



Capacity Building Needs Assessment of REDD+ in Myanmar

Developing and using experience in
implementing REDD+ in the Himalaya,
Myanmar

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Acronyms and Abbreviations

ASEAN	Association of South-East Asian Nations
BMUB	Environment, Nature Conservation, Building and Nuclear Safety, Germany
CBNA	Capacity Building Needs Assessment
CBOs	Community Based Organizations
CSOs	Civil Society Organizations
COP	Conference of Parties
DGTTF	Democratic Governance Thematic Trust Fund
FAO	Food and Agricultural Organization
FD	Forest Department
FPIC	Free, Prior and Informed Consent
FRA	Forest Resource Assessment
FREL	Forest Reference Emission Level
GDP	Gross Domestic Product
GHGs	Greenhouse Gases
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Agency)
GoM	Government of Myanmar
ICIMOD	International Centre for Integrated Mountain Development
IEC	Information, Education and Communication
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
KFS	Korea Forest Service
LULUCF	Land Use, Land-Use Change and Forestry
MONREC	Ministry of Natural Resources and Environmental Conservation
MRV	Measurement, Reporting and Verification
NDC	Nationally Determined Contributions
NFMS	National Forest Monitoring System
NGO	Non-Governmental Organization
NS/AP	National Strategy and/or Action Plan
POINT	Promotion of Indigenous and Nature Together
QA/QC	Quality Assurance/Quality Control
RBP	Results-Based Payment
RECOFTC	Regional Community Forestry Training Centre
REDD+	Reduced Emission from Deforestation and Forest Degradation and Carbon Enhancement
ROK	Republic of Korea
SDGs	Sustainable Development Goals
SFM	Sustainable Forest Management
SIS	Safeguard Information System
TWGs	Technical Working Groups
UNDP	United Nations Development Program
UNDRIP	United Nations Declaration on the Rights of Indigenous People
UN-REDD	United Nations REDD Programme
UNFCCC	United Nations Framework Convention on Climate Change

Background

Myanmar has the largest remaining forest area in continental Southeast Asia, with nearly 44 percent of the total land surface being forest. Scientific forestry was introduced in Myanmar around the late 19th century. Notwithstanding the fact that Myanmar is the pioneer country in the Southeast Asia region for adopting Scientific Forest Management (SFM), conversion of forests into other land uses and degradation of forests are still the main environmental challenges facing the country. Myanmar has the third highest rate of deforestation in the world and lost 1.3 million acres of forest between 2010 and 2015.

Recognizing the rapid rate of deforestation and forest degradation in the country, the government of Myanmar (GoM) has committed to set aside 30 percent of the country as reserved forests and protected public forests and another 10 percent as protected areas. These Nationally Determined Contributions (NDCs) will have to be fulfilled by the year 2030. However, this could pose new challenges for the local communities and forest-dependent population of the country, whose livelihood depends on forests. Moreover, NDCs could also have consequences on the economy, which largely depends on land-based activities such as agriculture, fishery, and resource extraction.

According to the recent census by the GoM, more than 70 percent of the total population live in rural areas. In 2015, agriculture and resource extraction accounted for more than 60 percent of the total GDP of the country. However, agriculture and resource extraction are the two main drivers of deforestation in Myanmar. For Myanmar to fulfil the Sustainable Development Goals (SDGs), the GoM needs to restructure the economy and find sustainable routes toward economic development.

Amidst this dilemma of over-dependency as a land-based economy and the urgent need to stop deforestation, the GoM needs to find a mechanism which will check the rapid rate of deforestation and forest degradation and save the remaining forests of the country. On the other hand, such a mechanism should also encourage the sustainable development of the country without any hindrance to the rapidly growing economy.

REDD+ is a mechanism which, if carefully crafted, could contribute to sustainable development through the provision of economic incentives for the conservation of forests. By reducing emissions from deforestation and forest degradation, increasing the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks, REDD+ aims to provide incentives as a performance-based payment to stakeholders who maintain their forest standing and increase forest carbon stocks. To design and implement this effectively, the UN-REDD programme was evolved in 2008. Developing countries are now paying more attention to REDD+.

Myanmar has been a member country of the United Nations Framework of Climate Change Convention (UNFCCC) since 1994 and has endeavoured to participate in the international climate negotiation meetings to a great extent since then. The activities related to the Reducing Emissions from Deforestation and Forest Degradation mechanism were introduced into Myanmar in 2011. Myanmar became a partner country to the UN-REDD programme at the same time.

The REDD+ Readiness Roadmap, a foundation for REDD+ activities, was completed in Myanmar in 2013 with the technical and financial support of the UN-REDD programme. The country is still in the REDD+ readiness phase and is expected to complete the REDD+ strategies in 2018. Formulation of strategies for REDD+ requires some baseline information related to the positive and negative impact of existing and planned activities in Myanmar.

Rationale

In December 2013, the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) agreed to fund the regional programme "REDD+ Himalaya: Developing and Using Experience in Implementing REDD+ in the Himalaya". This capacity building programme for REDD+ is jointly implemented by the International Centre for Integrated Mountain Development (ICIMOD) and GIZ in four Hindu Kush Himalaya countries (Bhutan, India, Myanmar, and Nepal). Under this initiative, REDD+ activities have been planned for all four countries through consultative workshops held in each country.

In Myanmar, the country-specific objectives of the REDD+ Himalaya programme are to develop the capacity of the REDD+ stakeholders and to develop instruments in preparation for REDD+ readiness by undertaking and

identifying gaps in the readiness phase. This study has been undertaken as part of developing capacity for relevant REDD+ stakeholders. The purpose of the study is stated below:

- To assess the capacity needs for REDD+ implementation in Myanmar
- To identify capacity interventions for REDD+ implementation
- To support the development of a national REDD+ competency framework in Myanmar

Methodology

The report is primarily focused on desk review of the REDD+ related documents in Myanmar. Key documents that were reviewed for the study included, but were not limited to:

- Government policy documents, legislation, rules, and instructions
- Myanmar REDD+ Readiness Road Map
- REDD+ National Strategy (Draft) of Myanmar
- Previous studies on capacity needs of REDD+ in Myanmar
- Documents related to past and present REDD+ projects
- Scientific papers and articles

In addition to the desk review of the REDD+ documents, consultation meetings and key informant interviews were also conducted to gain insights into the current REDD+ implementation and to reflect the capacity needs of the REDD+ practitioners. Key informant interviews were conducted with the representatives from key stakeholders, such as local communities, REDD+ project executors, government agencies, and civil society organizations.

Key Capacity Builders for REDD+ in Myanmar

Forest Department

The Forest Department (FD), under the Ministry of Natural Resources and Environmental Conservation (MONREC), is the key capacity builder of the REDD+ mechanism in Myanmar. It is also the focal department for the implementation of REDD+ activities. Currently, FD is implementing multiple REDD+ projects.

UN-REDD Program, Myanmar

With support from the Government of Norway, the UN-REDD Programme, in partnership with the Regional Community Forestry Training Centre (RECOFTC), assisted the GoM and other stakeholders in developing a REDD+ Readiness Roadmap in July 2012-August 2013. Most of the information included in the Roadmap was derived from the work of three multi-stakeholder Technical Working Groups (TWGs) held during December 2012-April 2013. A draft document was written and was subject to review at six consultation events – two national workshops and four sub-national workshops (see Consultation Annex to the Roadmap). A revised document was produced, reflecting inputs from the consultation events.

The Myanmar REDD+ Readiness Roadmap has six sections:

- Management of REDD+ Readiness Arrangements
- Stakeholder Consultation and Participation
- Development and Selection of REDD+ Strategies
- Implementation Framework and Safeguards
- Development of a National Forest Reference Emission Level and/or Forest Reference Level
- Development of a National Forest Monitoring System

The total budget calculated for implementation of these six sections is USD 23,320,650 (including administrative costs). This funding will be accessed through the support of numerous donors, development partners, and the GoM.

Some initial support for the implementation of the Roadmap was provided through the targeted support window during 2014-15. In early 2015, Myanmar was invited to submit an expression of interest for a full national programme, and subsequently to make a presentation on it to the 14th and 15th meetings of the UN-REDD Policy Board. The Policy Board provisionally approved the allocation of USD 5,554,370 to the Myanmar National

Programme. This decision became operational following the confirmation of availability of funds provided to the interim governance body on 6 July 2016.

The Myanmar UN-REDD National Programme reflects the needs and requests of the GoM and the comparative advantages of the UN-REDD Programme and specific circumstances of the country. The situation analysis underlying UN-REDD Programmatic Support, including stakeholder analysis, is described in the Roadmap itself (Annex 1).

Promotion of Indigenous and Nature Together (POINT)

POINT is a rights-based Non-Governmental Organization (NGO) which was established in March 2012 to assist with the capacity building of the indigenous people. In the past, only religious organizations were working, to some extent, for indigenous peoples' humanitarian and developmental needs. POINT was formed to fill the gaps in the promotion of the rights of indigenous peoples and to increase their awareness of environmentally related knowledge. With regard to the REDD+ mechanism, POINT conducts trainings for indigenous and local communities to ensure that they understand their rights. It also provides trainings on Free, Prior, and Informed Consent (FPIC) and gender roles in REDD+.

Regional Community Forestry Training Centre (RECOFTC)

RECOFTC aims to support community forestry development through programs of capacity building that involve training, action research, learning networks, piloting and demonstrating, and widely communicating best practices. Together, that lead to learning, leverage, and the establishment of RECOFTC as the primary support service provider for community forestry in the country. RECOFTC has implemented a regional project on Grassroots Capacity Building for REDD+ since 2009 with financial support from the Norwegian Agency for Development in four countries: Indonesia, Laos, Nepal, and Vietnam. Myanmar was added to the project in 2013 and remained until the project ended in 2015. The project had two objectives for its grassroots stakeholders:

- Achieving a greater understanding of the concept of climate change and REDD+, with a focus on social safeguards and ongoing REDD+ developments at the national and international level, enabling them to respond to future needs of REDD+ capacity building in their countries, and
- Gaining greater capacity and skills to communicate their aspirations and concerns related to REDD+ to policy makers and other key stakeholders in context of sustainable forest management.

This project was funded by the International Tropical Timber Organization (ITTO) and implemented by the FD. The project area covered four townships, namely Yedashay, Taungoo, Oat Twin, and Phyu in the Taungoo District of Bago region. The project fund comprises a fund from ITTO and other technical support from the government. The project started in 2012 and was planned to end in 2015, but it was extended to mid-2016. It was mainly intended to strengthen the capacity of stakeholders in the design and implementation of REDD+ in Myanmar, with a specific focus on facilitating the preparation of REDD+ strategies and a Measuring, Reporting and Verification (MRV) system in teak forests in Myanmar.

The programme involves:

- Collection of REDD+ related information and raising awareness through different Information, Education, and Communication (IEC) materials;
- Capacity building for government staffs and other stakeholders for the development of REDD+ strategies through workshops, training, and discussion;
- Formulation of National REDD+ strategies through multi-stakeholder consultation and formation of a REDD+ core unit and coordination with other relevant organizations;
- Preparation of a comprehensive REDD+ capacity building work plan;
- Increasing the number of qualified persons for REDD+ activities, including carbon measuring through several training, workshops, and meetings;
- Capacity building for Free, Prior and Informed Consent (FPIC) to stakeholders in the project area;
- Establishment of demonstration sites and pragmatic implementation of REDD+ activities on the ground;

- Preparation of standard guidelines for carbon measuring and effective forest inventory; and
- Study of forest cover and forest inventories.

Additionally, the key outputs from this project were:

- Formation of a REDD+ core unit, social and environmental safeguards, standard guidelines for carbon measuring, forest inventory, and a REDD+ demonstration site;
- Publication of REDD+ national strategies;
- Capacity Building on improving Forest Resource Assessment (FRA) and enhancing the involvement of the local community to address the adverse impacts of climate change.

This regional project ran from 2013 to 2015 and covered Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Singapore, Thailand, and Vietnam, with financial support from the Republic of Korea (ROK). The total budget allocated was USD 2,000,000 for regional and USD 138,249 for Myanmar without the government involvement. It aimed to:

- Enhance the capacity of FRA for Association of South-East Asian Nations (ASEAN) member countries;
- Achieve successful and sustainable management of forests;
- Address forest management issues in the context of climate change; and
- Mitigate adverse impacts of climate change through the enhanced involvement of the local community in SFM and develop alternative livelihoods.

The key activities of this project comprised the following:

- Capacity needs assessment on conducting FRA;
- Organizing regional workshop events;
- Providing supporting equipment and high resolution images, as well as training remote sensing and Geographic Information System (GIS) specialists; and
- Strengthening the Myanmar National Forest Monitoring System (NFMS) for land use assessment and capacity building.

The Food and Agricultural Organization (FAO) has a long history of providing technical and funding assistance to the FD, particularly on forest resource assessment. This project aims to enhance the capacity of stakeholders working in the area of forest cover analysis and forest inventory. It was a two-year-long project (2014-2016) whose main activities were the development of an NFMS action plan, upgrading the current forest monitoring system in compliance with the Intergovernmental Panel on Climate Change (IPCC) guidelines, provision of training and workshops, and conducting field surveys, parallel with enhancing the capacity of Remote Sensing and GIS. The National Forest Monitoring System is also important for the design and implementation of REDD+. Currently, training on RS and GIS has been accomplished and work on the image analysis of Landsat 8 is taking place across the country.

Capacity Building of relevant stakeholders for REDD+ readiness of Myanmar

The Korean Forest Service (KFS) is interested in supporting funding for REDD+ readiness, especially for capacity building programs. Recently it has supported and accomplished a REDD+ capacity building programme at Taungoo District, Bago region. This project is also engaged in capacity building of REDD+ in the western Bago region. It was supposed to start in 2015 and end in 2018, but has not yet begun. The project location focuses on three different reserved forests: southern and northern Zarmari RF and Shwe Laung Ko Tu Kwe RF in Bago district, western Bago region. It is currently under negotiation between KFS and FD.

REDD+ Himalayas: Developing and using experience in implementing REDD+ in the Himalaya

ICIMOD is a regional intergovernmental learning and knowledge sharing center based in Kathmandu, Nepal and serving the eight member countries of the Hindu Kush Himalaya – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Globalization and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. The REDD+ Himalaya project is a thriving programme of ICIMOD funded by GIZ and which provides support for the resiliency of mountain ecosystems. This

programme was officially initiated in Myanmar in 2016 and will come to an end in 2018. The project will spend about 0.3 million Euros for REDD+ in Myanmar.

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

The project was funded by the Korea Forest Service (KFS) and was implemented by the FD from 2011 to 2014. This was among the pioneer REDD+ activities in Myanmar, and capacity building on REDD+ was one of the priorities of the project. The primary objectives of the project were:

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

The main activities of the project were:

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

Improvement of the quality of life of ethnic minorities in the Naga area of Myanmar through youth participation in REDD+ readiness process

This project was funded by the Democratic Governance Thematic Trust Fund (DGTTF) and was implemented by United Nations Development Project (UNDP) for two years (2013 to 2015) in Khamti, Layshi, and Lahe townships of Sagaing region. The key results obtained from this project were:

- A strengthened network of Civil Society Organizations (CSOs)/Community-Based Organizations (CBOs), with enhanced roles for youths advocating a rights-based approach for REDD+;
- Enhanced awareness of ethnic minority youths in the Naga Area on climate change, REDD+, the United Nations Declaration on the Rights of Indigenous People (UNDRIP), and implications for rights-based development; and
- Trained youth representatives and enhanced awareness on anti-corruption measures, and approaches to promote transparency and equity in benefit distribution.

Grassroots Capacity Building for REDD+

RECOFTC, in partnership with local NGOs, CSOs, and other government agencies, carried out this project from 2013 to 2015. The major objective was to actively contribute to REDD+ planning and policy processes through the effective participation of grassroots stakeholders who can clearly communicate to the policy makers, as well as take advantage of potential benefits from REDD+ for local socioeconomic development. The main activities listed for this project were:

- Conducting a Capacity Building Needs Assessment (CBNA) for grassroots level stakeholders;
- Developing a set of training packages;
- Delivering training programs for project implementing partners, national and sub-national-level facilitators, and other key stakeholders on how to effectively raise grassroots stakeholder awareness and knowledge on climate change; and
- Implementing training and capacity building programs for grassroots stakeholders.

Study on strengthening the methodological and technological approaches for reducing deforestation and forest degradation within the REDD+ implementation framework

The FD of MONREC sanctioned a technical study in Kalaw and Nyaung Shwe township of Shan State from 2012 to 2014. Objectives of this project are listed below:

- To strengthen the remote sensing and GIS capacity of FD staff in order to support the REDD+ readiness process;
- To demonstrate the preparation of carbon mapping in selected areas; and
- To share and exchange knowledge and experiences regarding REDD+ readiness activities.

The main activities accomplished by the project are:

- Organized GIS and remote sensing training in Myanmar and Japan;
- Organized a REDD+ workshop in Myanmar;
- Conducted surveys (socioeconomic, forest cover, and community forestry activities) in Nyang Shwe and Kalaw Townships; and
- Developed carbon mapping of some selected areas (e.g., community forests and some areas of Nyaung Shwe Township).

Capacity needs in relation to the Warsaw REDD+ Framework

The Warsaw Climate Change Conference took place from 11-23 November 2013 in Poland. It included the 19th session of the Conference of the Parties (COP 19) to the UNFCCC. At the COP 19, Parties adopted the “Warsaw REDD+ framework”, a series of seven decisions on REDD+ finance, institutional arrangements, and methodological issues. “Warsaw REDD+ framework” is a fundamental component of REDD+, and every REDD+ country should prepare it as an entity of REDD+ Readiness. The framework includes the following four elements:

- National Strategy and/or Action Plan
- National Forest Monitoring System
- Forest Reference Emission Level
- Safeguards Information System

National Strategy and/or Action Plan (NS/AP)

NS/AP is one of the four design elements which have been agreed upon internationally as prerequisites for REDD+ implementation and accessing Results-Based Payments (RBPs) (Decision 1/COP 16, paragraph 71(a), in accordance with Decisions 12/COP 17 and 11/COP 19).

REDD+ NS/AP describes how emissions will be reduced and/or how forest carbon stocks will be enhanced, conserved, and/or sustainably managed in the implementation of REDD+ (phases 2 & 3). NS/APs are integrative products and processes of the readiness phase (phase 1), drawing from all the analytical work, stakeholders’ dialogue, and strategic decisions made to prepare an effective and efficient implementation of REDD+ (phase 2).

There are no detailed prescriptions in the decision texts regarding the actual content of an NS/AP and no template to follow. Nonetheless, paragraph 72 of Decision 1/COP 16 indicates that when developing and implementing the NS/APs, parties are requested to address, among other things:

- Drivers of deforestation and forest degradation;
- Land tenure issues;
- Forest governance issues;
- Gender considerations;
- Cancun REDD+ Safeguards;
- Ensuring the full and effective participation of relevant stakeholders, inter alia, indigenous peoples and local communities.

National Forest Monitoring System

The National Forest Monitoring System (NFMS) is one of the key components of REDD+ Implementation. It has been defined in the REDD+ Academy Journal as “a system for recording and monitoring how land is used in a

country, and to develop data which show the levels of Greenhouse Gas (GHG) Emissions and Removals related to forests". The above-ground and below-ground biomass assessment manual provides for development of emission factors in different ecosystems and for different species. It is a core step for the improvement of the higher tier estimation of GHG in the land use sector. However, IPCC 2006 guidelines have more activities to be considered in the calculation of GHG inventory. For example, biomass burning from the land preparation of different sectors (subsistence and commercial agriculture and forestry in particular) are also quite important.

As a part of the assessment of emission factors for the Land Use, Land-Use Change, and Forestry (LULUCF) sector, a multipurpose National Forest Inventory (NFI) data collection methodology will need to be designed to measure forest carbon stocks. NFI should account for as many of the five IPCC forest carbon pools as possible, and it will be a key tool for the planning and management of forests and other land use sectors. Similarly, NFI should become a key tool to inform national land use planning through the collection and distribution of 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 assist on this process, capacity building is required according to IPCC guidelines for NFIs, including 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 their best practices. Once the above activities have been completed, the FD will lead efforts to redesign its existing NFI methodology through a series of consultation workshops, to ensure wide participation and transparency in the process. Concurrently with the methodological redesign, the FD will design an appropriate data management, analysis, and archiving system. With a new methodology in place, the FD will move toward planning and implementation of the piloting processes, including data processing and archiving.

The NFMS action plan for Myanmar is intended to cover the planning and implementing of a new or revised system of national forest monitoring and carbon inventory for Myanmar. It should rise to the level of a first cycle of national level measurements and ideally the initial production of national reports on the state of the forests in the country. The plan covers seven main thematic areas, stated below:

- The country situation relevant for developing NFMS in Myanmar
- The purposes of national forest monitoring
- Guidance for the planning process in Myanmar
- Proposals for organizing and deciding on the planning process
- Proposals for an operational structure of the NFMS
- A budget proposal and a time frame
- A work plan for four years

Forest Reference Emission Level (FREL)

Following the suggestion of Decision 12/COP 17, Myanmar prepared its FREL using a stepwise approach. This initial FREL submission will be a benchmark for assessing performance in implementing REDD+ activities as a contribution to climate change mitigation. The main objective of the FREL submission is to support the climate change mitigation efforts under the national context of Myanmar. Further objectives of the submission are:

- To assess and evaluate the performance of REDD+ policies, measures, and sustainable forest management practices;
- To provide information on emission projections to stakeholders, including policy makers, government line departments, technicians, and members of the public on a clear, transparent, and consistent basis;
- To facilitate access to potential funding sources for results-based payments; and
- To support efforts to reduce emissions from the forest and land use sector.

Safeguards Information System (SIS)

Safeguards refer to processes or policies designed to mitigate risks. The seven safeguards associated with REDD+, as agreed to under the UNFCCC, are broad aspirational principles that can help to ensure that REDD+ activities

“do no harm” to people or the environment, as well as “do good” and enhance social and environmental benefits.

Integral to the country approach to safeguards is the development of an SIS. An SIS is one of the four core elements that must be in place for REDD+ implementation (COP 16, 2010) and for a country to be eligible to receive RBPs (COP 16, COP 19). Further guidance on SIS design was provided at COP 17 in Durban and COP 19 in Warsaw, notably:

- Consistency with Cancun guidance;
- Accessibility and periodic provision of information: providing transparent and consistent information that is accessible by all relevant stakeholders and updated on a regular basis;
- Improvement over time: being transparent and flexible to allow for improvements over time;
- Comprehensiveness: providing information on how all Cancun safeguards are being addressed and respected;
- Country driven: being driven by the country and implemented at the national level; and
- Utilizing existing systems and building on them as appropriate.

An SIS should, wherever possible, build on existing information systems to provide information on the way the safeguards are being addressed and respected throughout the implementation of REDD+ activities. It is acknowledged, for example, in Decision 11/COP 19, that the NFMS of REDD+ countries may provide relevant information for the SIS. Table 1 shows the capacity needs of relevant stakeholders in relation to the implementation of the Warsaw REDD+ Framework.

Table 1: Capacity needs of relevant stakeholders in relation to the implementation of Warsaw REDD+ Framework

No	Key Areas	Local Community	Local Level	Sub-national Level	National Level
1	National strategy and/or action plan (NRS)	x	x	x	
	(a) Drivers of deforestation and forest degradation				
	(b) Barriers to enhance “+” activities	x	x		
	(c) Policies and measures to address drivers and barriers	x	x	x	
2	National forest monitoring system (NFMS)	x	x		
	(a) National forest inventory design and intensity	x	x	x	
	(b) RS/GIS skill	x	x		
	(c) Inventory	x	x		
	(d) Database	x	x	x	
3	Forest Reference Emission Level (FREL)	x	x	x	
	(a) Objectives and methodology	x	x	x	
	(b) Facilities	x	x	x	
	(c) Coordination for reporting	x	x	x	
4	Safeguards information system (SIS)	x	x	x	
	(a) Stakeholder mapping and engagement	x	x		
	(b) Cancun safeguards	x	x	x	
	(c) Benefit and risk analysis	x	x	x	
	(d) Consultations, coordination, negotiation	x	x	x	

Analysis of current state of competency and capacity among different stakeholders on climate change and REDD+

Capacity of local communities

Local communities were unable to understand the changes in temperature and rainfall patterns as impacts of climate change. They regarded this change as normal, as these changes have not been obvious due to a gradual increase in temperature.

Secondly, local villagers were also not able to link forests with climate change. REDD+ is a very new concept and they do not understand the idea behind it, other than the fact that carbon can be sold to the global market. The fundamental understanding of what carbon means, how carbon is accumulated, and the relationship between the growth of trees and CO₂ absorption are all new topics for them.

Capacity of local government staff

Local-level staffs of NGOs and the FD possess limited knowledge on climate change science, and REDD+ is a relatively new concept for the field-level staff as well. Many of the local staff are not familiar with the REDD+ mechanism and do not understand the activities included in it. Although many of the staff are familiar with conventional forestry activities such as forest conservation and plantation establishment, they have limited knowledge when it comes to participatory processes involving local communities. Further, the staff do not have any experience with the skills related to facilitating carbon stock measurement with local communities. Basic benefit sharing is another unclear term, as are equality, equity, and fair distribution in the context of REDD+.

Regional Level Stakeholders

Knowledge and understanding of climate change science at the regional level is poor. The CBNA report prepared by the RECOFTC in 2013 pointed out that “REDD could vaguely be explained in the project area at Bago region implemented by FD funding of KFS. The acronym for Reducing Emissions from Deforestation and Forest Degradation can't be correctly explained. The core activities of REDD+ are double pointed to them. Drivers of deforestation and forest degradation were discussed in the interview. However, they could neither indicate major drivers that exist at the national level nor suggest strategies to address the causes of deforestation. The differences between deforestation and forest degradation were very difficult for them to explain”. Similarly, the concepts of carbon trading and carbon market are also peripheral to the regional staff. The concepts of FPIC, benefit sharing mechanisms, and social and environmental safeguards are also not fully understood.

National level stakeholders

National-level stakeholders, particularly those who are actively involved in the REDD+ readiness roadmap, reported having good knowledge of climate change and REDD+ in comparison with the state-of-the-art of REDD+ in the country. However, the knowledge level of the national-level stakeholders was skewed toward the scientific part of the REDD+ rather than the social part of REDD+. The 2013 RECOFTC report on CBNA of REDD+ stated that “most of the national-level stakeholders did not recognize the issues of conflict management because it is a new concept and thus did not seem to take it into account in the REDD+ mechanism. In fact, the REDD mechanism comprises two major areas – technical and social -- for building the capacity of all stakeholders. Some national-level stakeholders are going to strongly focus on the MRV and less on FPIC and safeguards, meaning that the core value of REDD as an integrated mechanism will be undermined. Complete understanding on the requirements of REDD is still lacking”.

The concept of FPIC is known to very few stakeholders at the national level. The idea of integrating the FPIC concept in REDD+ and REDD+ benefit sharing, along with other inclusive decision making, is still lacking. This is mainly because of a lack of experience in the facilitation process and with the local communities. Each and every national stakeholder is grounded in the “learning by doing” theories related to capacity building of the local actors. Carbon market information is relatively new to those at the national level. Similarly, the current market trend assessment on the carbon market information is still missing.

The national stakeholders also have meagre knowledge on opportunity costs. They have still not included all the cost estimations on REDD+ design and implementation and are still clarifying their understanding on capacity building of local-level stakeholders on the following topics: what climate change is, how REDD has evolved, what REDD stands for, what the core activities of REDD are, the current status of forest cover, the rate of deforestation and forest degradation, the underlying drivers of deforestation, and how it can be addressed through REDD+ activities.

Table 2: Capacity needs at different levels of stakeholders

No	Key Areas	Local Community	Local Level	Sub-national Level	National Level
1	Climate Change	X	X	X	–
2	REDD+	X	X	X	–
3	CFM and REDD	X	X	X	X
4	Benefit Sharing	X	X	X	X
5	Participatory process for inclusive decision making	X	X	–	–
6	Art of facilitation and communication	X	X	X	–
7	Participatory carbon stock assessment	X	X	X	–
8	Participatory benefit sharing	X	X	X	–
9	FPIC and REDD+	X	X	X	X
10	Indigenous Peoples' Rights and REDD	–	X	X	X
11	Conflict Management and Natural Resource Management	X	X	X	X
12	Forest Governance	–	X	X	–
13	Sustainable Forest Management Principles	–	X	X	–

Analysis of gaps and needs assessment with respect to training and capacity building for REDD+ in the country

The capacity gap can be defined as the difference between the existing capacity and the capacity that an individual, an institution, or an organization must have to perform a task effectively and efficiently. The capacity gap will be presented in accordance with the findings at the local community level, local level, regional level, and national level. The key capacity gaps at different levels of stakeholders are identified as follows:

Local communities

- Knowledge and understanding of climate change science
- Concept and core elements of REDD+
- No experience on carbon assessment except for some assistance in the forest inventory, and no consideration of carbon stock as a new forest commodity
- Very limited experience in financial management and weak knowledge in benefit distribution
- Some hearsay on carbon but no information regarding carbon price and assessment of carbon market trend
- Inadequate understanding of their rights, including tenure rights, bundle of property rights, and indigenous rights.

Local Levels (Project and FD Staffs)

- Low level of understanding of climate change, weak observation of the traditional adaptive strategies, limited explanation of scientific knowledge of GHGs, inadequate comprehension of the linkage of GHGs emission and deforestation and forest degradation, unclear explanation of drivers of deforestation and forest degradation;
- Weak understanding of REDD+ and its link with climate change;
- Limited carbon market knowledge and practical experience in the facilitation process of carbon stock assessment with local communities;

- Weak facilitation of the inclusive decision making on benefit distribution and on concepts and principles of FPIC; and
- Weak in recognizing customary or indigenous rights.

Regional Level

- Very limited understanding of climate change, especially on scientific knowledge, linkage between GHGs and drivers of deforestation/ degradation;
- Limited knowledge of REDD+ in the context of climate change;
- Poor experience/knowledge in benefit sharing mechanism;
- Insufficient comprehension of FPIC and its inclusion in benefit sharing mechanisms;
- Inadequate or limited comprehension regarding the carbon market, carbon price information, and existing carbon market trends; and
- Opportunity cost is a new concept and thus there is insufficient understanding of the cost estimation of REDD+.

National Level

- Moderate to good understanding of climate change, particularly on the scientific knowledge, but poor understanding of the link between scientific and traditional knowledge in adaptation to climate change and traditional adaptive strategies;
- Moderate involvement in the national climate change discussion and negotiations;
- Moderate knowledge of REDD+, but a clear understanding of the differences between climate change and drivers of deforestation and forest degradation;
- Poor ability to link with other attributes of REDD+ such as FPIC, benefit sharing, environmental and social safeguards, conflict management strategies, indigenous rights, and tenure security;
- Weak in understanding the institutional requirement for the REDD+ design and implementation;
- Weak to low knowledge on benefit sharing mechanism and vagueness in integration of MRV and benefit sharing;
- Low to moderate experience in carbon market, its trade, and lack of initiation in carbon credit trading, verification standards at international level;
- Weak to low understanding of the opportunity cost, participatory processes for the opportunity cost estimation of REDD+, and the skills to estimate the costs of REDD+.

Conclusion

Capacity needs assessment for REDD+ was conducted to support the implementation of REDD+ mechanisms and to identify the capacity gaps for REDD+ implementation in Myanmar. The report supplements the capacity building activities conducted by the ICIMOD REDD+ Himalaya project in Shan State of Myanmar. The report finds that capacity building is required for all levels of stakeholders for the implementation of REDD+ in Myanmar, particularly for sub-national level stakeholders, in order to implement the sub-national REDD+ activities. Moreover, capacity building is also needed for the formation and operationalization of the National Forest Monitoring System in Myanmar.

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