FD) when they raised their crops. The taungya system has the advantages that it provides land to grow agricultural crops, while Teak trees are planted at a regular spacing of 1.8 x 1.8 m (or approximately 3,000 trees per ha), among the crops, almost free of charge. A nominal amount, depending on the survival percentage, was paid by the FD to the farmers in the form of a bonus.

Experience in Myanmar reveals that some of the Teak plantations established by taungya cutters were located on unsuitable sites or were scattered over wide areas in small patches. They were consequently difficult to effectively tend, manage and protect. For example, lack of regular thinning of Teak plantations led to stunted growth and soil erosion due to lack of undergrowth vegetation. The lesson is that the taungya system of planting teak can be successful only if it is undertaken on suitable sites with proper tending and supervision.

In Myanmar, most commercial plantations are established under the departmental taungya system, evolved from the original taungya system adopted by the Forest Administration before the Second World War. Under the departmental taungya system, taungya cultivators are paid to clear (by burning remnant vegetation which is no longer classified or considered as "forest") sites for planting by the FD in the form of minimum daily wage or on a piecework basis. Similarly, fixed rates for each stage of plantation establishment are paid to the villagers. On the social side, temporary forest villages including a primary school and water supply system are established for villagers who agree to participate in the work on a full-time basis. These villagers therefore enjoy the benefit of a good income for their labour as well as income from the agricultural crops they grow in the plantation areas. The more facilities are provided, the more attractive it is for villagers to participate in departmental plantation work. The District Forest Officers normally oversee the situation and manage the programme as a measure to solve the socio-economic problems of landless villagers dwelling near the forests. This system works well in large-scale commercial plantation programmes.

The establishment of commercial plantations by the FD has dramatically declined since the government started involving the private sector. In 2006, the government introduced the private forest plantation scheme with three major objectives: to supplement teak and hardwoods production, to support economic development of the country and to contribute to environmental conservation. By March 2010, 13,618 ha of teak and 14,540 ha of other hardwood plantations had been established by the private sector. Private individuals or companies interested in establishing timber plantations can acquire 30 year extendable leases in the PFE for a maximum of 100ha. The allotment of land is based on specific criteria taking into account the growing (not carbon) stock or regeneration potential of the forest. This system can also be used for the establishment of rubber and palm oil plantations but in parts of the PFE, leases are restricted to teak and hardwoods. Leases for the establishment of rubber and palm plantations outside the PFE are easier to obtain. Investors need to apply to the MoAI or the Myanmar Investment Commission of the President's Office. If these plantations are established outside the PFE but within the non-reserved public forest, applications still require prior approval of MoECAF.

The establishment of commercial plantations by the private sector continues to make use of the taungya system but not in a systematic way. The FD continues to use the taungya system to establish smaller commercial plantations (50-150ha) at the township level. Financial incentives paid to the taungya farmers were increased to enable the FD to compete with the private sector.

Village supply, industrial and watershed plantations

With growing population pressure and corresponding increase in demand for firewood and charcoal, the FD started the establishment of Village Supply Plantations in degraded reserved forests and protected public forests. Fast growing multi-purpose tree species like *mezali* (*Cassia siamea*), *sha* (*Acacia catechu*), *auri-sha* (*Acacia auriculiformis*), and *bawzagaing* (*Leucaena leucocephala*) are used. In addition, *Eucalyptus camaldulensis* and *Prosopis juliflora* are also planted in the central dry zone where average annual rainfall is approximately 500 mm. Village plantation establishment is increasingly combined with CF where plantations and degraded natural forests are handed over to communities for 30-year renewable leases. There are no fees or land taxes for the establishment of these community level plantations.

Industrial plantations are established near each specific industry as required. The main objective is to assure a supply of raw material to industry without depending on natural forests and to reduce the cost of transportation of raw materials.

In view of the construction of more than 100 dams and reservoirs, big and small, in the last decade by the government, watershed management has become vital to extend the life span of reservoirs through mitigation of siltation and sedimentation. The current strategy is to promote reforestation as well as agro-forestry practices in the interest of local level farmers who traditionally cultivate various agricultural crops on the slopes of the watersheds.

3.4.2.3. Biomass conservation programmes

The biomass sector has links to several ministries. MoECAF is in charge of the fuel wood sector. The MoAI is in charge of the use of agro-waste for fuel (direct combustion) as well as biofuels. Biogas and biomass gasification are technologies promoted by the Ministry of Science and Technology. Biomass energy contributes more than 60% of the total energy consumption and is used by more than 70% of the population. Wood is the largest source of biomass energy.

There is a surprisingly large number of NGOs which have been involved in the promotion of Improved Cook Stoves (ICS), which appears to be an asset for future work on ICS. Local organisations like EcoDev, EGG, FREDA, MERN or REAM were commonly recruited by international organisations such as FAO, UNDP or Mercy Corps for their interventions focusing on the central Dry Zone and the mangrove forest in coastal areas. These efforts have been great in terms of reaching many people at a particular point in time. They rendered benefits to the targeted households as long as the distributed stoves stayed intact. However, the promotion of ICS in Myanmar is often justified with the battle against deforestation. In this case, short term ICS distributions are probably not the right instrument as they do not contribute to the desired long term objective. After 15 years of ICS promotion, the penetration of ICS is reported to be still limited. New market based approaches are needed to achieve sustainable usage of ICS. The promotion of ICS should be focused primarily on the perception of the user-households and not on the overall development goal or “reducing deforestation”. Hence, new promotion arguments are required which are addressing the references of the target groups. ICS should be improved in respect to these preferences. To address the differences in power to purchase and power to invest, a variety of ICS products of different costs and different quality should be offered to the customers.

Solid biomass waste is used as complementary cooking fuel in some areas. Pigeon peas and rice husks are important supplementary fuels particularly in wood deficit areas such as the central Dry

Zone. This concept, which has been a large success in other countries, might be another option to reduce fuel wood extraction from forest areas.

Initial biogas trials have not yet resulted in large scale application. During the 1980s and 1990s a number of smaller and larger biogas plants have been installed but basic technical problems have been reported. The Dutch development NGO SNV has assessed the biogas potential for household and large scale installations in Myanmar which could lead to the development of a national biogas programme.

3.4.3 Feasibility assessment of candidate REDD+ strategies

3.4.3.1 Initial identification of candidate strategies

REDD+ strategies will be designed to address the underlying causes of deforestation and forest degradation; and build on existing capacities and activities in the country to conserve, enhance and sustainably manage forest carbon stocks. REDD+ strategies fall into two broad categories:

- **Activity packages:** An activity package is a set of practical measures which will directly result in net reductions in GHG emissions and/or enhanced forest GHG removals. The costs of implementing an activity package per unit area, unit of time or unit of labour, can be predicted with reasonable accuracy. Its impact on GHG emissions can be measured directly through implementation of a national forest monitoring system, as set out in Section 6.
- **Governance measures:** A governance measure addresses existing gaps or inefficiencies in the implementation framework for REDD+. The overall impact on GHG emission reductions may be significant but cannot usually be measured directly. Governance measures may be necessary in order for some or all activity packages to be effective.

REDD+ strategies can cover any of the 5 “REDD+ activities”:

The five REDD+ activities	
(a) Reducing emissions from deforestation	REDD
(b) Reducing emissions from forest degradation	
(c) Conservation of forest carbon stocks	+
(d) Sustainable management of forests	
(e) Enhancement of forest carbon stocks	

During the REDD+ Roadmap development, an initial list of candidate REDD+ strategies was established by the Drivers and Strategies Technical Working Group based on the assessment of drivers and underlying causes of deforestation and forest degradation (Section 3.2), the assessment of policies, laws and rules (Section 3.4.1) and the review of past and present forestry management programmes (Section 3.4.2). The initial list of candidate strategies was further reviewed, prioritized and validated during the national and regional roadmap consultation workshops held in May and June 2013 (see proceedings in Annex 1). A first list of candidate strategies to address drivers of forest degradation or those within the forestry sector is provided in Table 3.11. These strategies will potentially cover four of the five REDD+ Activities including: i) the reduction of emissions from forest degradation, ii) sustainable forest management, iii) conservation of carbon stocks and iv) enhancement of carbon stocks. A second list of candidate strategies is provided in Table 3.12. These additional candidate strategies focus on the drivers of deforestation or those outside the forestry sector and will potentially contribute to the reduction of emissions from deforestation. Some of the

candidate strategies are policy measures which are included in the list of proposed readiness phase activities under this section.

Table 3.11: Initial identification of candidate REDD+ strategies for forest sector drivers (forest degradation)

Drivers	Driver-specific candidate strategies
Over-exploitation (legal)	<p>Prepare forest harvesting plans, in accordance with the principle of sustained yield and the optimization of production potential plans (MSS and local AAC), prior to harvesting operations (Forest Policy 1995). Phase-out approach of logging (by 2014): production below national AAC for teak and other hardwoods. Production based on sustainable extraction and not on set targets for forest sector contributions to national budget;</p> <p>Enforce National Harvesting Code of Practice, conduct post-harvest inventories and assessments by FD and apply fines or sanctions to MTE or operators as per internal regulations;</p> <p>Implement Log Export Ban (LEB) by 2014;</p> <p>Impose an export assessment tax inversely proportional to the value added content of the forest products (Forest Policy 1995);</p> <p>Improve domestic timber supply (through local supply by MTE and General Administration Department at market price) and improve efficiency of wood and timber transformation and use (by log export ban and FDI) , in collaboration with the private sector;</p> <p>Develop national standards and set up a national certification system;</p> <p>Abolish concessional pricing of forest products and effectively reflect real economic value (Forest Policy 1995);</p> <p>Abolish price controls except for consideration of social equity, e.g. providing basic needs at affordable prices with provision for the subsidy being reflected in national accounting in order to determine the realistic contribution of the forestry sector to the gross domestic product (Forest Policy 1995);</p> <p>Introduce conservation concessions (private sector, NGO, community) as an alternative to commercial or industrial plantations (private sector concessions) and state management in different categories of the PFE.</p>
Over-exploitation (illegal)	<p>Train FD and MTE staff, General Administration/local government, Police, NGOs, judges, prosecutors and lawyers in forest related policies, laws rules and enforcement;</p> <p>Combat illegal logging through better law enforcement (controls, checkpoints, improved documentation and traceability), the development of incentive systems for government staff to encourage denunciation of illegal activities and promote seizure of illegal timber, and the promotion of more effective collaboration with communities and neighbouring countries for improved monitoring and controls.</p>
Unstable or	Regularize existing areas under shifting cultivation (by handing over these areas as CF)

pioneering shifting cultivation (Not permanent conversion of forest into agricultural land)	<p>and permanent agricultural encroachment in forest land (by revising PFE boundaries), and fully enforce the provisions of the Forestry Act in the eviction of any future encroachment and other forms of forest land misuse (Forest Policy 1995);</p> <p>Implementation (based on better research on relationship between population increase and forest degradation and deforestation) of in-situ development programmes for shifting cultivators and integration of appropriate agro-forestry practices into smallholders' farming activities (Forest Policy 1995). Improvement of or alternatives to slash-and-burn agriculture: improved fallow, fire and erosion control, conservation agriculture, integrated pest management, agro-forestry (incl. taungya system), NTFP cultivation/domestication, etc. (could become part of the Community Forestry programme);</p> <p>Develop techniques for rehabilitating very degraded and denuded lands as well as the conversion of poor forest into high value forest (forest policy 1995): Assisted natural regeneration and enrichment planting in degraded forests and plantation establishment (commercial, village supply, community, private or small holder leasehold, mixed agro-forestry) in very degraded forest or denuded grass (including bamboo) land (could be part of the Community Forestry programme);</p> <p>Ensure optimal employment conditions and benefits for shifting cultivators hired by the FD and private sector to establish commercial plantations. Expand the establishment of community-based nurseries for income generation.</p>
Overharvesting of wood biomass	<p>Promotion of: biogas, improved stoves, improved charcoal making, use of farm or industrial residues, fuel wood or village supply or community plantations, agro-forestry and tree planting in agricultural landscapes (trees on-farm).</p> <p>Further expansion of rural electrification.</p>
General candidate strategies	
	<p>Increase investment in forest conservation and development through the establishment of a forest development/REDD+ fund with appropriate participation of financial institutions and donors (also outside forestry sector) and to be operated with a high degree of autonomy (Forest Policy 1995);</p> <p>Remove enforcement bottlenecks, shortcomings, anomalies and loopholes in existing legal framework for the forestry sector (e.g. review fining system of MTE by FD, reinforce status of CF in 1992 law, abolish rules and regulations which discourage tree plantations on individual or communal lands, etc.);</p> <p>Revision of boundaries of reserved forests, public protected forests and protected areas (PFE) to reflect confirmed land use changes and promote social fencing of PFE (community forestry, agro-forestry, leasehold community or village plantations. etc.);</p> <p>Strengthen the extension capabilities of the Forest Department and develop mechanisms for greater public involvement in forestry programmes (Forest Policy 1995). Enhance stakeholder consultation and community involvement in the development or review of District Forest Management Plans and develop community forestry programme to meet the 2001-2031 NFMP target.</p>

Table 3.12: Initial identification of candidate REDD+ strategies for non-forest sector drivers (deforestation)

Drivers	Driver specific candidate strategies
Expansion of Agriculture (Subsistence and Commercial)	<p>30% of the total land area of the country to be gazetted as reserved forest and 10% under protected areas system (Forest Policy 1995). Revision of current PFE boundaries to exclude permanent agricultural land and add unclassified forest into PFE;</p> <p>Introduce S/EIAs for medium or large size agricultural concessions, taking into account the value of sequestered carbon and impact on deforestation and promoting minimal forest clearance and CO2 emissions. Establish an efficient S/EIA review mechanism and monitor the implementation of corresponding mitigation plan by investors;</p> <p>Apply carbon tax or rebate to encourage private investors to take note of carbon stocks within their concession areas;</p> <p>Promote agricultural identification in existing large agricultural landscapes and remove policies that promote agricultural extensification.</p>
Mining	<p>Introduce S/EIAs for medium or large scale mining operations or concessions, taking into account the value of sequestered carbon and impact on deforestation and promoting minimal forest clearance and CO2 emissions. Establish an efficient S/EIA review mechanism and monitor the implementation of corresponding mitigation plan by investors;</p> <p>Apply carbon tax or rebate to encourage private investors to take note of carbon stocks within their concession area.</p>
Hydro-power Development	<p>Introduce S/EIAs for medium or large scale hydro-power projects, taking into account the value of sequestered carbon and impact on deforestation and promoting minimal forest clearance and CO2 emissions. Establish an efficient S/EIA review mechanism and monitor the implementation of corresponding mitigation plan by investors;</p> <p>Apply carbon tax or rebate to encourage private investors to take note of carbon stocks when identifying project design defining reservoir location and size;</p> <p>Implement Obligatory Biomass Removal Plans to minimize emissions from submerged biomass.</p>
Infrastructure (road, pipeline, Special economic zones, power lines, military)	<p>Introduce S/EIAs for medium or large scale infrastructure development, taking into account the value of sequestered carbon and impact on deforestation and promoting minimal forest clearance and CO2 emissions. Establish an efficient S/EIA review mechanism and monitor the implementation of corresponding mitigation plan by investors.</p>
Urbanization and resettlement	<p>Enforcement of urban planning rules and guidelines to minimize deforestation;</p> <p>Intensification and improvement of agriculture in existing agricultural landscapes to accommodate resettled communities;</p> <p>Guide the development of and monitor the resettlement plans to be implemented by private investors in order to minimize deforestation and forest degradation.</p>
Development of aquaculture	<p>Introduce S/EIAs for medium or large scale aquaculture operations or concessions in coastal areas, taking into account the value of sequestered carbon and impact on deforestation and promoting minimal forest clearance and CO2 emissions. Establish</p>

	an efficient S/EIA review mechanism and monitor the implementation of corresponding mitigation plan by investors.
	General candidate strategies
	<p>Identify possible areas of conflict within forest policy and other ex-sector policies and establish inter-sector task forces for resolution of conflicts and to make recommendations to the Policy Advisory Board; and Resolution of ex-sector policy conflicts at highest level of the Government; Ensure inter-sector coordination/consultation during planning process (Forest Policy 1995). Adapt and harmonize legislation/policy/programmes outside the forestry sector and clarify mandates in areas such as land use planning/allocation, land tenure, agriculture, private investment management, infrastructure development to maximize synergies and reduce conflicts with the policy and legal framework of the forestry sector;</p> <p>Establish a land use advisory board (at all levels) with responsibilities to oversee and coordinate overall land utilization in the country (Forest Policy 1995). A unique structure would combine 1) the Inter-Ministerial Land Scrutiny Group chaired by MoECAf and mandated by the President and which will have equivalent State/Region, District and Township Land-use Advisory Committees including civil society and private sector representatives and 2) Central Fallow, Vacant and Virgin Land Management Committee chaired by MoAI;</p> <p>Prepare land-use plans to specify the ultimate purpose for which the lands should be used. The plan should ensure that:</p> <ul style="list-style-type: none"> - land is used for the purpose for which it is best suited; and - harmonization of different land uses to provide for the most effective use of the total land area in the country and resolving of any potential conflicts before the resources are damaged (Forest Policy 1995); <p>Define and establish safe minimum standards for environmental conservation in respect of all development activities and S/EIA of development projects made obligatory with related rules/ regulations formulated and enforced (Forest Policy 1995);</p> <p>Review S/EIAs of all existing pipeline projects and new ones and monitor the implementation of the corresponding mitigation plans.</p>

3.4.3.2 Feasibility assessment and confirmation of candidate REDD+ Strategies

During the REDD+ Readiness phase, one of the key objectives will be the final selection of a number of strategies to implement REDD+ activities. These strategies will be piloted during the second phase of REDD+ implementation. A number of potential candidate REDD+ strategies have been pre-identified and reviewed during the development of the Roadmap (Section 3.4.3.1). However, in order to achieve short term emission reductions, more focused and intensive efforts are required to address critical drivers and underlying causes of deforestation and forest degradation.

A Forestry Sector Institutional and Context Analysis will be undertaken as an initial step in Roadmap implementation, in order to identify enforcement bottlenecks, anomalies and loopholes in the existing policies, laws and rules. This analysis will lead to the further assessment and refinement of the pre-identified candidate REDD+ strategies for forestry sector drivers (Table 3.11). This **first review** will focus on how to facilitate the implementation of **four of the five REDD+ activities**:

- Reducing emissions from forest degradation;
- Conservation of forest carbon stocks;
- Sustainable management of forests;
- Enhancement of forest carbon stocks.

This forestry sector review will also be an opportunity to address critical shortcomings or bottlenecks in the policy and legal framework, leading to the effective implementation of REDD+ and solving some of the implementation and enforcement issues already identified in this section of the Roadmap.

A **second review** will examine policies, laws and rules (including supporting institutional mechanisms, development plans and programmes) outside the forestry sector (FDI/investments, agriculture, land-use planning and allocation, trade, infrastructure development, tenure, etc.) to assess and refine the pre-identified candidate REDD+ strategies addressing the drivers of deforestation (Table 3.12) or therefore contributing to the **reduction of emissions from deforestation**. This review will also recommend how to adapt and harmonize legislation/policy and clarify mandates in areas such as land use planning/allocation, land tenure, agriculture, private/public investment management and infrastructure development. This will represent an opportunity to maximize synergies and reduce possible conflicts with the policy and legal framework of the forestry sector.

Both reviews will be validated by the Drivers and Strategy Development TWG, translated into Myanmar language and circulated for comments and final endorsement among the members of the national REDD+ network. A **national consultation workshop** involving all members of the National REDD+ network will be held to review and validate the revised candidate strategies for both the forestry and non-forestry sectors.

The next step in the assessment of REDD+ candidate strategies will be to rank or prioritise the confirmed candidate strategies from both within and outside the forestry sector. The assessment and ranking will be based on a number of criteria listed below:

- 1) Addressing drivers causing significant emissions;
- 2) Addressing drivers which will cause significant emissions in the future;
- 3) Contribution to conservation of carbon stocks, enhancement of carbon stocks and sustainable management of forests (REDD "+");
- 4) Scale of emission reductions;
- 5) Cost-effectiveness;
- 6) Opportunity cost;
- 7) Possibility to upscale through co-financing existing programmes;
- 8) Contribution to poverty reduction, food security, social development;
- 9) Contribution to the empowerment of women or ethnic groups;
- 10) Contribution to biodiversity conservation and other ecosystems services (environmental co-benefits).

The initial ranking of the confirmed REDD+ strategies will be done by the Drivers and Strategies TWG and will be based on a number of complementary studies:

- Quantitative assessment of emissions and carbon stock removals from major drivers of forest degradation and deforestation, including estimates or trends of future emissions (Section 3.3);
- Study on REDD+ strategies in relation to costs and benefits considering, *inter alia*, potential for immediate emission reductions, environmental co-benefits, poverty reduction potential,

contribution to food security, social development and empowerment, contribution to SFM and conservation/enhancement of carbon stocks, etc.;

- Study on the funding of or support to existing forest management programmes (e.g. CF programme, shifting cultivation stabilization programme) and including estimates of the financial costs of REDD+ implementation in conjunction with these programmes.

Each of the above studies will be translated into Myanmar language and will be circulated for among the members of the National REDD+ network. Comments will be incorporated and only final study reports will be used by the TWG to complete the ranking of candidate REDD+ strategies. The list of prioritized candidate REDD+ strategies will again be reviewed and validated during a national consultation workshop involving all members of the National REDD+ Network. Additional regional consultation workshops will be organised to consult a larger stakeholder group, as it was done for the initial pre-identification of candidate strategies during the development of the roadmap. The entire assessment process described above is summarized in Figure 3.3 below:

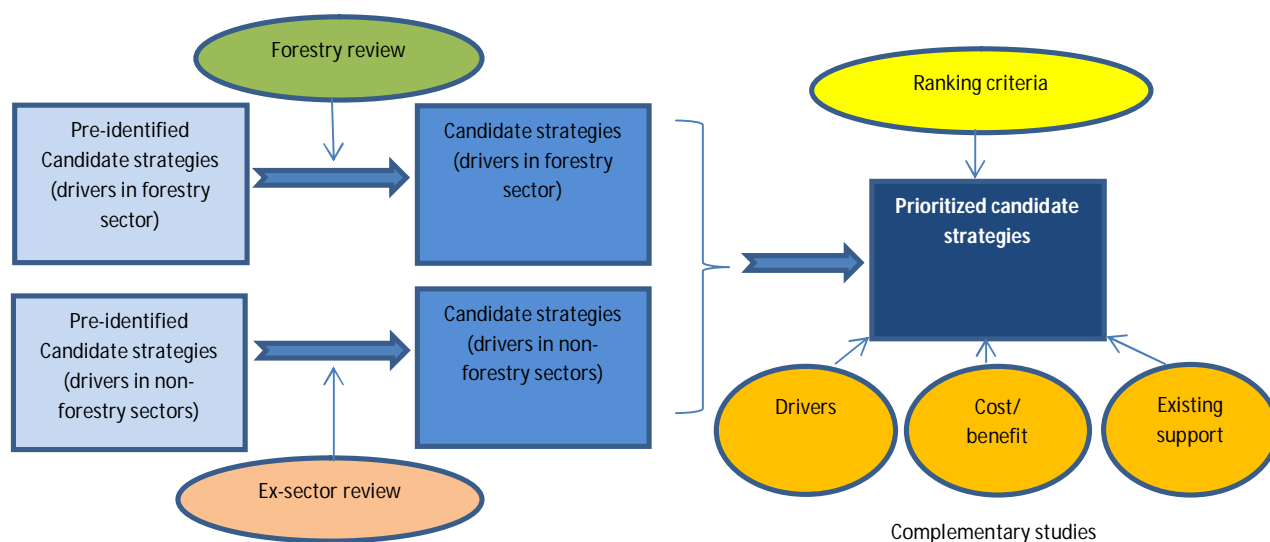


Figure 3.3: Initial feasibility assessment of candidate REDD+ Strategies

During the national consultation workshop, participants will agree on one of the three options presented below:

- 1) Focus on a smaller number of strategies addressing specific drivers or underlying causes and where significant and immediate emission reductions could be achieved. The advantage is to focus scarce financial and human resources and to build up specialized expertise. The disadvantage is that there is less experience in addressing lesser drivers which could become significant;
- 2) Address all drivers at the same time. The advantage is to gain experience and make progress on many fronts. The same investment will probably generate less emission reduction than a focused approach;
- 3) A combination of these 2 options aiming at immediate and significant emission reduction by addressing specific drivers and building up capacity to address a number of additional drivers which might become more significant in the near future.

The final step towards the selection of REDD+ strategies will be to **pilot** the candidate REDD+ strategies which correspond to “**activity packages**” and to undertake actions in **support** of the

implementation of both “**activity packages**” and “**governance measures**”. The piloting of selected “activity packages” will build upon existing or ongoing forestry management and development initiatives. This approach will allow the corresponding REDD+ strategies to become embedded into existing programmes. This approach also will avoid raising immediate expectations from standalone and short-term REDD+ readiness pilots. The piloting of “activity packages” will whenever possible build upon, support and complement existing REDD+ pilot programmes or projects. Project experiences will inform the development of the national REDD+ framework and systems. Strong linkages with the national Readiness process will facilitate their integration into sub-national jurisdictional REDD+ pilot programmes which will be implemented during the second or pilot phase of REDD+ implementation. A preliminary list of actions needed to implement candidate strategies representing specific “governance measures” is provided below. This list is based on the pre-identified candidate REDD+ strategies in Table 3.11 and Table 3.12 and will be reviewed by the Drivers and Strategy Development TWG based on the final list of candidate strategies:

- Finalise the revision of the National Harvesting Code of Practice and Criteria and Indicators of SFM and develop principles and criteria of a National Myanmar Certification Standard;
- Develop a training curriculum on the MSS and the facilitation and implementation of participatory forestry programmes (e.g. community forestry, stabilization of shifting cultivation, private and community plantations) for MoECF and NGO staff;
- Conduct a feasibility study for the introduction of different tax incentives (e.g. export tax inversely proportionate to value addition, carbon tax for private sector development projects, taxes based on ‘polluter pays’ principle, etc.)
- Establish a pricing system for forest products reflecting market realities but catering for special social discounts;
- Evaluate sources of and options to supply domestic timber demand and improve efficiency of wood and timber transformation and use;
- Develop a national strategy and plan to combat illegal logging;
- Assess the potential of conservation concessions (private sector, NGO, community) as an alternative to commercial or industrial plantations (private sector concessions) and State management in different categories of the PFE;
- Develop a methodology and guidelines for the participatory revision of PFE boundaries, to conduct consultations for further expansion of PFE and to promote social fencing of PFE boundaries;
- Evaluate the feasibility of generating long-term revenue streams (other than REDD+) to fund forestry programmes (carbon tax, % of timber sales, carbon offsetting in non-forestry sectors, PES, etc.) and to establish a dedicated basket funding mechanism;
- Review the existing forestry sector legal framework and propose amendments to remove enforcement bottlenecks, shortcomings, anomalies and loopholes (e.g. revision of CFI reinforcement of Forest Law, further develop and improve private or community tenure options over forest and trees as opposed to cultivated land);
- Develop a national CF development policy, incorporating community-based reforestation and afforestation and approaches for the stabilization and improvement of shifting cultivation;
- Development of sector specific S/EIA guidelines (one for the development of S/EIA by developers and one for the review of S/EIA by the administration) taking into account the value of sequestered carbon and impact on deforestation and promoting minimal forest clearance and CO₂ emissions and improved monitoring of enforcement of corresponding mitigation plans by investors in the mining, agricultural, hydropower and infrastructure sectors;
- Implement measures to mitigate corruption risks, based on priorities identified through the UN-REDD Corruption Risk Assessment;

- Comparative studies on 1) economic valuation (including forest carbon) of direct and indirect eco-systems services provided by forests versus main agricultural land uses; 2) economic multiplier effects of forestry activities to influence decision making and win support of the national planning bodies and other related institutions (Forest Policy 1995) and 3) forest revenues and intangible values as related to forest investment (Forest Policy 1995);
- Develop national-level regulations (including carbon related criteria) for land use planning and allocation of concessions (including commercial and industrial plantations inside PFE) to be applied by the Inter-Ministerial Land Scrutiny Group chaired by MoECAP and criteria and decision making principles for the implementation of the Fallow, Marginal and Virgin Land Law (to better regulate conversion of non-classified forest or wooded land).

3.5 Planning process for the piloting of REDD+ implementation

At the end of the Readiness phase, Myanmar will be ready to pilot the implementation of the REDD+ activities that have been selected through a national consultation process. In order to do so, there must be an objective planning process to identify suitable locations for piloting and the specific REDD+ activities for each location.

3.5.1 Identification of scale and sites for demonstration activities

In Myanmar, the administrative level for planning and implementing REDD+ ‘activity packages’ will be the district because this is the level at which Forest Management Plans are formulated. Districts, considered as Forest Management Units, are also large enough to measure GHG emission reductions.

In line with the piloting of REDD+ ‘activity packages’ undertaken during phase 1 of REDD+ Readiness, selection of demonstration sites for the piloting of REDD+ implementation (phase 2) will very much be based on the locations of existing and relevant projects and programmes. The presence of existing projects and programmes, the available budget for the piloting phase and the need to cover different forest types, regions but also drivers will help establish an initial list of potential target districts.

Within each potential target district, a screening process will take place to identify, objectively, the specific forest locations (or areas for afforestation/reforestation) which are most appropriate to deliver multiple benefits from REDD+: net GHG emission reductions and net social and environmental benefits. The screening process will therefore rely on the development of data on each of the following parameters:

- Forest cover change (based on remotely-sensed data);
- Carbon density (proxy information, IPCC Tier 1);
- Socio-economic indicators (poverty rates or proxies);
- Biodiversity hotspots.

By overlaying these data, the most suitable locations for REDD+ implementation, in terms of multiple benefits but also cost effectiveness will be identified. These locations will be prioritized in the planning process and will be used in the design of activity packages.

3.5.2 Design of district-level plans and budgets

Once the priority locations for pilot REDD+ activities have been identified, a multi-stakeholder consultation process will be conducted to identify the specific drivers of deforestation and/or degradation at each site. If the drivers thus identified cannot be addressed by a REDD+ strategy then the concerned district will be dropped from the list of potential REDD+ pilot implementation sites.

For sites where the drivers can be addressed by one or a combination of REDD+ strategies, REDD+ pilot implementation plans and budgets will be developed as part of the revised and fully costed District Forest Management Plan. REDD+ support for the implementation (Phase 2) of this revised District Forest Management Plan will be conditional to the FPIC from local communities. The expected in kind contributions and responsibilities of local communities and the proposed REDD+ payments (plus distribution mechanisms) will have to be agreed upon by the communities as part of the FPIC process.

3.6 Indicative work plan and budget

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 3: Development and selection of REDD+ Strategies				
Output 3.1 Proposed candidate strategies outside the forestry sector confirmed (see Section 3.4.3.2)	UNDP, FAO, UNEP, FAO-GEF, ITTO, KFS	D&SD-TWG with F-TWG and L-TWG	<ul style="list-style-type: none"> • Forestry Sector Institutional and Context Analysis; • Review of policies, laws and rules outside the forestry sector; • UN-REDD "Corruption Risk Assessment"; • Consolidation of list of candidate strategies for forestry and non-forestry sectors; • National Consultation Workshop to review and validate the revised candidate strategies for both the forestry and non-forestry sectors; • Quantitative assessment of emissions and carbon stock removals from major drivers of forest degradation and deforestation, including estimates or trends of future emissions (Section 3.3); • Study on REDD+ strategies in relation to costs and benefits; • Study on the funding of or support to existing forest management programmes and including estimates of the financial costs of REDD+ implementation in conjunction with these programmes; • Establish list of prioritized candidate strategies based on ranking by TWG; • National Consultation Process to review and validate the final list of candidate strategies. 	900,000
Output 3.2 Candidate strategies piloted and supporting or enabling activities completed (see Section 3.4.3.2)	UNDP, FAO, UNEP, FAO-GEF, ITTO, KFS	D&SD-TWG	<ul style="list-style-type: none"> • Pilot the candidate REDD+ strategies which correspond to "activity packages"; • Undertake actions/activities in support of the implementation of both "activity packages" and "governance measures" (see list under section 3.4.3.2). 	5,500,000
Output 3.3 Process for piloting of REDD+ Strategy implementation planned	UNDP, FAO, UNEP	D&SD-TWG	<ul style="list-style-type: none"> • Identification of a preliminary list or representative sample of potential pilot districts • Initial district mapping to identify of priority areas which are most appropriate to deliver multiple benefits from REDD+; • Conduct multi-stakeholder workshops for each priority location of pre-selected districts to verify the probable effectiveness of REDD+ strategies; • Develop a REDD+ implementation plan for each selected district; • Seek FPIC of local communities on REDD+ implementation plan prior to the initiation; • Design of district-level plans and budgets. 	800,000
TOTAL				7,200,000

SECTION 4: IMPLEMENTATION FRAMEWORK AND SAFEGUARDS

Rationale: *To frame conditions within which a national REDD+ programme must operate, the activities that must be implemented to optimize these conditions, and the measures (safeguards) that must be applied to prevent negative (and promote positive) net social and environmental impacts.*

Key parts:

- *Elements of the REDD+ Implementation framework: Institutional, legal and financial;*
- *Operationalising the Institutional framework through regular reviews of institutional structure, capacity building of all stakeholders and effective communication and information management;*
- *Alignment of policy and legal framework: review the existing legal framework and identify gaps; amend existing legal framework and develop new Policies, Laws and Regulations needed for the effective implementation of REDD+;*
- *Development of a Financial framework: Management of REDD+ Resources and distribution or sharing of benefits;*
- *Development of a National Social and Environmental Safeguards System to comply with the safeguards according to Annex 1 of the Cancun Agreements;*
- *Indicative work plan and budget.*

4.1 Elements of the REDD+ Implementation Framework

The REDD+ Implementation Framework provides the appropriate **institutional, regulatory and financial** arrangements to successfully implement the selected REDD+ in Myanmar. Without the necessary foundation or appropriate Implementation Framework, implementation of the most appropriate REDD+ strategies may not be feasible. The Framework has to ensure credibility and provide for transparent, equitable, efficient and effective decision making, implementation and monitoring of REDD+ efforts. Continuous **capacity development** efforts and effective, **transparent communication** networks will contribute to an effective Implementation framework.

Crucially, the Implementation Framework for REDD+ also includes **the social and environmental frame conditions** within which the programme operates and therefore requires a system to assess Myanmar's compliance with REDD+ **Social and Environmental Safeguards** described in the Cancun Agreement (UNFCCC CoP16).

4.2 Operationalising the Institutional Structure

4.2.1 Reviewing the proposed Institutional Structure

Since most elements of institutional structure proposed in Section 1.6 are already in place or require minor changes, it is anticipated that the REDD+ institutional structure will be in place shortly after the start of the Readiness phase. This will allow the testing of the robustness of the Institutional Structure over the next 2-3 years. If the REDD+ institutional structure remains dysfunctional one year after its establishment, due to an inappropriate choice of institutions and mechanisms or a possible major institutional reform, an institutional review followed by a national stakeholder consultation will be undertaken to address bottlenecks and to propose a viable alternative.

Even if original institutional arrangements function well, it is likely that some modifications or clarifications will be needed as experience is gained and as the country moves from a readiness phase towards piloting and implementation. A review followed by a national stakeholder consultation will therefore be organized towards the end of the readiness phase. The review will be an opportunity to propose improvements at both national and sub-national levels, and to establish long-term

institutional arrangements. It is likely that REDD+ will become mainstreamed into forest management practices and land-use or investment decisions. After the readiness phase, a modest REDD+ Office, under the immediate responsibility of MoECAF and under the overall guidance of the NECC (see Section 1), is all that might be required to coordinate activities, to facilitate the on-going consultation process, to disseminate knowledge and document good practices, to maintain a REDD+ register and to undertake forest monitoring.

The national level roll-out of REDD+, which will start towards the end of the readiness phase, might require changes in the ToR of local level MoECAF Forestry Officers or even the establishment of sub-national REDD+ Offices as suggested during the National Roadmap Consultation Process. The above review, to be undertaken towards the end of the readiness phase, will analyse possible challenges linked to the up-scaling of REDD+ and will propose corresponding temporary or permanent changes in the institutional arrangements.

4.2.2 Capacity Building and Awareness Raising

A comprehensive and continuous process of learning is necessary for the key REDD+ institutions and grassroots stakeholders to successfully engage in REDD+ Readiness activities and to contribute to the scaling up of activities for the REDD+ implementation phase. An ongoing, reflective learning process needs to be developed to provide each institution and group of stakeholders with the competencies, skills and knowledge required to fulfill their role in the REDD+ programme. This will require a 3 steps approach which will be repeated as part of the reviews of the REDD+ Institutional Structure proposed under Section 4.2.1.

- 1) **Develop a Competency Framework for REDD+:** This will build on the membership of the different elements of the REDD+ Institutional Structure described under section 1 and the stakeholder mapping and categorization described in Section 2. The competency framework will identify the knowledge and skills that each stakeholder group must attain in order to fulfill their role in a National REDD+ Programme. This activity will be undertaken by the Stakeholders and Safeguards TWG. The Competency Framework will include awareness raising, facilitation, consultation and training-of-trainers skills relevant to the members of the National REDD+ Stakeholder Network and government officials working at grassroots level;
- 2) **Design and conduct an Initial Capacity Building Needs Assessment (CBNA) for REDD+:** Using the competency framework as a template, the CBNA will involve identifying the key capacity, skill and knowledge gaps among the stakeholder groups that will have to implement the National REDD+ Programme. The results and recommendations for the CBNA will be reviewed and validated during a national consultation workshop;
- 3) **Implement training and awareness raising activities:** Based on the recommendations of the CBNA, targeted training and awareness raising activities will be conducted. Capacity building activities will typically be implemented by the different TWGs but the REDD+ Task Force will select the most appropriate individuals, structures or organisations and where needed will bring in external trainers or organisations.

The implementation of capacity building and awareness-raising activities will be coordinated and systematically evaluated by the Stakeholder Consultation and Safeguards TWG to ensure maximum synergies among organisations and projects already implementing capacity building and awareness raising activities.

It is expected that RECOFTC's project on "Grassroots Capacity Building for REDD+" (2013-2015) will contribute significantly to awareness raising and capacity building of forest dependent households

such as local communities and indigenous peoples, community based organizations, community forest user groups, local forest managers, government, and forestry officials, NGOs, civil society groups and local journalists. The RECOFTC projects will enable these grassroots stakeholders to actively contribute to the REDD+ planning and policy process by effectively participating and communicating their perspective to policy makers and by positioning themselves to take advantage of potential benefits from REDD+ for local socio-economic development. The project will contribute to the Readiness capacity building activities by:

- Conducting a CBNA for grassroots level stakeholders;
- Develop a set of training packages;
- Deliver training programs for project implementing partners, and national and sub-national level facilitators, and other key stakeholders on how to effectively raise grassroots stakeholder awareness and knowledge on climate change;
- Implement training and capacity building programs for grassroots stakeholders.

4.2.3 Communication Strategy and Information Management

4.2.3.1 REDD+ Communication Strategy

Due to the complexity of REDD+ and the many relevant stakeholders involved, it will be important to put in place an effective communication strategy on the country's vision for implementing REDD+. In the context of the REDD+ Roadmap process, the role of the strategy is to ensure that all stakeholders have access to the information they need, as determined by their existing roles in the forestry sector and their potential roles in a REDD+ programme. The strategy is therefore not designed to ensure support for the REDD+ programme, but will enable stakeholders to make free, informed decisions on whether and how to engage with the programme. It will therefore need to describe to all stakeholders the kind of behavioural changes that a REDD+ programme will require. In the case of REDD+, the principle of *additionality* indicates that these changes would not be made in a 'no-REDD+' scenario because of the direct, indirect or opportunity costs that they entail. These changes will therefore be normally perceived as disadvantageous, or as an encumbrance on existing (or perceived) rights. Only the financial resources that a REDD+ programme will bring will therefore make these behavioural changes worthwhile. In this case it is important to consider that awareness raising materials, particularly those targeted at forest-dependent peoples, should be delivered in parallel with practical or financial assistance, for example capacity building activities.

Diverse communication and information materials targeting different stakeholders during implementation will be needed to ensure that stakeholders have access to information in a timely and culturally appropriate manner. The Stakeholder Consultation and Safeguards TWG recommended developing a Communication Strategy based on toolkit (CBD/IUCN/CEC, 2007) for Communication, Education and Public Awareness (CEPA) developed for the Convention on Biological Diversity (CBD) and which identifies the following steps:

- Step 1: Analyse the issues and role of communication based on a problem/issue identification
- Step 2: Identify target groups/audiences for communication and intermediaries.
- Step 3: Determine communication targets for each target group
- Step 4: Determine communication strategy and select partners
- Step 5: Determine the best possible messages for each target group
- Step 6: Determine the means of message delivery
- Step 7: Organise communication and brief partners
- Step 8: Planning milestones and activities
- Step 9: Determine the budget
- Step 10: Determine programme evaluation methods.

The Communication Strategy will be updated in parallel with the two planned reviews of the REDD+ Institutional Structure (Section 4.2.1) and the corresponding reviews of the Capacity Building Needs Assessment (Section 4.2.2). The validation of the Communication Strategy will therefore be subjected to a national consultation workshop. Step 5 of the Communication Strategy development is the identification of the best possible messages for each target group will be an ongoing process. The Stakeholder Consultation and Safeguards TWG will continue identifying and collecting materials made available from different international sources:

- UN-REDD Workspace (www.un-redd.org)
- REDD-net (www.reddnet.org)
- Forest Carbon Asia (www.forestcarbonasia.org)
- CIFOR (www.cifor.org)
- RECOFTC (www.recoftc.org)
- Ecosystem Marketplace (www.ecosystemmarketplace.com)

These materials will be adapted according to the national context, to match requirements and needs of specific target groups and to fit different awareness-raising and training activities. The TWG will be responsible to guarantee the quality of materials including the accuracy of translations into Myanmar and minority languages. The TWG will also guarantee the consistency of all REDD+ related materials produced, translated, used and disseminated in the country.

4.2.3.2 Information management

Information management is essential to ensure that all institutions and stakeholders have access to accurate, up-to-date and transparent information on the national REDD+ process in general and to lessons learned from pilot projects in particular. The REDD+ Task Force Office will develop an on line Information Management System. This user-friendly and fully accessible REDD+ webpage will be hosted on the MoECAAF website and will provide the following information (plus whatever is deemed necessary) as it becomes available during the readiness phase:

- Major REDD+ related strategies including the REDD+ Readiness Roadmap;
- ToRs and membership lists/contacts of all elements of the REDD+ Institutional Structure including the REDD+ Task Force, the TWGs, The REDD+ Task Force Office and the National REDD+ network;
- Reports of studies and reviews undertaken as part of the readiness process (see Section 2);
- Minutes of REDD+ Task Force Meetings and TWG meetings;
- Proceedings of Consultation Workshops undertaken during Roadmap Development and Implementation (see Section 2);
- Project documents, progress reports and evaluations of REDD+ related projects;
- Links to International websites and reference materials/tools;
- Extension and other relevant reference materials;
- Carbon Registry to facilitate carbon accounting related to REDD+ pilot projects and eventually at national scale);
- Safeguards Information System or SIS (see Section 4.5.4.2);
- The National Forest Monitoring System, including the Land Satellite Monitoring System, the National Forest Inventory and the national GHG Inventory Archive (see Section 6.1).

The REDD+ webpage will use, where possible and appropriate, the templates and structures of and create linkages with existing international REDD+ knowledge management systems including the

REDD Desk,¹⁴ Forest Carbon Asia¹⁵ and the UN-REDD workspace. The REDD+ Webpage will also include an online feedback system enabling stakeholders to provide comments on key Roadmap outputs or REDD+ documents such as review reports, strategy documents, ToRs, minutes or proceedings, assessments, etc. The REDD+ Task Force Office will be responsible to review comments and seek clarifications from the REDD+ Task Force or the corresponding TWG. Both comments and responses will be made available on the webpage. This online review or feedback system will be used as one of the stakeholder consultation mechanisms described in Section 2.5. It will also serve as an initial grievance mechanism described under Section 4.5.4.3. The online feedback mechanism will by no means replace but will complement the more traditional consultation workshops and grassroots level consultations.

The development of the web-based Information Management System will be the responsibility of the REDD+ Task Force Office but all TWGs will contribute to its design and content. The system will be reviewed, improved and validated online.

4.3 The Legal framework

4.3.1 Review of existing legal framework

Although regulations relevant to the implementation of REDD+ Strategies are generally in place, focused policy and legal framework reviews in and outside the forestry sector undertaken under Section 3.4.3.2 will be an opportunity to verify whether laws and regulations of Myanmar allow for REDD+ strategies to be implemented. These activities originally designed to identify possible REDD+ Strategies (Policy measures) include:

- A review of the implementation and enforcement bottlenecks, anomalies and loopholes in the existing policies, laws and rules within the forestry sector to be conducted as an initial step to assess and refine the pre-identified candidate REDD+ strategies for forestry sector drivers;
- A review of policies, laws and rules (including supporting institutional mechanisms, development plans and programmes) outside the forestry sector (FDI/investments, agriculture, land-use planning and allocation, trade, infrastructure development, tenure, etc.) to assess and refine the pre-identified candidate REDD+ strategies addressing the drivers of deforestation.

Legal provisions that need to be changed or reinforced to support REDD+ activities will be identified during these reviews. As most activities under the REDD+ programme will inherently be linked to carbon and therefore land, an essential contribution of these reviews to a supportive legal framework for REDD+ will be to clarify and secure land tenure and rights pertaining to land use, including indigenous people's rights.

4.3.2 Identify new REDD+ specific legal framework

In addition to the necessary harmonisation and amendment of the existing forestry and ex-sector legal frameworks, important new issues require the development of a REDD+ specific legal or regulatory framework. This will provide clarity related to key REDD+ issues such as:

- Eligibility of organisations, groups and individuals to participate in REDD+ activities funded both from national and international sources and the voluntary market ;
- The financial management and benefit sharing/distribution systems;
- How REDD+ activities are to be developed and sponsored;

¹⁴www.theredddesk.org

¹⁵www.forestcarbonasia.org

- The obligation to compensate for the liquidation of carbon stocks (if this becomes policy);
- National REDD+ Social and Environmental Safeguards System (see Section 4.8).

Legal reviews described under Section 3.4.3.2 will be used to identify and develop this complementary or REDD+ specific legal framework. It will also be necessary to legalise arrangements, roles and responsibilities of the proposed REDD+ Institutional Structure (Section 1.6) and to make consecutive amendments based on the institutional review(s) planned under Section 4.2.1. This could include a separate regulation to establish a separate REDD+ Fund or in the case of using an existing Fund, the amendment of the related legal framework. Institutional reviews planned under Sections 1 and 4 will be used to identify the necessary actions to be undertaken to legalise these arrangements, roles and responsibilities.

4.3.3 Adapting the legal framework

Flexibility should be maximized at the outset for the REDD+ Readiness phase by allowing the testing of various approaches to REDD+ within the existing legal framework. During the initial stages of the Roadmap implementation, the newly created Legal TWG will compile information on gaps, conflicts and shortcomings in the country's legal framework or overlapping jurisdictions that hinder effective implementation of sustainable forest management in general and REDD+ in particular. This activity will be based on the different reviews planned under Sections 1, 2, 3 and 4. The Legal TWG will also compile and list of topics which require new legislation.

Once enough information has been collected and sufficient experiences are gained from REDD+ related activities and pilots, only then will revisions of the National Legal Framework be undertaken. There should not be a rush to put in place various rules and regulations that are poorly designed and not properly integrated into the Myanmar context. Only if it is found to be necessary, should the concerned line ministries or the National Assembly enact or amend legislation for REDD+ implementation in the country

Two National Consultation Processes will be organised during the last two years of the Readiness phase. The initial workshop will be an opportunity to present proposed changes and additions to the national legal framework which are urgent, can easily be enacted (e.g. Ministerial regulations, instructions, etc.) and require no further piloting or review. The second national consultation process will focus on the more complex and long term changes or additions needed to the legal framework. Based on the recommendations of both consultation processes, the Legal TWG will draft the required legal documentation or amendments. These documents will be translated in Myanmar language and will be circulated for comments among the members of the National REDD+ Network. Only final consolidated documents will be presented to the concerned government authorities for adoption.

4.4 Financial Aspects

4.4.1 Management of REDD+ Resources

REDD+ benefits or performance-based payments will come from different funding sources:

- International or Multi-lateral Funds;
- Voluntary carbon markets;
- Compliance market mechanisms.

The REDD+ Readiness Phase will be used to establish appropriate financial management mechanisms that can deal with the multiple sources and ensure that funds get to the intended beneficiaries. The possibility of a new and dedicated REDD+ Fund will be examined in detail during the readiness phase through discussions with the Ministry of Finance and other stakeholders. There are very few operational funds at present in Myanmar that provide some precedents. The Mangrove Recovery Fund or trust fund was initiated after a meeting on "Promoting Community-led Natural Resource Management in the Delta".

A study will be carried out by the new Benefit sharing TWG in order to review existing financial mechanisms and to recommend options for the establishment of suitable arrangements. The study will also produce recommendations on the terms of reference for management of REDD+ payments. The management facility may have the following attributes:

- Independent of the REDD+ management structure described in Section 1;
- Ability to receive funds for performance based payments from both carbon market and fund-based systems and to create synergies between multiple sources of funding with clear accountability;
- Ability to enforce decisions on fund disbursement for REDD+ implementation.

This study will be translated into Myanmar language after initial validation by the TWG and will be circulated for comments among the members of the National REDD+ Network.

Support for REDD+ will also come from Donor grants/support projects. Coordination of various donor support for the National REDD+ Programme and the use of transparent and efficient systems for managing donor resources will be part of the Terms of Reference of the REDD+ Task Force and its Office. The REDD+ Task Force will be among the principal bodies to help track and manage incoming finances against activities and outputs.

4.4.2 Resource distribution (benefit sharing)

Each potential REDD+ strategy identified in Section 3.4.3.1 will entail direct costs on one or more groups of stakeholders. In addition to meeting these direct costs, the distribution of REDD+ resources must usually recognise the indirect costs of changing behaviour, so that the stakeholders involved actually recognise a benefit for themselves from taking part in REDD+.

Payments from international REDD+ funding sources will have to be shared among eligible stakeholders, with a transparent, efficient, effective and equitable benefit sharing mechanism. During the readiness phase, various simple benefit-sharing arrangements can be tested. Material and financial support provided to taungya farmers involved in plantation establishment could provide an initial example as well as lessons learned.

Eventually a more complex system will need to be designed and legalized based on experience gained, that allows for scaling up of REDD+ efforts during the implementation phase and ultimately accommodates a nationwide approach. A study will be required to assess whether the currently existing distribution channels through the ministries and/or outside of the public sector (e.g., micro-credit banking systems, microfinance institutions, NGOs and CBOs) can be used. Based on the recommendations of study, the Benefit Sharing TWG will develop a system for benefit-sharing at multiple scales, including:

- National-level payments (e.g. compensation for cancelling social and economic land concessions);
- Payments to Jurisdictional Agencies, e.g. for capacity-building or results;
- Payments to individual landscape units, e.g. Protected Areas or Protected Forests, to cover management costs and for results at achieving REDD+;
- Payments to provinces, districts and/or communes as appropriate, e.g. for land-use planning or forming development plans;
- Payments to communes, villages and even households for results at achieving REDD+ results.

The benefit sharing mechanisms developed by the TWG, together with the proposed financial management mechanisms, will be presented for review and validation through a National Consultation Process. These mechanisms will be piloted as part of the piloting of Candidate REDD+ strategies described under Section 3.

4.5 Social and Environmental Safeguards

4.5.1 Most common REDD+ related risks

The most commonly expressed risks of REDD+ programmes when implemented without due consideration of social and environmental impacts¹⁶ are:

- 1) The conversion of natural forests to plantations and other land use of low biodiversity value and low resilience;
- 2) The loss of traditional territories resulting in displacement and relocation of indigenous peoples and forest dependent communities;
- 3) The erosion or loss of rights with exclusion from lands, territories and resources;
- 4) The loss of ecological knowledge;
- 5) The loss of traditional and rural livelihoods;
- 6) Social exclusion and elite capture in the distribution of benefits from REDD+;
- 7) The loss of or reduced access to forest products important for local livelihoods;
- 8) The creation of contradictory or competing national policy frameworks;
- 9) The other benefits of forests are traded-off at the expense of maximizing the carbon benefits;
- 10) Human-wildlife conflict as population of crop raiding animals benefit from better protected forests.

4.5.2 REDD+ Safeguards, according to Annex 1 of the Cancun Agreements (Decision 1/CP.16)

In order to avoid possible risks related to the implementation of REDD+, a number of social and environmental safeguards were defined under the UNFCCC:

- a) Actions under a REDD+ programme complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;
- b) REDD+ programmes must have transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- c) REDD+ programmes must demonstrate 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 United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;

¹⁶Moss N, Nussbaum R, Muchemi J and Halverson E, 2011, "A Review of Three REDD+ Safeguard Initiatives". FAO, UNDP and UNEP

- d) REDD+ programmes must ensure the full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities, in actions under a REDD+ programme;
- e) Actions under a REDD+ programme are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 70 of this decision 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;
- f) A REDD+ programme must include actions to address the risks of reversals;
- g) A REDD+ programme must include actions to reduce displacement of emissions.

4.5.3 Elements of a National REDD+ Social and Environmental Safeguards System

The Cancun Safeguards are addressed through the country-led development of a national REDD+ safeguards system. Key elements can be broken out according to the main functions that such a system needs to perform:

4.5.3.1 Policies, Laws and Regulations

National Policies, Laws and Regulations (PRL) set out the safeguards that have been established for REDD+. They may consist of existing PLRs or new PLRs that have been developed specifically for REDD+. Examples may include laws on Environmental Impact Assessment, Forest Codes etc. REDD+ specific PLRs outline new safeguards that have specifically been defined for REDD+. For example, this could include a policy on carbon rights. This could also include a more comprehensive REDD+ safeguards framework – i.e. a policy that outlines all of the safeguards for REDD+. The main requirement for the PLRs is that they adequately meet the Cancun requirements – i.e. they provide a national interpretation of how the Cancun safeguards are operationalised.

4.5.3.2 A Safeguards Information System

A *Safeguards Information System* (SIS) is a key aspect of the safeguards system and is required by the Durban Decision on safeguards. The monitoring and reporting system needs to include a few key elements:

- Indicators related to country-specific safeguards implementation. These could be **process** indicators or **outcome** indicators. Process indicators are those which illustrate whether an output has been achieved (such as assessing whether and how a particular process related to the REDD+ programme has been planned, established and implemented). Outcome indicators are linked to the actual impacts of the REDD+ programme on the issue in question (e.g. whether a certain group of stakeholders' rights to land have been protected);
- Monitoring methodologies: The monitoring methodologies summarise how information on safeguards is collected. This includes factors such as:
 - ✓ What information is collected in order to show that indicators are being achieved or not?
 - ✓ Who collects the information? An important consideration here is that independence needs to be ensured, so that the quality of the information being measured is reliable and not subject to biased results.
 - ✓ How is the information collected? For example, is it collected through field surveys or from secondary data that already exists?
 - ✓ How often is information collected?

- Reporting frameworks to address different information needs (for adaptive management, for national stakeholders, for donor agencies, for UNFCCC etc.). The reporting framework outlines how information is stored and reported. This could be a new reporting platform but it may also draw from existing reporting platforms. A new institutional framework may be required to consolidate different platforms into one platform that can be used as the basis for reporting the UNFCCC on REDD+ safeguards.

4.5.3.3 A Grievance and Redress Mechanism

A Grievance and Redress Mechanism enables stakeholders affected by REDD+ to provide feedback on the implementation of safeguards, which could help with monitoring, transparency and ultimately improve implementation. Such a mechanism is not a requirement with the UNFCCC safeguards, but it is best practice in most existing safeguard systems and could help to improve confidence among future investors in REDD+ activities. Grievance mechanisms usually include 6 main steps:

- 1) Grievance uptake;
- 2) Grievance sorting and processing;
- 3) Acknowledgement and follow-up;
- 4) Grievance verification, investigation and action;
- 5) Grievance monitoring and evaluation;
- 6) Feedback or communication.

Effective grievance redress mechanisms are typified by a number of characteristics, such as multiple grievance uptake locations and multiple channels for receiving grievances; fixed service standards for grievance resolution; prompt, clear, and transparent processing guidelines (including reviewing procedures and monitoring systems); and an effective and timely grievance response system to inform complainants of the action taken.

4.5.3.4 Operationalising the different functions of a safeguards system

In order to operationalise these different functions, institutions will need to be established (or existing institutions assigned responsibilities) and various processes and procedures will need to be followed:

- 1) **Institutions:** Institutions involved in country safeguard systems will need to take on a variety of different functions and they may be formal (e.g. government agencies) or informal (e.g. customary community forest management institutions). They are cross-cutting across all of the elements of the safeguards system, but key aspects of these institutions will be to:
 - ✓ Ensure fair, effective and transparent processes for design and implementation
 - ✓ Implement policies, laws and regulations: These may be existing institutions or new institutions (such as national REDD+ funds) that play a role in implementing PLRs.
 - ✓ Institutions to collect and process information for monitoring and reporting on safeguards.
- 2) **Processes and Procedures:** In order to implement a safeguards system for REDD+ various processes and procedures will need to be in place. These include:
 - ✓ Consultation processes: Ensuring effective multi-stakeholder participation in the design of a safeguards system and in its operation will be important to ensure that it is effective. During implementation, consultations may be required on areas such as monitoring

whether safeguards are being implemented and validating the information that is collected in monitoring systems;

- ✓ Strategic assessments and analysis that help to determine, for example, what existing safeguards are in place that are relevant to REDD+ and how well these are functioning;
- ✓ Capacity building: In order to ensure that the system functions properly, capacity building will be required in areas such as awareness raising on what safeguards are, how to develop indicators and monitoring systems etc.;
- ✓ Specific action plans may need to be developed to deal with safeguards issues that arise during REDD+ implementation;
- ✓ Information dissemination and communications: the above activities need to include procedures for sharing information;
- ✓ Tools/instruments: For example, to operationalise a policy or regulation an agency involved in REDD+ safeguard may develop guidelines that projects must/should apply, or templates that they must/should/could use in reporting. So these are not legal instruments as such (and thus not under PLR) but nonetheless key for operationalising PLR.

4.5.4 Development of a REDD+ Social and Environmental Safeguards system

As a core part of its REDD+ readiness process, Myanmar will develop a set of nationally-specific social and environmental standards to ensure that the safeguards specified in the Cancun Agreements are complied with, while respecting the national interests and development goals. In order to establish the elements of the country's safeguards approach, Myanmar will need to go through a development process led by the Stakeholder and Safeguards TWG. This development process contains some generic steps to develop a functioning system (Figure 4.1). Many of the steps are likely to be iterative and may not necessarily proceed at the same speed. The way in which the process is carried out is also key to the effectiveness and legitimacy of the system. For example, effective participation of stakeholders in each of the steps is needed. Myanmar will develop a set of nationally-appropriate standards to comply with REDD+ social and environmental safeguards. These standards will be based on existing and newly created PLRs. Standards will lead to the identification of indicators which will be the basis of the country's safeguards monitoring and reporting system or Safeguards Information System (SIS). Standards will also serve as a baseline against which grievances can be raised.

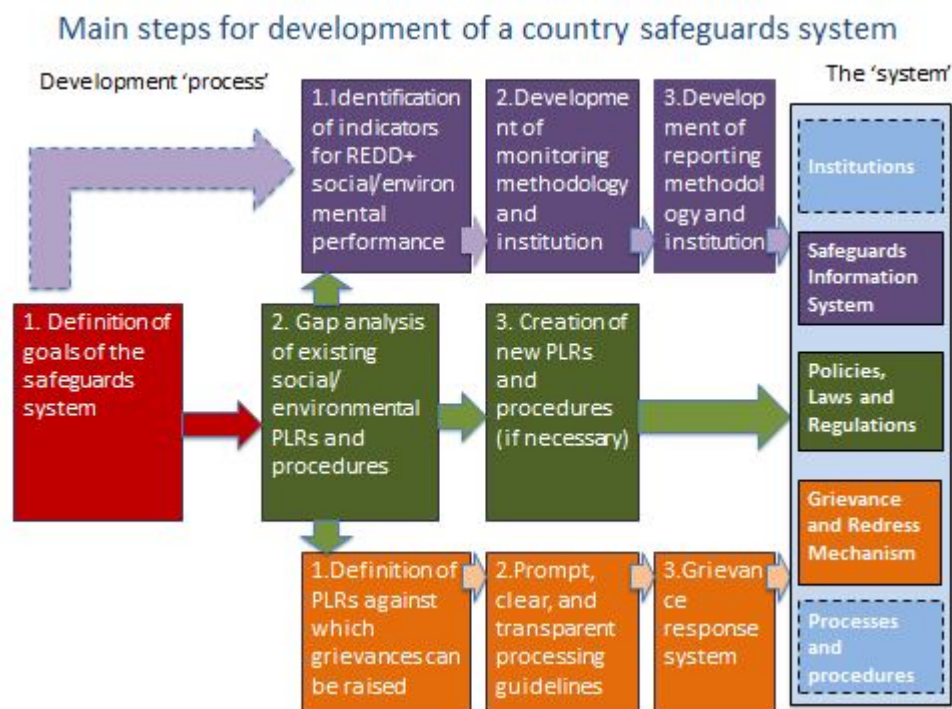


Figure 4.1: The development of a country safeguards system

4.5.4.1 Identifying PLRs or safeguard standards

The identification of safeguards standards starts by defining the goal or the “why” of the country’s safeguards system. The goal needs to address or respond to:

- 1) The UNFCCC Cancun and Durban requirements – as these decisions do not say much about what countries have to have in place, this is the minimum response;
- 2) The requirements of donor operational policies, which will to some extent dictate the content of which safeguards need to be monitored and reported;
- 3) Country development priorities, especially those relating to the social and environmental impacts of investments.

The next step will be the review and gap analysis of existing PLRs in the country that respond to the country interpretation of REDD+ safeguards, and the identification of PLRs that will apply to REDD+ activities. This review will include an evaluation of the effectiveness and record of implementation of existing PLRs. This evaluation will be necessary in order to determine whether existing safeguards are likely to be effective and prioritise actions to improve their effectiveness. The review will recommend (where needed) the development of new PLRs on REDD+ specific issues. This review will be initially validated by both the Legal TWG and the Stakeholder and Safeguards TWGs. It will then be translated and shared for comments among the members of the National REDD+ Stakeholder Network.

4.5.4.2 Developing or defining a Safeguards Information System

The information and reporting system should be developed once the REDD+ safeguards standards have been defined. The first step will be the identification of indicators for social and environmental performance. The process for developing indicators will need to take into account the following issues:

- 1) That the indicator(s) provide a good measure of whether the safeguard is being implemented;
- 2) That the indicator is measurable and objectively verifiable. This will need to take into account the potential data sources that exist or the new data sources that may need to be compiled;
- 3) Participation in the definition of indicators: in other words, do all stakeholders agree that the indicators chosen help in measuring performance against the safeguard?

The next steps will be to develop monitoring or reporting methodologies and to identify the corresponding institution:

- 1) Who collects the information? An important consideration here is that independence needs to be ensured, so that the quality of the information being measured is reliable and not subject to biased results;
- 2) How is the information collected? For example, is it collected through field surveys or from secondary data that already exists? Many existing processes may already be in place, so it may just be a case of defining how these relate to REDD+ activities;
- 3) How often is information collected? A monitoring plan should be developed;
- 4) What information is to be reported, in what format (e.g. a database with quantitative information), where it is held (e.g. which ministry and department is the lead) and how it is reported (e.g. published online; distributed in hard copy on an annual basis etc.).

4.5.4.3 Developing or defining a grievance mechanism

The robustness of the country's safeguards system will be improved through the development of a feedback or grievance mechanism. An effective, accessible and transparent grievance mechanism is an essential fail-safe in REDD+ development. Even in the Readiness Phase of REDD+ complaints may emerge from individuals and from communities. At a minimum this grievance mechanism will include a system allowing members of the National REDD+ Stakeholder Network to review and comment on the operation of the safeguard system and the establishment of a feedback channel to systematically register and address concerns voiced during readiness consultations. However, while feedback channels may meet policy requirements they may not be sufficient to address escalating disputes. Additional skills and processes may be necessary to respond to grievances. A more ambitious and long term approach would be to allow stakeholders that are negatively affected by REDD+ activities to raise complaints.

Local level structures which could be employed as grievance mechanisms exist in customary laws and village level dispute mechanisms. The Local Authority Instruction also provides means of redress to a certain degree. However, formalized and broadly recognized grievance mechanisms at local levels and in particular at the national scale do not yet appear to be in place. A key task in the REDD+ Readiness Phase will be a careful examination of existing mechanisms for potential to be employed, and an assessment of frameworks should new mechanisms be established. Potential frameworks and models discussed in the context of Myanmar included grievance mechanisms developed by SPECTRUM, Myanmar's Local Resource Center as well as that of CARE Myanmar. The Parliamentary "Land Confiscation Inquiry Commission" established in July 2012 to address grievances related to land confiscation could provide lessons learned and even serve as one of the components of a REDD+ Grievance Mechanism.

An initial review will be carried out to understand what grievance mechanisms already exist, how well they function and whether these could be used and where needed improved in relation to REDD+ safeguards. This review will be conducted as part of the review of existing PRLs. The main steps in developing a grievance mechanism include:

- 1) Defining PLRs against which grievances can be raised;
- 2) Develop prompt, clear, and transparent processing guidelines (eligibility, submission, anonymity and timeframe);
- 3) Define grievance response system: How are grievances solved (e.g. through mediation; corrective actions; or through compensation and how is the outcome communicated?

4.5.4.4 Consultations on the development of the National REDD+ safeguards system

A National Consultation Workshop will be held to review and validate the selected PLR or safeguards standards and the proposed SIS. This national workshop will be the opportunity to review the different options for the establishment of grievance mechanism and to provide guidance for its development. A second National Consultation Workshop will be held to review and validate the proposed grievance mechanism.

4.6 Indicative work plan and budget

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 4: Implementation framework and safeguards				
Output 4.1: Institutional Structure Operationalised	UNDP, NORAD-RECOFTC, FAO-GEF, DGTTF-UNDP, KFS, ITTO	RECOFTC, SP&S-TWG	<ul style="list-style-type: none"> • Develop a Competency Framework for REDD+; • Conduct Initial Capacity Building Needs Assessment (CBNA); • Development of a National REDD+ Communication Strategy (Section 4.2.2); • Review available information/communication materials and recommend a selection for translation and adaptation to Myanmar context; • Develop information/communication materials specific to the Myanmar REDD+ Roadmap; • Establish web based Information Management System and develop/update as information becomes available; • Conduct training, and awareness raising for all stakeholders; • Conduct interim review of Institutional Structure, CBNA and National REDD+ Communication Strategy (if proposed Institutional structure fails one year after establishment); 	1,020,000
			<ul style="list-style-type: none"> • Validate findings of interim review of the Institutional Structure, CBNA and National REDD+ Communication Strategy through National Consultation Workshop; • Adapt Institutional Structure and conduct necessary training and awareness raising; • Adapt existing information/communication materials; • Conduct final review of Institutional Structure, CBNA and National REDD+ Communication Strategy; • Validate findings of final review of the Institutional Structure, CBNA and National REDD+ Communication Strategy through National Consultation Workshop; • Adapt Institutional Structure and conduct necessary training and awareness raising; • Adapt existing information/communication materials. 	

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Output 4.2: Legal Framework Adapted and reinforced	UNDP, FAO-GEF	L-TWG and D&SD-TWG	<ul style="list-style-type: none"> • Draft list of proposed amendments to existing legal framework and draft new REDD+ specific legal framework (based on 2 policy and legal reviews conducted under Section 3.4.3.2); • Initial National Consultation Process to review and validate the list of proposed amendments and additions to legal framework (focus on urgent and easily enacted changes); • Draft amendments, circulate amongst REDD+ Network members for validation and submit for adoption by government. • Second National Consultation Process to review and validate list of proposed amendments and additions to legal framework (focus on more fundamental, complex and long term changes); • Draft amendments, circulate amongst REDD+ Network members for validation and submit for adoption by government. 	200,000
Output 4.3: Financial Framework developed	UNDP	F-TWG	<ul style="list-style-type: none"> • Conduct a review of existing financial mechanisms and recommend options for the establishment of suitable financial management mechanism for REDD+; • Develop a financial management mechanism for REDD+; • Conduct a review of existing distribution channels through the ministries and/or outside of the public sector • Develop a system for REDD+ benefit-sharing at multiple scales; • National Consultation Process for the review and validation of the proposed financial management and benefit sharing mechanisms. 	260,000
Output 4.4: REDD+ Social and Environmental Safeguards System developed	UNDP, UNEP	SP&S-TWG and L-TWG	<ul style="list-style-type: none"> • Identify PLRs or safeguard standards; • Developing or defining a Safeguards Information System; • Developing or defining a grievance mechanism; • Organise a National Consultation Workshop to review and validate the selected PLR or safeguards standards and the proposed SIS; • National Consultation Process to review and validate the proposed grievance mechanism. 	400,000
TOTAL				1,880,000

SECTION 5: DEVELOPMENT OF A NATIONAL FOREST REFERENCE EMISSION LEVEL AND/OR FOREST REFERENCE LEVEL (REL/RL)

Rationale: REDD+ is based on a continuous assessment of forest-based greenhouse gas emissions. This assessment must be compared against a 'no-REDD+' scenario in order to be meaningful. A participating country must determine its Reference Level (or Reference Emission Level) to be eligible. This section includes early ideas on a process for determining which approach and methods to use, major data requirements, and current capacity and capacity requirements.

Key parts:

- Approach to REL/RL development in Myanmar;
- Assessment of current data availability and capacities;
- Description of activities;
- Indicative work plan and budget.

5.1 Background and Objectives

To date (as of June 2013), the COP of the UNFCCC have published three decisions that provide guidance on forest reference emission levels and forest reference levels (RELs/RLs) for REDD+ activities. The first piece of guidance was published in Decision 4/CP.15, paragraph 7, which states that RELs/RLs should be developed transparently taking into account historic data, and adjust for national circumstances. Decision 1/CP.16 then sets out a '*national forest reference emission level and/or forest reference level or, if appropriate, as an interim measure, sub-national forest reference emission levels and/or forest reference levels*' as one of the four elements that developing countries aiming to undertake REDD+ activities are requested to develop; in accordance with national circumstances and the provisions set out in Decision 4/CP.15. The most substantive guidance on the modalities for RELs/RLs is set out in Decision 12/CP.17 (totalling nine paragraphs and supported by an Annex on 'Guidelines for submissions of information on forest reference levels'), with some of the key points as follows:

- RELs/RLs should be expressed in tonnes of carbon dioxide equivalent per year and are benchmarks for assessing a country's performance in implementing REDD+ activities;
- RELs/RLs must be established maintaining consistency with anthropogenic forest-related GHG emissions and removals by sinks as derived from a country's national forest monitoring system;
- A step-wise approach to RELs/RLs development may be useful to allow countries to improve them by incorporating better data, improved methodologies and, where appropriate, additional forest carbon pools (this modality reflects the phased approach to the implementation of REDD+ activities to allow a learning-by-doing process);
- Subnational RELs/RLs that may cover less than the entire territory of a country may be elaborated as an interim measure while a country transitions to a national REL/RL;
- RELs/RLs should be periodically updated (i.e. revised) to take account of new knowledge, new trends and any modification of scope and methodologies;
- Countries are invited to submit proposed RELs/RLs on a voluntary basis and to make them available on the UNFCCC REDD+ web platform.

Importantly, Decision 12/CP.17 allows countries the flexibility to exclude non-significant forest carbon pools when developing RELs/RLs and adopt a conservative approach to estimating forest carbon stock changes. The step-wise approach also allows them to develop preliminary RELs/RLs while they continue to collect data and further refine their methodologies.

The objective of this section is to set out how Myanmar will follow the above UNFCCC guidance and modalities to develop its forest RELs/RLs for REDD+ activities. In doing so, this section will also set out early methodological ideas for RELs/RLs development in Myanmar, identify capacity gaps and requirements and assess linkages to other components of this Roadmap. This section will have strong links to Section 3 (covering the assessment of drivers of deforestation and forest degradation and the identification and assessment of REDD+ Strategies) and Section 6 (on the design of a national forest monitoring system).

5.2 Approach to REL/RL Development in Myanmar

RELs/RLs will be developed in such a way that ensures GHG emissions and removals are directly comparable to the emissions and removals in the national forest monitoring system component, using the same metrics to ensure consistency between RELs/RLs and the national forest monitoring system (see Section 6). Key features of the development of Myanmar's RELs/RLs will be:

- **Methodological consistency:** to ensure comparability of all future RELs/RLs;
- **Transparency:** to ensure that all relevant stakeholders, including those in the international community, have full access to the process and information used in the development of RELs/RLs.

5.2.1 Data and information compilation

Step 1: Determination of institutional arrangements for data generation, analysis and sharing. Formal institutional arrangements will ensure transparency and accountability. This is another element of the RELs/RLs component of the Roadmap that will be intricately linked with the national forest monitoring system component. Only once institutional arrangements have been discussed, consulted upon and agreed by all relevant stakeholders will the government proceed with the methodological development of the RELs/RLs.

Step 2: Selection of REDD+ activities (of the five defined under the Cancun Agreements) that the country decides to implement. Each activity may require a distinct national and/or sub-national RELs/RLs; the development of which should be consistent with the national forest monitoring system developed through Section 6 – i.e. using the same metrics and ensuring methodological consistency. Nevertheless, because Myanmar will likely need to report on GHG emissions from deforestation regardless of the formal selection of activities (following reporting standards on forest management to date), the work on this particular activity's REL can be initiated immediately.

5.2.2 Assessment of historical trends

Following UNFCCC guidance, Myanmar will undertake a national assessment of historical trends in land use change using remote sensing data and GIS analysis over a historical period of 20 years, taking four time slices (1990, 2000, 2005, 2010). National land use will be stratified using the land use categories set out by the IPCC (forest land, cropland, grassland, wetlands, settlement and other land), and further stratified according to sub-categories (e.g. for forest land: mangrove, tropical evergreen, dry, deciduous dipterocarp, etc.). These land use categories and sub-categories will be determined by the NFMS/REL-RL Technical Working Group convened under Section 6 of the Roadmap. The most recent remote sensing data will be used to compile a national forest base map for a set year (e.g. 2013, but to be determined), against which all future land use changes will be measured. This forest base map will be the same one used to monitor REDD+ activities and assess Activity Data under the national forest monitoring system component of the Roadmap (see Section 6).

5.2.3 Assessment of National Circumstances

In addition to data on historical forest area change and associated emissions, the development of RELs/ RLs requires information on drivers and activities at work and their specific potential contribution(s) to future national emissions. The assessment and reporting of national circumstances is a pre-existing requirement for all UNFCCC parties as part of their National Communication, though there are currently no clear guidelines for their assessment in the context of forestry and REDD+. Another major area of work under this component will therefore be the assessment of national circumstances and a determination of what they mean in the context of adjusting national and/or subnational RELs/RLs (and subject to further guidance from the COP). A first step in this work area will be detailed analysis of the specific drivers of deforestation and forest degradation, which will be carried out under Section 3.

The assessment of expected future developments and changes, in particular those related to forestry, is directly related to specific activities and their underlying causes; assessments should therefore be made separately for each driver of forest carbon stock changes within a country (Herold *et al.*, 2012¹⁷). In cases where assumptions about expected future developments differ from the observed historical trends in forest changes and emissions, these will be fully justified and supported by an explanation of activities and drivers at the national level. Examples of underlying causes of forest cover and quality change include international markets and commodity prices, national population and GDP growth and policies, and local land use trends. Based on existing guidance and pending further guidance from the COP, the assessment of national circumstances could consider the following information (UNFCCC, 2003¹⁸) (among others):

- Geographical characteristics (climate, forest area and types, land use, other environmental characteristics);
- Population (growth rates, distribution, density, etc.);
- Economy (GDP, per capita income, income distribution).

5.3 Assessment of current data availability and capacities

As part of the preparation of this Roadmap, a National Forest Monitoring System and RELs/RLs (NFMS/RELs) Technical Working Group was formed and convened approximately once per month from December 2012 to May 2013. The NFMS/RELs Working Group was tasked with identifying and documenting existing data and technical systems; and capacity building gaps and needs. Below are the findings of the assessment of existing data and technical systems.

5.3.1 Remote Sensing and GIS in Relation to Forestry

5.3.1.1 Satellite Monitoring System

The MOECF's Forest Department (FD) is one of the foremost organizations in using remote sensing and GIS (RS/GIS) in Myanmar. There are RS/GIS facilities in the Land Survey Department, MOECF, Land Settlement and Records Department, the Ministry of Agriculture and Irrigation, the Ministry of Science and Technology and Ministry of Transportation. The FD's RS/GIS Section in the Planning and Statistics Division was established in 1980 and satellite remote sensing was introduced by a FAO/UNEP project. The use of PC-based Arc/Info GIS was initiated in 1993 by the National Forest

¹⁷Herold, M., Verchot, L., Angelsen, A., Maniatis, D., Bauch, S., 2012. A step-wise framework for setting REDD+ forest reference emission levels and forest reference levels. InfoBrief No. 52, April 2012, CIFOR, Bogor.

¹⁸UNFCCC, 2003. Reporting on climate change: User manual for the guidelines on national communications from non-Annex I parties. UNFCCC, Bonn. Available at: http://unfccc.int/resource/docs/publications/userman_nainc_en.pdf.

Management and Inventory Project (MYA/85/003). The major activities of RS/GIS Section are: forest cover assessment at various scales and using various satellite data sources, preparation and management of a national GIS database, and the preparation of various maps for land use management, biomass assessment and forest fire assessment. The FD also receives international cooperation support for technical training programmes, including from JICA, FAO, ITTO, the International Centre for Integrated Mountain Development (ICIMOD), the Korean Forest Service and Asia Air Survey (see Section 1.4.1).

5.3.1.2 Remote Sensing Data Sources

- Landsat TM and ETM+ (30m x 30m resolution) data were used for previous national forest cover maps (1990, 2000, 2005);
- IRS Liss 3 (23.5m x 23.5m resolution) were acquired in 2010 and are currently being used for an on-going national forest cover assessment;
- High resolution satellite data sources such as Quickbird, IKONOS, ALOS and Aster have also been used for conservation priority areas, such as Tanintharyi Nature Reserve, Irrawady Delta, Nay Pyi Taw region, Wundwin, Rakhine State and Shan State.

5.3.1.3 Software

- TNTmips, Erdas and ENVI for remote sensing data processing;
- ArcGIS and ArcView for GIS analysis.

5.3.1.4 Current Activities

- Forest cover assessment (land use / land cover) and forest types mapping in targeted areas of the country;
- Preparation of a GIS Database using topographic maps and GPS data (e.g. boundaries of reserved forests, compartments, protected public forests, protected areas and watershed, road networks, etc.)
- Preparation of various maps for the Forest Department (e.g. forest cover maps, land use and land cover maps for township levels, district levels, state and national level)
- Biomass assessment under REDD+ programme with Korea Forest Service for one district;
- Preparation of maps to guide forest inventory;
- Land use zoning maps;
- RS/GIS training and academic research;
- Cooperation with international organizations for RS/ GIS (JICA, FAO, ITTO, ICIMOD, KFS, AAS).

5.3.1.5 Human Capacities for RS/GIS

- Three Assistant Directors, five Staff Officers, one Range Officer (four of which are foresters);
- Nine cartographers including computer operators.

5.3.2 Carbon Stock Data

For background on National Forest Inventory (NFI) in Myanmar, see Section 6. Forest carbon stock data has not been collected through the NFI and national data on forest carbon stocks is limited to academic research that has been carried out by the Forest Research Institute (FRI), with biomass figures having been derived for several predominant tree species. This is currently a major data gap for the development of national and/or sub-national RELs/RLs and which will be addressed through

the development and implementation of the country's national forest monitoring system – as set out in Section 6.

5.4 Description of Activities

Output 1: Review methodologies for establishing nationals REL/RLs

Little guidance currently exists on exact methodologies to follow to establish a national and/or sub-national RELs/RLs. Existing guidelines and methodologies, as well as lessons learned from other countries, will be collated and reviewed to determine the best practice approaches Myanmar can/will take when developing its own RELs/RLs. This will involve consultations with national and international organizations and research institutes that are working on diverse approaches to REL/RL development.

Under this output, the following activities will be implemented:

- 1) RELs/RLs capacity building workshop held with stakeholders;
- 2) Study carried out into the context of REL/RL implementation in Myanmar and methodological options available;
- 3) Stakeholder consultation workshop to present findings of the REL/RL methodological study;
- 4) Consultations to determine which methodologies to pilot at demonstration sites.

Outputs indicators:

- Raised capacities of stakeholders on RELs/RLs;
- Report on RELs/RLs methodologies being used in other countries, including assessment of feasibility of application of these methodologies in Myanmar;
- Proposals for methodologies to use/test at demonstration sites.

Output 2: Analyse historical land use change trends at the national scale

This activity will be directly linked to the assessment of activity data as part of the development of the national forest monitoring system (see Section 6), using remote sensing data and GIS analysis to calculate spatially-explicit historical land use changes. The remote sensing analysis will also be used to stratify land uses and forest types by eco-region, which will feed into the development of RELs/RLs for different forest types and/or for different REDD+ activities. This output will involve training as set out in Section 6.

- 1) See activities under Section 6 land use change analysis activities;
- 2) Historical annual emissions calculated using emission factors from national forest monitoring system (Section 6).

Outputs indicators:

- Historical land use (change) analysis for Myanmar completed;
- Emissions factors applied to historical changes to generate assessment of historical emissions from LULUCF.

Output 3: Review relevant national circumstances and collect data

Evaluating Myanmar's national circumstances will be based on variables including: (i) analysis of existing and historical social, political and economic data and trends; (ii) existing conservation laws and policies; (iii) analysis of projected future development in Myanmar (iv) vulnerability to climate change and adaptive capacity; and (v) potential forest cover and carbon stock changes through a consultative process. This will also involve: (a) a further assessment of land-use policy, forest policy and governance conducted through the roadmap process with appropriate institutional structures and arrangements (see Sections 4.2.1 and 3.4.3.2), and (b) new assessments undertaken as part of the REDD+ Strategy analysis to be conducted during the Roadmap implementation under Section 3.4.3.2). A key work area will be the further quantitative assessment of the drivers of deforestation and forest degradation (see Section 3.3), which will not only inform the development appropriate policies and measures to implement REDD+ activities, but also shed light on specific national circumstances surrounding forestry and the implementation of REDD+ activities in Myanmar.

In combination with historical data, the above aspects will constitute the tool on which to base national decisions for the establishment of RELs/RLs. Collating information on these aspects will provide the opportunity to harmonize REDD+ with Myanmar's conservation goals, sustainable development priorities, objectives and projects, and circumstances that will have a significant impact on the successful implementation of REDD+ activities within the broader context of national development. It will also create a platform to promote better understanding of the country's vulnerability and adaptive capacity to deal with adverse effects of climate change.

Under this output, the following activities will be implemented:

- 1) Assessment of the drivers of deforestation (see Sections 3.3 and 3.4.3.2), including policy and land use governance context;
- 2) Stakeholder consultation workshop to present findings of the study on national circumstances;
- 3) Development of potential RELs/RLs adjustment factors.

Output indicators:

- Detailed assessment of the national circumstances of Myanmar in the context of forestry and REDD+, including the drivers of deforestation and forest degradation in Myanmar;
- Potential RELs/RLs adjustment factors.

Output 4: Testing of a national REL/RL and selection of demonstration sites for piloting

Towards the end of the REDD+ Readiness Roadmap implementation process, wide stakeholder consultations will be held to determine concrete proposals for REL/RL formulation, including the REDD+ activities to be piloted (and therefore for which RELs/RLs will be formulated), the locations for implementation and different methodologies to be used/tested. This activity will require extensive consultations with technical experts (government and non-government) as well as stakeholders at the proposed sites of demonstration activities, and will therefore be closely linked to Section 3.5. This activity will lead to the development/testing of a preliminary national REL/RL and identification of sites for piloting REL/RL development at the subnational level, to accompany activity piloting.

Under this output, the following activities will be implemented:

- 1) Consultations with stakeholder and technical experts to collate proposals for, and select, pilot sites;
- 2) Develop a national REL/RL and submit to the UNFCCC Secretariat for review.

Output indicators:

- Proposals for locations of pilot sites where RELs/RLs methodologies will be tested;
- Preliminary national REL/RL and feedback on the methodology used from the UNFCCC.

5.5 Indicative work plan and budget

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 5: Developing a national REL and/or RL				
Output 5.1: Methodologies for establishing national REL/RLs reviewed	FAO, UNDP, ITTO, KFS, Asia Air Survey	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • REL/RL capacity building workshop held with stakeholders; • Study carried out into the context of REL/RL implementation in Myanmar and methodological options available; • National Consultation Workshop to present findings of the REL/RL methodological study; • Consultations to determine which methodologies to pilot at demonstration sites (see Activity 5.4.1). 	230,000
Output 5.2: Historical land use change trends analysed at the national scale	FAO, ITTO, KFS, Asia Air Survey	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • See activities under Section 6 land use change analysis activities; • Historical annual emissions calculated using emission factors from national forest monitoring system (Section 6). 	75,000
Output 5.3: Relevant national circumstances reviewed and data collected	UNDP, FAO, ITTO, KFS	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • Assessment of the drivers of deforestation (see Sections 3.3 and 3.4.3.2), including policy and land use governance context; • National Consultation Workshop to present findings of the study on national circumstances; • Development of potential REL/RL adjustment factors, following outcomes of Output 5.1. 	150,000
Output 5.4: National REL/RL tested and demonstrations sites for piloting selected	FAO, UNDP, ITTO, KFS, Asia Air Survey	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • Consultations with stakeholder and technical experts to collate proposals for, and select, pilot sites; • Formulation of national REL/RL and submission to the UNFCCC Secretariat. 	620,000
TOTAL				1,075,000

SECTION 6: DEVELOPMENT OF A NATIONAL FOREST MONITORING SYSTEM

Rationale: The REDD+ Readiness phase must put in place capacities, infrastructure and systems necessary to conduct accurate national forest inventories, monitoring of forest cover and cover change, and measurement, reporting and verification (MRV) of forest-based greenhouse gas (GHG) emissions. Following UNFCCC guidance, this will be achieved by developing and implementing a national forest monitoring system.

Key parts:

- Background and objectives;
- Approach to National Forest Monitoring System Development in Myanmar;
- Data availability and capacity building needs;
- Description of activities;
- Indicative work plan and budget.

6.1 Background and Objectives

Decision 4/CP.15 establishes the REDD+ MRV requirement by requesting Parties (paragraph 1(d)) to:

"...establish, according to national circumstances and capabilities, robust and transparent national forest monitoring systems and, if appropriate, sub-national systems as part of national monitoring systems that:

- 1) Use a combination of remote sensing and ground-based forest carbon inventory approaches for estimating ... anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes;*
- 2) Provide estimates that are transparent, consistent, as far as possible accurate, and that reduce uncertainties, taking into account national capabilities and capacities;*
- 3) Are transparent and their results are available and suitable for review as agreed by the Conference of the Parties".*

Decision 4/CP.15 also specifies that countries must follow the most recent methodological recommendations issued by the IPCC, serving as a basis for estimating the sources of anthropogenic GHG emissions, and their removal by sinks, and for measuring carbon stocks and changes in forest area. In this way, emissions estimates will be based on common (IPCC) methodological approaches. This methodological guidance indicates that national forest monitoring systems should be used to: 1) estimate emissions and removals from the forest sector (measurement); 2) report this mitigation performance of REDD+ activities to the UNFCCC (reporting); and 3) allow verification of the results by the UNFCCC Secretariat (verification) (subject to further guidance from the COP) – i.e. to fulfil the MRV function for REDD+ activities.

UNFCCC guidance on this technical element for REDD+ is built upon in Decision 1/CP.16, where developing countries aiming to participate in REDD+ are requested to develop (paragraph 71(c)):

- *"A robust and transparent national forest monitoring system for the monitoring and reporting of the [REDD+] activities ..., with, if appropriate, subnational monitoring and reporting as an interim measure, in accordance with national circumstances, and with the provisions contained in decision 4/CP.15".*

Decisions 4/CP.15 and 1/CP.16 together establish that countries should develop a national forest monitoring system to serve the dual functions of monitoring and MRV, as shown in Figure 6.1. As the figure indicates, the monitoring function of the national forest monitoring system may include wider

elements including community monitoring and traditional forestry monitoring systems. Community monitoring will form an integral part of the monitoring system as communities will provide ground-level information (e.g. tree counts and locations, delimitation of community forest areas), which will feed into the web-GIS interface. Traditional forest monitoring systems are a critical consideration as the national forest monitoring system aims to build on existing systems and be based on national circumstances; these will therefore also be incorporated into the monitoring function for REDD+.

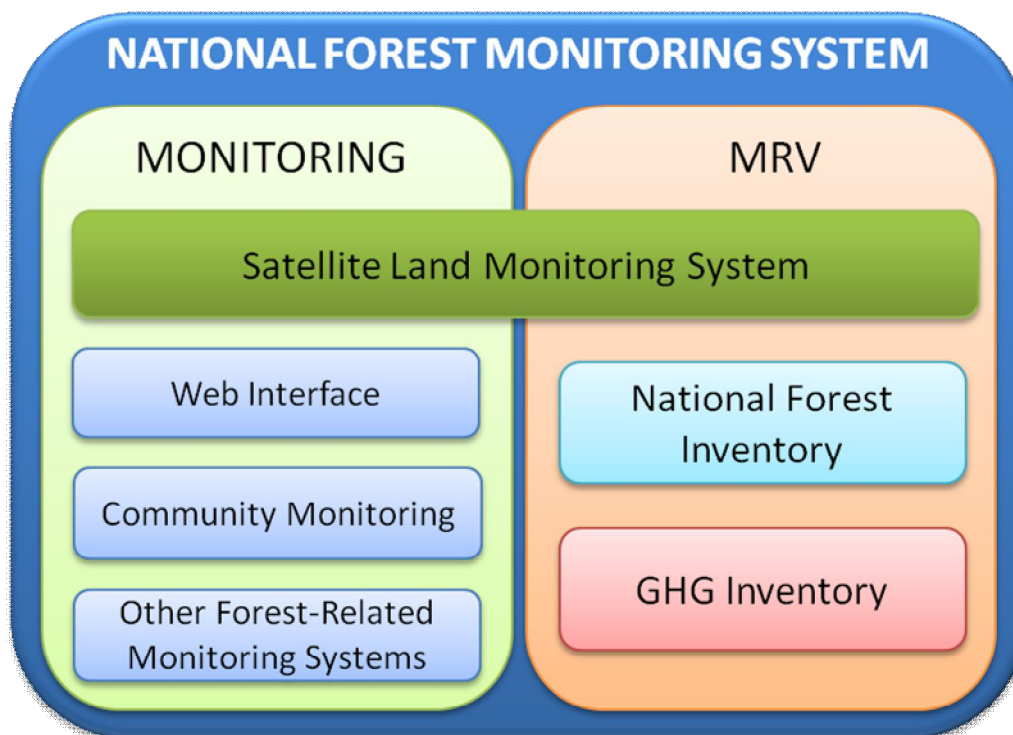


Figure 6.1: The dual functions of the national forest monitoring system for REDD+.

The monitoring function will allow a country to assess whether REDD+ activities are resulting in positive outcomes, according to proxy indicators such as forest cover change; while the MRV function will assess the mitigation performance of REDD+ activities (Fig. 6.2), i.e. by allowing the assessment (following international standards) of whether REDD+ activities are contributing to measureable carbon mitigation.

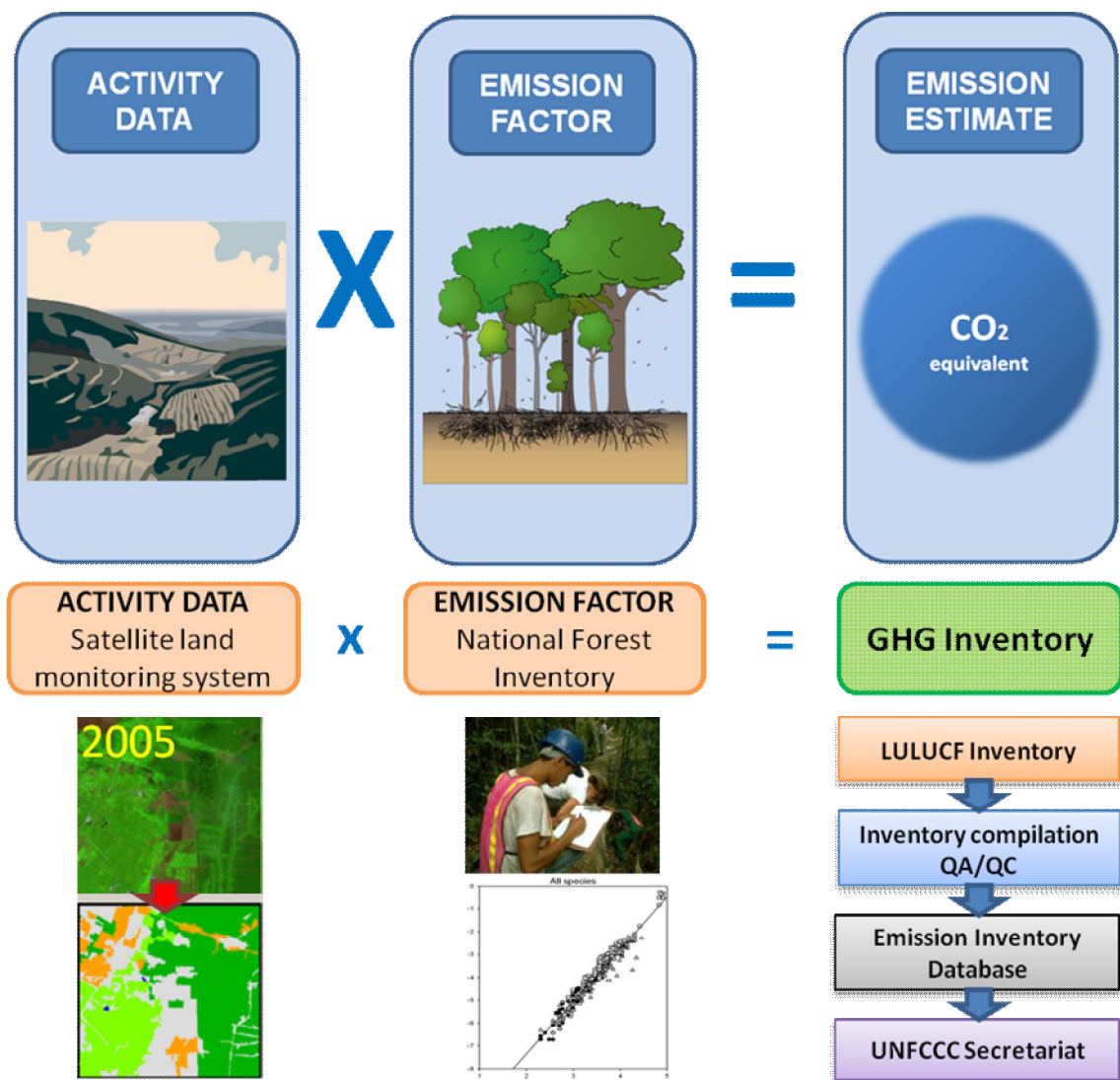


Figure 6.2: The IPCC's methodological approach to calculate anthropogenic GHG emissions by sources and removals by sinks related to forest land.

The implementation of the technical components of the national forest monitoring system will be implemented through the three-phased approach. This allows time to build the necessary capacity, learning lessons and improving the systems, as necessary:

- **Phase 1:** Capacity building on, and design of, technical elements (e.g. Satellite Land Monitoring System, remote sensing, forest inventory); establishment of institutional arrangements; activity planning; design of demonstration (pilot) activities.
- **Phase 2:** Implementation and monitoring of (and learning from) demonstration activities, and further capacity building on technical elements.
- **Phase 3:** Satellite Land Monitoring System is upgraded to monitor national performance of REDD+ policies and measures; full MRV in place for assessing GHG emissions and removals in the forestry sector and to report mitigation performance to the UNFCCC Secretariat.

The objective of this chapter is to set out how Myanmar will follow the above UNFCCC guidance and modalities to develop its national forest monitoring system for REDD+.

6.2 National Forest Monitoring System Development in Myanmar

6.2.1 Institutional Arrangements

The first step towards the development of Myanmar's national forest monitoring system will be the determination of transparent and effective institutional arrangements for 1) the production and sharing of land use monitoring and forest carbon stocks data, 2) compilation of the national GHG inventory for the Land-use, Land-use Change and Forestry (LULUCF) sector, and 3) compilation and reporting of the National Communication to the UNFCCC. Transparent and accountable institutional arrangements will be essential to ensure the effective functioning of the system; the Government of Myanmar will therefore aim to formalize these arrangements through a legal act to ensure long-term accountability and sustainability of the national forest monitoring system.

Discussions held by the NFMS/RELS Technical Working Group led to the proposal of the institutional arrangements set out in Figure 6.3. The institutions indicated in the boxes are proposed to act as the lead government agencies/institutions for each of the respective components of the national forest monitoring system; namely: the Forest Department (and specifically the Remote Sensing and GIS Session) for the Land Satellite Monitoring System; the Forest Department for the National Forest Inventory; MoECAF and MoAI for the National GHG Inventory for the LULUCF sector; and MoECAF for the compilation and reporting of the National Communication to the UNFCCC.

In and around these arrangements will be integrated specific Quality Control processes (as set out by the IPCC) and an overall Quality Assurance assessment that should be carried out by an independent third party. Under these arrangements activity data, emission factors and GHG emissions data should be shared between the involved institutions to maximize transparency and openness.

The institutions listed in the figure will act as lead entities for their respective components, though this does not preclude the receipt of additional technical and capacity building support from other national and international agencies and institutions, for example for the collection and analysis of data. A first step in the implementation of the REDD+ Readiness Roadmap will be to formalize these arrangements among relevant institutions and stakeholders, followed by the publishing of the agreed institutional arrangements proposal in Myanmar's National Forest Monitoring System Action Plan – see next section.

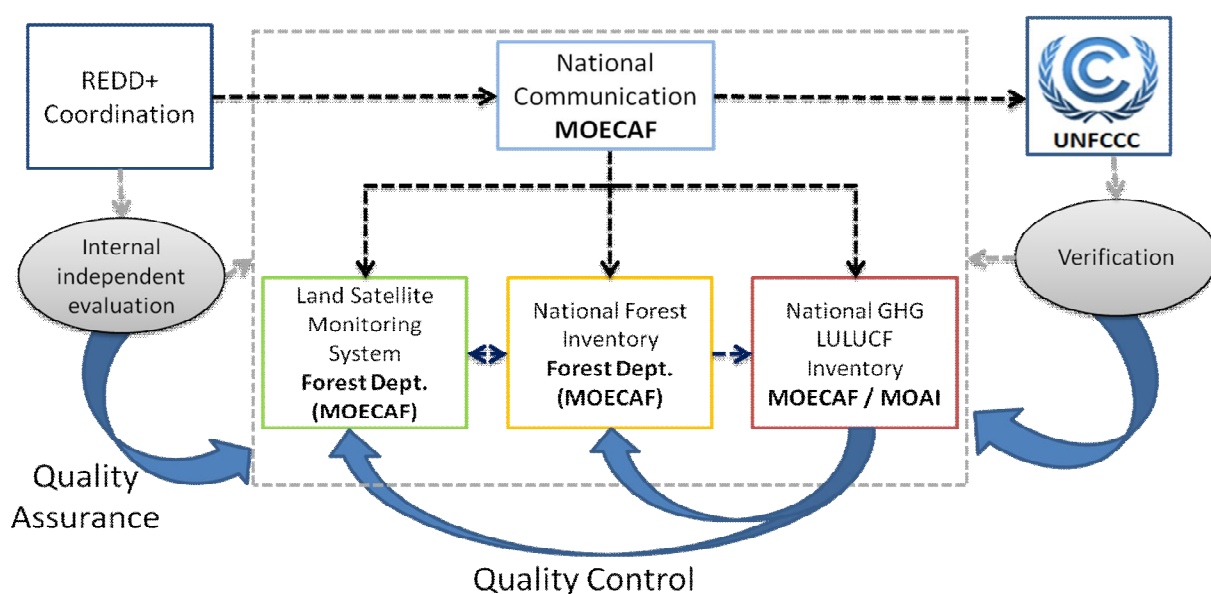


Figure 6.3: Proposed institutional arrangements for Myanmar's National Forest Monitoring System.

6.2.2 Capacity Building Planning for the National Forest Monitoring System

In order to specify in detail the steps that Myanmar will take to develop and implement its national forest monitoring system, the Forest Department will lead on the formulation of a National Forest Monitoring System Action Plan (NFMS-AP) document. This document will set out the actions that the country will undertake, in the context of the provision of adequate and predictable support, including financial resources and technical and technological support, to implement its national forest monitoring system for REDD+ activities. The NFMS-AP is likely to include sections on the following:

- Detailed capacity assessment of RS/GIS, forest inventory and GHG inventory, both in government and non-government entities; and support received to date;
- Guidance on the phased implementation of the national forest monitoring system, from concretizing institutional arrangements and capacity building (Phase 1) to demonstration and monitoring (Phase 2) to full national monitoring and MRV for REDD+ activities;
- A timeline for the implementation of activities;
- A budget.

6.3 Data Availability and Capacity Building Needs

Preliminary ideas on methods to be employed and systems to be developed are outlined below; but will be subject to change based on the results of national and sub-national consultations.

6.3.1 Forest monitoring

6.3.1.1 Remote Sensing and GIS

Details of existing data, capacities and activities on RS/GIS are set out in Section 5.3.

The Satellite Land Monitoring System (SLMS) will be developed to fulfill two roles. The first is the monitoring of REDD+ activities, which is necessary in order to assess whether activities are being implemented effectively. Consultations will be undertaken to determine the proxies that will be most useful to monitor the activities, depending on which REDD+ activities are selected for implementation and where. To fulfill this role, Forest Department's RS/GIS Session will require capacity building on proxy-based forest monitoring, including training on appropriate software. Among others, the application of open-source software such as TerrAmazon, developed by the Government of Brazil, will be explored.

The second role of the SLMS will be to produce activity data to feed into the national GHG inventory for the LULUCF sector. This role will require a national analysis of land use change based on the IPCC categories and methodologies. This form of land use change analysis has to-date not been completed at the national level in Myanmar. Training will therefore be required for the RS/GIS Session on IPCC guidance and guidelines, as well as appropriate software and other tools.

6.3.1.2 Forest Monitoring Data Sharing

There is currently no national mechanism or tool in place in Myanmar to openly and transparently share forest information. Key features of the national forest monitoring system will be 1) open-access data sharing and 2) ability to feed-back data, information and/or corrections, as necessary, to the centralized system. One method which will be used to share forest monitoring data and information at the national and international level will be a web-GIS portal, through which any internet user will be able to view forest information through a GIS mapping interface, including viewing of forest areas and types, deforestation statistics, forest governance structures, etc. The RS/GIS Session will require

capacity building on the development, hosting and management of the web-GIS portal, including data uploading and editing processes.

6.3.1.3 Other Forest Monitoring Methods and Approaches

While there are legal provisions for community forest management in Myanmar, forest monitoring activities are currently not carried out at the community level. Nevertheless, the community forest management infrastructure in place is likely to facilitate the integration of local-level monitoring activities which will provide critical data and information for Myanmar's NFMS. Local monitoring information could include tree counts, delineation of forest areas and GPS routes of monitoring activities.

Consultations will be held to decide the ways in which non-RS/GIS forms of forest monitoring will be incorporated into the NFMS, including the potential role and function of community forest monitoring. Capacity building workshops will then be held for the national- and subnational-level stakeholders who will be participating in this monitoring, including on how to collect data and information and feed it up to the national level.

6.3.2 National Forest Inventory

6.3.2.1 Historical Context

Forest inventory was initiated at the national level in 1982, when the Government of Myanmar set up a national forest survey and inventory to be carried out in three main phases: 1) the production of national forest cover and land use maps using satellite imagery, 2) the production of detailed forest type and land use maps of targeted areas using aerial photography, and 3) ground survey of the remotely sensed targeted areas. The main objectives of the ground survey are to establish permanent sample plots to monitor the condition of the forest and its growth by successive measurements, to determine the amount, location and quality of timber at pre-investment level, to assess the silvicultural characteristics of the forest (especially regeneration) and to classify the forest terrain according to its operability. The design, supervision and computation of the inventory were undertaken through the support of UNDP/FAO National Forest Survey and Inventory Project (BUR/79/011) in collaboration with the Forest Department. Detailed field inventory design and field instructions can be found in the project document '*National Forest Survey and Inventory, Burma Field Instructions (FO: BUR/79/011)*'. The National Forest Inventory (NFI) could not be finished for the whole country and the works were stopped at the end of this project in 1993.

6.3.2.2 Current Status

Currently, district level forest inventory (800 temporary sample plots are assigned to each district) is being conducted by the Forest Department, with the aim of completing two districts per year, and with the objectives: 1) to develop stand and stock tables based on the inventory data, 2) to calculate annual allowable cut and 3) to assess changes of land use and forest status. The sample plots are square and its size changes according to available timeframe; ranging from 40m x 40m to 100m x 100m. The sample plots are established depending on the forest cover that comes from the satellite remote sensing results. Sample plots are usually established systematically within closed forest (> 40% canopy density) and open forest (10-40% canopy density). For district-level inventory, plots are spaced at a distance of 2,000m. The centre of the sample plots is recorded by GPS. Field inventory crews record trees with a DBH above 20cm, the condition of regeneration and bamboo. Field inventory is usually supervised by Inventory Section, Planning and Statistics Division of the Forest Department; though a lack of funds means that this work area is regularly underfunded and field work is not able to be fully completed.

Before starting the field inventory, local forest staff are trained for measurement of forest attributes and in the use of GPS. Following field work, the data are passed to the Planning and Statistics Division, Computer Section (that was established in 1985 under NFI project) to analyse the data and produce stand, stock and bamboo tables, and to calculate the annual allowable cut. Forest inventory is conducted in only one or two districts per year due to limited budgets and human resources.

6.3.2.3 Capacity Building Needs

In order to function for the assessment of emission factors for the LULUCF sector GHG inventory, the NFI data collection methodology will need to be re-designed to measure forest carbon stocks, as part of a multipurpose NFI. The NFI should aim to account for as many of the five IPCC forest carbon pools as possible, and will be a key tool for the planning and management of the forest and other land use sectors. The NFI should become a key tool to inform national land use planning, by collecting and making available data on timber stocks, biodiversity and human uses of forests, in addition to carbon stocks. Consultations will be held at the national and sub-national levels to gather input from diverse stakeholders to inform the selection of parameters for data collection through the multipurpose NFI.

To inform and guide this process capacity building is required on IPCC guidance and guidelines for NFIs, including on NFI sampling strategies, data collection methodologies, process documentation, uncertainty analyses, data management and storage, and quality assurance and quality control (QA/QC) measures. International support will be sought from countries with multipurpose NFIs in place, to learn lessons from best practice.

Once the above activities have been completed, the Forest Department will lead efforts to re-design its existing NFI methodology through a series of consultation workshops, to ensure wide participation and transparency in the process. Concurrently to the methodological re-design, the Forest Department will design an appropriate data management, analysis and archiving system. With a new methodology in place, the Forest Department will move towards planning and implementation of the piloting of the methodology, including data processing and archiving, before refining the methodology, as necessary.

6.3.3 Forest-Related National GHG Inventory in Myanmar

All country Parties to the UNFCCC are requested to estimate and report on forest-related GHGs by sources and removal by sinks (Decision 4/CP.15, paragraph 1(d) and (d) (i)). Information published in GHG inventories allows the COP to observe progress achieved by the Parties in fulfilling their commitments and achieving the ultimate objective of the Convention.

The quality of a GHG inventory depends not only on the robustness of the results from the measurements made and the credibility of estimates, but also on the manner and method in which the information is collated and presented. Information should be documented coherently following the reporting the guidance of the UNFCCC. Countries should follow the most recent IPCC guidance and guidelines, as adopted or encouraged by the COP, as a basis for estimating anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes in order to comply with the five GHG inventory reporting principles: Transparency, Coherence, Comparability, Completeness and Accuracy.

6.3.3.1 National Communication

Parties to the Convention must submit national reports on their progress on implementing the Convention to the UNFCCC COP. The core elements of the national communications are information on emissions and removals of GHGs and details of the activities a Party has undertaken to implement

the Convention. National Communications usually contain sections on national circumstances, vulnerability assessment, financial resources and transfer of technology, and education, training and public awareness.

6.3.3.2 Central National GHG Inventory Archiving System

An archive system is a critical tool to underpin the sustainability of the National GHG Inventory System by ensuring that GHG estimates can be easily (re-)produced, safeguarding against data and information loss, and allowing replicability of estimates.

6.3.3.3 Current Status

The Government of Myanmar recently completed and submitted its Initial National Communication (INC) to the UNFCCC, which was the result of a UNEP-funded project begun in 2008 (Myanmar joined negotiations under the UNFCCC in 2005). The base year for the INC was 2000. Default values from the IPCC's global Emissions Factor Database (EFDB) were used to compile the forestry sector inventory; and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories were followed for the compilation of the inventory report. A project proposal is being prepared to compile the Second National Communication. Capacity building is required for technical officers in MOECF and MOAI on IPCC guidance and guidelines for GHG inventory compilations, as well as software tools that can be used to support inventory compilation, such as the US Environmental Protection Agency's (EPA) Agriculture and Land Use (ALU) tool, and database development and management, including QA/QC procedures.

6.3.4 NFMS-Related Scientific Research

6.3.4.1 Current Status

Myanmar's Forest Research Institute (FRI) sits under MoECF's Forest Department and leads national research into forest development (including management and silviculture, botany, tree improvement and forest protection) and utilization. The FRI has a soil analysis laboratory and has undertaken studies on tree biomass, but lacks information on forestry in the context of measurement and monitoring for REDD+. Capacity building is therefore required to raise levels of awareness on the role and importance of nationally-derived data for REDD+, as well as to guide FRI towards new avenues of forestry research.

6.3.4.2 Potential Research Areas

Following initial awareness raising and capacity building on REDD+, internal and external consultations and discussions will be undertaken by the Forest Department and FRI into potential new research areas to support the implementation of REDD+ in Myanmar, and in particular the multipurpose NFI.

6.4 Description of Activities

Output 1: Capacity Building and NFMS Action Plan Development

The first step towards the development and implementation of Myanmar's national forest monitoring system will involve general awareness raising on the components of the system as well as in-depth training workshops on the specifics of each of the components, at national and sub-national levels. This output will include the hiring of an international Chief Technical Advisor (P3 grade

international FAO officer), a national officer and a secretary who will together coordinate all activities under Sections 5 and 6.

Activity 1.1: Organize NFMS work and regular Working Group meetings

Under this activity, the following sub-activities will be implemented:

- 1) Develop a list of all the institutions and staff involved in forest monitoring and MRV (using the membership of the NFMS/REL-RLs Technical Working Group as a starting point);
- 2) Develop a calendar of meetings to be held over the Roadmap implementation period;
- 3) Collaboratively formulate a TOR for the Working Group;
- 4) Identify the topics to be discussed in each of the meetings and relevant contributors;
- 5) Prepare the minutes of each of the meetings;
- 6) Store and archive all documents and other materials produced during the meetings;
- 7) In collaboration with all relevant stakeholders, contribute to national consultations on the NFMS-AP, national forest definition, satellite land monitoring system and GHG inventory.

Expected outputs:

- List of the NFMS stakeholders with contact address and associated institution names;
- TOR, work plan and calendar for the Roadmap implementation period;
- Minutes of the meetings;
- Archive of all documents produced;
- Reports of the national consultations.

Activity 1.2: Formalize institutional arrangements for the implementation and management of the NFMS

Under this activity, the following sub-activities will be implemented:

- 1) Propose institutional arrangements for effective and transparent implementation;
- 2) Identify the roles, coordination mechanisms and contact information for those providing relevant data for estimating GHG emissions and removals from the LULUCF sector;
- 3) Provide information on lead agencies, identify inventory management team members, contact information and status of institutional arrangements in a tabular format;
- 4) Identify policy support necessary for institutional arrangement and obtain government approval (e.g. notification on institutional structures, roles and mandate) for effective implementation;
- 5) Identify the strengths, and recommend for potential improvements, in the management structure of National Inventory System.

Expected outputs:

- Essential information in a tabular format;
- Standardized tasks, to compare and contrast results provided;
- Roles and responsibilities clarified;
- Objective and efficient system for identifying priorities for future improvements provided;
- Concrete institutional arrangements proposed in Myanmar's NFMS-AP.

Activity 1.3: Develop Myanmar's NFMS Action Plan

The NFMS-AP (as outlined above) will set out institutional arrangements and guidance for implementation in Myanmar. In addition to detailed capacity and needs assessment, it will set out

the activities and work plan to implement the NFMS, including details of logistics, procurement, equipment and software needs, etc.

The NFMS-AP will be consulted upon with relevant stakeholders, re-drafted (as necessary), then be proposed for official government endorsement in order to formalize the institutional arrangements and work plan. In addition to guiding national activities, this document will also be used to seek additional funding for components of the national forest monitoring system not funded through the Roadmap.

Under this activity, the following sub-activities will be implemented:

- 1) Develop a table of contents (led by NFMS/REL-RLs Technical Working Group);
- 2) Gather input through meetings and consultations with relevant ministries, NGOs and private sector stakeholders;
- 3) Develop a first draft of the document and consult widely with stakeholders through a workshop;
- 4) Gather input and re-draft the document;
- 5) Produce final version and hold national a validation workshop.

Expected outputs:

- Myanmar's NFMS Action Plan document;
- Report of the proceedings of national consultation workshop;
- Report of the proceedings of national validation workshop.

Output 2: Satellite Land Monitoring System developed and operationalized

A SLMS will be designed and implemented to monitor REDD+ activities and (eventually) assess national activity data. Consultations will be undertaken to determine an efficient and cost-effective approach, including consideration of open-source software packages and through support from experienced international organizations and countries. Training will be delivered to technical officers who will then process national data and upload it to the purpose-built web-GIS portal. In addition, a systematic data archive will be built to store national remote sensing data securely and transparently.

Activity 2.1: Capacity building on geospatial data processing and database management

Stakeholders will receive training on geospatial data capture, processing, analysis and management. Part of the training will be delivered in collaboration with the Brazilian Institute for Space Research (INPE), who have a partnership with FAO/UN-REDD to deliver training to government counterparts from partner countries. This activity will also include the hiring of a team of people to coordinate the SLMS work and design, operationalise and manage Myanmar's SLMS.

Under this activity, the following sub-activities will be implemented:

- 1) Identification of RS/GIS and database management training needs;
- 2) Develop and deliver training programmes on satellite data geo-rectification, interpretation, classification, field data collection, accuracy assessment and change matrix generation;
- 3) Travel of national officers to Brazil for training at INPE;
- 4) Develop and deliver a training program on RS/GIS database structure and data capture including metadata, editing and retrieval, visualization, analysis, mapping and modelling;

- 5) Provide guidelines and training on RS/GIS data archiving and database management, with preference for open-source database software.

Output indicators:

- Capacity enhanced on GIS, RS data handling and data base management;
- Training materials and guidelines on GIS and remote sensing;
- Training materials and guidelines on RS/GIS data archiving and management.

Activity 2.2: Establish a harmonized classification system for land representation

This activity involves setting the National Forest Definition and classification for land representation. It is important to have an appropriate national definition of forest and land representation system allowing for effective and sustainable monitoring tools of forest resources. Under the UNFCCC, forest definitions are provided based on biophysical thresholds. The forest thresholds will need to be within the thresholds identified by the UNFCCC.

The forest classification systems will need to account for measuring and monitoring REDD+ activities.

Under this activity, the following sub-activities will be implemented:

- 1) Collect existing land cover and land use maps of Myanmar and identify the different forest and other land use definitions and criteria used to develop the maps;
- 2) Organize consultations on forest classification, including a forest monitoring training workshop;
- 3) Assess the impact of different forest definitions on the feasibility, sustainability and efficiency of methods for forest monitoring;
- 4) Provide recommendations on forest classification and forest stratification;
- 5) Develop a harmonized classification system of land use.

Output indicators:

- Harmonized land use classification for mapping;
- Manual of the classification system;
- Minutes of the national consultations.

Activity 2.3: Satellite image characterization for forest monitoring

The selection of the types of satellite imagery will depend on their quality, cloud cover, spatial, temporal and spectral resolution, as well as their cost. It is therefore necessary to decide the parameters to be used for collecting remote sensing data to accurately monitor forest cover change and provide information on some of the REDD+ safeguards. It is also important to decide on the use of correct levels of resolution, to accurately monitor forest degradation or enhancement of forest carbon stocks by way of distinguishing forest landscape feature changes or forest area changes.

Under this activity, the following sub-activities will be implemented:

- 1) Identify and organize all available satellite and/or aerial imageries for the country, e.g. by resolution, date, geographical coverage, etc.;
- 2) Assess the quality of these data in terms of spatial and temporal coverage, cloud cover, spatial and spectral resolution and image registration;

- 3) Analyse the impact of different spatial resolutions in identifying deforestation and forest degradation;
- 4) Provide recommendations for the use of imagery for past and future forest cover assessments, forest stratification and monitoring of REDD+ activities.

Output indicators:

- All existing satellite imagery for Myanmar identified;
- Standardised procedure for integrating medium- and high-resolution satellite data;
- Freely available satellite imageries archived and transparently available for the national entities involved in the NFMS;
- Recommendations provided on satellite imagery to be used to monitor REDD+ activities.

Activity 2.4: Establishment of an RS/GIS Forest Information System and web-GIS platform

Information and monitoring systems for the forest sector have become important tools for forest planning, monitoring and reporting. An RS/GIS Forest Information Systems (FIS) will be developed to support decision makers as well as ensure transparency of forest data, including for REDD+. Development of the system will involve documentation at all levels, including of meta-data, development of a data dictionary and user manuals, and instructions for data storage, manipulation, retrieval and update.

Under this activity, the following sub-activities will be implemented:

- 1) Review, harmonize and standardize existing statistical and spatial data information related to the forest sector and identify additional information requirements;
- 2) Develop a database structure for the Forest Information System;
- 3) Review capacity building needs for the Forest Information System;
- 4) Develop a design for hosting a web-based GIS platform for database management;
- 5) Standardize existing GIS and RS data and integrate them into the system;
- 6) Develop training manuals for managing and maintaining the system;
- 7) Develop technical documentation and deliver training on the system.

Output indicators:

- Operational Forest Information System;
- Documentation of the system design, data flow, storage and retrieval models;
- Web-based GIS platform operational;
- User manual.

Activity 2.5: Develop and operationalise Myanmar's satellite land monitoring system

A satellite land monitoring system (SLMS) will be a crucial element of Myanmar's NFMS, for the monitoring of REDD+ activities and for the generation of activity data.

Under this activity, the following sub-activities will be implemented:

- 1) Organize national consultations on SLMS development and identify and validate parameters for forest monitoring;
- 2) Develop Myanmar's forest base map (forest mask), to use as the basis for forest/REDD+ monitoring;

- 3) Develop an operational methodology for the monitoring forests (including staffing and logistical issues and costs);
- 4) Carry out field tests of the monitoring system for selected demonstration activities;
- 5) Integrate lessons from field demonstration activities into the national system.

Output indicator:

- Report of the consultations to identify the forest monitoring parameters and recommendations for Myanmar's SLMS;
- Nationally appropriate satellite land monitoring system developed and operationalised;
- Results from demonstration sites integrated into the national SLMS.

Activity 2.6: Development of participatory tools for community forest monitoring

Given the importance of community monitoring in generating and delivering local data and ground-truthing national monitoring activities, activities will also be designed to support the assessment of integrating community monitoring into the NFMS.

Under this activity, the following sub-activities will be implemented:

- 1) Research on a) current community forest monitoring practices in Myanmar and b) community monitoring integration in other countries in SE Asia;
- 2) Socio-economic assessment of the potential involvement of forest communities in the NFMS;
- 3) Provide recommendations on the involvement of forest communities in the NFMS;
- 4) Stakeholder consultation and validation workshops to select an approach to community forest monitoring for REDD+;
- 5) Selection of demonstration sites based on transparent criteria.

Output indicators:

- Diagnostic of the roles, methods and costs of the involvement of the forest communities in the NFMS;
- List of potential demonstration sites.

Activity 2.7: Forest boundary delineation in the field and GIS boundary generation for demonstration activities

Some of the risks involved in REDD+ implementation include the displacement of deforestation or forest degradation from the demonstration activities to other forest areas, leading to lower actual net carbon savings by the project. The entire demonstration area should be delineated to assure effective and accurate management and monitoring.

Under this activity, the following sub-activities will be implemented:

- 1) Collect forest / field maps / cadastral maps of forest boundaries;
- 2) Provide orientation and training for forest land survey using maps and GPS;
- 3) Execute a forest land survey with the coordination with multiple ministries and local stakeholders;
- 4) Develop a boundary demarcation plan by state (along with a budget);
- 5) Identify the potential organisations involved in GIS database building for forest boundary digitization and contract for GIS data generation;
- 6) Provide guidelines for GIS boundary generation.

Output indicators:

- Forest boundary defined and mapped;
- Training materials developed and delivered for forest delineation.

Output 3: Multipurpose NFI designed and piloted

Capacity building will be delivered to relevant stakeholders to raise awareness of the role and function of a multipurpose NFI, learning from best practice from projects and other countries' experience. Parameters to be measured will be determined and a new NFI methodology will be proposed that will include a national sampling strategy and data collection protocols, following IPCC guidance and guidelines. A NFI database will be designed, according to the parameters to be measured, to facilitate storage, analysis and archiving of the data to be collected using the new methodology. The findings from studies undertaken by FRI to support this work area will inform both the data collection methodology and analysis protocols.

Activity 3.1: Strengthen forest inventory capacities among stakeholders

A detailed assessment will be carried out of the technical capacities of stakeholders (on issues including field data collection, inventory plot layout, data recording and analysis, emission factor calculation, allometric equation calculation, etc.), on the basis of which an NFI capacity building programme will be designed to provide and upgrade knowledge, including international guidance on QA/QC procedures and the production of emission factors.

Under this activity, the following sub-activities will be implemented:

- 1) Define training needs for the stakeholders and deliver training program on forest inventory (data collection, compilation, analysis etc.);
- 2) Organize training on NFI to the relevant stakeholders;
- 3) Develop NFI training manuals;
- 4) Develop NFI curriculum for Myanmar Forest School and the University of Forestry;
- 5) Provide training on data processing, data management and statistical analysis.

Output indicators:

- Report detailing national capacities to implement NFIs and assessing emission factors;
- Training materials and details of trained staff;
- NFI training and field manuals;
- Report on NFI data processing, data management and statistical analysis.

Activity 3.2: Harmonize all existing inventory data and develop robust tree species and NFI databases

In order to ensure the comparability of data collected and to improve the estimates of forest biomass and carbon stocks, existing data should be stored in a central tree species and forestry database and used to support the design of the new multipurpose NFI. Once the new NFI is designed, an accompanying database will be developed to input, analyse and archive NFI data once it has been collected.

Under this activity, the following sub-activities will be implemented:

- 1) Consultations held with the relevant stakeholders involved in forest inventory and measurement and collate all existing forest inventory data;
- 2) Tree species and forestry database developed based on open-source software;
- 3) All available existing inventory data and land cover maps collected and reviewed;
- 4) Robust geo-referenced database developed, preferably based on open-source software;
- 5) Populate the database with existing inventory data (including allometric equations, wood density and conversion factors, soil and litter carbon stock assessment, etc.);
- 6) Variability of the biomass and carbon stocks in the various forest types assessed;
- 7) NFI database for inputting, analysing and archiving NFI data developed, preferably based on open-source software.

Output indicators:

- List of the stakeholders involved in forest inventory and measurement activities;
- Central database containing the available and harmonized tree species and forestry data;
- Statistical method for data harmonization and accuracy assessment;
- Database for new multipurpose NFI.

Activity 3.3: Review existing inventory designs and provide recommendations for design of a new multipurpose NFI

NFIs can deliver information on carbon as well as multiple other aspects of forests, including volume, biodiversity, forest condition and socio-economic aspects of forest resources. A comprehensive review of existing inventory designs is required to develop a multipurpose NFI that will generate emission factors for different forest types and conditions, as well as provide necessary information for the development of forest management plans. Myanmar's NFI will aim to identify all forest carbon pools (above-ground biomass, below-ground biomass, litter, soil and dead wood). An appropriate sampling design is necessary for the development of a cost-efficient NFI that provides data at the targeted accuracy.

Under this activity, the following sub-activities will be implemented:

- 1) Establish a technical working group on NFI and organize regular meetings;
- 2) Assess existing NFI designs in the country and region, including cost estimates to implement in Myanmar;
- 3) Identify the objectives of the multipurpose NFI, the targeted parameters to be assessed and variables to be measured;
- 4) Identify the capacity needs to implement a multipurpose NFI;
- 5) Provide recommendations for the design of Myanmar's multipurpose NFI.

Output indicators:

- Report on existing NFI designs, capacity needs and recommendations;
- Minutes of NFI meetings;
- List of parameters to be measured by the new multipurpose NFI;
- Recommendations for the design of the new multipurpose NFI.

Activity 3.4: Design and pilot Myanmar's multipurpose National Forest Inventory

The NFI design will take into consideration IPCC guidelines to ensure that the outputs from the NFI will be in line with the UNFCCC reporting requirements. The NFI will be designed to provide the necessary data for the calibration of satellite data interpretation. This implies that methods for NFI and the satellite monitoring system will be consistent. In addition, consultations will be held to decide which other forest parameters Myanmar would like to collect information on, based on national circumstances.

Under this activity, the following sub-activities will be implemented:

- 1) Design the multi-purpose NFI based on recommendations from Activity 3.3 and validate with stakeholders;
- 2) Design and publish field data collection manuals, NFI Master Plan and work programme for implementation of the multipurpose NFI;
- 3) Purchase equipment for data collection for piloting NFI;
- 4) Carry out field training of the NFI methodology at demonstration sites and gather feedback;
- 5) Carry out NFI piloting and collate data in NFI database;
- 6) Develop emission factors for REDD+-related activities based on preliminary data.

Output indicators:

- Formal NFI technical working group established;
- Report on NFI planning process, including objectives and parameters to be measured, variability of the target variables, and cost estimates of different designs;
- NFI methodology including sampling strategy;
- Data collection field manuals, NFI Master Plan and implementation work programme;
- Results of field piloting;
- Preliminary national emissions factors.

Output 4: National capacity built for undertaking GHG Inventory for the LULUCF sector

Activity data and emissions factors estimated through the SLMS and NFI will be compiled, following international guidance, to produce Myanmar's GHG inventory for the LULUCF sector. Figure 6.4 summarizes the sequence of generic activities to develop and implement Myanmar's national GHG inventory for the LULUCF sector.

Activity 4.1: Technical capacity building for the GHG inventory for the LULUCF sector

Myanmar has limited experience in developing national GHG inventories for the LULUCF sector. The objective of this activity is to provide preliminary training and identify the future training needs in order to prepare the inventory plan for data compilation and reporting with the aim of promoting the establishment of the national system.

Under this activity, the following sub-activities will be implemented:

- 1) Establish working group on GHG inventory for the LULUCF sector;
- 2) Training delivered on GHG inventory implementation for the LULUCF sector;
- 3) Training needs identified for inventory planning, data collection, data compilation, Quality Assurance/Quality Control (QA/QC) procedures, reporting, uncertainty estimation;
- 4) Myanmar-specific training manuals developed and training programme delivered, as necessary;

- 5) Technical support provided for use of GHG inventory software tools for data compilation and reporting;
- 6) QA/QC plans developed for data collection and compilation;
- 7) Reporting manual designed.

Output indicators:

- Government working group on GHG inventory for the LULUCF sector and associated reports/documentation from meetings;
- Government personnel trained in GHG inventory for LULUCF and able to undertake inventory activities independently;
- Manuals, plans, designs of data collection, compilation and QA/QC procedures developed.

Activity 4.2: Develop a central GHG database and archiving system

An archiving system is essential for the preparation of the national inventory reports. No common archive system currently exists for GHG data management in Myanmar. A common archiving procedure will be developed in order to secure the REDD+ data related to monitoring and MRV as well as information on some of the REDD+ safeguards. The archiving system will be used by the relevant institutions and the documents and data will be shared in order to ensure that the activities are implemented in a timely manner. The archiving system will host a central database whose structure will allow effective, efficient and transparent QA/QC procedures.

Under this activity, the following sub-activities will be implemented:

- 1) Assess existing database management, archiving and sharing mechanisms in place;
- 2) Develop design of a specialized database structure;
- 3) Standardize existing data and integrate in a specialized data structure;
- 4) Design a web-based platform for sharing the data;
- 5) Procure necessary equipment to establish servers;
- 6) Establish servers;
- 7) Identify training needs and deliver training programmes for the operation and maintenance of the archiving system;
- 8) Develop necessary training manuals;
- 9) Provide training to operationalize the system.

Output indicators:

- Report on the assessment of the existing data and needs for GHG inventory server;
- List of the necessary equipment for the relevant entities;
- Web-based data sharing and archiving system for data sharing;
- Technical staff trained to operationalise the system;
- Transparency of national system ensured.

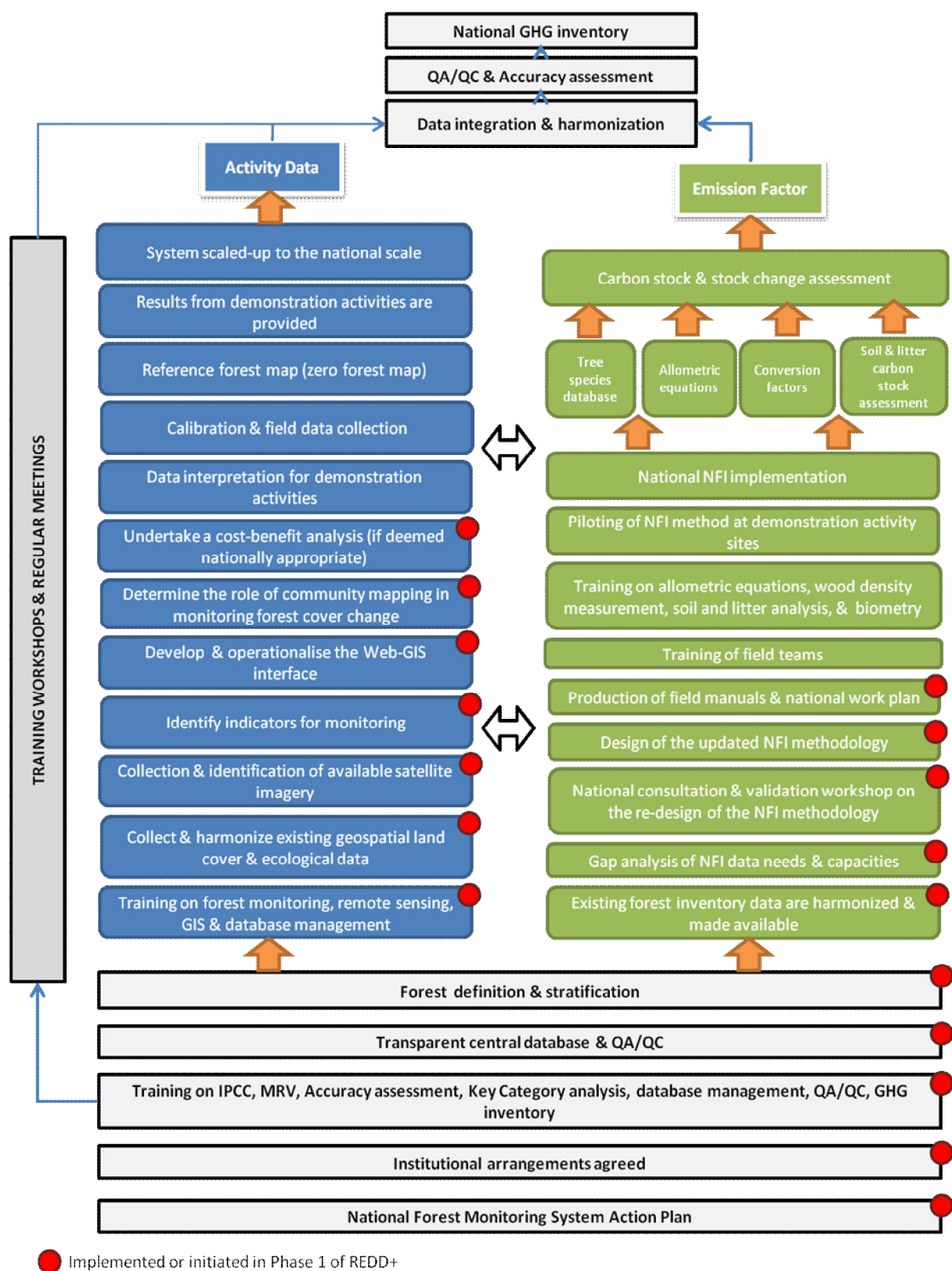


Figure 6.4: Indicative activities marking progress towards the generating of the Myanmar's national GHG inventory for the LULUCF sector.

Output 5: NFMS-related research supported

Following initial awareness raising and capacity building on REDD+, internal and external consultations and discussions will be undertaken by the Forest Department and FRI into potential new research areas to support the implementation of REDD+ in Myanmar, and in particular the multipurpose NFI.

Activity 5.1: Support NFMS-related research and dissemination of findings

Research areas may include, for example, studies on allometric equations, wood density, biodiversity, and indigenous knowledge and use of forest land. In particular, specific allometric equations to assess the total volume of biomass would be particularly useful for the NFI (and assessment of emission factors). The assessment of forest resources needs to be carried out together with an assessment of the indigenous knowledge and use of the forest land as these two elements will be crucial to define policies for sustainable forest management.

Under this activity, the following sub-activities will be implemented:

- 1) Identification of specific studies related to the multipurpose NFI (e.g. allometric equations, wood density, biodiversity, indigenous knowledge);
- 2) Gathering of existing research activities and findings related to REDD+/NFMS;
- 3) Implementation of studies on forest and tree characterisation;
- 4) Publishing of study reports and scientific papers based on findings;
- 5) Provision of internships for university students to support specific studies on forest and tree characterisation;
- 6) Organization of technical and scientific workshops/seminars in Myanmar involving national and international researchers and university students.

Output indicators:

- Report on the scope of potential studies to support NFMS development in Myanmar;
- NFMS-related studies completed;
- Specific allometric equations and emission factors;
- Results disseminated through published reports and articles in peer-reviewed journals;
- Minutes of workshops/seminars on NFMS-related research;
- Trained university interns.

6.5 Indicative work plan and budget

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 6: Development of a National Forest Monitoring System				
Output 6.1 Capacity building and NFMS Action Plan development	FAO, IUCN-Smithsonian Institute (NORAD)	NFMS and REL/RL TWG	<ul style="list-style-type: none">• Organize NFMS work and regular Working Group meetings;• Formalize institutional arrangements for the implementation and management of the NFMS;• Develop Myanmar's NFMS Action Plan.	2,962,000

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Output 6.2 Satellite Land Monitoring System developed and operationalised	FAO	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • Capacity building on geospatial data processing and database management; • Formalize a national forest definition and establish a harmonized classification system for land representation; • Satellite image characterization for forest monitoring; • Establishment a Forest Management Information System; • Develop and operationalise Myanmar's satellite land monitoring system; • Develop participatory tools for forest monitoring and MRV; • Forest boundary delineation in the field and GIS boundary generation for demonstration activities. 	1,020,000
Output 6.3 Multipurpose NFI designed and piloted	FAO, IUCN-Smithsonian Institute (NORAD)	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • Strengthen forest inventory capacities among stakeholders; • Harmonize all existing inventory data and develop robust tree species and NFI databases; • Review existing inventory designs and provide recommendations for design of a new multipurpose NFI; • Design and pilot Myanmar's multipurpose National Forest Inventory. 	842,000
Output 6.4 National capacity built for undertaking GHG Inventory for the LULUCF sector	FAO	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • Technical capacity building for the GHG inventory for the LULUCF sector; • Develop a central GHG database and archiving system. 	166,000
Output 6.5 NFMS-related research supported	FAO	NFMS and REL/RL TWG	<ul style="list-style-type: none"> • Support NFMS-related research and dissemination of findings. 	130,000
TOTAL				5,120,000

RESULTS FRAMEWORK

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Component 1: Management of REDD+ Readiness				
Output 1.1 National REDD+ Readiness Management Structure established	UNDP, FAO, UNEP	NECC, REDD+ TF and SP&S-TWG	<ul style="list-style-type: none"> Create REDD+ TF (by NECC); Review of REDD+ TF ToR (if needed); Review of TWG ToRs (if needed); Create 3 new TWGs (project, legal and financial); Develop ToR for government and external staff of the REDD+TF Office; Create REDD+ Task Force Office: creation of administrative unit within FD with mandate and staff. Creation reflected in MoECAf decision; Confirm initial membership of National REDD+ Stakeholder Network. 	100,000
Output 1.2 REDD+ TF Office in place and functional	UNDP and FAO (note: for FAO related components, TF Office budgets are reflected under Sections 5 and 6)	REDD+ TF and REDD+ TF Office	<ul style="list-style-type: none"> Recruitment of TF Office staff; Procurement of equipment and vehicles; Provision of secretarial, managerial, operational and technical support (staff, administrative and travel costs) to the REDD+ TF, TWGs and National REDD+ Stakeholder Network. 	4,420,000
Output 1.3 REDD+ TF and TWGs supported	UNDP, FAO, UNEP (note does not include consultation workshops covered in other sections)	REDD+ TF Office	<ul style="list-style-type: none"> REDD+ TF meetings and logistical support including travel TWG meetings and logistical support including travel 	1,300,000
TOTAL Component 1				5,820,000
Component 2: Stakeholder Consultation and Participation				
Output 2.1: Stakeholder representation and consultation strengthened	UNDP, DGTTF-UNDP	SP&S-TWG	<ul style="list-style-type: none"> Undertake annual stakeholder review to update and strengthen the membership of the National REDD+ Network; Develop National REDD+ Readiness Stakeholder Consultation Guidelines and Consultation Plan; Develop concept notes for each consultation workshop. 	200,000
Output 2.2: National FPIC Guidelines Developed	UNDP	SP&S-TWG	<ul style="list-style-type: none"> Study into traditional decision-making systems; Develop National FPIC Guidelines; National Consultation Process on National FPIC guidelines; Piloting of FPIC guidelines (as part of pilot project implementation). 	500,000
TOTAL Component 2				700,000
Component 3: Development and selection of REDD+ Strategies				

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Output 3.1 Proposed candidate strategies outside the forestry sector confirmed (see Section 3.4.3.2)	UNDP, FAO, UNEP, FAO-GEF, ITTO, KFS	D&SD-TWG with F-TWG and L-TWG	<ul style="list-style-type: none"> • Forestry Sector Institutional and Context Analysis; • Review of policies, laws and rules outside the forestry sector; • UN-REDD "Corruption Risk Assessment"; • Consolidation of list of candidate strategies for forestry and non-forestry sectors; • National Consultation Workshop to review and validate the revised candidate strategies for both the forestry and non-forestry sectors; • Quantitative assessment of emissions and carbon stock removals from major drivers of forest degradation and deforestation, including estimates or trends of future emissions (Section 3.3); • Study on REDD+ strategies in relation to costs and benefits; • Study on the funding of or support to existing forest management programmes and including estimates of the financial costs of REDD+ implementation in conjunction with these programmes; • Establish list of prioritized candidate strategies based on ranking by TWG; • National Consultation Process to review and validate the final list of candidate strategies. 	900,000
Output 3.2 Candidate strategies piloted and supporting or enabling activities completed (see Section 3.4.3.2)	UNDP, FAO, UNEP, FAO-GEF, ITTO, KFS	D&SD-TWG	<ul style="list-style-type: none"> • Pilot the candidate REDD+ strategies which correspond to "activity packages"; • Undertake actions/activities in support of the implementation of both "activity packages" and "governance measures" (see list under section 3.4.3.2). 	5,500,000
Output 3.3 Process for piloting of REDD+ Strategy implementation planned	UNDP, FAO, UNEP	D&SD-TWG	<ul style="list-style-type: none"> • Identification of a preliminary list or representative sample of potential pilot districts • Initial district mapping to identify of priority areas which are most appropriate to deliver multiple benefits from REDD+; • Conduct multi-stakeholder workshops for each priority location of pre-selected districts to verify the probable effectiveness of REDD+ strategies; • Develop a REDD+ implementation plan for each selected district; • Seek FPIC of local communities on REDD+ implementation plan prior to the initiation; • Design of district-level plans and budgets. 	800,000
TOTAL Component 3				7,200,000
Component 4: Implementation framework and safeguards				

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Output 4.1: Institutional Structure Operationalised	UNDP, NORAD-RECOFTC, FAO-GEF, DGTTF-UNDP, KFS, ITTO	RECOFTC, SP&S-TWG	<ul style="list-style-type: none"> • Develop a Competency Framework for REDD+; • Conduct Initial Capacity Building Needs Assessment (CBNA); • Development of a National REDD+ Communication Strategy (Section 4.2.2); • Review available information/communication materials and recommend a selection for translation and adaptation to Myanmar context; • Develop information/communication materials specific to the Myanmar REDD+ Roadmap; • Establish web based Information Management System and develop/update as information becomes available; • Conduct training, and awareness raising for all stakeholders; • Conduct interim review of Institutional Structure, CBNA and National REDD+ Communication Strategy (if proposed Institutional structure fails one year after establishment); • Validate findings of interim review of the Institutional Structure, CBNA and National REDD+ Communication Strategy through National Consultation Workshop; • Adapt Institutional Structure and conduct necessary training and awareness raising; • Adapt existing information/communication materials; • Conduct final review of Institutional Structure, CBNA and National REDD+ Communication Strategy; • Validate findings of final review of the Institutional Structure, CBNA and National REDD+ Communication Strategy through National Consultation Workshop; • Adapt Institutional Structure and conduct necessary training and awareness raising; • Adapt existing information/communication materials. 	1,020,000
Output 4.2: Legal Framework Adapted and reinforced	UNDP, FAO-GEF	L-TWG and D&SD-TWG	<ul style="list-style-type: none"> • Draft list of proposed amendments to existing legal framework and draft new REDD+ specific legal framework (based on 2 policy and legal reviews conducted under Section 3.4.3.2); • Initial National Consultation Process to review and validate the list of proposed amendments and additions to legal framework (focus on urgent and easily enacted changes); • Draft amendments, circulate amount REDD+ Network members for validation and submit for adoption by government. • Second National Consultation Process to review and validate list of proposed amendments and additions to legal framework (focus on more fundamental, complex and long term changes); • Draft amendments, circulate amount REDD+ Network members for validation and submit for adoption by government. 	200,000
Output 4.3: Financial Framework developed	UNDP	F-TWG	<ul style="list-style-type: none"> • Conduct a review of existing financial mechanisms and recommend options for the establishment of suitable financial management mechanism for REDD+; • Develop a financial management mechanism for REDD+; • Conduct a review of existing distribution channels through the ministries and/or outside of the public sector • Develop a system for REDD+ benefit-sharing at multiple scales; • National Consultation Process for the review and validation of the proposed financial management and benefit sharing mechanisms. 	260,000

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Output 4.4: REDD+ Social and Environmental Safeguards System developed	UNDP, UNEP	SP&S-TWG and L-TWG	<ul style="list-style-type: none"> Identify PLRs or safeguard standards; Developing or defining a Safeguards Information System; Developing or defining a grievance mechanism; Organise a National Consultation Workshop to review and validate the selected PLR or safeguards standards and the proposed SIS; National Consultation Process to review and validate the proposed grievance mechanism. 	400,000
TOTAL Component 4				1,880,000
Component 5: Developing a national REL and/or RL				
Output 5.1: Methodologies for establishing national REL/RLs reviewed	FAO, UNDP, ITTO, KFS, Asia Air Survey	NFMS and REL/RL TWG	<ul style="list-style-type: none"> REL/RL capacity building workshop held with stakeholders; Study carried out into the context of REL/RL implementation in Myanmar and methodological options available; National Consultation Workshop to present findings of the REL/RL methodological study; Consultations to determine which methodologies to pilot at demonstration sites (see Activity 5.4.1). 	230,000
Output 5.2: Historical land use change trends analysed at the national scale	FAO, ITTO, KFS, Asia Air Survey	NFMS and REL/RL TWG	<ul style="list-style-type: none"> See activities under Section 6 land use change analysis activities; Historical annual emissions calculated using emission factors from national forest monitoring system (Section 6). 	75,000
Output 5.3: Relevant national circumstances reviewed and data collected	UNDP, FAO, ITTO, KFS	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Assessment of the drivers of deforestation (see Sections 3.3 and 3.4.3.2), including policy and land use governance context; National Consultation Workshop to present findings of the study on national circumstances; Development of potential REL/RL adjustment factors, following outcomes of Output 5.1. 	150,000
Output 5.4: National REL/RL tested and demonstrations sites for piloting selected	FAO, UNDP, ITTO, KFS, Asia Air Survey	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Consultations with stakeholder and technical experts to collate proposals for, and select, pilot sites; Formulation of national REL/RL and submission to the UNFCCC Secretariat. 	620,000
TOTAL Component 5				1,075,000
Component 6: Development of a National Forest Monitoring System				
Output 6.1 Capacity building and NFMS Action Plan development	FAO, IUCN-Smithsonian Institute (NORAD)	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Organize NFMS work and regular Working Group meetings; Formalize institutional arrangements for the implementation and management of the NFMS; Develop Myanmar's NFMS Action Plan. 	2,962,000
Output 6.2 Satellite Land Monitoring System developed and operationalised	FAO	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Capacity building on geospatial data processing and database management; Formalize a national forest definition and establish a harmonized classification system for land representation; Satellite image characterization for forest monitoring; Establishment a Forest Management Information System; Develop and operationalise Myanmar's satellite land monitoring system; Develop participatory tools for forest monitoring and MRV; Forest boundary delineation in the field and GIS boundary generation for demonstration activities. 	1,020,000

National Programme Components	Participating donor organization	Implementing Partner	Indicative readiness activities	Budget (4 years)
Output 6.3 Multipurpose NFI designed and piloted	FAO, IUCN-Smithsonian Institute (NORAD)	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Strengthen forest inventory capacities among stakeholders; Harmonize all existing inventory data and develop robust tree species and NFI databases; Review existing inventory designs and provide recommendations for design of a new multipurpose NFI; Design and pilot Myanmar's multipurpose National Forest Inventory. 	842,000
Output 6.4 National capacity built for undertaking GHG Inventory for the LULUCF sector	FAO	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Technical capacity building for the GHG inventory for the LULUCF sector; Develop a central GHG database and archiving system. 	166,000
Output 6.5 NFMS-related research supported	FAO	NFMS and REL/RL TWG	<ul style="list-style-type: none"> Support NFMS-related research and dissemination of findings 	130,000
TOTAL Component 6				5,120,000
GRAND TOTAL Components 1-6				21,795,000
Administrative costs and Overhead (7%)				1,525,650
Total Cost of the 4-year REDD+ Readiness Programme				23,320,650

ANNEX 1:

PROCEEDINGS OF THE REDD+ READINESS ROADMAP CONSULTATION PROCESS IN MYNARMAR (MAY-JUNE 2013)

Introduction

The draft REDD+ Readiness Roadmap developed by the TWGs from December 2012 till May 2013 was reviewed and validated through a national multi-stakeholder consultation process. The entire process consisted of an initial National Consultation Workshop held in Nay Pyi Taw on the 15th of May, four Regional Consultation Workshops held in Bago (Bago Region), Taunggyi (Shan State), Bogalay (Ayeyarwaddy Delta) and Kathar (Sagaing Region) from mid-May till mid-June and a final National Validation Workshop held in Nay Pyi Taw on the 25th of June 2013. Comments and feedback collected during these workshops are summarized below. Full proceedings of each workshop are available on the UN-REDD workspace, Myanmar country page (www.unredd.net).



Initial Consultation Workshop, Nay Pyi Taw



Regional Consultation Workshop, Bago



Regional Consultation Workshop, Taunggyi



Regional Consultation Workshop, Bogalay



Regional Consultation Workshop, Kathar



Final National Validation Workshop, Nay Pyi Taw

National Consultation Workshop on REDD+ Roadmap, Nay Pyi Taw
(15 May 2013, 73 participants)

A. Workshop agenda:

Opening Session	Opening Speech	H.E. Deputy Minister U Aye Myint Maung, MOECAF
Presentation of Roadmap Sections	The REDD+ Readiness Roadmap Development Process:	Dr. Thaung Naing Oo UN-REDD Programme Focal Point Deputy Director, Forest Department
	Roadmap Section 1: Management of REDD+ Readiness	
	Roadmap Session 5: Developing a Forest Reference Emission Level and Forest Reference Level (REL/RL) Roadmap Session 6: Developing a National Forest Monitoring System	Dr. Myat Su Mon, Assistant Director, RS/GIS Session, Forest Department
	Roadmap Section 3: Development and selection of REDD+ Strategies	Dr. Rosy Ne Win, Staff Officer, Forest Department
	Roadmap Section 2: Stakeholder Consultation and Participation Roadmap Section 4: Implementation Framework and Safeguards	Mr. Nanda Win Aung, Staff Officer, Forest Department
Group Discussion Session	Three Discussion Groups	
	Presentation of results of Group Discussion	
Closing Session	Closing Speech	Deputy Director General, Forest Department

B. Main comments/questions and responses per session:

Opening Session by H.E. U Aye Myint Maung, Deputy Minister for MOECAF:

- Stressed the fact that restored forests will, in addition of increasing Climate Change resilience, will enhance ecosystem services such as: i) increased food supply; ii) soil stabilization/erosion control (including decreased dam siltation); iii) soil fertility; iv) maintained/increased water quality; v) carbon sequestration; vi) maintained/increased water supply; vii) increased river flow for irrigation; and viii) increased hydro-electric power generation.
- REDD+ is an innovative approach, perceived as a quick and cheap option for taking early action toward limiting global warming to 2 degree Celsius.
- Stakeholder consultation process and involvement of all relevant stakeholders including indigenous people (local communities) in the REDD+ roadmap formulation is crucial.
- Scale up the stakeholder consultation processes, mainstream REDD+ and climate change mitigation activities into the national forest programme, promote forest

governance and forest management system, invite indigenous (local communities) to participate in the process, improve technical and policy process for land and resource tenure and mobilize financial and technical support for the implementation of the REDD+ Roadmap.

Presentation of Roadmap Sections (Q&A):

No.	Questions
1	How can we get benefits from REDD+? How will you share REDD+ benefits (carbon credit)?
2	How can we get involved in REDD+ activities?
3	How do you identify priorities to address major drivers of deforestation and forest degradation?
4	What is the next step of the REDD+ Roadmap?
5	How is your plan to scale up the awareness raising and capacity building about REDD+?
6	Could you please briefly explain about the current status of REDD+ readiness activities being implemented in Myanmar?

No.	Response to the Questions
1	In Myanmar, benefit sharing system has not been developed. Corresponding REDD+ mechanisms are not defined or in. What we can say is that that REDD+ is a performance-based payment system. Benefits from REDD+ are not limited to “carbon credit or money”. We can enjoy other co-benefits such as enhancing biodiversity, soil conservation, water regulations, income generation of rural communities and rural development.
2	In our REDD+ readiness roadmap, we already identified the role of each stakeholder.
3	We identified major drivers of deforestation and forest degradation through brain storming among technical working groups and based on the experiences of Forest Department. Further analysis will be undertaken during roadmap implementation.
4	After organizing the stakeholder consultation workshops, we will submit the roadmap to MOECAAF for adoption and will submit a corresponding funding proposal to the Norwegian Government through the UN-REDD Programme.
5	Through the on-going REDD+ pilot demonstration projects, we have been scaling up our awareness raising and capacity development about REDD+.
6	In addition to REDD+ roadmap formulation activities in cooperation with the UN-REDD Programme, Forest Department has been implementing REDD+ Capacity Building

	Projects with the support of ITTO and the Korea Forest Service.
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Comments on presentations of the different Roadmap sections:

Dr Min Htut Yin- Assistant Residence Representative, UNDP:

The impact ranking for drivers of deforestation and forest degradation are based on the group members perception and available data from reliable sources should also be considered to ensure the data validity. The facilitator or members of the technical working groups or the lead writer should verify data in consultation with respective line Ministries for instance, mining area in forested area, etc. Illegal logging or deforestation figures and future trends should also be validated by cross-checking data from different sources like Government, NGOs, local communities and third independent parties. Data on illegal logging and deforestation generated by Divisions and States should also be collected and feed into the roadmap report. That would improve the quality of the data and prevent future controversy and argumentation.

U Khin Maung Oo, Director, Planning and Statistics Department, MOECF:

U Khin Maung Oo, commented on the data issue raised by UNDP and added that data on legally over harvested timber is based on the comprehensive data collected by the Planning and Statistics Department, MoECF. It can be said that legal overharvesting is quite substantial on the basis of available data. Although it may be difficult to acquire precise data on illegally harvested timber, there should be a discussion on how to obtain and compile this important data as well.

Dr Kyaw Tint, Director General (Retired), Chairman of ECCDI NGO and MERN NGO Network:

He commented that some weakness in implementing the Myanmar Selection System (MSS) on the ground is recognized. Nonetheless, MSS itself has some flaws and needs to be modified. For instance, MSS is designed to exploit the surplus yield by extracting the timber that meets certain girth limit, supposed above 6 feet 6 inches, however, felling all trees that have certain girth limit does not reflect to the real selection system nowadays even though it could be proper in the past. Additionally, the selection system in Myanmar mainly focuses on teak (*Tectona grandis*) extraction and has been applied in all parts including areas where there are not enough trees left to catch up with the constant annual yield. The system is applied regardless of the species. Basic criteria to be taken into account are whether the designated compartments have enough trees to be extracted in the sustainable way considering the stand structure, species composition and diameter (girth) limits. This is why the MSS practiced today needs to be reconsidered and reviewed. Another point is gap planting in natural forest which has been undertaken. These areas are counted as natural forests after a 40 years period. Specific management plans should be drawn for plantations and natural forest instead of mixing them together. Timber certification is designed to sell the timbers legally on the international market. There should be standards and guidelines for legality and traceability in line with sustainable forest management principles. Community based system should also be encouraged by providing them education and awareness as well as the rights and responsibilities. Changing the way communities use forest will generate real benefits. Another critical point is to change the mind-set of Forest Department staff. Some foresters still believe that only foresters can manage the forest and that forest quality will decline if the forest is handed over to communities. This kind of attitude should be changed to place the trust in local communities and manage the forest in cooperation with them.

Daw Naw Ei Ei Min, Spectrum

Firewood consumption will increase in future. The energy efficiency plans have been formulated in Myanmar recently. In this context, promotion of rural renewable energy such as solar energy plays an

important role for cooking and small scale business such as making jaggery from palm tree. If all concerned stakeholders from Government to UNDP and NGOs collaborate together to increase the use of renewable energy and technology, the firewood demand could be remained at the present levels.

Group discussions

Participants were split into three groups to review: 1) the REDD+ institutional and management structure, 2) review deforestation and forest degradation drivers and trends and review candidate REDD+ strategies and policy interventions and 3) stakeholder engagement and safeguards. The main findings comments made during these group discussions are listed below:

A participant noticed that according to official data some forest types such as tropical evergreen forest and hill-temperate forest cover remained the same or even increased from 2000 till 2010. These changes might have to be reassessed or verified. A possible source of reliable data would be the UNEP publications of 2010 which include pressures, drivers, impact and responses regarding environmental conservation.

The group agreed with illegal and legal over exploitation of timber as the first driver of forest degradation. However, overharvesting of fuel wood and charcoal should be ranked as second instead of 6th. In terms of drivers of deforestation expansion of agriculture should be ranked 3rd instead of 4th. Deforestation due to mining should be assessed based on data provided by the corresponding ministry. Finally, the group agreed to review the deforestation and forest degradation data and ranking of corresponding drivers on the basis of available data, reliable literature and in consultation with corresponding officers from line Ministries.

Regarding the future trends for major drivers of deforestation and forest degradation, a decreasing trend for illegal over exploitation in the next five years or a decade was not agreed upon by the participants. This could only be achieved by improving the political situation which remains uncertain. However, the decreasing trend for legal over exploitation was agreed upon as policy changes indicate a real commitment to more sustainable logging. Regarding firewood collection and charcoal making, participants estimated that the continued negative impact on forest resources could be reversed by the introduction of energy efficient technology and renewables.

In relation to the main potential candidate strategies, activities packages and policy measures, the group supported the proposal to improve pre and post-harvest inventories to comply with the principles of the MSS. In order to expand the CF program, participants agreed to the idea of reviewing the existing CF instructions and to turn these into law. It was also recommended to facilitate the legal trade of forest products produced by CF. Shifting cultivation accounting for about 23% of the total land should be stabilized by injecting technical and financial investments in cooperation with NGOs, UN agencies and other development partners. Training and awareness campaigns will also be useful to strengthen the capacity of local communities while they are provided rights and responsibilities to benefit from the forest produce such as NTFP, agro-forestry, home-stead garden and so on. Implementing universal access to energy should be further and actively promoted to address the shortage of energy. The proposed policy measures related to national certification standards for timber extraction, CF and agro-forestry program, export logging ban, stabilizing shifting cultivation and expansion of permanent forest estate (PFE) up to 40% of the total land area, developing ESIA standards, procedures and guidelines, imposing systematic taxation system on carbon counts, intensification of mechanized and improved technologies for agricultural productivity, and implementation of biomass removal from submerged hydro power area, are agreeable but should be further validated through the regional consultation workshops.

It was recommended to consider supply and demand side when assessing and revising strategies. The demand side (not only the supply side might need additional attention. For instance, providing land lease 30 years is not enough to rehabilitate and subsidies could be another element to reinforce for environmental rehabilitation.

Closing session:

- Proposed REDD+ activities are very much in line with the national and sector reform processes and there are many potential benefits from REDD+.
- Existing policies, laws and technical capacities in the sector are compatible with REDD+ and the new initiative is therefore an opportunity to scale up relevant and existing programmes.

Regional Consultation Workshop on REDD+ Roadmap in Bago, Bago Region
(30th of May 2013, 63 participants)

A. Workshop Agenda

Opening Session	Opening Speech	H.E. U Kyaw Htay Regional Minister for Ministry of Mining and Forestry, Bago Region
	Key Note Presentation about REDD+	Dr. Thaung Naing Oo, Deputy Director, Forest Department
Presentation of Roadmap Sections	The REDD+ Readiness Roadmap Development Process Roadmap Section 1: Management of REDD+ Readiness	Dr. Thaung Naing Oo UN-REDD Programme Focal Point Deputy Director, Forest Department
	Roadmap Section 3: Development and selection of REDD+ Strategies	Dr. Rosy Ne Win, Staff Officer, Forest Department
	Roadmap Section 2: Stakeholder Consultation and Participation Roadmap Section 4: Implementation Framework and Safeguards	Mr. Nanda Win Aung, Staff Officer, Forest Department
Group discussion Session	Group 1: Major Drivers of Deforestation and Forest Degradation and REDD+ Strategies.	

	Group 2: Stakeholder engagement and safeguard.	
	Presentation of results of Group Discussion	
Closing session	Closing Speech by U Kyaw Kyaw Lwin, Director, Bago Region, Forest Department	

B. Main comments/questions and responses per session:

Opening session by H.E. U Kyaw Htay Regional Minister for Ministry of Mining and Forestry, Bago

Region:

- The presence of climate-resilient forests will play an important role in stabilizing degraded areas and provide a buffer against extreme climatic events;
- The Bago Region, which is a heart of Myanmar, is the watershed area of major rivers in Myanmar but deforestation and forest degradation is a serious concern in the Bago Yoma Region

Presentation of Roadmap sections (Q&A)

No.	Questions
1	What is the different between Scrubland and Indaing Forest? Is Scrubland included in REDD+? What is A1 Stove?
2	What does it mean when saying that agriculture is a driver of deforestation and that there is a need to reduce agricultural land. Isn't agriculture the country's priority to improve the country's income?
3	It is important to have SWOT analysis on the REDD+ strategy to have effective road map that can be useful for local, regional and national levels.
4	Who will do the implementation?
5	Where in Myanmar will REDD+ be implemented? Will REDD+ be implemented in the whole country?
6	Will everyone (every stakeholders) take part in REDD+?

No.	Response to the Questions
1	Scrubland is not accounted in the REDD+ since they are not regarded as the forest. A1 Stove is a stove designed to reduce up to one third of the use of fuel wood in cooking. It only

	cost 1000 to 1500 Kyats.
2	Agricultural expansion is No 4 driver of deforestation. Instead of increasing agricultural lands there might be an option to improve yields through better technology. It is acknowledged that there are conflicting interests over the use of land and the Readiness process will be an opportunity to discuss this in depth. Since the permanent forest is currently less than 40%, increasing forest areas is also an important measure to be considered.
3	A SWOT analysis including social and environment safeguards was conducted by the TWG during roadmap preparation.
4	Everyone can take part in the readiness stage and provide inputs from relevant stakeholders. Safeguards system development will be the responsibility of the REDD+ Task force office but there will be a national stakeholder consultation process.
5	It is true that REDD+ is intended for the whole country. However, due to limited funding and technology, it cannot be implemented the whole country at once. Places where there is high deforestation and degradation and with high emission reduction potential will be the priority for REDD+. There are five steps to define places of deforestation and forest degradation. All the projects will follow National safeguard requirements as well.
6	There is no discrimination. The more people can take part, the better REDD+ is. Some stakeholders who show interest and necessary skills are more likely to get involved but in theory each and every one can contribute to REDD+ at take different roles.

Group discussions

Charcoal production in the Bago region, in terms of legal and illegal activity, is a more significant driver of forest degradation than the overexploitation of timber. This is why forest degradation due to the firewood and charcoal would need to be ranked as the most important driver in the region. The extraction of poles and posts is also in high demand due to the growing population but charcoal making is widely recognized as the largest driver of forest degradation. The illegal loggers fell trees of a commercial size whereas charcoal makers cut all trees even including very small stems (4-5 cm in diameter). Myanmar Greening Network confirmed that charcoal making is the most serious issue in Bago region and that they have accurate data to illustrate this. On the other hand, firewood collection by local residents does not affect forest decline as they collect and cut branches, decayed poles and posts. People also grow trees on farm for household firewood consumption. Law enforcement and crack down on charcoal making might be difficult to impose on the local communities who are pro poor and disproportionately dependent on the natural forest resources. Instead we should REDD+ to develop alternative activities or wood production through the establishment of village supply plantation, community forestry plantations, homestead garden, agro-forestry plantations, sloping agricultural land technology (SALT) and so on.

Both legal and illegal over-exploitation of timber exists in the Bago region. Since 1988, deforestation and degradation in the Bago region has been severe. Legal timber extraction exercised by the State authority is acceptable but the oversight and supervision by the Forest Department on the Company's extraction work is rather weak. Illegal timber exploitation is also common and stricter law enforcement is needed. In order for implementing REDD+ projects, the effective control, rigorous

monitoring system and law enforcement on overexploitation of timber is first and foremost important in Bago region. The private companies should replant the trees where they extract timber from to reverse environmental decline. This should be imposed and monitored with greater attention.

The group concluded that charcoal and firewood harvesting has the highest impact on forest degradation, followed by the over exploitation (legal and illegal). Shifting cultivation in Bago region is ranked as third biggest driver of forest degradation.

Agricultural expansion, dam construction, infrastructure development, mining and urbanization are substantive drivers of deforestation in the region. Economic development in the Bago region is a priority and it's central location and accessibility makes it attractive.

REDD+ strategies should ensure clear tenure or ownership, clear boundary demarcation and precise land use planning. The 30 years master plan drawn up by the Forest Department will largely support this including the promotion of CF plantations. Large concessions were granted to private companies but some do not establish the expected plantations. Unless the private companies establish these plantations, leased land should be withdrawn and handed over to local communities with some subsidies for forest regeneration and agro-forestry activities.

Along with the increasing population, agricultural land has expanded gradually inside the reserved forest. There is a need to improve productivity of existing agricultural land.

Mining exists in some part of the Bago region and in one village, the local communities lost their community forestry plantations due to mining. The CF instruction should therefore be translated into the Community Forestry Law as early as possible to support the land and tree tenure for poor rural communities, including those involved in REDD+ activities.

How can we ensure effective consultation and participation of 1) Women and 2) Ethnic Minority Groups? In Bago Division, there are ethnic minority groups such as Karen, Chin, Shan and Pa-o. Using religious networks might be an efficient way of involving Ethnic groups. Women could be encouraged to participate if REDD+ also addresses fuel wood consumption by introducing improved stoves, nutrition by for example planting fruit trees and health where they need substantial support. Translation in local languages will be necessary and participation in local festivals will facilitate involvement in REDD+

Who should be able to benefit from REDD+ (Where does the money go)? CF user groups would be a good channel for benefit distribution. REDD+ benefit sharing should be defined by a law which would need to be approved by all stakeholders and ensure all those who contribute are rewarded.

What are the potential risks of REDD+ implementation in Myanmar? Land grabbing could become an issue if private sector and government seek carbon rents without considering traditional or formal community land tenure. There are also risks if carbon rents do not provide a real alternative to the livelihood strategies that had to be abandoned or changes. There is also a risk benefits do not reach those who are implementing REDD+ activities.

**Regional Consultation Workshop on REDD+ Roadmap in Taunggyi, Shan State
(5th of June 2013, 71 participants)**

A. Workshop agenda

Opening Session	Opening Speech	H.E. Sai Aung Myat, Chief Minister, Shan State
	Key Note Presentation about REDD+	Dr. Thaung Naing Oo, Deputy Director, Forest Department
Presentation of Roadmap Sections	The REDD+ Readiness Roadmap Development Process Roadmap Section 1: Management of REDD+ Readiness	Dr. Thaung Naing Oo UN-REDD Programme Focal Point Deputy Director, Forest Department
	Roadmap Section 3: Development and selection of REDD+ Strategies	Dr. Rosy Ne Win, Staff Officer, Forest Department
	Roadmap Section 2: Stakeholder Consultation and Participation Roadmap Section 4: Implementation Framework and Safeguards	Mr. Nanda Win Aung, Staff Officer, Forest Department
Group discussion Session	Group 1: Major Drivers of Deforestation and Forest Degradation and REDD+ Strategies. Group 2: Stakeholder engagement and safeguard.	
	Presentation of results of Group Discussion	
Closing session	Closing Speech	U Win Zaw, Director, Shan State, Forest Department

B. Main comments/questions and responses per session:

Opening session by H.E. U Sai Aung Myat, Chief Minister, Shan State

- Importance of contributions of forests to watershed conservation, biodiversity conservation, soil erosion control and economic development of the people.
- Sustainability of Inlay Lake, which is the second largest inland lake and ASEAN heritage, is totally dependent on forests in the watershed areas of the Lake.
- Prolonged drought in Shan State in 2010 which could be attributed to the rapid rate of deforestation and forest degradation and Climate Change, caused serious socio-economic impacts.

Presentation of Roadmap sessions (O&A)

No.	Questions
1	How can carbon credit benefit to all different stakeholders such as private sector and local community? Will the law cater for different stakeholders?
2	Indigenous people's culture is different in each region and it would be good if safeguards strategies could be adapted accordingly?
3	What kind of criteria do you use for the selection of REDD+ pilot sites?
4	It is not enough with policy alone to control deforestation, it is important to consider the livelihoods of local communities. The very basic need is their food, clothing and housing. In other neighboring countries, every household can access to gas for cooking. Therefore, in order to conserve the forest, it is best to provide gas with proper price to local communities.
5	For effective participation, stakeholders should take part in system design and policy decisions. For choosing representation as well, it would be better for self-selection by communities rather than top down selection.

No.	Response to the Questions
1	The establishment of a benefit sharing mechanism will be an essential part of REDD+ Readiness. It cannot be understood fully at the moment but it should be mainly on performance based. There is a need to assess who will contribute and how each contribution will be rewarded. The mechanism will build on existing or traditional practices where possible.
2	There are pilot experience in forest depart for supporting community social needs by providing school and establishing school garden program in Taungoo. In addition, agro forestry is also encouraged to replace shifting cultivation. There are several examples of benefit sharing which

	can be adapted to cater for specific communities or groups.
3	We have a set of criteria that we use such as places of high deforestation. We will also invite regional participants to confirm selection procedures and REDD+ piloting.
4	This is related to Ministry of Energy and they also came and took part in the road map development process. There are many institutions now discussing energy issues in Myanmar such as ADB, WB, JICA, UN, MOEP and thus there will be support to both grid expansion and promotion of renewable energy.
5	There will enough awareness and information given to REDD+ pilot communities. Not only by the Forest Department, but the government will also work together with NGOs for awareness raising. We will also make sure self-selection takes place.

Group discussions

How can we ensure effective consultation and participation of 1) Women and 2) Ethnic Minority Groups? By studying and following local culture and traditions. By using local languages and proverbs. Women will be interested in specific issues such as fuel for cooking and these priorities should be addresses. Women and ethnic groups should be given enough time to understand these new concepts.

Who should be able to benefit from REDD+ (Where does the money go)? Forest dependent communities and relevant stakeholders should benefit from REDD+ based on a clear and fair policy where conservation and management efforts are rewarded. Those who will have to give up their existing livelihoods should be compensated or should benefit.

What are the potential risks of REDD+ implementation in Myanmar? There is a risk people will not gain immediate benefits and will therefore become less engaged. Wood products are an essential need so anything affecting supply could become problematic. There is a risk REDD+ will exacerbate mistrust between communities and government or private sector.

**Regional Consultation Workshop on REDD+ Roadmap in Bogalay, Ayeyawady Region
(11th of June 2013, 65 participants)**

A. Workshop Agenda

Opening Session	Opening Speech	H.E. U Soe Myint, Minister for Ministry of Mining and Forestry, Ayeyawady Region
	Key Note Presentation about REDD+	Dr. Thaung Naing Oo, Deputy Director, Forest Department
Presentation of Roadmap Sections	The REDD+ Readiness Roadmap Development Process Roadmap Section 1: Management of REDD+ Readiness	Dr. Thaung Naing Oo UN-REDD Programme Focal Point Deputy Director, Forest Department
	Roadmap Section 3: Development and selection of REDD+ Strategies	Dr. Rosy Ne Win, Staff Officer, Forest Department
	Roadmap Section 2: Stakeholder Consultation and Participation Roadmap Section 4: Implementation Framework and Safeguards	Mr. Nanda Win Aung, Staff Officer, Forest Department
Group discussion Session	Group 1: Major Drivers of Deforestation and Forest Degradation and REDD+ Strategies. Group 2: Stakeholder engagement and safeguard.	
	Presentation of results of Group Discussion	
Closing session	Closing Speech	U Zaw Win, Director, Ayeyawady Region, Forest Department

B. Main comments/questions and responses per session:

Opening session by H.E. U Soe Myint, Regional Minister for Ministry for Mining and Forestry,

Ayeyawady Region

- Forests and in particular mangroves are important for the mitigation of natural disasters such as tropical cyclones, flood control, nutrient recycling, food security, biodiversity and other ecosystem services including high carbon sequestration.
- Rapid rate of deforestation of mangrove forests in Ayeyawady delta has negative impacts to the agricultural sectors as well as local communities.
- REDD+ mechanism is an opportunity to conserve existing natural mangrove forests and to rehabilitate degraded mangrove forests with people's participation.

Group discussions

How can we ensure effective consultation and participation of 1) Women and 2) Ethnic Minority Groups? Information provided should be clear and confirmed (including benefit sharing) so that people can make informed decisions. There is a need to raise awareness about the importance and value of trees and forests.

Who should be able to benefit from REDD+ (Where does the money go)? REDD+ benefits should not only go to forest management or tree planting activities. Supporting agricultural development should be part of the REDD+ approach and support. The benefit sharing mechanism should consider permanent and legal versus temporary or illegal residence but also proximity to the resource.

What are the potential risks of REDD+ implementation in Myanmar? There is a risk of gender discrimination and language barriers (exclusion) which will vary from region to region. There is also a risk of corruption by those who are responsible for benefit distribution. There is a risk of losing trust and disengagement if benefits don't become tangible fast enough.

Regional Consultation Workshop on REDD+ Roadmap in Kathar, Sagaing Region **(18th of June 2013, 71 participants)**

A. Workshop Agenda

Opening Session	Opening Speech	H.E. U Than Htaik, Minister for Ministry of Mining and Forestry, Sagaing Region
	Key Note Presentation about REDD+	Dr. Thaung Naing Oo, Deputy Director, Forest Department
Presentation of Roadmap Sections	The REDD+ Readiness Roadmap Development Process Roadmap Section 1: Management of	Dr. Thaung Naing Oo UN-REDD Programme Focal

	REDD+ Readiness	Point Deputy Director, Forest Department
	Roadmap Section 3: Development and selection of REDD+ Strategies	Dr. Rosy Ne Win, Staff Officer, Forest Department
	Roadmap Section 2: Stakeholder Consultation and Participation Roadmap Section 4: Implementation Framework and Safeguards	Mr. Nanda Win Aung, Staff Officer, Forest Department
Group discussion Session	Group 1: Major Drivers of Deforestation and Forest Degradation and REDD+ Strategies. Group 2: Stakeholder engagement and safeguard.	
	Presentation of results of Group Discussion	
Closing session	Closing Speech	U Nyunt Aung, Deputy Director, Sagaing Region, Forest Department

B. Main Comments/questions and responses per session

Opening session by H.E. U Than Htaik, Regional Minister for Ministry for Mining and Forestry,

Sagaing Region.

- Sagaing has the highest forest cover in Myanmar and contribute significantly to the national economy as well as the socio-economic development of local communities.
- Expansion of agricultural land, including sugar cane plantation, mining, other land use activities and illegal logging caused serious deforestation in this region.
- Sagaing forest are essential for watershed conservation and the prevention of soil erosion including along the banks of the Ayeyawaday and Childern Rivers.
- It is important to preserve forests including parts that are not part of the PFE.

Presentation of Roadmap Sections (O&A)

No.	Questions
1	How can we make sure REDD+ is implemented in a transparent way Myanmar?

No.	Response to the Questions
1	The Myanmar government is increasingly paying attention to transparency and the government commitment on international mechanism such as EITI (Extractive Industry Transparency Initiative) is a good example of the attempt to promote transparency in Myanmar. Forest Department also welcome CSOs to take part in promoting this together for REDD+.

Group discussions

How can we ensure effective consultation and participation of 1) Women and 2) Ethnic Minority Groups? Ethnic minorities in the region such as Kachin and Lisu do not understand Burmese language well and do not trust people who don't speak their language well. Translation and use of local languages is therefore essential when implementing REDD+. Religion is also important for ethnic groups and using their religious leaders to reach them is a good approach. There are many good examples of good forest management by ethnic groups and rewarding them will encourage others to follow. There is a need to document and advertise good examples. Micro-finance or revolving fund mechanisms in support of handicraft and livelihoods activities could be a good tool to involve women.

Who should be able to benefit from REDD+ (Where does the money go)?Benefit sharing should depend on the contribution and responsibility of those directly involved,including national and regional level government bodies.

What are the potential risks of REDD+ implementation in Myanmar? Land grabbing by private companies might be encouraged by REDD+. Private sector might use a REDD+ activity as an initial cover for other commercial activities. There is a risk REDD+ implementation will be approved at the top and therefore favouring bigger units. If the decision making is local, more small units are likely to be approved with more benefits going to local communities. There should be local REDD+ implementation mechanisms.

**Final National Validation Workshop on REDD+ Roadmap, Nay Pyi Taw
(25th June 2013, 77 participants)**

A. Workshop agenda

Opening Session	Opening Speech Conservation and Forestry	H.E. U Aye Myint Maung, Deputy Minister, MoECAF
	Congratulatory Remarks by Dr. Tint Lwin Thaung, Executive Director, RECOFTC	ED, RECOFTC
Presentations: Roadmap consultation process	The REDD+ Readiness Roadmap Development Process Lessons learned during 4 Regional Workshops and the way forward for REDD+ roadmap	Dr. Thaung Naing Oo UN-REDD Programme Focal Point Deputy Director, Forest Department
	Summary of comments made by 4 Regional Workshops on Roadmap Section 3: Development and selection of REDD+ Strategies	Dr. Rosy Ne Win, Staff Officer, Forest Department
	Summary of comments made by 4 Regional Workshops on Roadmap Section 2: Stakeholder Consultation and Participation and Roadmap Section 4: Implementation Framework and Safeguards	Mr. Nanda Win Aung, Staff Officer, Forest Department
Group discussion Session	Group Discussion (Two Groups) on comments made by Regional Workshops	
	Presentation of results of Group Discussion	
Closing session	Closing Speech	Dr. Nyi Nyi Kyaw, Director General of the Forest Department Director General

B. Main comments/questions and responses per session

Opening session by H. E. U Aye Myint Maung, Deputy Minister, MOECAP and Dr. Daw Thet Thet Zin, Deputy Minister, MOECAP.

- During a mission of the Union Minister of Ministry of Environmental Conservation and Forestry (MOECAP) to Oslo, the Norwegian government further indicated their intention to invest in Myanmar's REDD-Plus Readiness process, through the implementation of the Roadmap.
- The roadmap was developed by the 3 TWGs including representatives from government, private sector and CSO. Financial support was provided by the Norwegian government and UN-REDD and technical support by RECOFTC and UN-REDD.
- The draft Roadmap was reviewed during a comprehensive consultation process including one initial national consultation workshop followed by 4 regional consultation workshops (Bago Region, Shan State, Ayeyawady Region and Sagaing Region) held in May and June. This inclusive multi-stakeholder consultation process is crucial to prevent future conflict and to improve the quality and ownership of the Roadmap.
- The process has drawn attention from important stakeholders such as the Chief Minister of Shan State and Regional Ministers of Mining and Forestry of the Regional Governments who attended opening ceremonies, delivered speeches but also listened to technical presentations. Another indicator of interest was the diversity of stakeholders. Participation was not limited to government line ministries and representatives of political parties, parliament members, UN agencies, NGOs, civil societies, private sector, forest user group, indigenous people, media and so on actively contributed to the consultation workshops.
- The most common questions raised by stakeholders during regional workshops were related to benefit distribution. This is why this issue should receive all the necessary attention during the readiness phase.
- The Roadmap and its contents should not remain a "Paper Tiger" and it should be implemented with momentum, in line with national and international frameworks and in cooperation with international organizations.

Congratulatory Remarks by Dr. Tint Lwin Thauung, Executive Director of the RECOFTC.

He expressed his sincere appreciation to Ministry of Environmental Conservation and Forestry for very active cooperation in formulating REDD+ Roadmap. He also informed that there are many positive responses and interests of Norwegian Government in supporting REDD+ roadmap implementation. He also committed RECOFTC's continued support to the REDD+ process in Myanmar especially in the area of Capacity Building. Finally, he appreciated Forest Department and REDD+ Roadmap working group for their great support and efforts for REDD+ roadmap formulation process.

Presentations of regional feedback on Sections 2, 3 and 4 (O&A)

No.	Questions	Questions raised by
1	What can REDD+ contribute to villagers? According to the experience from the workshop in Bhutan organised by FAO, it was recommended to provide alternative fuel to communities. If not, how can we stop the villagers from cutting trees?	U Tun from Myanmar Timber Enterprise (MTE):
2	What do you mean by regional workshop? Is it up to village level? Since there is a lot of land grabbing, there are many areas where the land is no longer in the hand of local communities. How can REDD+ take into account forest areas which are not owned by the local communities?	U Maung Maung Thein Pe' from Rakhine Environmental Conservation Group
3	What is the evaluation on the future trend on the use of fuel wood? How can it be reduced?	U Ye Htun Htun from Ministry of Agriculture and Irrigation
4	This is a good project with a good plan, good intension and purposes. Will REDD+ cover the whole country? Is it too ambitious? There are many activities included in this but is this not too wide and deep? How much funding and how many years will we need to get ready for REDD+?	U Ye Htun Htun from Ministry of Agriculture and Irrigation
5	Since the lands of the country are owned by the state, discussion on who should benefit is good, but how can it be shared or how can we do it practically? It is stated in the Taunggyi discussion that the lack of a grievance mechanism is one risk. The country already has grievance mechanisms such as the judiciary system, parliamentary system and thus please include this in further discussion.	Dr. Maung Maung Than
6	How about including family forestry which can be considered individual property?	U Tun from Myanmar Timber Enterprise (MTE)

No.	Response to the Questions	Responded by
1	Almost all regional consultations came up with discussion on benefits to local communities. Here, benefits can vary depending on the regions. There will be a working group on benefit distribution under the REDD+ Task Force. A pilot project was started in Taungoo District and everyone is welcomed to review progress there and to come up with additional ideas. There will be extensive studies and consultations on benefit	Dr. Thaung Naing Oo

	sharing during Roadmap implementation.	
2	<p>Forest Department tried very hard to come up with such a detailed road map. The timeframe for the development of the roadmap was tight and was supported by several donors. All the workshops were completed by the end of June and regional workshops took place more or less every week from mid-May till Mid-June. There were selection criteria to select the 4 regions and the selection was done by the Stakeholder consultation TWG. For all regional workshops, we invited different stakeholders including community forestry forest user groups, farmers association etc. We also invite media and NGO network to allow the information to reach to village level. It is important that all stakeholders participate and actively play their roles. The Strategies TWG also paid special attention to reviewing policies and programmes which are most relevant and beneficial to local communities.</p> <p>REDD+ is part of the global response to climate change and the Forest Department is also working on other parallel activities to keep up the good work on environmental conservation and combat climate change under the commitment to UNFCCC.</p>	Dr. Thaung Naing Oo and U Bo Ni
3	The presentation is based on regional feedback and suggestions. One possible solution may be to establish community fuel wood plantation areas for village use.	Dr. Rosy Nay Win
4	There is no exact commitment on funding. We will try our best to mobilise what is required, from donors and government.	Dr. Thaung Naing Oo
5	What we mean here is if there is no proper grievance mechanism for REDD+ there is a risk. It does not mean that there is no grievance mechanism in Myanmar.	U Nanda Win Aung
6	There are two parts in CF. Common management at local level and individual management with 5 acres or more so that the community has to take responsibility to have ownership sense.	U Nanda Win Aung

Comments on the presentations

Dr. Maung Maung Than from RECOFTC

I am interested in the Kathar discussion. In my opinion, on the job training through forest field schools will be useful and could be of capacity building on sustainable forest management.

U Aung Thu Ya, Director General of Ministry of Planning and Statistics

We can see the proportion of wood production in different regions in different years and since they are not balanced it is difficult to negotiate. Remaining permit for logging is moved to other states such as Kayah, Kayah and Chin. Some area dropped in logging rate whereas eg. Chin has increased a lot.

Dr. Nyi Nyi Kyaw, Director General, Forest Department,

In every developing country, there is a need to extract natural resources for the development of the country. However, the trends are changing at the moment along with climate change negotiations. Our country is a bit late to response to this and this is the chance to get lesson learned from others and to act upon the needs.

Group Discussion on Stakeholder Consultation and Safeguards

Stakeholder Consultation Guidelines

The Wash Technical Working group created after the Nargis Cyclone is a good example. It was composed of all relevant government institutions, INGOs, NGOs and local groups and there were regular monthly meetings. Therefore, if REDD TWGs include all relevant stakeholders with regular meeting, it would work.

There might be a need to create REDD+ cells at the regional level so that it can link up to the national TWGs. Participation to meetings should be compulsory and not only on a voluntary basis. These meeting should also be regular to guarantee effective consultation.

National FPIC Guidelines

Good facilitators are important to be able to mobilize the communities. There is a role here for local NGOs to ensure effective mediation. RECOFTC will publish Facilitation Guide Book. There is a need to look at the details of FPIC since it is new to the country but examples from other countries should help. There is a need to complete a situation analysis before developing national guidelines. The formation should be complete and precise before completing FPIC. FPIC will not be a one off exercise as needs to conditions will change and will have to be renegotiated.

Development of the REDD+ Social and Environmental Safeguards system and grievance mechanism

A national safeguard framework will have to be adapted to the local situation. Anti-corruption measures should accompany the implementation of a safeguards and grievance mechanism because what matters is the attitude of people rather than the system. REDD+ Safeguards would be ground breaking in Myanmar and could be used as an example.

Closing session by Dr. Nyi Nyi Kyaw, Director General of the Forest Department

In his Closing Speech, he congratulated REDD+ Roadmap Technical Working Groups for successful formulation of REDD+ Roadmap. He also expressed his appreciation to the Norwegian Government, RECOFTC and the UN-REDD Programme for financial and technical support. He urged MoECAF and relevant stakeholders to pay more attention to the REDD+ Readiness process and to participate along the REDD+ readiness preparation process.

Director General also stated that he was very proud of the stakeholder consultation process. He expressed his continued support to the REDD+ process and insisted on the need to follow up with the preparation of a financial proposal to support the Roadmap implementation. He confirmed MoECAF's support to the REDD+ process and highlighted Myanmar's policy trend towards improved forest conservation, green economy, green growth, stakeholder consultation, E/SIA, FLEG-T, EITI and C&I for SFM. He also insisted on the need to link the REDD+ Road map with the country's existing policies, laws and relevant mechanism.