

Study on benefit sharing of REDD+ in Myanmar

**Developing and using experience in implementing
REDD+ in the Himalayas (FD-ICIMOD REDD+
Project)**

Study on Benefit Sharing of REDD+ in Myanmar

Key Messages

- Benefit sharing system or Incentive Allocation Systems (IAS) are structures which can be used by a country in order to incentivize stakeholders to adopt behaviours which are aligned with the national REDD+ objectives
- There is no UNFCCC guidance or requirement for countries to design and implement an approach for allocation of incentives.
- Incentives and Allocation Systems should be effective, efficient and equitable
- The design of an IAS should address seven important issues
- Traditional and customary laws can be helpful in the design of benefit sharing mechanisms
- Benefit sharing of community forestry in Myanmar is presented as examples for consideration of REDD+ benefit sharing mechanism

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1. Introduction

Forests play an important role in stabilizing the global climate, and greenhouse-gas emissions caused by deforestation are roughly equivalent to those caused by the transport sector. The results-based payment aspect distinguishes REDD+ from more traditional official development assistance grants and soft-loan formats. At the same time, REDD+ differs in scale from traditional “payments for environmental services” (PES) schemes because it seeks to monetize services at the global level that is, the climate-change mitigation services of carbon sequestration and avoided emissions (TRD, 2014).

REDD+ countries have been encouraged to design and implement benefit-sharing mechanisms as part of their national REDD+ strategies. Different approaches have emerged in different country contexts based on past and ongoing experiences, and the field dialogues captured the lessons learned in four REDD+-engaged countries.

This document analyses the various benefit sharing mechanisms in order to identify bottlenecks that increase costs and risks of natural resources reaching the vulnerable and rural poor so as to develop innovative opportunities for benefit sharing in REDD+ mechanisms. The process of developing this brief, sought: to underscore the importance of equitable benefit sharing within the natural resources/ forestry sector, to analyze the existing benefit sharing mechanisms in the forestry sector particularly Community Forestry in Myanmar with a view to capturing lessons and experiences there from and finally to propose options and specific recommendations to guide the design and implementation of national benefit sharing mechanisms for REDD in Myanmar.

2. Objectives

The specific objectives of this study were:

- a) To study the cash and non-cash benefits generated from Community Forestry which was initiated in Myanmar since 1995 in different agro-ecological zones of Myanmar
- b) To observe and assess the current mechanism of benefit sharing system of community forestry
- c) To suggest possible benefit distribution systems of REDD+ based on experiences of community forestry as well as prevailing laws and regulation

3. Concept of benefit sharing

[UN REDD Modules] “Benefit Sharing Systems (BSS)” or “Benefit Distribution Systems (BDS)” are also known as known as Incentive Allocation System (IAS).

These all are structures which can be used by a country in order to incentivize stakeholders to adopt behaviours which are aligned with the national REDD+ objectives. According to UN-REDD Programme, the term “IAS” might be the most appropriate, in order to avoid potential confusion with “multiple benefits” which is a very different issue, and to reduce the risk of assumption that a project-based approach is proposed. Also, the term “benefits” implies a reward for actions already undertaken; but an alternative approach is to provide investments for future action. The term “Incentives” captures both views.

3.1. Incentives

In the case of REDD+, incentives are Policies and Measures (PAMs) which are designed to encourage specific actions from stakeholders. There are different types of incentives:

- Direct incentives e.g. cash transfer, participatory management, etc.
- Policy and governance incentives e.g. tenure clarification, agricultural intensification, etc.

Incentives can be considered as investments in order to get emission reductions (ER), or can take the form of a redistribution of Results-Based Finance (RBF) gained from measured ER.

Actually, there is no UNFCCC guidance or requirement for countries to design and implement an approach for allocation of incentives. Only one COP decision relates to allocation of incentives:

1/CP.16; Appendix 1; para 2(e)

“... actions referred to in paragraph 70 of this decision [i.e., the 5 REDD+ activities] 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”

Not all Policies and Measures (PAMs) need to be associated with incentives to stakeholders. Indeed, some PAMs may be effective by eliminating “perverse incentives” or direct subsidies promoting forest destruction.

3.2. Characteristics of an IAS for REDD+

[UN-REDD Programme] expressed that a system for benefit sharing or IAS for REDD+ should be based on:

Effectiveness: the incentives/benefits serve to reduce emissions from forests and to promote removals by forests to the maximum extent feasible.

Efficiency: the incentives/benefits reduce emissions (and promote removals) in such a way as to minimize costs (while being consistent with a rights-based approach).

Equity: the incentives/benefits are shared in a manner that is fair and equitable, particularly for the benefit of the most vulnerable

3.2.1. Effectiveness

The incentives should be made available at the optimal time, in the optimal amount and in the optimal form to effectively promote the desired actions and ensure sustainability of the results or maintain the desired actions. The time, amount and form need to be clearly defined and understood by both recipients of incentives and those providing incentives, and are subject to (negotiation and) agreement between parties – this consultation and negotiation process is similar to the process required for Free, Prior and Informed Consent (FPIC).

As a contribution to countries addressing and respecting the Cancun safeguards, the benefit distribution system or IAS for REDD+ should also:

Ensure the full and effective participation of all relevant stakeholders (Decision 1/CP.16, Appendix 1, paragraph 2[d]);

Empower transparent and effective national forest governance structures (Decision 1/CP.16, Appendix 1, paragraph 2[b]);

Engender respect for the knowledge and rights of indigenous peoples and members of local communities (Decision 1/CP.16, Appendix 1, paragraph 2[b]).

BOX 1. EXPLANATION ON OPTIMAL TIME, AMOUNT AND FORM FOR INCENTIVES

OPTIMAL TIME

Some incentives can be provided before results are obtained, as an investment, and to establish good will; others can be viewed as rewards for successful actions. Since results-based finance comes only after results have been verified, some initial investment is required – subsequently this can be reimbursed from results-based finance. Some bilateral agreements, such as Germany’s REDD+ early Movers programme (REM) can also pay for past results.

OPTIMAL AMOUNT

They also need to be adequate to stimulate and maintain the desired actions. Consideration of opportunity costs may provide some help, but the definition of the amount of the incentive should not be viewed as a simple arithmetic exercise. In-kind incentives are complementary to financial incentives. Finally, some incentives can be non-financial and adequate; for example, improved access to extension services, or improved tenure security.

OPTIMAL FORM

The incentive’s form also needs to be clearly defined and understood by both recipients of incentives and those providing incentives – subject to (negotiation and) agreement between parties. Stakeholders will have preferences, and if the incentive is provided in a form that does not meet their preferences, effectiveness is adversely affected. For example, in Viet Nam a survey of stakeholders in Lam Dong province revealed that there was a preference non-cash incentives, as such, providing a mix of incentives between cash and in-kind might be key.

3.2.2. Efficiency

In a national REDD+ Programme, there are certain operational elements, such as National Forest monitoring Systems and Safeguards Information Systems that carry recurring costs. These costs, which are essentially “fixed” as they are independent of the volume of emissions reductions secured, may need to be covered from results-based finance. This will limit the amount of results-based finance available to be used in the provision of incentives, so a system to allocate incentives needs to be financially efficient. Financial efficiency can be promoted by using financial institutions as service providers. For example, the Amazon Fund uses the Brazilian Development Bank (BNDES) to administer the incentive system.

Administration costs can be reduced by avoiding the need for the funds to transit through several institutions before reaching their final destination (a “cascade” of funds from the national, to state/provincial, to district/local levels, for example). A cascade also increases risks of corruption. The system also needs to be institutionally efficient, especially for links between reporting, decision making and delivery. If a report indicates that a milestone has

been reached, which triggers the delivery of an incentive, the affected stakeholders need to receive that incentive promptly in order to remain engaged and committed.

3.2.3. Equity

The system needs to incentivize fairly. Those undertaking comparable interventions and achieving comparable results should receive comparable incentives, irrespective of social position, ethnicity, gender, or any other social parameter. Without clear equity, social tensions will increase and stakeholders will cease to be engaged. This, in turns, requires transparency – agreed incentives negotiated with different stakeholder groups should be public knowledge.

BOX 2. EXPLANATION ON EQUITABILITY

Equitability can be defined in different ways:

- On the basis of “rights” (but rights to what?);
- On the basis of costs incurred in implementing policies and measures;
- On the basis of results achieved (but difficult and costly to measure at a scale that is relevant to allocation of incentives).

As women and men use forests and engage in differing economic activities, consideration of gender when defining and sharing REDD+ benefits is critical. However, women may be disadvantaged or marginalized in traditional or formal processes, particularly land tenure, which can lead to them to having unequal access to information and legal processes, or not being involved in decision-making processes on benefit sharing mechanisms and structures. Women may also be excluded from REDD+ benefits due to weak right to land and trees, or simply not have a bank account.

3.2.4. Types of benefits

The definition of REDD+ benefits is central to communication on REDD+ benefit-sharing. Incentive structures must be aligned with the interests of relevant stakeholders and clearly articulated and understood. Differentiated benefits, incentives and compensation structures are required because different stakeholders have different perceptions of REDD+ benefits (TRD, 2014). During the survey and interview, when discussing the benefits of REDD+ during field dialogues, some stakeholders mainly referred to non-monetary benefits, while others spoke largely in monetary terms (Table 1).

Table 1. Perceptions of REDD+ benefits, by stakeholder group (TRD, 2014)

Incentives	Indigenous people/community	Government	Private Sector
Cash benefits	Income from protecting natural resources: fees, royalties and gate proceeds; income derived from the use of natural resources: non-timber forest products, timber, etc.; access to credit; salaries from jobs	Taxes on income (from timber, tourism, non-timber forest products and agriculture); penalties; rent on land; royalties; donor grants	Capacity building; rural infrastructure; tax breaks; access to finance/ markets (including carbon and rural markets); reduced risk—guaranteed off-take; diversified cash flow; access to insurance, etc.; employment; high-quality products; multiplier effect
Either cash or non-cash benefits	Provision of alternative livelihoods	Capacity building; livelihoods; biodiversity	Technical support (e.g., silvicultural knowhow); provision of alternative livelihoods; carbon neutrality; research and development; reduction in illegal activities; fair trade and transparency; ecosystem services
Non-cash benefits	Capacity building; infrastructure; ecosystem services; biodiversity (existence value); access to resources for subsistence; cultural values; supply of inputs (seeds, fertilizers); access to information	Better education for people; medicinal/nutritional values; improved forest governance; forest security/improved agricultural productivity; ecosystem services; biodiversity (existence value); cultural value	Nested approach; 30 projects relevant to REDD+ under preparation; social conflicts over land rights

3.2.5. Design of benefit distribution system or IAS

Benefit distribution system or IAS can be designed based on prevailing policies, legislations and procedures. Based on the principles presented above, the design of an IAS should address seven important issues, which are listed in BOX 3 in accordance with (UN REDD Programme).

BOX.3. *CONSIDERATIONS FOR DESIGNING BENEFIT DISTRIBUTION SYSTEM OR IAS*

Issue 1: Who qualifies to receive incentives?

Answering this question requires properly addressing the equity issue between those who incur costs, those who have rights to the forest and those who deliver results. If qualification is on the basis of rights, it is important to understand that the UNFCCC does not require the definition of carbon rights, since reporting on emission reductions is at the national level and the responsibility of the country.

In Vietnam, there are 7 categories of forest “owners”. All are considered eligible for incentives except for the Armed Forces.

Issue 2: On what basis should decisions on allocation of incentives be made?

In theory, this could be based on performance in terms of emission reductions/removal enhancements. However, it would be immensely expensive to measure emission reductions/removals at a scale relevant for allocation of incentives – the costs would probably exceed results-based payments received. Therefore an alternative measure of performance is needed. A measure based on inputs is far easier to assess and can be assumed to be related to emissions reductions/removals.

Issue 3: How will the data for decisions (either input-based or output-based) be collected, analysed, and shared?

To promote efficiency, costs of data collection, analysis and results dissemination should be kept low. The role of participatory data collection should be considered. For some types of data collection, self-reporting with spot checks may be most efficient. For example, communities may self-report areas of bare land planted, or person-hours of forest patrolling, but forest authority may be responsible for checking accuracy of reported data.

Issue 4: Who will make the decisions, based on the collected and analysed data?

In order to ensure transparency and to avoid risk of corruption, the decisions cannot be made by stakeholders who are potentially eligible for incentives. Therefore, if there is some type of committee or board to make decision, members of this committee or board (and the organizations they may represent) should not be eligible for incentives

Issue 5: How will the type of incentive (monetary; various types of non-monetary) be decided?

In order to promote effectiveness, stakeholders should be able to indicate preference in the type of incentive since they will respond more positively to incentives that match their wishes. Type of incentive should be consistent among similar stakeholders. A registry may be required to maintain a record of incentives to be provided (and conditions to be met in order for them to be provided). This registry should be available for inspection and verification, at least by the stakeholders themselves.

Issue 6: How will the incentives be delivered?

This of course depends on the nature of the incentives. In order to promote efficiency, existing mechanisms may be available for delivering monetary incentives – for example, many countries have experience of conditional cash transfers in the health and education sectors. Stand-alone REDD+ “funds” should not be the default choice.

Other types of incentives will require different mechanisms. Technical support incentives (for example, agricultural intensification and alternative livelihood options) may be delivered through specialist governmental or non-governmental agencies.

Issue 7: How will the system be monitored?

Monitoring of performance, used to trigger the delivery of incentives, is part of the role of the NFMS (addressed in module 5). Variables used to assess performance of eligible recipients of incentives should be integrated into the NFMS. Monitoring of the delivery of incentives (in accordance with conditions recorded in the registry) should be the role of the REDD+ management agency

Figure 1, below, depicts a hypothetical IAS, and Box 4 demonstrates how each of the seven principles discussed above are addressed in this hypothetical system.

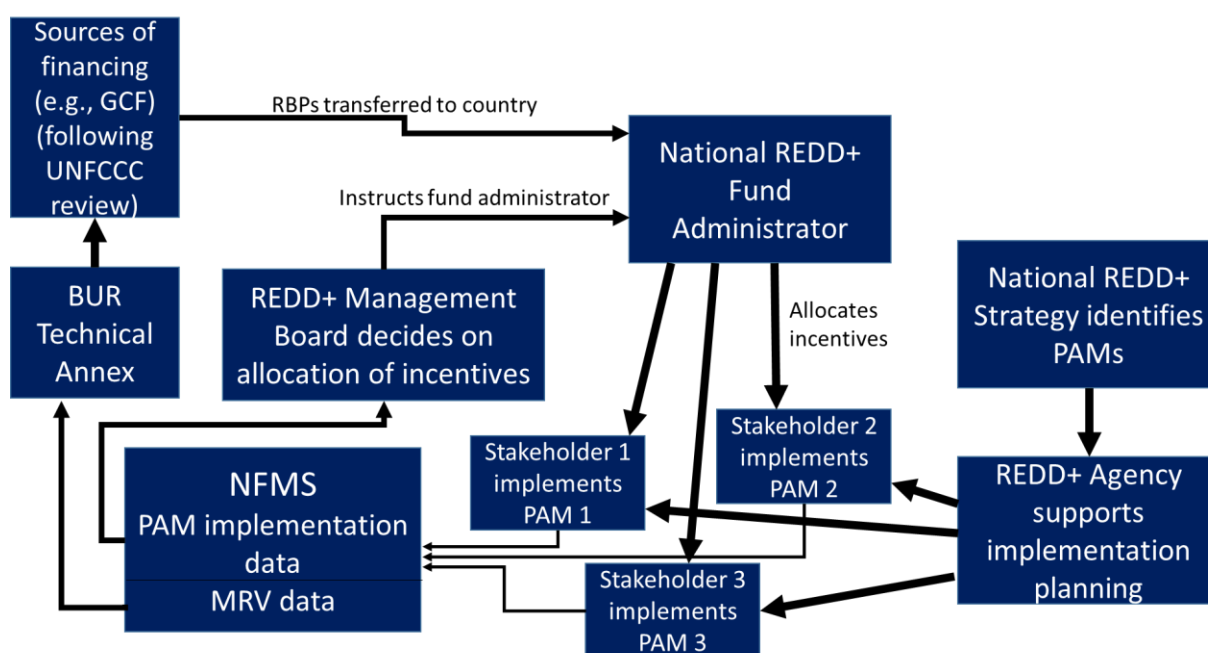


Figure 1. Example of an IAS structure

Source: UN-REDD Programme

UN-REDD Programme identified seven principles of benefit distribution system or IAS and also provided the possible ways of solutions to address these principles as shown in Box 4.

BOX 4. SEVEN PRINCIPLES OF IAS AND POSSIBLE APPROACHES

Principle	How it is addressed in the example
1. Who qualifies to receive incentives?	Implementation planning supported by the REDD+ Agency identifies stakeholders to be involved in implementing specific PAMs
2. On what basis should decisions on allocation of incentives be made?	NFMS data is submitted to the REDD+ Management Board
3. How will the data for decisions (either input-based or output-based) be collected, analyzed, and shared?	Responsibility of the agency(ies) responsible for the NFMS
4. Who will make the decisions, based on the collected and analyzed data?	REDD+ Management Board
5. How will the type of incentive (monetary; various types of non-monetary) be decided?	REDD+ Agency supporting implementation planning
6. How will the incentives be delivered?	National REDD+ Fund Administrator delivers funding to entities identified in implementation planning to be responsible for delivering agreed incentives
7. How will the system be monitored?	Through reports of the REDD+ Agency, REDD+ Management Board, and National REDD+ Fund Administrator

3.2.6. Importance of participatory processes in design of systems to deliver redd+ incentives

Design of incentive allocation systems that are effective, efficient and equitable, and that satisfy the seven principles, is a complex process that requires consultation and communication with a broad range of stakeholders. The Forest Dialogue (2014) provided the methodology for designing IAS and it is shown as the Figure 2 which presents a process which could be used to ensure that the design process is appropriately participatory. The process begins by recognizing that different stakeholder groups have different perceptions, and the need to understand these differences in order to develop a common vision through training, awareness-raising, and the establishment of platforms for on-going consultation.

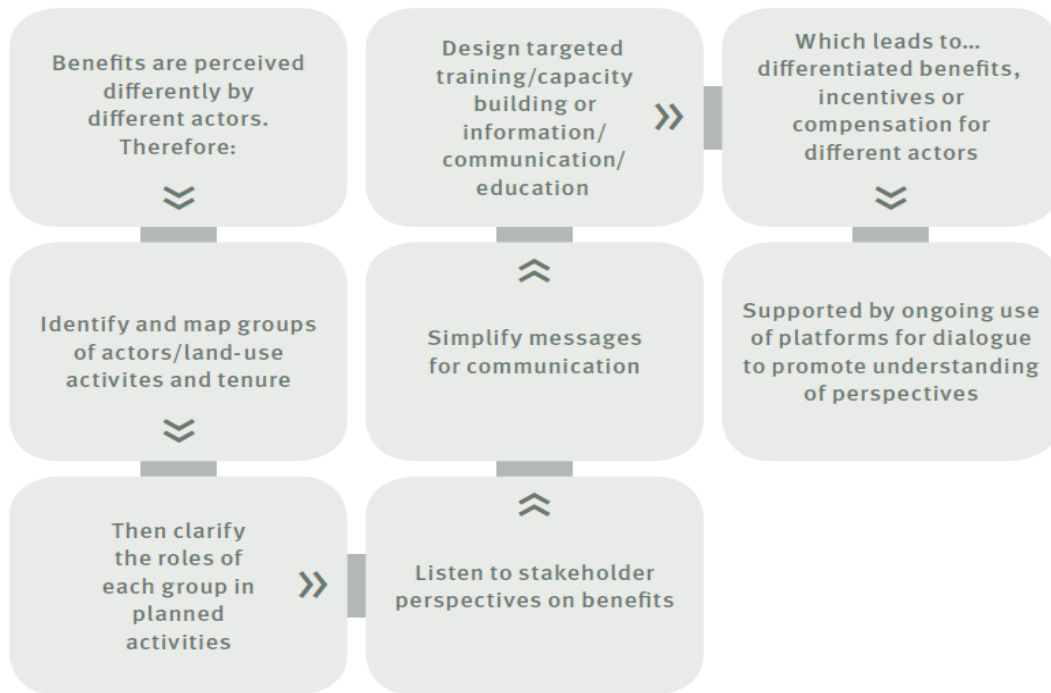


Figure 2. A methodology for designing incentives

Source: The Forest Dialogue (TFD): Country Options for REDD+ Benefit-Sharing; Insights from TFD's Multi-Stakeholder Dialogue Initiative (2014)

3.2.7 Examples of existing systems to deliver REDD+ incentives

Despite an enormous amount of debate, there are as of yet few examples of REDD+ allocation of incentives systems, even in voluntary market projects. There are however, many examples of relevant systems in the Payments for Ecosystem Services (PES) and Sustainable Forest Management (SFM) programmes.

Many of the examples are lacking in one or more of the 7 key issues described previously. For example:

- Participatory identification of the nature of incentives is rare – often the incentives are defined by government (and are often cash-based)
- Monitoring of performance may be weak or absent
- Equity is poorly defined and applied
- Decision-making is opaque

4. Fundamental for benefit sharing in the future

The basis for sharing benefits many REDD+ countries are interested in receiving cash payments from donors to support their national activities on REDD+. To receive such payments, countries will be evaluated on their performance in reducing emissions from deforestation and forest degradation. At the subnational level, however, both performance-based and input-based approaches can be used to share cash and non-cash benefits to incentivize positive land-use change. A national government can set frameworks, employ safeguards, and provide a menu of options for sharing benefits, but the types of benefits shared and the basis on which such sharing takes place must be tailored to local circumstances. Each of the eligible land-use activities in REDD+ may require its own set of incentives and thus its own mechanisms for providing those incentives.

Traditional and customary laws can be helpful in the design of benefit sharing mechanisms (TRD, 2014). For example, some communities may prefer an equal share of benefits among all participating households instead of differentiated payments based on performance because it avoids conflict among community members. Different phases of REDD+ also call for different bases for benefit-sharing: at early stages of REDD+, benefits are shared mostly based on inputs (e.g., field dialogue participants in Viet Nam observed the input-based model operating at the sub-national level), while performance-based payments may become more relevant at later stages. Benefits shared in the early stages of REDD+ can be designed to create lasting impacts and to incentivize sustainable land-use behavior that will lead to further emission reductions.

Where local capacity is weak, capacity building could be perceived as an interim benefit of REDD+ processes if it empowers local communities, women and Indigenous Peoples to play a greater and sustained role in decision-making through multi-stakeholder forums. Ultimately, such forms will help ensure the longer-term societal outcomes of increasing rural incomes while ensuring permanence in emission reductions.

5. Case studies on benefit sharing of Community Forestry in Myanmar

5.1. Introduction (Benefit sharing mechanism in CF to REDD+)

Benefit sharing is critically important for the effectiveness, equitability, sustainability, and acceptability of a work such as Reducing Emission from Deforestation and Forest Degradation (REDD+), Community forestry (CF), etc.. Any work could not be succeeded without suitable benefit sharing system (Campese J 2012, Blomley et al. 2009). Therefore benefit sharing in REDD+ has been recently emphasizing in project implementing countries.

Recent studies have been learned lessons on benefit sharing system of CF to bring this to REDD+. CF means all kind of forestry operations for sustainable forest management in which local people are involved. The term covers afforestation and reforestation activities from small scale to commercial scale to create job opportunities and income; to produce fodder; to stabilize ecosystem and to enhance environmental conditions (MONREC 2016). CF programmes have been developed well and established benefit sharing mechanisms, and it generates and distributes co-benefits beyond carbon, and thus it can provide relevant lessons for REDD+ (Nawir et al. 2015, Rana 2016). In Nepal, CF has been placed at the centre of REDD+ strategy (West 2012). Therefore, it is timing to evaluate the benefit sharing in CF of Myanmar with the aim to support sharing benefit in REDD+ in Myanmar.

5.2. Community forestry in Myanmar

In Myanmar, the community forestry programme started with the Community Forestry Instruction since 1995. The duration of land lease for CFs is 30 years, and it can be extendable after the initial 30-year period.

The main objectives of CFs are:

- a. To address the basic needs of timber and non-timber products for local people,
- b. To create job opportunities and income so as to reduce the poverty,
- c. To increase forest area and provide perpetual supply of forest products in sustainable manner,
- d. To promote participatory forest management, and
- e. To enhance environmental services which support for climate change mitigation and adaptation through conservation of deforestation and forest degradation.



Since CFs have been formed across the country based on the needs of local community and forest conservation as well, there are different objective types among community forests. Based on objectives types, community forests (CFs) can be identified into five types: production forest, protection forest, conservation forest, religious forest, and traditional forest.

Production CFs are established with major aims to support the local people by producing timber, pole, post, fuel wood and non-timber forest products from plantations while enhancing the local people participation in forest conservation and reducing degraded areas by establishing plantations. Protection CFs are established for the protection of rare fauna and flora, natural beauty, and areas, with special environmental, scientific, cultural or any other special importance. Conservation CFs are mainly aimed to conserve forests, soil, water and natural resources with the involve of local people, while those CFs support the livelihood of local people in terms of giving fuel wood and non-timber forest products, etc. Religious CFs are established for spiritual believe by conserving and utilizing forests for any religious importance. Traditional CFs are aimed to conserve the forests traditionally by local people, and utilize and manage the forests for their livelihood and village development.



5.3. Site selection and data collection

The following five case study sites were selected: Kachin state, Shan state, Mandalay division, Magway division, and Ayeyarwaddy division, ranging from the upper to lower Myanmar. A total of 25 community managed forests were surveyed for this study including six community based forests in Kachin state, four in Mandalay division, four in Magway division, six in Ayeyarwaddy division and five in Shan state. Then The CFs in the study sites were categorized according to the different objective types of CF establishment. The survey covered the production, protection, conservation and religious community forests. The locations of the study sites are shown in Figure 3.

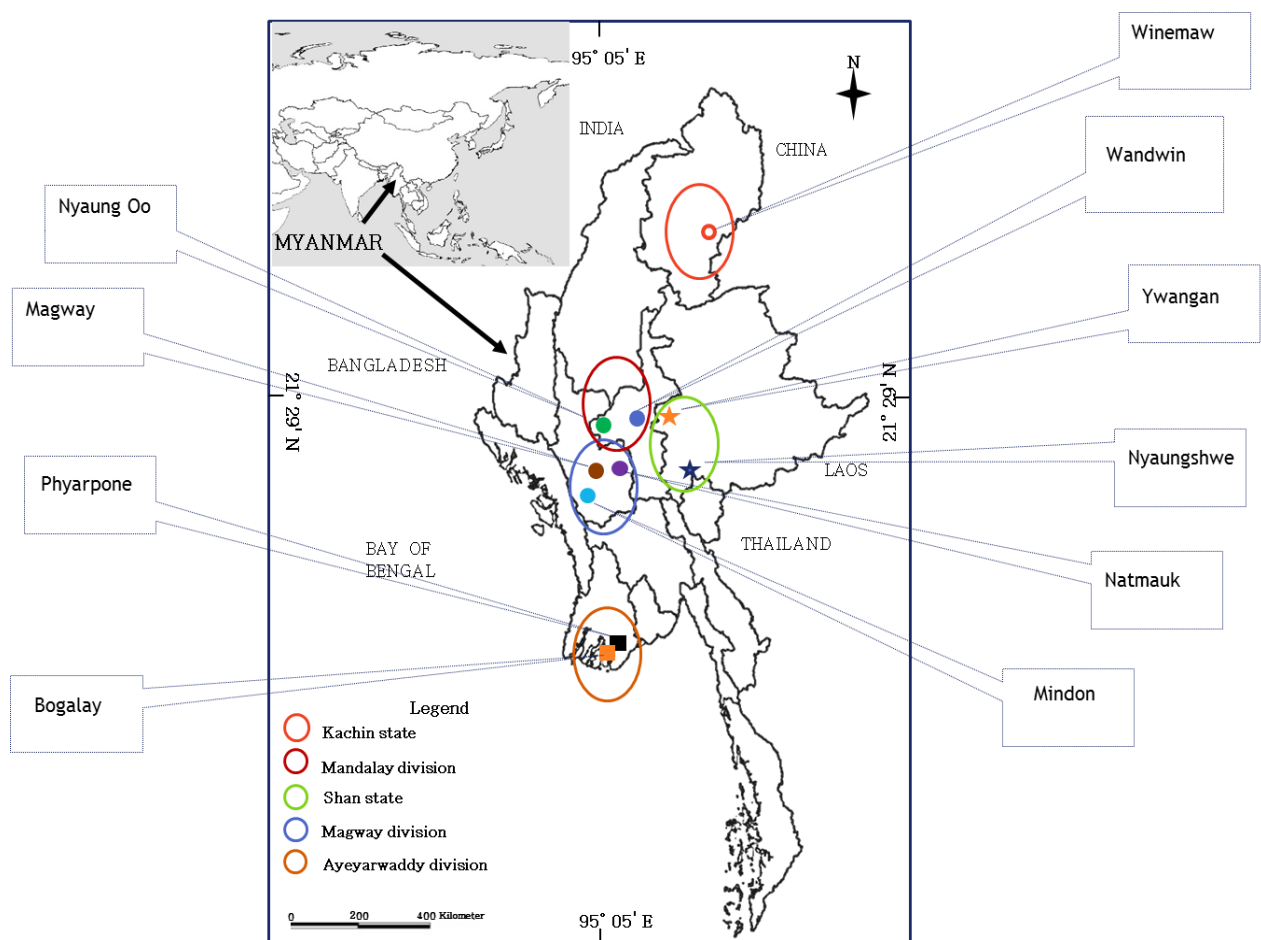


Figure 3. location map of the study areas

Desk reviews on existing information such as geographic information, management plan, and regular progress report on CF, were done to identify the types of CF and background information of village and CF as the secondary data for this study. Group discussions with CF members and field check to CFs were conducted to know the ground condition, current situation and verify the types of community forests



After conducting the above works, the benefits sharing mechanism of CF was observed by face to face interviews and focused group discussions with CF members. The community members, at least 10 members in each community managed forest, were selected for face to face interviews. In order to cover the overall assessment of benefit sharing system in CF, the focused group discussions were done with the involvement of community members as much as possible in each CF.



The questionnaires were prepared into six parts; the background information of CF, status of villages, types of benefits obtained from CF, benefits distribution among community members, management of CF and the benefit sharing system/mechanism in CF. Focus group

discussions were done to assess the challenges in the establishment and management of CF, the types of distribution among community members and the benefit sharing system/mechanism in each community managed forest.

The terms used in this study were clarified as follows:

Sr.no	Description	Characteristics
1.	Beneficiaries	CF community members
2.	Types of benefits	Tangible and intangible (Monetary and non-monetary) benefits
3.	Management	Management applied in CF by community members
4.	Monitoring	Involve all community members
5.	Revolving fund	Managed by CF committee.

The basic information and types of CFs are shown in Table 2.



Table 2. The basic information and types of CF in the study areas

Sr. no	Village	Township	State/ Division	Year of Establishment	Areas (Acre)	User Group Members	CFs type	Remarks
1.	La-ban	Winemaw	Kachin state	2007	759	263	Production CF	
2.	La-ban	Winemaw	Kachin state	2007	400	263	Conservation CF	
3.	Woo-yan	Winemaw	Kachin state	2008	600	222	Production CF	
4.	Woo-yan	Winemaw	Kachin state	2008	300	222	Conservation CF	
5.	Woo-yan	Winemaw	Kachin state	2008	300	222	Protection CF	
6.	La-myan	Winemaw	Kachin state	2016	35	23	Production CF	
7.	Yo-sonse	Wandwin	Mandalay division	2004	540	122	Production CF	
8.	Yo-sonse	Wandwin	Mandalay division	2004	10	122	Conservation CF	
9.	Myay-thin-twin	Nyaung Oo	Mandalay division	2015	53.08	165	Conservation CF	
10.	Zi-O-thit-hla	Nyaung Oo	Mandalay division	2008/2018	40	165	Religious CF	
11.	Kan-thar-lay	Magway	Magway division	1996	50	1071	Production CF	
12.	Aung-myay-kone	Magway	Magway division	2006	75	43	Conservation CF	
13.	Nga-laing-san	Mintone	Magway division	2002	482	144	Conservation CF	
14.	Padauk-ngoke	Natmauk	Magway division	2005	128	30	Production CF	
15.	Wah-kone	Phyarpone	Ayeyarwaddy division	2001	350	54	Production CF	
16.	Kywe-te	Phyarpone	Ayeyarwaddy division	2001	653	36	Production CF	
17.	2-Bawathit	Phyarpone	Ayeyarwaddy division	2017	800	150	Production CF	
18.	Phoe-ba-kone	Phyarpone	Ayeyarwaddy division	2017	807.24	43	Production CF	

Sr. no	Village	Township	State/ Division	Year of Establishment	Areas (Acre)	User Group Members	CFs type	Remarks
19.	Shwe-pyi-thar	Bogalae	Ayeyarwaddy division	2012	50	144	Production CF	
20.	Mingalar-yaekyaw	Bogalae	Ayeyarwaddy division	2017	20	30	Conservation CF	
21.	Mine-thout	Nyaungshwe	Shan state	2001	1250	95	Conservation CF	
22.	Lwe-nyeint	Nyaungshwe	Shan state	2000	600	120	Conservation CF	
23.	Lwe-khaung	Nyaungshwe	Shan state	2016	198	85	Production CF	
24.	Alaechaung	Nyaungshwe	Shan state	1996	405	280	Production CF	
25.	Yagyi	Nyaungshwe	Shan state	1950	673	380	Conservation CF	

5.4. Results and discussions

5.4.1. Status on CF developed villages

Generally, most of the households in all study areas are poor; a few are the rich although their property level definitions are different among the villages. For concerning the physical asset, most of the villages have no electricity, clinic, and no good road access and enough drinking water resources. As the education (the human asset), primary schools and branch of the middle school levels were found. Even though the ratio of educated persons and village population is low, we found local people who pass matriculation examination and hold degrees.

5.4.2. Types of benefits and its distribution to community members

Both monetary and non-monetary benefits were obtained from CF. Firewood, post, pole, and non-wood forest products are main CF products in all study areas. In Ayeyarwaddy region, Dani (*Nepa fruitica*), mangrove fruits, crab are also included as main CF products in Ayeyarwaddy region while plum are included in Dry zone (Nyaung Oo) area and bamboo and mushroom collection are included in Magway division. These main products are used for their subsistence needs and sometimes sell or offer their relatives and neighbours. Local communities including CF members and non-CF members earn living from collecting medicinal plants and fruits collecting. CF members allow non-CF members to gather fruits freely and sometimes they can collect dry firewood in some villages but they have to follow internal rules formulated by CF committee and members: do not cut the trees for firewood; and do not climb the trees to get fruits.



As a win-win benefit, non-members give information about the current situation of the owner's forests (for example- who steal/ cut trees, where, when) although CF members face a few problems with non-member who do not follow CF internal rules. Local community earn a lot of income from selling non-wood forest products to outside villages in some places while local community in other places get a small amount of money from non-wood forest products to outside villages. Some areas of CF established as agroforestry type by planting sea sesame, rice, and groundnut in line with CF management plan. In some cases local communities earned money from nature based ecotourism and community-based tourism, especially in Shan state.



As non-monetary benefits, environmental conservation, watershed conservation, attending capacity building trainings and workshops were obtained from CF. Monetary and non-monetary benefits of CF in different regions are shown in Table 3.

Table 3. Benefits obtained from CF in different regions

Sr. no	Township	Village	Benefits			
			Tangible		Intangible	
1.	Wine Maw	Laban	Firewood, agricultural crops	pole, post, fruits	Environmental conservation, (domestic)	Training
2.		Wooyan	Firewood, agricultural bamboo shoot, medicinal plants	pole, post, crops, medicinal	Environmental conservation, (domestic, international)	Training
3.		Lamyan	Firewood, agricultural crops	pole, post,	Environmental conservation, (domestic)	Training
4.	Wandwin	Yo-son	Gum, seeds		Environmental conservation, (domestic, international)	Training

Sr. no	Township	Village	Benefits				
			Tangible			Intangible	
5.	Nyaung Oo	Myaythintwin	Firewood, plum	pole,	post,	Watershed conservation, Training (domestic)	
6.	Magway	Kantharlay	Firewood,	pole,	post	Watershed conservation, Training (domestic)	
7.	Magway	Aungmyaykone	Firewood,	pole,	post	Watershed conservation, Training (domestic)	
8.	Mindon	Naglaingsan	Firewood, bamboo	pole,	post,	Environmental conservation, Training (domestic)	
9.	Natmauk	Padaukngoke	Firewood, mushroom	pole,	post,	Environmental conservation, Training (domestic)	
10.	Phyarpone	Wahkone	Firewood, Dani, crab	pole,	post,	Environmental conservation, Training (domestic, international)	
11.	Phyarpone	Kywete	Firewood, Dani, crab	pole,	post,	Environmental conservation, Training (domestic)	
12.	Phyarpone	2-Bawathin	Firewood, Dani, crab	pole,	post,	Environmental conservation, Training (domestic)	
13.	Phyarpone	Phoebakone	Firewood, Dani, crab	pole,	post,	Environmental conservation, Training (domestic)	
14.	Bogalay	Shwepyithar	Firewood, Dani, crab	pole,	post,	Environmental conservation, Training (domestic)	
15.	Bogalay	Mingalarya	Firewood, Dani, crab	pole,	post,	Environmental conservation, Training (domestic)	
16.	Nyaung Shwe	Minethout	Coffee, bamboo, other			Watershed conservation, Training (domestic, international)	
17.	Nyaung Shwe	Lwentyeint	Firewood, medicinal plants	pole,	post,	Watershed conservation, Training (domestic)	
18.	Nyaung Shwe	Lwekhaung	Coffee, shoot, bamboo	pole,	bamboo	Watershed conservation, Training (domestic)	
19.	Ywangan	Alaechaung	Firewood,	pole,	post	Watershed conservation, Training (domestic)	
20.	Ywangan	Yagyi	Firewood,	pole,	post	Watershed conservation, Training (domestic)	

5.4.3. Major challenges and management of CF

Poor understanding in formation processes: some villagers did not have a clear or detail understanding of CF concepts during the formation process.

Inclusiveness and equity: if only a small part of local community has taken control of land ownership, this will lead to conflicts between CF members and non-members.

Sustainability: sustainability of CF with systematic allocation of tasks and gains among members should be done. Avoid conflict management within groups as well as with outsiders.

For concerning management activities of CF, CF members follow the CF management plan. CF meetings are held every month: CF committee discuss monthly activities of CF with CF members. Some CF perform pruning and branching, enrichment planting/ gap planting and protecting CF areas, only, because of no more space for plantation establishment. The rest of the villages carry out enrichment planting/ gap planting, plantations including slashing, weeding, fire line protection, and nursery practices together with maintaining and protecting existing forests.

5.4.4. Benefit sharing system in CF

Community forestry have specific rules for benefit sharing according to the CF management plan where there is a little bit different benefit sharing systems among the villages. Some exceptional cases, Shwepyithar and Mingalaryaekyaw CFs, with individual ownership, they have no definite benefit sharing system where CF members will use firewood, post, and pole and will sell the extra to other village. Except this, in all CF types, CF members who have individual ownership maintain and protect their respective forests by themselves and take all benefits from CF they maintained; members who have collective ownership conserve their forests to reduce the risk of natural disasters where they donate firewood from pruning and branching to the monastery and allocate the extra for their subsistence; on one cut or steal the trees. Allocation of land and benefits in individual and collective ownerships, respectively, are equitable among CF members in successful CFs. Additionally, input based benefit sharing was found in all study sites.

The benefits sharing systems in CFs are varied among different regions but not significantly. However, the benefits sharing systems in CFs are significantly varied among different types of CFs (Table 4).

Table 4. Benefits sharing systems in different types of CFs

Items	Production	Conservation	Protection	Religious
Forest Conservation Activities	19 % (4 – 35%)	33 % (25 – 50%)	32 %	60 %
Community Development Activities	17 % (2 – 40%)	26 % (5 – 50%)	60 %	30 %
Revolving Fund	11 % (1 – 40%)	18 % (10 – 25%)	-	
CF Committee	8 % (5 – 10%)	15 % (15%)	8 %	
CF Members	71 % (40 – 99%)	51 % (25 – 90%)		
Saving Money	5 % (2 – 10%)	5 % (5%)		
Miscellaneous Things	5 % (5%)	15 % (5 – 20%)		10 %
Total	100 %	100 %	100 %	100 %

In production types, the benefits obtained from CF are shared for forest conservation, community development activities, revolving fund, CF committee, CF members, saving money and miscellaneous things. An average of 71% of benefits are shared among CF members, 19 % for forest conservation, 17 % for community development activities, 11 % for revolving fund, 8 % for CF committee, and 5% each are used for saving money and miscellaneous things (Table 4). In conservation types, 51% of total benefits is shared among CF members, 33% is for forest conservation and 26% is for community development activities. The remaining percentage is used for revolving fund, CF committee, saving money and other miscellaneous things. In protection and religious types the monetary benefits are much lesser than those in production and conservation types. And 90% of those benefits are used for forest conservation and community development activities in protection and religious typed CFs. The benefit sharing systems in different types of CF are shown in Table 4, and the detail sharing systems in different regions are shown in Table 5, 6, 7, 8, and 9.

Table 5. Benefits sharing systems of CFs in Kachin state

Items	Laban Prd. (Individual ownership)	Laban Con. (collective ownership)	Wooyan Prd. (Individual ownership)	Wooyan Con. (collective ownership)	Wooyan Pro. (collective ownership)	Lamyang Prd. (Individual ownership)
Forest Conservation Activities	5 %	35 %	4 %	30 %	32 %	10 %
Community Development Activities	5 %	-	2 %	-	60 %	2 %
Revolving Fund	5 %	-	2 %	-	-	-
CF Committee	-	-	-	-	8 %	5 %
CF Members	75 %	50 %	90 %	55 %	-	80 %
Saving Money	5 %	-	2 %	-	-	3 %
Miscellaneous Things	5 %	15 %	-	15 %	-	-
Total	100 %	100 %	100 %	100 %	100 %	100 %

Prd. = production type, Con. = conservation type, Pro. = protection type, Rel. = religious type.

Table 6. Benefits sharing systems of CFs in Mandalay region

Items	Yo-sone Prd. (Individual ownership)	Yo-sone Con. (collective ownership)	Myaythintwin Con. (collective ownership)	Zi-O-Thithla Rel. (collective ownership)
Forest Conservation Activities	-	30 %	35 %	60 %
Community Development Activities	-	50 %	5 %	30 %
Revolving Fund	1 %	-	-	-
CF Committee	-	-	15 %	-
CF Members	99 % (+ maintenance)	-	35 %	-
Saving Money	-	-	5 %	-
Miscellaneous Things	-	20 %	5 %	10 %
Total	100 %	100 %	100 %	100 %

Prd. = production type, Con. = conservation type, Pro. = protection type, Rel. = religious type.

Table 7. Benefits sharing systems of CFs in Magway region

Items	Kantharlay Prd. (collective ownership)	Aungmyaykone Con. (collective ownership)	Ngalaingsan Con. (collective ownership)	Padaukngoke Prd. (collective ownership)
Forest Conservation Activities	25 % (tentative)	25 %	-	-
Community Development Activities	25 % (tentative)	25 %	-	-
Revolving Fund	-	-	10 %	10 %
CF Committee	-	-	-	-
CF Members	50 % (tentative)	50 %	90 % (+ forest conservation)	90 % (+ forest conservation)
Saving Money	-	-	-	-
Miscellaneous Things	-	-	-	-
Total	100 %	100 %	100 %	100 %

Prd. = production type, Con. = conservation type, Pro. = protection type, Rel. = religious type.

Table 8. Benefits sharing systems of CFs in Shan state

Items	Minethout Con. (collective ownership)	Lwentyeint Con. (collective ownership)	Lwekhaung Prd. (collective ownership)	Alaechaung Prd. (collective ownership)	Yagyi Con. (collective ownership)
Forest Conservation Activities	50 %	30 %	20 %	20 %	25 %
Community Development Activities	-	-	40 %	-	25 %
Revolving Fund	-	-	-	-	25 %
CF Committee					
CF Members	50 % (+community development)	50 %	40 %	80 %	25 %
Saving Money	-		-	-	
Miscellaneous Things	-	20 % (+ community development)	-	-	-
Total	100 %	100 %	100 %	100 %	100 %

Prd. = production type, Con. = conservation type, Pro. = protection type, Rel. = religious type.

Table 9. Benefits sharing systems of CFs in Ayeyarwaddy region

Items	Wakone Prd. (Individual ownership)	Kywete Prd. (Individual ownership)	2-Bawathin Prd. (Individual/ collective ownership)	Phoebakone Prd. (Individual ownership)	Shwepyithar Prd. (Individual ownership)	Mingalar- yaekyaw Con. (Individual ownership)
Forest Conservation Activities	35 %	30 %	-	25 %	All activities (100%)	All activities (100%)
Community Development Activities	-	20 %	-	25 %		
Revolving Fund	-	40 %	10 %	-		
CF Committee	10 %	10 %	-	-		
CF Members	40 %		90 %	50 %		
Saving Money	10 %		-	-		
Miscellaneous Things	5 %					
Total	100 %	100 %	100 %	100 %	100 %	100 %

Prd. = production type, Con. = conservation type, Pro. = protection type, Rel. = religious type.

6. Possible benefit sharing mechanism of REDD+ in Myanmar

UN-REDD Programme identified seven principles of benefit distribution system or IAS and also provided the possible ways of solutions to address these principles as shown in Box 4. Benefit distribution system or IAS can be designed based on prevailing policies, legislations and procedures, traditions, customs and cultures. Benefits could also be cash or non-cash or both for communities.

Equitable benefit sharing can overcome the challenges associated with implementing REDD+ and CF activities (Rana 2016; Neupane & Shrestha 2012). The case studies support the above mentioned statement. And the studies highlighted that input based benefit sharing system is suitable for community based forest management. Therefore input based benefit sharing system should be used in REDD+ readiness phases because the benefits are distributed up front to affected communities who can provide enabling conditions for implementation of REDD+ practices.

Based on the findings of case studies and review on REDD+ activities, we also would like to suggest that it had better to share the benefits obtained from the implementation of REDD+ activities by local people involvement as 20% of total benefit for forest conservation, 20 % for community development, 55 % for community members, and 5 % for revolving fund. But care should be taken into consideration that one common benefit sharing system, alone, could not fit all types. It is better to set or adjust the benefit sharing systems based on different objectives or types of work. **The most important fact is that REDD+ is a results-based payment at the National level and there is no mechanism to share benefits for project level and sub-national level.**

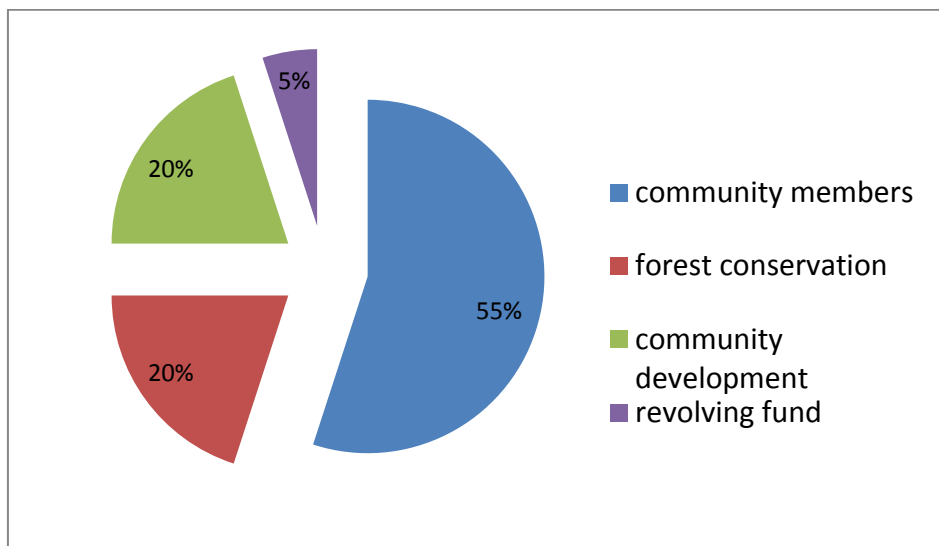


Figure 4. Possible benefit sharing mechanism of REDD+ in Myanmar

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