

RAPID ASSESSMENT OF OPTIONS FOR INDEPENDENT SUSTAINABILITY CERTIFICATION FOR COMMUNITY FORESTRY IN MYANMAR



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Acronyms and abbreviations

CF	Community Forestry
CFMP	Community Forest Management Plan
CFNWG	Community Forestry National Working Group
dbh	Diameter at breast height (1.3m)
DFMP	District Forest Management Plan
EU	European Union
FAO	Food and Agriculture Organisation
FFI	Fauna & Flora international
FLEGT	Forest Law Enforcement Governance and Trade
FSC	Forest Stewardship Council
FUG	Forest User Group
ILO	International Labor Organisation
IUCN	World Conservation Union
MAI	Mean Annual Increment
MC	CF Management Committee
MFCS	Myanmar Forest Certification Scheme
MOECF	Ministry of Environmental Conservation and Forestry
MTE	Myanmar Timber Enterprise
MTLAS	Myanmar Timber Legality Assurance System
MTMA	Myanmar Timber Merchants Association
NTFP	Non-timber Forest Product
PCT	Potential Crop Tree
RIL	Reduced Impact Logging
SFM	Sustainable Forest Management
SLRD	Settlement and Land Records Department
TNR	Tanintharyi Nature Reserve

1. Summary

We here examine several options for independent certification of community forests with a view to legal timber harvest.

A number of certification standards and types have been developed world-wide, with the Programme for the Endorsement of Forest Certification (PEFC; www.pefc.org) and the Forest Stewardship Council (FSC; info.fsc.org) being the most widely recognised standards for Sustainable Forest Management (SFM) and Chain of Custody (CoC) certification.

This report considers the suitability of both systems in the context of nationally recognised community forest management in Myanmar, through the conduct of a rapid field assessment of the constraints and opportunities in two forest user group networks in Tanintharyi region and Kachin State.

Certification concepts and our initial findings were presented in a roundtable meeting in Yangon in August hosted jointly with EcoDev and the Myanmar Timber Merchants Association, and attended by RECOFTC, Myanmar Forest Certification Committee, IUCN and other stakeholders. The presentations are reproduced in **Annex 1 and 2**.

Our rapid field evaluation shows that, in the case study sites, an external review by an accredited timber certifier – either Forest Stewardship Council or the Programme for the Endorsement of Forest Certification – would currently cost more than the benefits it will bring to the smallholders. The main constraints are that; a) managed areas are currently too small (< 10,000 ha), even within relatively large forest user networks, and, b) the products and volumes produced are also likely to be small, and currently only for subsistence use or a local market. Our assessment does not however rule out the possibility that certification may be economically viable for other CF managers, or for the surveyed forest user groups at some point in the future.

Despite these constraints, international certification standards nonetheless provide a well tested tool for monitoring and improving forest management and as such can serve as a guide for achieving sustainable forest management. Following these standards can provide participants and regulators with the assurance that community forest management will provide a sustainable and optimal yield. They also offer to help address the lack of management, monitoring or harvesting guidelines for CF in Myanmar.

We compare FSC standards with the current FFI technical concept for CF in order to assess the feasibility of a pilot (Annex 3). We conclude that an external (third party) evaluation in the form of a certification simulation would allow us to show impartially that the model would be sustainable against international standards. We believe such an evaluation would make a valuable contribution to the development of CF in Myanmar and towards the development of the Myanmar timber legality assurance system.

2. Legal status of CF timber

As part of the current FAO-EU FLEGT Project we conducted a desk review of the policy constraints facing commercialisation of CF timber in early 2014 (MCD Report 37). Findings were clarified during a initial project workshop (MCDP Report 28), and indicated that although there were a number of constraints facing implementation of commercial harvest from CF plantation, these were largely procedural rather than legal, eg, due to a lack of management guidelines and shortcomings in the CF planning cycle.

However, it remained far from clear to what extent commercial harvest from natural forest would be legal under the existing framework, and we hereby provide our own preliminary legal opinion on that question.

One major problem facing legal commercial CF timber is that the Forest Law (1992) does not recognize Community Forestry, which is only defined under a departmental instruction (from the Forest Department). So there is currently no full national legal basis for the Community Forestry Instruction.

Also, although CF is targeted at 2.27 million acres by 2030 in the thirty years Forestry Master Plan, there is no requirement or mechanism for this target to be operationalised, eg, through the annual plans of the Forest Department.

It is also our understanding that the current provision in the Forest Law stating that a "standing teak tree wherever situated in the State is owned by the State" will be removed, and the list of 'reserved tree species shortened to allow private ownership of other commercial species. MOECF is already distributing teak seedlings to farmers to grow as their own, so in practice this provision is open to interpretation.

The existing **Forest Law (1992)** does recognize 'commercial reserved forest', and 'local supply reserved forest', both of which would be considered natural forest. One question therefore is whether commercial Community Forestry can take place in areas zoned as 'commercial reserved forest'.

It could be argued that **Article 17 and 18(c) in Chapter VI** of the Forest Law (1992) would permit this. The former allows for commercial extraction with a permit, and the latter allows for extraction without using the competitive bidding system for "minor forest produce". **Article 20** gives the Director General of the Forest Department a lot of leeway in how to define 'minor forest produce' and other matters in this regard. We would argue that the low annual timber harvesting volumes likely under (certified) sustainable community forestry could fairly be described as such.

The **Community Forest Instruction (1995)** allows Forest User Groups to gain lease and user rights over 'Reserve Forest, Public Protected Forest, Unclassified Forest and land at the disposal of the State', thus including both natural forest and degraded forest lands. **Article 2** of the instruction defines Community Forestry as 'Forestry operations in which the local community itself is involved' and clearly allows for that to be on a commercial basis.

Article 5 states that Community Forestry will be permitted to be established in 'Natural forests which *for various reasons* should be managed by the local

community.’ (emphasis added). The big question is how to interpret the phrase ‘for various reasons’, but it would appear to leave plenty of scope for the Forest Department to allow sustainable certified commercial production in support of local livelihoods.

There is nothing in the **Article 19** prohibitions on allowable activities for Forest User Group members that we would interpret to prohibit commercial production in natural forest areas, and under ‘Exploitation of Forest Products from the Community Forest’, **Articles 20 & 21** clearly allow marketing of surplus products that can’t be used within the community.

Furthermore, **Article 27** allows (excess) income generated from forest use to be used for establishment of business enterprises that produce value added products, indicating a general intention to encourage forest based businesses. Lastly, **Article 29** also argues for commercial use, since it states that the community can freely sell the products of the Community Forest at market prices.

Overall, a CF certificate grants 30 year user rights to communities for state forest land, and these are already included in District Forest Management Plans. Thus if commercial timber extraction from the CF were considered to be allowed, then it should automatically be included in these plans, further strengthening the legal position.

Thus a very quick review of the Forestry Law (1992) and the Community Forestry Instruction (1995) suggests ample scope for commercial timber extraction from both plantation and natural forest components of certified Community Forests.

This will hopefully be strengthened through current revisions to the Forest Law and CF Instruction, which seek at least to give the instruction full legal force and potentially elevate it to a ‘Rule’, and to strengthen the commercial focus. Based on our assessment to date, we would strongly argue that harvest from natural forest on a commercial basis also be allowed, with the caveat that regulations are needed to define under what circumstances this be allowed.

Procedurally a bigger potential sticking point may be that all management operations are required to be included within the 30-year CF management plan, which is the main document used to judge a CF application. This means that for existing CF the Forest Department would have had to interpret commercial timber use as a valid management activity when the application was made, which seems unlikely.

The current CF Instruction does not mention how amendments or modifications may be made to the management plan. Thus a change in policy orientation towards commercial production would be difficult to accommodate within existing certified CF, and limits options for *any* FUG to change management focus or indeed expand the area under management. For these reasons we would thus advocate for an amendment clause to be included within the revised Instruction.

Lastly, legal questions aside there are currently no national statistics to test whether commercial production or extraction from natural forest is a management objective or ambition of any current Forest User Group. We do however attempt to answer this

and related questions through the conduct of extensive field interview surveys currently underway under this FAO-EU FLEGT Project, the results of which will be shared in due course (Wode et al *in prep.*).

3. PEFC certification background (Source: www.pefc.org)

The Programme for the Endorsement of Forest Certification (PEFC) is an international non-profit, non-governmental organization dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification.

PEFC works throughout the entire forest supply chain to promote good practice in the forest and to ensure that timber and non-timber forest products are produced with respect for the highest ecological, social and ethical standards. Thanks to its eco-label, customers and consumers are able to identify products from sustainably managed forests.

PEFC is an umbrella organization. It works by endorsing national forest certification systems developed through multi-stakeholder processes and tailored to local priorities and conditions.

With over 30 endorsed national certification systems and more than 250 million hectares of certified forests, PEFC is the world's largest forest certification system.

Each national forest certification system undergoes rigorous third-party assessment against PEFC's unique Sustainability Benchmarks to ensure consistency with international requirements.

These Benchmarks have been developed based on internationally-recognized, ongoing and long-term, intergovernmental processes and guidelines for the promotion of SFM to ensure compliance with globally agreed requirements.

The Benchmark criteria are regularly revised through multi-stakeholder processes involving participants drawn globally from civil society, business, governments, labour and research institutions to take account of new scientific knowledge, societal change, evolving expectations and to incorporate latest best practice.

Today, PEFC includes 38 national certification systems among its membership, which is also open to international stakeholders such as civil society organizations, businesses, government entities and intergovernmental bodies.

Organisation and Governance

To promote the widest possible participation, PEFC adopts a "bottom-up" approach to governance. It builds on national members whose local expertise is complemented by the experiences of internationally-active organizations.

There are two categories of membership with voting rights:

- National members (or "National Governing Bodies") are independent, national organizations established to develop and implement a PEFC system within their country.

- International Stakeholder members are international entities including NGOs, companies, and associations committed to supporting PEFC's principles.

This unique structure allows for ethical and responsible decision-making that incorporates the combined experiences and knowledge of all stakeholders at national and international levels and highlights its commitment to participation, democracy and equity as critical and central elements in the governance of the organization.

PEFC has three decision-making bodies:

- The General Assembly is the highest authority of PEFC. It includes both national members and international stakeholder members with voting rights, and extraordinary members as observers.
- The Board of Directors supports the work of the General Assembly and the organization as a whole. It is accountable to all members. Board members are elected by the General Assembly. Board members are chosen to ensure a balance between the major stakeholders supporting PEFC, the geographical distribution of members, annual cutting categories, and gender.
- The Secretary General is responsible for the work of the PEFC Secretariat in Geneva, Switzerland. He is supported by a highly dedicated team of eleven professionals.

PEFC unique selling proposition

- Requires compliance with all fundamental ILO Conventions in forest management since 2001, setting new benchmarks for social issues.
- Is tailored to the specific needs of family and community-owned forests, with lasting contributions to livelihoods and rural development.
- Offers well-established processes for group certification, providing access to certification and the marketplace for certified products from locally controlled forestry.
- Sets the highest standards for forest certification aligned with the majority of the world's governments, including:
 - *Maintaining or enhancing biodiversity*
 - *Protecting ecologically important forest area*
 - *Prohibition of forest conversions; exclusion of certification of plantations established by conversions*
 - *Prohibition of the most hazardous chemicals and GMOs*
 - *Protecting workers' rights and welfare, and encouraging local employment*
 - *Recognizing the principle of free, prior and informed consent (FPIC), the UN Declaration on Indigenous Peoples' Rights, and ILO Convention 169 on Indigenous and Tribal Peoples*
 - *Respect for property and land tenure rights as well as customary and traditional rights*

- *Provisions for consultation with local people and stakeholders*
- *Abiding by applicable laws*
- *Safeguarding the basic rights of workers*
- Requires companies to demonstrate compliance with social, health and safety requirements in Chain of Custody certification.

Level of Stakeholder Engagement equally high for all Standards

- Strictly separates standard-setting, certification and accreditation to ensure complete independence and impartiality.
- Requires all national standards to be independently developed with the open participation of all interested parties.
- Recognizes the importance of the nine major groups as defined by Agenda 21 (CSD Major Groups).
- Requires that all standards undergo public consultation at national and international level and third-party assessment.
- Demands and implements regular revisions of national certification systems.

Builds on Intergovernmental Agreements & Globally Recognized Processes

- Builds its understanding of sustainable forest management on broad societal consensus expressed in international and intergovernmental processes.
- Supports the implementation of governmental agreements through a voluntary, market-based mechanism.
- Follows globally accepted ISO Guidelines for certification and accreditation.

Requirements and Criteria

PEFC uses the definition of sustainable forest management (SFM) initially developed by Forest Europe in 1993 and subsequently adopted by the Food and Agriculture Organization (FAO) of the United Nations:

"The stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems."

Although many forests may be sustainably managed, the best independent proof of this is through impartial and credible third-party accredited certification. PEFC promotes this independent certification and provides assurance mechanisms to demonstrate to consumers that the wood used in their products comes from sustainably managed forests.

Unique in the world of forest certification, PEFC's forest management requirements are based on broad societal consensus expressed in globally recognized

intergovernmental, multi-stakeholder processes and guidelines involving thousands of interested parties.

These are ongoing processes supported by 149 governments in the world and covering 85% of the world's forest area which reflect and will continue to reflect global society's understanding of SFM.

PEFC supplements the principles, criteria and indicators derived from these international processes with additional requirements, developed through multi-stakeholder processes to make them operational as performance measures in the forest.

In line with its roots in small and family forestry, and its values of rural development and as the certification system of choice for small-forest owners, PEFC was the first global system to require compliance with all fundamental ILO conventions as early as 2001, setting new benchmarks for social issues, especially in rural social settings.

Obtaining PEFC Sustainable Forest Management certification demonstrates that management practices meet requirements for best practice in sustainable forest management, including:

- **Biodiversity** of forest ecosystems is maintained or enhanced
- The range of **ecosystem services** that forests provide is sustained
 - they provide food, fibre, biomass and wood
 - they are a key part of the water cycle, act as sinks capturing and storing carbon, and prevent soil erosion
 - they provide habitats and shelter for people and wildlife; and
 - they offer spiritual and recreational benefits
- Chemicals are substituted by **natural alternatives** or their use is minimized
- **Workers' rights** and welfare are protected
- **Local employment** is encouraged
- **Indigenous peoples' rights** are respected
- Operations are undertaken within the **legal framework** and following best practices

These requirements are part of the PEFC Sustainability Benchmark, a set of over 300 criteria that form the basis against which national certification systems are assessed during PEFC endorsement.

National systems are required to meet or exceed all criteria.

Smallholder focus

As the world's largest forest certification system, PEFC remains the certification system of choice for small, non-industrial private forests, with hundreds of thousands of family forest owners certified to comply with our internationally recognized Sustainability Benchmark.

With alternative forest certification systems available, there are good reasons why so many people are opting for PEFC, which remains the only entirely not-for-profit global certification system.

PEFC is the certification system of choice for small forest owners including family- and community-owned forests.

Some 25% of the world's forests are managed by 2 billion families and community members, with 40% of forests in the North owned by 30 million families and 25% of forests in the South owned or managed by communities.

Through innovative mechanisms for group and regional certification, PEFC supports small land owners to gain recognition in the market place thereby making a lasting contribution to livelihoods and rural development.

To date, several hundred-thousand family- and community-owned forests have acquired PEFC certification.

Approaches to Certification

PEFC Sustainable Forestry and Chain of Custody certification are ideally suited to the needs of small family and community-owned and managed forests.

PEFC has paid special attention to their needs and their specific cost and operating structures to make forest certification accessible to all. In order to best respond to cost challenges, PEFC has implemented a series of certification mechanisms, such as Individual, Group and Regional Certification.

a. Individual Certification

Under Individual certification, a forest owner applies for certification directly with the certification body for all the forest area under his ownership or management within a country.

b. Group Certification

Group Forest Management Certification (PEFC ST 1002:2010) defines the general requirements for forest certification schemes which include group forest management certification and allow the certification of a number of forest owners/managers under one certificate.

Group certification allows multiple forest owners to become certified as a Group and share the financial costs arising from obtaining certification.

Given that fragmented forest ownership is the predominant model in many countries both in the developing and the developed world, Group Certification has proven to be the most effective option for small family- and community-owned forests to obtain certification and gain access to global timber markets, especially those requiring both wood and non-wood forest products from certified sources.

Without group certification, small forest holdings would be faced with significant barriers to certification, including:

- limited financial income of small forest owners

- periodicity of their management activities and revenues
- limited access to information and knowledge.

Under the system of Group Certification, a group entity represents the individual forest owners, with the overall responsibility for ensuring conformity of forest management in the certified area with the PEFC requirements.

Individual forest owners who join the group on a voluntary basis are in turn required to comply with all requirements, provide full cooperation and assistance in the implementation of forest certification, and are obliged to implement relevant corrective and preventive actions established by the group entity.

In the case of Myanmar this could be FUG networks or forest associations.

Costs of certification

With 25% percent of the world's forests owned by families and communities, the cost of certification is a major obstacle to expanding forest certification to the more than 90% of forest area currently uncertified globally.

Certification costs include both direct and indirect costs. They fall into the following categories:

- costs of preparatory activities (information, training, revision of documentation)
- costs of changes in forest management (increased number or retention trees, larger buffer zones, etc.)
- costs of internal audits and other additional controls
- costs of external audits and issuance of a certificate

PEFC has developed robust mechanisms to ensure the participation and inclusion of family and community owned forests in forest certification.

PEFC has paid special attention to the needs of small forest holdings and their specific cost and operating structures to ensure that forest certification is accessible to all by establishing the concept of group certification, a concept now replicated by certification organizations in other sectors globally.

4. FSC certification background (info.fsc.org)

Certification for forest management has only been existing since the beginning of the '90s. At that time, the general public had become aware that, through their consumption of wood products, they contribute to forest depletion. Therefore more and more people started to demand products that came from well-managed forests.

The slow progress made by the different intergovernmental processes to halt forest destruction, made a group of timber users, traders, and representatives of environmental and human-rights organisations decide to bundle their efforts and interests to improving forest conservation. They confirmed the need for a credible system for identifying well managed forests as acceptable sources of forest products. This resulted in the founding of Forest Stewardship Council (FSC) in 1993 and in

1994 a definitive set of principles and criteria for forest management were approved by the membership.

For the first time, the 3 necessary elements for certification; accreditation, evaluation system and a standard were turned into an operational system. The standard specifies the requirements for forest management, or in other words what the forest manager has to do. The evaluation system defines how the evaluation has to be carried out and how the results of the standard evaluation have to be interpreted to decide whether the forest passed or failed the test. The evaluation is carried out by the certifier. The highest level is accreditation where the rules and procedures by which the certifier is bound are being determined. This turned certification into a tool to effectively determine the sustainability of forest management, including environmental, social and economic aspects.

Nowadays it is widely accepted that the main characteristics of a certification scheme are that it is voluntary, independent or third party, technically consistent and non discriminatory.

The main incentive and the driving force behind forest certification is the use of a label that gives certified forest owners a **competitive advantage** in high priced international markets especially in North America and Western Europe. Here the demand for certified timber is higher than the supply and this results in higher prices and/or better contract conditions.

However, there are other benefits that can be as attractive, such as image building, **access to public or private financing**, and an **internal project monitoring** possibility. It is therefore important to distinguish between internal and external review. An internal review is a review against a standard carried out by the forest manager or project, their client or their financing agency. An external review is carried out by an independent specialised organisation (the commercial model).

To make an external review or commercial certification cost effective, it is accepted that the scope of the certificate is at least 10,000 ha. Of course, this depends upon the value of the species produced and the productivity of the forest, but it gives an initial ballpark figure.

Box 1: Five main steps towards a full-fledged FSC certification

(Note: The same steps apply to forest management or chain of custody certification)

1. Contact certification body

Contact FSC accredited certification bodies to obtain a first estimate of cost and time needed.

The certification body will need some basic information about your operation. They provide information on requirements for FSC certification.

2. Choose certification body

Decide which certification body (eg, company) to work with and sign agreement.

3. Certification assessment

Audit at the field site to assess your operation's qualifications for certification

4. Certification report

Data is collected is compiled into the audit report on which the certification body makes the decision to certify.

5. Certification decision

If certification decision is positive, FSC certificate is granted. If the audit revealed that operation is not yet in full compliance with FSC requirements, then evidence for implementation of corrective action is requested prior to granting a full certificate.

An internal review helps the forest user to assess their current situation and to determine what still needs to be done to achieve sustainable forest management. It serves as a 'shopping list' with activities to be ticked off when it has been done. An internal review based on an internationally recognised standard allows the FUG to prepare for a commercial certification in the future. As such the internal review serves as a tool to improve and monitor forest management and to determine the sustainability of a project design and approach.

the fact to be able to say that FUGs are certifiable and therefore sustainable, is expected to have a huge impact on the replicability and acceptance of the project model even at national level.

In many cases where production aims at **self-sufficiency** or local markets or where no significant volumes are to be expected in the near future, one can save the cost of an external review while at the same time receive the assurance that one is **eligible for certification** if wished

SLIMF certification

SLIMF refers to "Small and Low-Intensity Managed Forest" and is specifically designed as a system for smallholder forest management.

The Forest Stewardship Council (FSC) defines a smallholder in terms of forest area or annual timber harvest volume.

SLIMF certification aims at reducing audit costs, both at initial certification assessment and annual monitoring, especially in years where no harvest has been conducted (desk-based audits).

FSC eligibility guidelines define if a forest is eligible or not. Under these guidelines an eligible forest has to comply with at least one of the following two main criteria:

- (I.) An area **of less than 100 hectares** (however, National Offices can apply to increase this maximum to 1000 hectares but is not available for Myanmar).

or

- (II.) The harvest rate is **less than 20% of the Mean Annual Increment (MAI)**, and the annual harvest is no more than 5000 m³, or the forest is **exclusively managed for non-timber forest products**.

Harvest amounts are to be verified by harvest reports and surveillance audits.

Smallholders can consider joining a group scheme rather than undertaking certification as a single entity. Certification within a group scheme has the potential to lower costs and certification requirements.

FSC Group certification

Small and community producers that qualify as small in area or low-intensity in terms of harvest can form a SLIMF certified FSC group.

The group network will have the following responsibilities:

- Apply for group certification with a certification body
- Act as contact point for the certification body

Box 2: Background to Tanintharyi Nature Reserve (TNR)

Established: 30th March 2005

Area: 420,076.8 acre (~1,700 square kilometer)

Core Zone 377,600 acre

Village Use Zone 51,853 acre

Integrated Buffer Zone 9,956 acre

Transportation Corridor 1,460 acre

Location:

East: Thailand

West: Dawei River

South: Dawei Township, Myitta Sub Township, Myaykhanbaw village tract

Ye Phyu Township, Kalonehta village tract

North: Yay Township

- Inform the group about their responsibilities
- Make sure that all group members are meeting the FSC forest management requirements
- Monitor all of the group members and organize internal auditing
- Keep records of e.g. lists of group members, forest areas and results of the internal audits

Group certification requires an *entity* to be the contact person and ‘manager’ of the group, and that it is a juridical person or a legal entity. So the group may need to be registered as, eg, an association or small business.

5. Options for FSC certification in Tanintharyi Region

We assessed options to engage local Forest User Groups inside the buffer zone of the Tanintharyi Nature Reserve (TNR) to engage in a forest certification scheme under FSC standards. Summary information on the reserve is presented in Box 2.

Following discussion with the reserve management and FUGs, forest management was agreed to aim to (i) contribute to a restoration of allocated natural forest resources, (ii) to increase the overall natural habitat of the nature reserve, while (iii) at the same time provide increased benefits from subsistence and commercial timber sale for local communities.

Table 1. Established CF Areas for Tanintharyi Division

No.	Forest user group	District	Township	No. of households	Status	Area (Acre)	Area (ha)
1	Michaunglaung	Dawei	YaePhyu	76	Certified	3332	1348,4
2	Zinba (1)	Dawei	YaePhyu	62	Certified	2167	877,0
3	Zinba (2)	Dawei	YaePhyu	30	Certified	878	355,3
4	Yebone	Dawei	YaePhyu	56	Certified	936	378,8
5	Tharyarmon	Dawei	YaePhyu	54	Certified	1052	425,7
6	Kyaukshut	Dawei	YaePhyu	87	Certified	2,167	876,8
7	Zinba (3)	Dawei	YaePhyu	47	Certified	1766	714,7
8	Thetkelkwet	Dawei	YaePhyu	36	Certified	2923	1182,9

Source: Tanintharyi Nature Reserve

As a positive effort at inclusive, sustainable forest management with a potential to engage local communities into improved natural resource management, certification of CF within the reserve village and buffer zones fits well with the management objectives of the reserve (Box 3).

Nature Reserve Zonation outcomes are illustrated in Fig. 1, clearly indicating along the western side of the protected areas the zone for an engagement of local communities under CF.

CF groups and certification options

Eight CF groups have been established in the TNR buffer area since 2007 (Table 1). Given these characteristics, the current CF sites in Dawei district would clearly exceed by up to ten times the area limitation under a **SLMF** certification scheme.

As a consequence, eligibility will ultimately depend on the actual harvest amount to be extracted from the forest resources. Thus, clear management regulations and a sound assessment of available timber resources are required to evaluate the potential under SLIMF certification.

On the other hand even if combined under a single certificate, the area would be too small to generate sufficient economic return for an economically viable operation under regular audit costs for a main FSC certification.

We therefore assess that the most feasible option is to apply a technically sound forest inventory-based monitoring system and to carefully regulate off-take levels in strict compliance with standards for low-intensity managed forests.

Box 3: Selected components of TNR management strategy*Vision*

Contribution to the sustainable livelihood of local communities through an involvement in conservation works.

Management objectives

Effectively engage local communities in management planning and implementation of conservation activities in the Village Use Zone of the Tanintharyi Nature Reserve.

Management principles

Involve local people in management of the TNR, respect and protect traditional, cultural, ecologically sustainable lifestyle, consistent with the overall management objectives for the Reserve. Communication with local people in the vicinity of the TNR Project is an integral part of the Project. Relevant activities will be restricted to extension workers and villagers who are recruited from the communities concerned and trained by the Project on the job, and other government personnel.

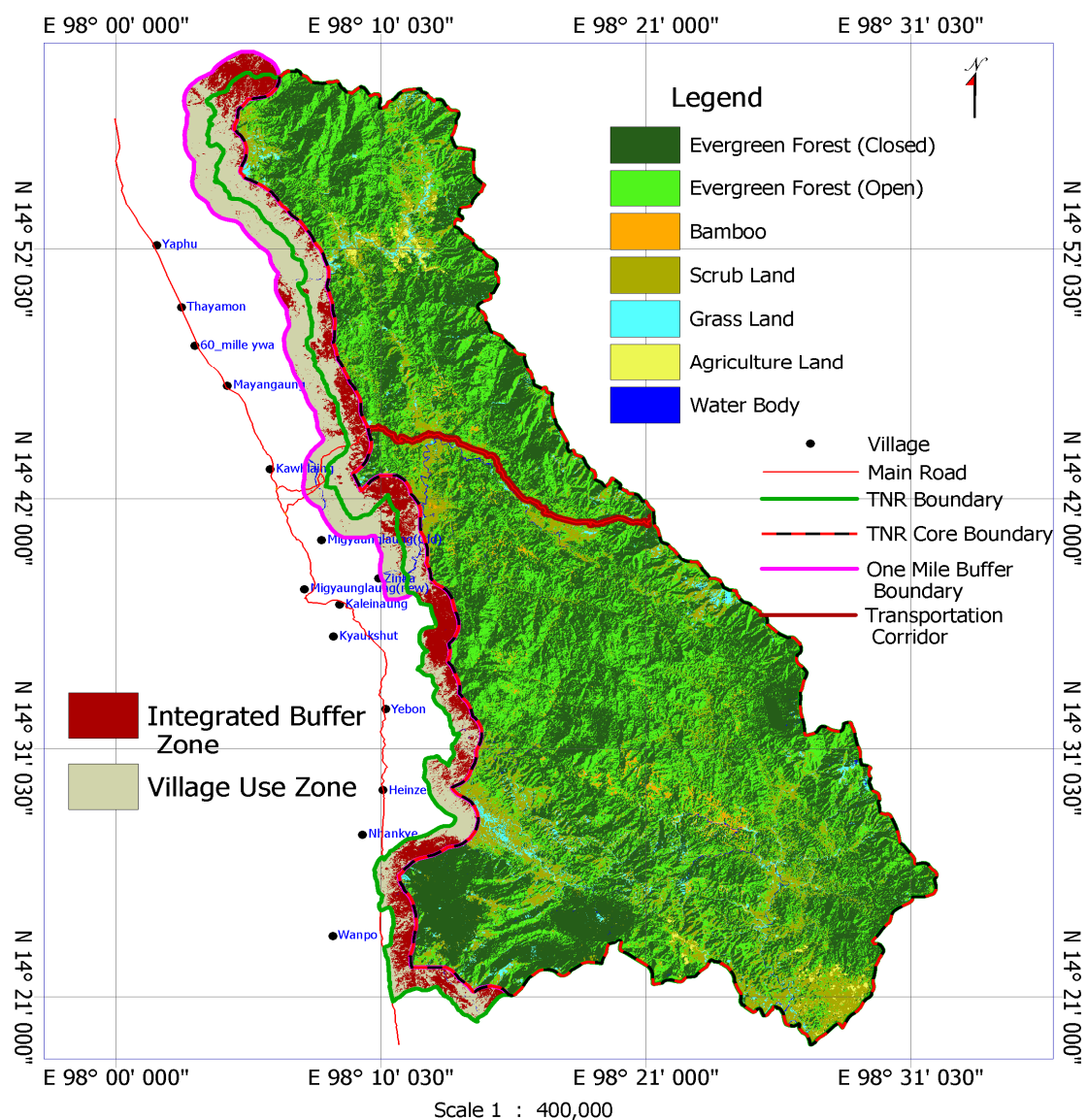


Fig. 1: Integrated buffer zone and village use zone map of TNR

6. Options for FSC group certification in Kachin state

FFI has been supporting CF in Mohnyin township in Kachin state since 2011 and has helped establish over 20 Forest User Groups, who have formed themselves into two support networks. This allows a group of forest owners to join together under a single FSC certificate organized by a group manager, as stated above.

In the case of FFI-supported FUGs, the Mohnyin networks would seem to be suitable candidates for FSC rules, and we tested the idea through consultations with the larger of the groups in August 2014.

Within the assessed site, eight FUGs are managing roughly 15,000 acres (6000 ha) with a total of 467 households registered. In order to keep managerial efforts for each group to a feasible level and to ensure an effective cooperation among each group member, it would be best to split up the total area among 3 FSC groups with an average area of 5,000 acre and 150 members.

Three FSC groups would provide increased lessons learnt under any pilot certification and capacity building interventions. Furthermore, reflection meetings among the three groups will stipulate learning from experiences and might even spark a positive competition for the best performance.

Simple monitoring procedures

Reflecting on the fact that a sustainable harvest rate would be a compulsory criteria for SLIMF certification of FUGs in Tanintharyi, a special focus has to be placed on the set-up and operation of a reliable and robust monitoring system. The monitoring system has to be operated and understood by the Management Committee of each Forest User Group, and be relevant for management decision.

The main forest characteristics to be obtained will comprise at a minimum; standing timber volume, species composition and, through repeated inventory cycles, mean annual increment rates. This will ultimately provide a good understanding of productivity, yield and dynamics of the forest, in particular growth and yield regeneration rates of target species, and the impact of applied forest management.

Monitoring needs to show that in practice, the forest is growing and regenerating and that harvesting levels are sustainable. If commercial NTFP harvest is conducted (e.g. extracting resin, collecting bark, seed, leaves etc.) harvest practices also need to be agreed, described and enforced, and monitored to ensure that the resource base is not depleted.

A simple inventory method is an essential tool for monitoring and the project has tested a technical standard with FUGs in both the Tanintharyi and Mohnyin FUG networks. This is described in more detail in Working Paper 03 (Wode 2014).

Biodiversity conservation measures

International standards require that rare species and areas considered to be of 'High Conservation Value' be identified within the community forest. Special protection and management measures are then required to ensure these values are maintained and monitored.

All conservation efforts are to be documented in form of a management plan against which monitoring can be conducted. (This requirement is currently lacking in the CF Instruction, and the impact of CF on biodiversity in Myanmar is likewise unknown.)

Monitoring should reveal whether planned actions as stated in the plan do really have the intended impact in the field (increased rare species or protected wildlife).

Monitoring of wildlife can be conducted based on indirect indicators such as habitat quality (eg, availability of food sources), breeding areas, nests, droppings, foot prints etc. rather than sightings of the animal itself. But effort is needed to collect and analyze these data, and a certification pilot would be needed to gauge what costs would be involved and what capacity exists in interested communities to undertake basic conservation monitoring.

Environmental and social Impacts also need to be identified, managed and monitored, including potential negative impacts from any activity associated with the forest management, such as road building, harvesting, collecting forest products, or livestock grazing in the forest.

Other examples of management-focused conservation monitoring subjects include; drinking water quality, changes in availability of fruits, seed or animals normally collected in the forest, and; hunting levels and impact.

Regular meetings should be held to discuss the impacts of the forest use and management. At such meetings the results of any monitoring activities should be presented and discussed. These meetings can also be used to develop or modify community-level decisions about norms for access and use of the forest.

Internal audit simulation

Under the current circumstances, costs for a full-fledged external audit against FSC or any other standard most likely outweigh the likely benefits from being able to access markets for certified products in the assessed FUG network. Most likely this is the case for much of Myanmar's CF at present.

However, to provide assurance to the Forest Department, government, lawmakers, donors etc that community forest management can be both productive and sustainable, a simulation of a certification assessment would seem to be a valuable input into the policy dialogue.

If carried out by external assessors, a positive evaluation will provide credibility to any particular CF model, and allow the Forest Department to prove that the objectives of the CF Instruction can really be met. An additional advantage for Myanmar would be that such a pilot would show that sustainable management of natural resources by local communities is feasible and as such pave the way for further land and natural resource allocations.

This project concept will be presented to stakeholders in more detail before the end of the current FAO-EU FLEGT project as a potential Phase Two to test regulatory and technical concepts developed during Phase One.

7. Conclusion

National efforts towards improved forest management and trade have resulted in a **Myanmar Timber Legality Assurance System (TLAS)**, the current draft of which is from 2013. This is intended to meet the requirements of international possible agreements, such as the EU's Forest Law Enforcement Governance and Trade (FLEGT), to prevent illegal logging and the associated trade in illegal timber products.

In general, a TLAS can be designed as a limited scope or nationwide system. Under a limited scope only main export supply chains to the European market would be monitored while other markets would remain unaffected.

In the case of a nationwide TLAS all timber producers have to comply with compulsory criteria and best practises of forest management regardless of whether they produce for international or local markets. Certification of forest management units would become one important monitoring pillar to ensure that forest management complies with internationally accepted standards.

Applying internal reviews would thus ensure that FUGs would be eligible for an internationally recognised sustainability certification, while also testing how CF legality in Myanmar can be defined to a standard compatible with the EU Timber Regulation. This would make a valuable contribution to the development and strengthening of the Myanmar TLAS in line with other reforms in the timber sector and in community forest management. An external review of an FSC or PEFC compliant CF pilot could also provide an unbiased contribution to those processes.

Application of the standards under both FSC and PEFC would undoubtedly help improve the quality of CF in Myanmar, and could even potentially facilitate access to external markets should the Myanmar TLAS allow for that. However our initial assessment of two forest user group networks suggests that a certification under PEFC may be currently more appropriate as it provides a very clear focus on smallholder forest management. PEFC is also oriented to non-profit management, which the Myanmar government may find more in line with their objectives for CF, and indeed PEFC appears to be favoured by regulators (and the private sector) in Myanmar.

The decision on such standards ultimately belongs to the government and forest managers. However, many of the safeguards within the FSC standard would also help improve forest management and sustainability. We thus recommend a hybrid pilot approach that would test components of the FSC standards with a view to developing a FLEGT-compliant timber legality assurance system that was supportive of sustainable and productive community forest management.

Annex 1. Presentations on certification and benefits CF



**FAUNA & FLORA
INTERNATIONAL**

Myanmar Programme

Introduction to forest certification and its applicability for FUG management

CF advisor team
30th August 2014

Innovative conservation since 1903



SFM certificate

Does my product come from well-managed forests?




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Why a global standard?

Today products are made far away - we don't know the carpenter nor forester logging trees in the forest

What is Responsible Forest Management?

Responsible forest management means forests are managed in a way that protects water, soil and wildlife. It means communities, Aboriginal Peoples, forest workers, industry, forest owners try to come to consensus on how the forest will be managed.



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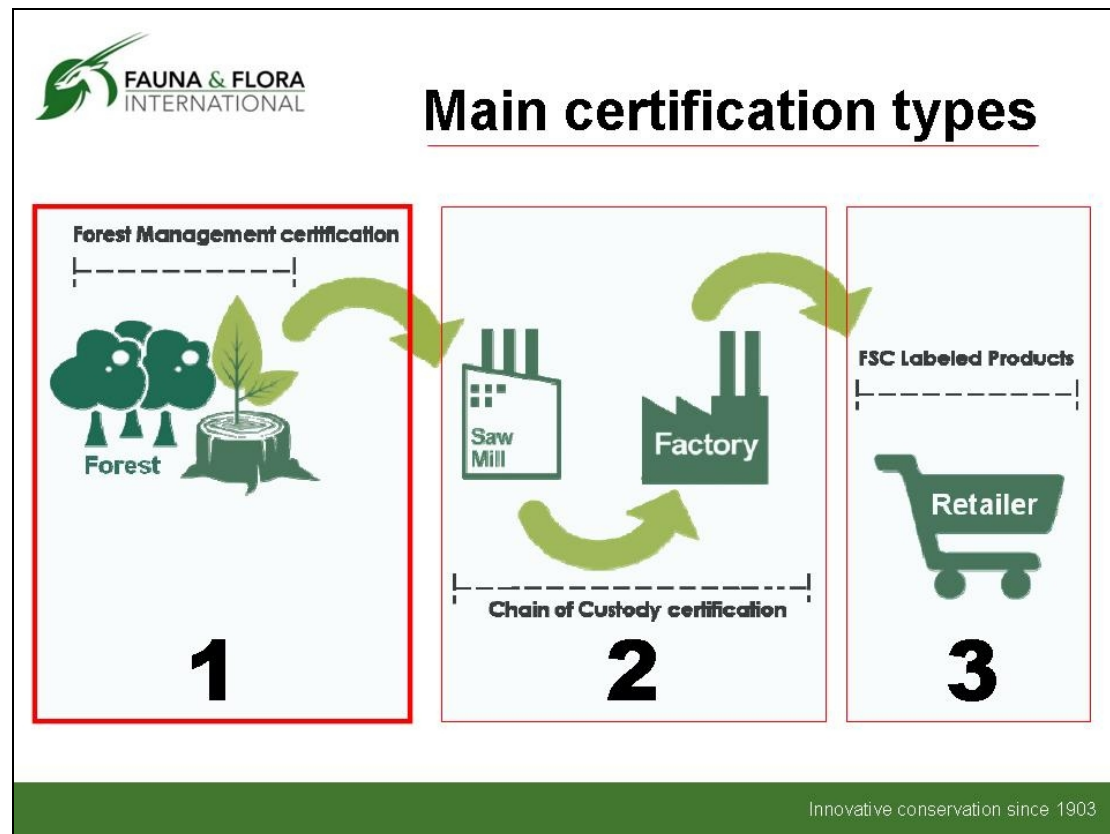
What is certification?

What is certification?

Certification was created to help consumers and businesses identify products from responsibly managed forests. Certification sets standards by which forests are certified, offering credible verification to people who are buying wood and paper products.



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FAUNA & FLORA INTERNATIONAL

Good Forest Management

Ten rules or **Principles** for the whole world:

1. Compliance with laws and FSC Principles
2. Tenure and use rights and responsibilities
3. Indigenous peoples' rights
4. Community relations and worker's rights
5. Benefits from the forest
6. Environmental impact
7. Management Plan
8. Monitoring and assessment
9. Maintain HVC forests
10. Plantations

The cartoon shows a person in a forest, kneeling and talking to a small red fish. A sign in the background says "REPLANTED IN 2001 INDUSTRIAL FOREST CO." The fish says, "THEY PLANT FIVE TREES FOR EVERY ONE THEY CUT, DON'T THEY?" The person replies, "MAYBE, BUT A FOREST IS MORE THAN THE SUM OF ITS TREES."

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Eligible Forest types

Plantation

- Criteria, e.g. no burning, no chemicals, protect natural regeneration



Natural forests

- Criteria, e.g. no clearcut, no exotic species, harvest below increment, harvest based on forest inventory



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Internal (external) Audit

- **External audit**, requires annual external consultants (high costs)
- Requires initial up-front investment (often depend on ODA)
- To be financed by the FUG through increased timber revenues – depend on stable market and productive forest
- Around 10,000 ha minimum economic size
- **Internal audit**, conducted by local staff (Nature reserve, township)
- Low cost but no legal certificate
- Timber legality standard eases approval by authority
- Public relations tool for timber consumers (hotels)
- To evaluate CF at end of CF certificate



Innov



Group certification

- Combine areas under many CF certificates into one group
- Larger wood quantities for annual supply under long-term contracts
- Establish one management board
- Sharply reduced cost for audit
- Sharing management work
- Increased power dealing with administration



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FSC/SLIMF certification

- Small or low intensity managed forests
- Small = < 100 hectares total area
- Low intensity = < 20% of annual timber increment, harvest < 5000 m³/year, only NTFP harvested
- Lower standards, lower costs for smallholders
- No limits regarding group size
- Oil palm not eligible under NTFP



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Certification for Myanmar FUGs

Main option under internal audit

- Most CF forest remains young or degraded - no immediate timber harvest for most FUGs
- Commercial timber harvest under CFI still unclear
- Local timber markets difficult to access by FUGs
- High subsistence demand
- Clear standard eases legal timber harvest permit
- Project internal monitoring



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Annex 2. Presentations on FSC/PEFC certification and benefits CF



Long-term objective



Sustainable utilisation



Thanks for your attention

Innovative conservation since 1903



Myanmar Programme

**Technical proposal and feasibility for
a forest certification under FUG
management**

CF advisor team
30th August 2014

Innovative conservation since 1903



Forest use rights

Principle no. 2: Tenure and use rights and responsibilities



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Forest tenure rights

- Based on customary use rights – no conflicts
- Support indigenous peoples rights
- Legal right to exclude outsiders
- Incentive for safe investment
- Clearly demarcated in the field/ on map
- 105/106 certificate, CF certificate
- 30 year land tenure to support sustainable forest development/plantations

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Planning and reporting

Principle no. 7: Management plan



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Planning and reporting

- Management objectives
- Description of forest resources/ownership
- Challenges and opportunities
- Budget planning
- Sustainable harvest amount
- Submitted to township, integrated into district plans
- Long-term, mid-term, annual operation
- Better access to State/Donor subsidise
- Evaluation at end of plan period

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Monitoring

Principle no. 8: Monitoring and assessment



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Monitoring

- Simple, technical sound, cost effective
- Conducted by FUG with support from township forest officers
- Repeated cycles result in improved management
- Harvest, Growth and yield, REDD+, Project
- Optimise timber harvest for market supply
- Show good management to authorities at end of CF certificate period
- Pre-harvest and post-harvest inventory

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Network/Group management

Forest user group certification



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Network/Group management

- Reduced certification audit costs
- Increased forest area and sustainable supply – better marketing, contracts with larger companies
- Increased power and legal standing working with State authorities
- Specialisation of group members – processing, wood working
- Division of labour under forest protection

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Plantations

Principle no. 10: Plantations



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Plantations contd.

Principle no. 10: Plantations



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Plantations

- Promotion of indigenous species
- Protection of natural regeneration
- Development towards mixed stands
- No site burning, no large clear cut
- Protection of watershed, soil erosion
- Longer production cycles
- In the long-run rehabilitation towards natural forest structures
- Case Vietnam: achieved 20% higher timber revenues

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Ecosystem Protection

Principle no. 9: Maintenance of high conservation value forests



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Ecosystem Protection

- Majority of biodiversity lies outside protected areas
- Remaining natural forest connects protected areas – biodiversity corridor
- Impact on fauna and flora by local communities cannot be managed by State alone
- Utilisation will still be allowed but under clear regulations
- Reduced harvest level, regular monitoring
- Buffer zone management, co-management

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Internal Audit



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Internal Audit

- Participatory audit facilitated by park staff, township forest officer and project staff

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Sustainable Timber harvest

Principle no. 6: Environmental impact



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Sustainable Timber harvest

Reduced Impact Logging

- Training on good harvesting techniques
- Mapping of individual crop trees
- Pre-harvest vine-cutting
- Directional felling, cutting stumps low to the ground, optimal crosscutting based on market demand
- On-site processing
- Minimised road construction - human or animal skidding
- Post-harvest assessment

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Sustainable Timber harvest

Benefits

- Costs 10 – 15% less on average
- Reduces wood waste by more than 60%
- Results in a reduced injury rate among workers
- Less canopy opening – faster recovery
- Reduces soil disturbance
- Assures better survival of residual trees
- Sets the stage for faster recovery

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Processing and trade

Principle no. 5: Benefits from the forest



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Processing and trade

- Added-value on produced timber
- Local processing
- Establishment of woodworking industry
- Strengthen and diversify the local economy
- Share of income to sustain FUG management

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Annex 3. FSC principles and criteria applied against FFI CF concept

The “FFI CF” concept is a biodiversity-friendly CF model that is being piloted in over 30 CF sites in areas of high biodiversity value in Kachin State and Magwe, Ayeyarwady and Tanintharyi Regions. It follows the CF Instruction but applies additional steps following experience from elsewhere in Southeast Asia to ensure environmental, economic and institutional sustainability, and to address some weaknesses in the CF Instruction. The concept is described more fully in FFI technical documents, including a CF Training of Trainers manual (six modules) and MCDP Reports 1, 6, 13, 17, 25 and 29. All are available from Fauna & Flora International Myanmar Programme on request.

1 Principle #1: Compliance with laws and FSC Principles	Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.	
Requirements	Assessment	Comments
1.1 Forest management shall respect all national and local laws and administrative requirements.	All procedures for the establishment of FUGs in strict compliance with CFI and forest law.	Technical guidelines for silvicultural practices currently limited to state-owned Myanmar Timber Enterprise with no reference for smallholders.
1.2 All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.	SLDR land measurement; CF certificate levies are paid. Natural resource post-harvest tax has not yet been applied as CF timber resources are currently too immature for major harvest.	
1.3 In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	No hunting is permitted inside the CF area and adjacent protected areas as regulated in the MC regulations.	
1.4 Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the	Legal procedures for sustainable forest management and commercial timber harvest by FUGs remain	

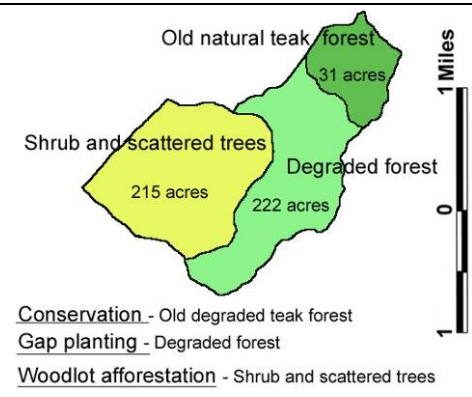
involved or affected parties.	unclear.	
1.5 Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.	FUG protection teams are patrolling in the forest supported by township forest officers.	
1.6 Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.	Long-term management plans for a 30 year period clearly stipulate adherence to SFM principles.	
2 Principle #2: Tenure and use rights and responsibilities	Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.	
Requirements	Assessment	Comments
2.1 Clear evidence of long-term forest use rights to the land (e.g. land title, customary rights, or lease agreements) shall be demonstrated.	105/106 certificate and CF certificate for a 30 year period obtained.	
2.2 Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.	Local communities applied for a legalized land tenure of customary land use rights in all cases.	
2.3 Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.	Land use conflicts between villages have been resolved through inter-village meetings in the case of ILWS.	

3 Principle #3: Indigenous peoples' rights	The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.	
Requirements	Assessment	Comments
3.1 Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.	FUGs are independently operating all silvicultural activities based on their free will.	
3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.	Customary land use rights are forming the basis for CFM establishment.	
3.3 Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.	No specific areas identified by the communities, forests surrounding pagodas are kept outside CF areas.	
3.4 Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.	Indigenous people are at the same time the forest managers, no conflict possible.	
4 Principle #4: Community relations and worker's rights	Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.	
Requirements	Assessment	Comments
4.1 The communities within, or adjacent to, the forest management area should be given opportunities for	FUGs are the target group of project capacity building efforts.	

employment, training, and other services.		
4.2 Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.	Forest management is following standards of Reduced Impact Logging and work safety as stipulated in project technical guidelines.	
4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the ILO.	No employment, all members contribute on a voluntary basis with only marginal labour compensation provided by the project during the establishment phase.	
4.4 Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.	All planning and decision-making is organized through plenary FUG and village meetings with both man and women participating.	
4.5 Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.	Regulations on authority and responsibility of all involved parties under CFM clearly regulates conflict resolution and grievance procedures.	
5 Principle #5: Benefits from the forest	Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.	
Requirements	Assessment	Comments
5.1 Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.	Forest usage remain with a strong focus on subsistence use for firewood supply. Mainly NTFPs used as commercial product by only few households.	Options for an economic-viable timber marketing and sale are subject to a positive outcome of the FLEGT study.

5.2 Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.	NTFPs are collected by households as contribution to a diversified income.	The project has not yet supported NTFP production through a comprehensive market survey and forest inventory.
5.3 Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.	Motor-manual felling operations and manual/animal skidding is ensuring minimal damage to the remaining stand. No road construction as under larger concession management is applied. Harvesting is following guidelines under RIL techniques.	RIL compliance forest management guideline has been drafted and has to be provided to FUG members and tested during pilot timber harvest/thinning operations.
5.4 Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.	The use and marketing of NTFP products is clearly stipulated in the forest management plans.	
5.5 Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.	Silvicultural practices are designed towards a rehabilitation of a natural forest structures. Enrichment planting and afforestation is strictly protecting the existing forest vegetation cover as part of the management goal.	Silvicultural guidelines produced by the project are available in bilingual version.
5.6 The rate of harvest of forest products shall not exceed levels which can be permanently sustained.	Timber harvest will be based on very conservative allowable harvest estimates to be derived from a participatory forest inventory and documented in the approved annual forest management plan.	Forest inventory training has been conducted in Kachin state but no full coverage of a single FUG site has yet been completed.
6 Principle #6: Environmental impact	Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.	
Requirements	Assessment	Comments

<p>6.1 Assessment of environmental impacts shall be completed - appropriate to the scale, intensity of forest management and the uniqueness of the affected resources - and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities.</p> <p>Environmental impacts shall be assessed prior to commencement of site-disturbing operations.</p>	<p>Motor-manual felling, on-site processing and human/animal skidding following RIL techniques are envisioned to minimize negative environmental impacts. According to national regulations no environmental impact assessment is required for the operation of small-scale logging activities.</p>	
<p>6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.</p>	<p>Logging will be spread among available common species with rare species to be protected from harvest (e.g. mother trees are spared from harvesting). Tree selection in the field is conducted along 7 compulsory criteria (RIL guideline) which further minimize the risk of overharvesting a certain species.</p>	<p>RIL forest management guideline has to consider rare and protected species management as part of overall forest management.</p>
<p>6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including:</p> <ul style="list-style-type: none"> a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem. 	<p>See silvicultural guidelines as produced by the project.</p> <p>Site burning is prohibited during site preparation and after harvest to protect natural regeneration and habitats for wildlife populations.</p>	
<p>6.4 Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.</p>	<p>Conservation forest areas are stipulated in the management plan and clearly mapped and demarcated on the ground.</p>	<p>CFMP sample map:</p>

		 <p>Old natural teak forest 31 acres</p> <p>Shrub and scattered trees 215 acres</p> <p>Degraded forest 222 acres</p> <p>0 1 Miles</p> <p><u>Conservation</u> - Old degraded teak forest <u>Gap planting</u> - Degraded forest <u>Woodlot afforestation</u> - Shrub and scattered trees</p>
6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.	FSC/RIL compliant CF management and harvesting manual is drafted and will be provided to FUGs.	Once guidelines are available in Burmese language, capacity building should commence.
6.6 Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.	<p>No use of any chemicals is proposed inside natural forests or plantation sites</p> <p>Controlled use of pesticide is strictly limited to nursery management.</p>	
6.7 Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an	See above	

environmentally appropriate manner at off-site locations.		
6.8 Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.	Not applied	
6.9 The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.	Seedling production is based on local seed sourcing from existing local seed stands only (>16 indigenous tree species were established in local nurseries).	
6.10 Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion: a) entails a very limited portion of the forest management unit; and b) does not occur on high conservation value forest areas; and c) will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit.	All forest management activities strictly protect any remaining natural forest structures (solitaire trees or natural regeneration) on plantation or rehabilitation sites as integrated part of the overall forest management goal. No conversion of natural forests into plantation is permitted under any circumstances.	
7 Principle #7: Management plan	A management plan - appropriate to the scale and intensity of the operations - shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.	
Requirements	Assessment	Comments
7.1 The management plan and supporting documents shall provide:	a) The CFMP guideline clearly stipulates short-, mid- and long-term objectives under social, economic and environmental objectives.	No forest inventory has yet been completed for an entire FUG as initial focus remained on nursery establishment and reforestation

<p>a) Management objectives.</p> <p>b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.</p> <p>c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.</p> <p>d) Rationale for rate of annual harvest and species selection.</p> <p>e) Provisions for monitoring of forest growth and dynamics.</p> <p>f) Environmental safeguards based on environmental assessments.</p> <p>g) Plans for the identification and protection of rare, threatened and endangered species.</p> <p>h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.</p> <p>i) Description and justification of harvesting techniques and equipment to be used.</p>	<p>b) Description of present vegetation, location map, topography, description of boundaries and adjacent lands.</p> <p>c) Forest threat map, afforestation planning, conservation efforts, silvicultural guidelines attached as annex. Forest inventory outcomes are to be discussed regarding their silvicultural implications.</p> <p>d) Species selection for afforestation measures is based on a threat assessment. Harvesting to be based on participatory forest inventory outcomes.</p> <p>e) An initial forest inventory is stipulated in the current planning format.</p> <p>f) see 6.1</p> <p>g) No regulations on protection on rare species and wildlife described in the management plan.</p> <p>h) Silviculture and implementation map provided with annual implementation sites delineated.</p> <p>i) A description on sustainable harvest practices are briefly described as standard procedure. Detailed information to be provided in the RIL guideline.</p>	<p>efforts.</p> <p>Repeated inventories are to be scheduled as compulsory part of the CFMP and supported through technical supervision of township forest officers.</p> <p>Wildlife protection efforts are to be stipulated in the CFMP.</p>
<p>7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and</p>	<p>Annual forest management plans are elaborated by each FUG and annual reports submitted to township</p>	

technical information, as well as to respond to changing environmental, social and economic circumstances.	forest department.	
7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.	FUG members are receiving regular training and coaching through project field staff and township forest officers.	
7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.	30 year Forest management plans are provided to district and state forest authorities, annual reports are provided to township forest department.	
8 Principle #8: Monitoring and assessment	Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.	
Requirements	Assessment	Comments
8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations as well as the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.	<p>All harvesting will be based on a forest inventory with at least 5 year cycle. For areas without any timber harvest no inventory will be required for the upcoming 5 year planning period.</p> <p>Plantation management will not be based on forest inventories but through a code of harvest practices (coppice with standards).</p>	Plantations still remain too young to initiate silvicultural training.
<p>8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:</p> <p>a) Yield of all forest products harvested.</p>	FUGs are envisioned to comply with simplified monitoring procedures under a SLIMF certification. At present no detailed monitoring procedures for growth and yield research are available but will be integrated into the existing participatory inventory	Simple monitoring procedures under growth and yield research are to be developed as part of the silvicultural concept for FUGs.

<p>b) Growth rates, regeneration and condition of the forest.</p> <p>c) Composition and observed changes in the flora and fauna.</p> <p>d) Environmental and social impacts of harvesting and other operations.</p> <p>e) Costs, productivity, and efficiency of forest management.</p>	methodology.	
8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."	A clear tracking system, operated by the MC will be ensured from tree selection, felling and skidding will be provided through a continuous numbering of all logs with reference numbers on the actual tree stump.	
8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.	Each harvest cycle will be based on an updated forest inventory and thus incorporate the impact from the previous harvest cycle.	Repeated inventory cycles might fall after project support and has to be conducted by FUGs under support from township forest officers.
8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.	Annual reports of CF implementation are to be submitted to township forestry departments as stipulated in the CFI.	Annual report formats should be revised and standardized to ensure an FSC compliance.
9 Principle #9: Maintenance of high conservation value forests	Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.	
Requirements	Assessment	Comments
9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be	Conservation forest areas are demarcated on the ground with no timber harvest permitted under the	

completed, appropriate to scale and intensity of forest management.	current CF management plan.	
9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.	Conservation forest areas are defined by local authorities and the size and location not subject to a decision-making by the FUG.	
9.3 The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.	Clear regulations on protection efforts are described in the CF management plan. Applied protection measures and achieved impacts are part of the annual reporting.	
9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.	No detailed annual monitoring procedure is yet stipulated in the CFM technical concept.	Annual rapid monitoring procedures should be defined as input to the annual report.
10 Principle #10: Plantations	Plantations shall be planned and managed in accordance with Principles and Criteria 1 - 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.	
Requirements	Assessment	Comments
10.1 The management objectives of the plantation, including natural forest conservation and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan.	See 7.1 for management objectives Forest management objectives are based on a threat assessment and are aiming at mitigation detrimental resource utilization by the local population. Tree species selection and nursery design are based defined threats and goals.	Threat assessments have to be ensured in each CFM planning document despite the lack of legal requirements under the CFI.

<p>10.2 The design and layout of plantations should promote the protection, restoration and conservation of natural forests, and not increase pressures on natural forests.</p> <p>Wildlife corridors, streamside zones and a mosaic of stands of different ages and rotation periods, shall be used in the layout of the plantation, consistent with the scale of the operation. The scale and layout of plantation blocks shall be consistent with the patterns of forest stands found within the natural landscape.</p>	<p>As stipulated in the guideline all afforestation efforts are in the long-run aiming at rehabilitating a natural forest structure with increased habitat function and connectivity to natural forest areas.</p> <p>Due to the rather limited scale under CF afforestation measures no wildlife corridors or age class distribution is considered in the afforestation design. Riparian buffer zones are described under the RIL forest management guideline.</p>	
<p>10.3 Diversity in the composition of plantations is preferred, so as to enhance economic, ecological and social stability. Such diversity may include the size and spatial distribution of management units within the landscape, number and genetic composition of species, age classes and structures.</p>	<p>Seedling production is based on local available seed sources and in the case of ILWS over 16 indigenous tree species are produced in decentralized village nurseries.</p>	<p>The project should promote mixed plantations in which tree species are planted in small group mixtures to minimize inter-species competition.</p>
<p>10.4 The selection of species for planting shall be based on their overall suitability for the site and their appropriateness to the management objectives. In order to enhance the conservation of biological diversity, native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts.</p>	<p>All species are identified based on the threat assessment and in view of achieving the overall management objectives.</p> <p>Use of local seed sources ensures collected at the site are ensuring best possible site matching result. Indigenous plantations are understood as the first step towards a rehabilitation of natural forest habitats with natural regeneration forming an important aspect of the management strategy.</p>	
<p>10.5 A proportion of the overall forest management area, appropriate to the scale of the plantation and to be determined in regional standards, shall be managed so as to</p>	<p>All enrichment planting sites are aiming at restoring a natural forest. Woodlots are managed under a coppice with standards systems which is providing a</p>	

restore the site to a natural forest cover.	vital bird habitat (Coppicing systems along agricultural sites in Germany are registered as protected bird habitat).	
10.6 Measures shall be taken to maintain or improve soil structure, fertility, and biological activity. The techniques and rate of harvesting, road and trail construction and maintenance, and the choice of species shall not result in long term soil degradation or adverse impacts on water quality, quantity or substantial deviation from stream course drainage patterns.	Site preparation is stipulated in the project guideline to be limited to spot clearing without site clearing and burning allowed under any circumstances. Natural ground vegetation on the site is protected to minimize the risk of soil erosion and wash out of soil nutrition. For tree species selection see point 10.4	
10.7 Measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and invasive plant introductions. Integrated pest management shall form an essential part of the management plan, with primary reliance on prevention and biological control methods rather than chemical pesticides and fertilizers. Plantation management should make every effort to move away from chemical pesticides and fertilizers, including their use in nurseries. The use of chemicals is also covered in Criteria 6.6 and 6.7.	No chemicals are permitted on afforestation and natural forest sites. Due to use of local tree species no requirements for pest management by use of chemical or biological agents is anticipated.	
10.8 Appropriate to the scale and diversity of the operation, monitoring of plantations shall include regular assessment of potential on-site and off-site ecological and social impacts, (e.g. natural regeneration, effects on water resources and soil fertility, and impacts on local welfare and social well-being), in addition to those elements addressed in principles 8, 6 and 4. No species should be planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do	Due to the rather limited scale of afforestation no annual monitoring procedures are stipulated despite reporting on survival rates and overall performances. Due to the rather young forest age no social impacts are envisioned for at least 5 years ahead, until the first coppicing cycle can be initiated. For use of indigenous species refer to point 10.3, 10.4	

not have significant negative ecological impacts on other ecosystems. Special attention will be paid to social issues of land acquisition for plantations, especially the protection of local rights of ownership, use or access.		
10.9 Plantations established in areas converted from natural forests after November 1994 normally shall not qualify for certification. Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly of such conversion.	<p>Forest conversions have happened through spontaneous, subsistence use by local populations as well as State managed MTEs prior to the issuance of the CF certificate.</p> <p>After the issuance of the CF certificate to the FUG no forest conversion is permitted under any circumstances and has not been observed in any site under project support yet.</p>	