

The Republic of the Union of Myanmar
Ministry of Natural Resources and Environmental Conservation
Forest Department



**Study on likelihood of implementing forest management standard for
Natural forest and plantation in three districts of Myanmar:
(Tharyarwaddy, Khata and Gangaw)**



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သစ်တောခရိုင် (၃)ခုတွင် သဘာဝတောနှင့် စိုက်ခင်း စီမံအုပ်ချုပ်မှုကို ထောက်ခံချက်ပေးမည့်
စံနှုန်းများအတိုင်း အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ဖြစ်နိုင်ခြေ ရှိမှုကို လေ့လာခြင်း

အုန်းလွင် (ပါမောက္ခ)၊ (သဘာဝထိန်းသိမ်းရေးအဖွဲ့၊ ရန်ကုန်မြို့)
ဖြိုးဝေကျော် (ကွင်းဝန်ထမ်း၊ RECOFTC- မြန်မာနိုင်ငံ အစီအစဉ်၊ ရန်ကုန်မြို့)

စာတမ်းငယ်အကျဉ်း

ဤစာတမ်းတွင် သစ်တောစီမံအုပ်ချုပ်လုပ်ကိုင်မှု (သဘာဝတောနှင့် စိုက်ခင်း)ကို ထောက်ခံချက်ပေးမည့် ဥပဒေ၊ စံနှင့်အညွှန်းများကို ခရိုင်သစ်တောစီမံအုပ်ချုပ်သူများအနေဖြင့် လက်တွေ့ အကောင်အထည် ဖော်ရမည်ဆိုပါက ဖြစ်နိုင်ချေရှိမှု အခြေအနေ၊ လိုအပ်ချက်များနှင့် အကြံပြုချက်များကို ကွင်းဆင်းလေ့လာ ဆန်းစစ်၍ တွေ့ရှိချက်များကို ဖော်ပြထားပါသည်။ ကွင်းဆင်း လေ့လာမှုကို တိုင်းဒေသကြီး (၃)ခုဖြစ်သော ပဲခူးတိုင်းဒေသကြီး၊ မကွေးတိုင်းဒေသကြီးနှင့် စစ်ကိုင်းတိုင်းဒေသကြီးအတွင်းရှိ သစ်တောလုပ်ငန်း အများ ဆုံး ဆောင်ရွက်လျက်ရှိသည့် သာယာဝတီခရိုင်၊ ဂန့်ဂေါခရိုင်နှင့် ကသာခရိုင်တို့တွင် ဆောင်ရွက်ခဲ့ပါသည်။ ခရိုင်(၃)ခရိုင်မှ လက်ထောက်ညွှန်ကြားရေးမှူးများ၏ ဖြေကြားချက်များအရ သစ်တောစီမံအုပ်ချုပ်လုပ်ကိုင် မှုကို ဥပဒေ၊ စံနှင့် အညွှန်းများအတိုင်း သဘာဝတောများတွင် အကောင်အထည်ဖော်ရမည် ဆိုပါက လိုအပ် ချက်မရှိဘဲ အကောင်အထည်ဖော်နိုင်မှု အခြေအနေမှာ (၂၅.၃%)၊ အသင့်အတင့်သာ အကောင် အထည်ဖော်နိုင်မှု အခြေအနေမှာ (၃၄.၅၂%)နှင့် အကောင်အထည်ဖော်ရန် အလွန်ခက်ခဲသော အခြေ အနေမှာ (၅.၉၁%) အသီးသီးရှိကြောင်း တွေ့ရှိရပါသည်။ သစ်တောစိုက်ခင်းများတွင် အကောင်အထည် ဖော်ရမည်ဆိုပါက လိုအပ်ချက်မရှိဘဲ အကောင်အထည်ဖော်နိုင်မှုအခြေအနေမှာ (၂၀.၄၅%)၊ အသင့် အတင့် သာ အကောင်အထည်ဖော်နိုင်မှုအခြေအနေမှာ (၃၂.၇၂%)၊ အလွန်ခက်ခဲသော အခြေအနေမှာ (၁၂.၄၇%) အသီးသီးရှိကြောင်း သိရှိရပါသည်။ သဘာဝတောများတွင် အကောင်အထည်ဖော်ရန်အတွက် လိုအပ်ချက်များမှာ စံနှင့်အညွှန်းဆိုင်ရာ သင်တန်းများပို့ချပေးရန် (၂၂.၂၂ %)၊ အခြား ဆက်စပ် ဌာနများ နှင့် ပူးပေါင်းဆောင်ရွက်မှု မြှင့်တင်ရန် (၁၃.၉၅%)၊ လုံလောက်သော ရန်ပုံငွေ ထောက်ပံ့ပေးရန် (၁၃.၄၈%)၊ ပစ္စည်းကိရိယာများ လုံလောက်စွာထောက်ပံ့ပေးရန် (၁၀.၁၇%)နှင့် သစ်တောဥပဒေ၊ နည်းဥပဒေတွင် ပြင်ဆင်ရန် (၈.၂၇%) တို့အားတွေ့ရှိရပါသည်။ သစ်တောစိုက်ခင်းများတွင် အကောင် အထည်ဖော်ရန်အတွက် လိုအပ် ချက်များမှာ စံနှင့်အညွှန်းဆိုင်ရာ သင်တန်းများပို့ချပေးရန် (၂၄.၅၄%)၊ သစ်တောဥပဒေ၊ နည်းဥပဒေတွင် ပြုပြင်ရန် (၁၈%)၊ လိုက်နာရန်ထုတ်ပြန်သော အမိန့်များ မရှိသေးခြင်း (၁၆.၃၆%)၊ သစ်တောမူဝါဒ အနေဖြင့် ပံ့ပိုးထားမှု (၁၅.၅၄%)၊ ရန်ပုံငွေ လုံလောက်စွာ ထောက်ပံ့ပေးမှု (၁၃.၀၉%)နှင့် စံနှင့်အညွှန်းများအား လက်တွေ့လုပ်ဆောင်ရာတွင် လုံလောက်သော အချိန်ကာလ ခွဲဝေ ပေးမှု (၁၂.၆၈%) တို့အား တွေ့ရှိရပါ သည်။ ထို့နောက် ထိုအစီရင်ခံစာအား စာတမ်းငယ်အဖြစ်ဖြင့် ဖော်ပြရန်အတွက် ပို၍ခိုင်မာသော သတင်း အချက်အလက်များရရှိစေရန် သစ်တောဦးစီးဌာနမှ လက်ထောက်ညွှန်ကြားရေးမှူးများထံသို့ မေးခွန်းများ ပေးပို့၍ မေးမြန်းခဲ့ပါသည်။ ခရိုင် (၁၅)ခရိုင်မှ လက်ထောက်ညွှန်ကြားရေးမှူးများ၏ ဖြေကြားချက်များအရ နည်းပညာဆိုင်ရာ သင်တန်းများ ပို့ချပေးရန် (၁၆.၂၈%)၊ ဥပဒေစိုးမိုးမှု လိုအပ်ချက် (၁၆.၂၈%)၊ ဒေသ ဆိုင်ရာ ဗဟုသုတရှိသော ဝန်ထမ်းများ အခန်းကဏ္ဍ (၁၁.၆၃%)၊ ငွေကြေးပံ့ပိုးမှု (၁၁.၆၃%)၊ ဒေသခံပြည်သူ များ၊ အခြားဌာနများနှင့် ပူးပေါင်း ဆောင်ရွက်မှု အရေးပါမှု (၆.၉၈%) တို့အားတွေ့ရှိရပါသည်။ ဤတွေ့ ရှိချက်များ အပေါ်မူတည်၍ ဖြည့်ဆည်းဆောင်ရွက်ပေးမည်ဆိုပါက မြန်မာနိုင်ငံ၏ သစ်တောထောက်ခံချက်ပြု ရေးလုပ်ငန်းများ လက်တွေ့ ဆောင်ရွက်ရာတွင် များစွာအထောက်အကူပြုနိုင်မည် ဖြစ်ပါကြောင်း အကြံပြု တင်ပြထားပါ သည်။

Study on likelihood of implementing forest management standard for Natural forest and
plantation in three districts:

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Abstract

This paper describes the results of field testing for likelihood status, requirements and suggestions to implement forest management standard for natural forest and plantation. The field test was conducted in three districts: Tharyarwaddy in Bago region, Katha in Sagaing region and Gangaw in Magway region where various forest management activities are being largely experienced. Result indicated that the responses of likelihood status for natural forest with able to implement forest management standard is 25.3%, those of possible to implement with certain requirement at 34.52% and very difficult condition at 5.91%. The responses of likelihood status for plantation with able to implement forest management standard is 20.45%, those of possible to implement with certain requirement at 32.72% and very difficult condition at 12.49%. The results of requirements in implementing forest management standard for natural forests showed that 22.22% of requirement is for conducting technical training course in forest management standard, 13.95% represents for cooperation with related governmental sectors, 13.48% refers to support sufficient budget, 10.17% for necessary equipment, 9.22% for allocation of enough time to study the standards and 8.27% refers to review and update forest law that can support forest management. The results for requirements in implementing standard for forest plantation management revealed that 24.54% of requirement concerns to technical training course in forest management standard, 18% refers to forest law and rules, 16.36% indicates lack of departmental instruction to implement standard, 15.54% for forest policy development, 13.09% implies sufficient amount of budget and another 12.68% deals with sufficient time to implement the standard step by step. In addition, to validate the results from the study, questionnaire was formulated and distributed to all assistant directors of forest department throughout the country, and their feedbacks were combined in the paper. The responses from fifteen Assistant Directors for the requirements in implementing forest management standard were observed that 16.29% of requirement demonstrates technical training course in forest management standard, 16.28% reveals law enforcement, 11.63% shows insufficient budget and local experienced staff, 6.98% for cooperation with local people and related governmental sectors. The study finally urges to fulfill the requirements from district level (forest management units) and implement forest management accordance with standard developed in Myanmar.

Key words: Assistant Director, certification, criteria and indicators, district, forest management standard, natural forest, Myanmar, plantation, principles, questionnaire.

Study on Likelihood of Implementing Forest Management Standards for Natural Forest and Plantation in Three Districts of Myanmar: Tharyarwaddy, Katha and Gangaw

1. Introduction

Identification of criteria and indicator (C&I) for SFM at national and forest management unit (FMU) levels were developed by forest department (FD) in 1996 based on International Tropical Timber Organization (ITTO) "C&I for the measurement of Sustainable Tropical Forest Management" published in 1992. With the publication of ITTO's revised set of C&I for Sustainable Management of Natural Tropical Forests in 1998, Myanmar again revised its 1996 C&I for SFM in late 1998. The final document, a merger of the two sets of C&I developed by the Ministry of Forestry (MOF) and Forest Resource and Environment Development Association (FREDA) was approved by MOF in October 1999. Based on revised ITTO C&I (2005) the standards for forest management (natural forest) and timber legality certification were again improved in 2007 and 2009 respectively.

Certification for forest management standard has been developed and successfully practiced in neighboring countries in the region such as Thailand, Lao's PDR, Indonesia, Malaysia and Vietnam. In fact, principle, C&I for forest management certification for both natural forest and plantation had been developed in 2014 within the framework of Forest Stewardship Council (FSC), under the guideline of Myanmar Forest Certification Committee (MFCC) and financed by ASEAN-German Programme on Response to Climate Change (GAP-CC). The draft standard was presented at the national consultancy meeting on 3rd January 2016 and approved as first draft which is still necessary for field testing in FMU level in other word district forest management whether it is implementable or not.

This study is intended to move forward the process of forest management certification scheme in forestry sector with suggestions from field level officers at district level.

2. Objective

The study was based on findings from field testing of forest management standard which is also one of the follow-up activity of developing forest management standard in Myanmar. Specific objectives of the study are as follows;

1. to practically understand the forest management standards for natural forest and plantation for field staff at district level,
2. to investigate the likelihood of practicing forest management standards through interviewing, and
3. to inform forestry sector the requirements in forest management standard and suggest possible measures to improve forest management practices.

3. Materials and Methods

3.1. Preliminary meeting for field testing

Preliminary meeting on field testing forest management standard attended by MFCC members was held on 28th January 2017 discussing on (i) choose the appropriate districts representing each region, (ii) member of field test team, (iii) guiding questions in interview, and (iv) period to conduct. Meeting decided that the MFCC has to report the results of the meeting to Forest Department and Myanmar Timber Enterprise (MTE) for approval and support in field tests, and result of field test to be submitted to Ministry of Natural Resources and Environmental Conservation.

3.2. Study site

Three districts: Tharyarwaddy in Bago region, Katha in Sagaing region and Gangaw in Magway region were selected where various forest management activities are being largely experienced. Short terms for the districts are;

TTY= Tharyarwaddy District, KTA= Katha District, GGW= Gangaw District

3.3. Member of field test team

(i) U Ohn Lwin, consultant, Responsible Asia Forestry and Trade (RAFT), (The Nature Conservancy (TNC)- Myanmar Program) as a leader of the team who drafted the forest management standard in 2014, (ii) U Myint Ngwe and U Tin Maung Ohn (Myanmar Forest Association), (iii) U Myo Ko, Promotion of Indigenous and Nature Together (POINT) and civil society organization of Sein Yaung So-Katha were, based on experience and linking their respected background, selected as members of field test team.

3.4. Guiding questions

Guiding questions were categorized into two components; principle number 1, 5, 7, 8, 9, and 10 of the standard were conducted by MFA and number 2, 3, 4, 6 for POINT and Sein Yaung So-Katha. And scoring likelihood status in each principle, C&I of the standard at the levels of “A to E” shown in table 1. Different requirements to implement C&I were also recorded in each principle, C&I with the symbol from “a to t” shown in table 2. In addition, relevant suggestion given by respondent for each indicator were also combined in result.

Table 1. Scoring likelihood status for the implementation of standards (Principles, criteria and indicators)

1	2	3
Description of likelihood status	Symbol for status	Requirements
Able to implement without any difficulties	A	
Possible to implement with certain requirements	B	a to t
Very difficult to implement	C	a to t
Particular criteria or indicator should be excluded due to inappropriate/ incompatible situation	D	
More criteria or indicator should be added	E	

Table 2. List of requirements to implement forest management standards

Short form of requirements to implement each C&I	Symbol	Detail description of requirement
Policy	a	Providing or updating policies
Planning	b	Implementation of forest management standard in district forest management plan
Forest law	c	Updated law and rule to be enacted
Procedure, instruction,	d	Standard operation procedure and departmental instructions
Technical, trainings	e	Technical trainings, skills, knowledge, experiences and profession
Locally knowledgeable staff	f	Who know local context, social, economy, religious, tradition and culture,
Working environment	g	Enjoyable working environment: Salary, incentives, cooperation, trust, unity, fair responsibility,

Skillful workers/ labors	h	Skillful local labor/ workers available, local people forestry workers,
Information	i	Soil type, water, weather, map, documents, past-history, records, collections, evidences, etc.
Silvicultural treatments	j	Good seed, silvicultural operations, study, references, research methods,
Equipment	k	Computer, GPS, GIS images, measurement tools, field equipment, office ware, etc.
Budget	l	Allocation of sufficient budget in time
Time allocation	m	Sufficient time requirement to learn and demonstrate the standard, implement step by step,
Intergovernmental cooperation	n	Forestry and environment related government sectors (Agriculture, Livestock, General Administrative, attorney general, trade, custom, industry, etc.)
People participation	o	Trust and willingness of local peoples
Poverty alleviation	p	Livelihood improvement and income generation, basic needs,
Cooperation with private sector	q	Private sector cooperation in investment, technology, market access,
Local context and priority	r	Align with local situations, norms, tradition, culture, customary rights etc.
Maintenance	s	Prevention, protection, patrolling, maintaining and regular monitoring,
Law enforcement	t	Law enforcement, respect and obey law and government decision, rule of law,

3.5. Period to conduct field testing

Duration of field testing in each district was set for 3 to 4 days from (30.1.2017) to (12.2.2017).

3.6. Validating result

To validate results of field test in order to be more realistic and practicable, questionnaire was formulated (shown in appendix 1) and distributed to all Assistant Directors in the FD with the support of FD.

3.7. Analysis of the result

Due to qualitative nature of the study, aggregated data were straightly analyzed in each parameter and straightforwardly compared to get practicable outcome result.

4. Literature cited

Consumers in many countries are demanding evidence that the products they buy do not damage the environment. An increasing number of retailers in Europe, North America and Asia are committed to phasing out wood and paper products which do not come from independently certified well-managed forests or plantations. Therefore, increasing concern about deforestation and poor management of forests and plantations throughout the world has focused consumer interest on verifying that the raw material used to produce wood and paper products originate from recognized certified sources.

It is widely accepted that forest resources and associated lands should be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. Furthermore, growing public awareness of forest destruction and degradation has

led consumers to demand that their purchases of wood and other forest products will not contribute to this destruction but rather help to secure forest resources for the future. In response to these demands, certification and self-certification programs of wood products have proliferated in the marketplace.

Certification of forest management has developed through consumer demand to ensure that purchased timber originates from well managed forests or plantations based on internationally recognized standards for sustained yield and maintenance of environmental and social benefits.

The FSC will conduct educational activities to increase public awareness of the importance of the following:

- improving forest management;
- incorporating the full costs of management and production into the price of forest products;
- promoting the highest and best use of forest resources;
- reducing damage and waste; and
- avoiding over-consumption and over-harvesting.
- FSC will also provide guidance to policy makers on these issues, including improving forest management legislation and policies.

Under the guideline of MFCC and financed by GAP-CC, revised Myanmar C&I for 'natural forest' certification appears as the first draft which consists of 9 principles, 47 criteria and 94 indicators under internationally accepted standards. The principles in the revised draft are;

- Principle 1: Compliance with Laws and Principles with (6) criteria and (12) indicators,
- Principle 2: Tenure and Use Rights and Responsibilities with (3) criteria and (5) indicators,
- Principle 3: Indigenous Peoples' Rights with (4) criteria and (9) indicators,
- Principle 4: Community Relations and Worker's Rights with (5) criteria and (14) indicators,
- Principle 5: Benefits from the forest with (6) criteria and (10) indicators,
- Principle 6: Environmental Value and Impact with (10) criteria and (25) indicators,
- Principle 7: Management Planning with (4) criteria and (6) indicators,
- Principle 8: Monitoring and Assessment with (5) criteria and (6) indicators, and
- Principle 9: Maintenance of High Conservation Value Forests with (4) criteria and (7) indicators,

C&I for 'plantation' certification appears as the first draft which consists of 10 principles, 55 criteria and 108 indicators under internationally accepted guidelines. The principles in the first draft are;

- Principle 1: Compliance with Laws and Principles with (6) criteria and (12) indicators,
- Principle 2: Tenure and Use Rights and Responsibilities with (3) criteria and (5) indicators,
- Principle 3: Indigenous Peoples' Rights with (4) criteria and (9) indicators,
- Principle 4: Community Relations and Worker's Rights with (5) criteria and (14) indicators,
- Principle 5: Benefits from the forest with (6) criteria and (10) indicators,
- Principle 6: Environmental Value and Impact with (10) criteria and (25) indicators,
- Principle 7: Management Planning with (4) criteria and (6) indicators,
- Principle 8: Monitoring and Assessment with (5) criteria and (6) indicators,
- Principle 9: Maintenance of High Conservation Value Forests with (4) criteria and (7) indicators, and
- Principle 10: Plantation Development with (8) criteria and (14) indicators.

Table 3. FSC's principles for both natural forest and plantation

Sr. No	FSC's Principles	C&I (Natural Forest)	C&I (Plantation)
1.	Compliance with Laws and Principle	6+12	6+12
2.	Tenure and Use Rights and Responsibilities	3+5	3+5
3.	Indigenous People's Rights	4+9	4+9
4.	Community Relations and Worker's Rights	5+14	5+14
5.	Benefits from the Forest	6+10	6+10
6.	Environmental Impact	10+25	10+25
7.	Management Plan	4+6	4+6
8.	Monitoring and Assessment	5+6	5+6
9.	Maintenance of High Conservation Value Forest	4+7	4+7
10.	Plantation Development	-	8+14
	Total C&I (Natural Forest and Plantation)	47+94	55+108

5. Results and Discussions

5.1. Likelihood status for implementation the standards (natural forest and plantation)

Levels of likelihood statuses to implement the forest management standard (natural forest and plantation) were simply compared for three districts as shown in table 4.

Table 4. Likelihood status to implement the management standards (Natural Forest and Plantation) in three districts

Symbol for status	District (%)						Percentage (%)	
	TYT		KTA		GGW			
	Natural	Plantati on	Natural	Plantati on	Natural	Plantati on	Natural	Plantati on
A	9.93	4.29	27.66	26.99	38.3	30.06	25.3	20.45
B	40.43	23.93	37.59	38.65	25.53	35.58	34.52	32.72
Consolidation (A+B)	(50.36)	(28.22)	(65.25)	(65.64)	(63.83)	(65.64)	(59.81)	(53.17)
C	15.6	37.42	0	0	2.13	0	5.91	12.47
D	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0

Likelihood status for natural forest

Status 'A' of able to implement without any difficulties indicated that Gangaw shows higher possibility in most of C&I follows by Katha and poor status with high limitations in Tharyarwaddy. Average status 'A' demonstrated that around one fourth of all C&I of the standard (25.3%) can be able to implement standard without difficulties.

Status 'B' for possible to implement with certain requirements, data was observed that Tharyarwaddy and Katha shows similar status, and Gangaw reveals poor situation. Average result of status B for three districts were found out (34.52%) of C&I can be possible to implement with certain requirement. Consolidated status of A and B for three districts were observed at (59.81%) to practice the standard in Myanmar.

For the status 'C' of very difficult to implement some C&I, Tharyarwaddy was observed higher limitation to follow the standards. Therefore, Tharyarwaddy was observed in the most difficult status to implement forest management standards comparing to other districts.

Likelihood status for plantation

Status 'A' of able to implement without any difficulties indicated that Gangaw and Katha show higher possibility in most of C&I but poor status with high limitations observed in Tharyarwaddy. Average status 'A' demonstrated that (20.45 %) of all C&I of the standard can be able to implement standard without difficulties.

For status 'B' of possible to implement with certain requirements, data was observed that Katha and Gangaw indicate similar status, and Tharyarwaddy shows poor situation. Average result of status B for three districts were found out one third (32.72 %) of C&I can be possible to implement with certain requirement. Consolidated status of A and B for three districts were observed at (53.17%) to practice the standard in Myanmar.

For the status 'C' of very difficult to implement some C&I, Tharyarwaddy was again observed highest limitation to follow the standards. Therefore, Tharyarwaddy indicated in the most difficult status to implement forest management standards for plantation as well.

5.2. Requirements for implementation of the standards

Table 5. List of requirements for the implementation of the standards (Natural Forest and Plantation)

Requirement (a-t)	Districts (%)						Percentage (%)	
	TYT		KTA		GGW			
	Natural Forest	Plantation	Natural Forest	Plantation	Natural Forest	Plantation	Natural Forest	Plantation
a	16.31	36.20	4.96	4.29	0.00	6.13	7.09	15.54
b	15.60	23.31	5.67	4.91	0.71	8.59	7.33	12.27
c	16.31	38.04	8.51	7.36	0.00	8.59	8.27	18.00
d	16.31	39.88	1.42	1.84	0.00	7.36	5.91	16.36
e	34.75	24.54	23.40	25.77	8.51	23.31	22.22	24.54
f	2.13	4.91	2.13	1.84	5.67	6.13	3.31	4.29
g	6.38	7.36	0.00	0.00	0.71	4.29	2.36	3.89
h	1.42	2.45	4.26	9.20	1.42	1.23	2.36	4.29
i	2.13	4.91	3.55	7.36	2.13	2.45	2.60	4.91
j	0.00	1.23	0.00	0.00	0.00	1.84	0.00	1.02
k	31.21	29.45	3.55	3.07	1.42	2.45	12.06	11.66
l	35.46	29.45	4.26	3.68	0.71	6.13	13.48	13.09
m	23.40	28.22	4.26	3.68	0.00	6.13	9.22	12.68
n	14.89	14.72	12.77	10.43	14.18	7.36	13.95	10.84
o	5.67	6.75	14.18	12.27	10.64	7.98	10.17	9.00
p	5.67	4.91	1.42	1.23	1.42	0.61	2.84	2.25
q	4.26	3.07	0.71	0.61	2.13	4.29	2.36	2.66
r	0.00	1.84	0.71	0.61	1.42	3.68	0.71	2.04
s	1.42	1.84	1.42	1.23	0.00	3.07	0.95	2.04
t	16.31	22.09	0.71	0.61	1.42	7.36	6.15	10.02

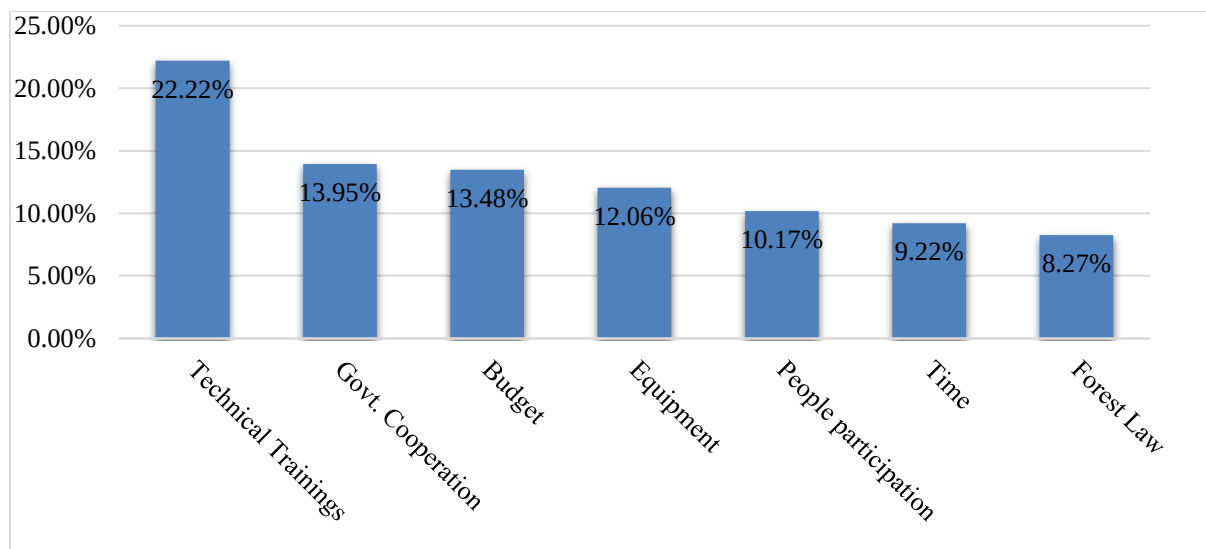


Figure 1. Requirements for the implementation of the standards in natural forest
Tharyarwaddy District

The results for the requirements of implementing standards are: (i) sufficient amount of budget, (ii) technical trainings for forest management standard, (iii) equipment and (iv) insufficient time to study the standard, (v) policy, (vi) law, (vii) regulations, (viii) law enforcement and (ix) cooperation with related governmental sectors.

Katha District

The results for the requirements of implementing standards are: (i) technical trainings, (ii) stakeholder engagement, (iii) cooperation with related governmental sectors, (iv) laws, (v) regulations, (vi) planning, (vii) policy, (viii) experienced workers, (ix) insufficient budget and time to study the standard.

Gangaw District

The requirements for forest management standards are: (i) cooperation with related departments, (ii) stakeholder engagement and (iii) technical trainings and (iv) insufficient knowledgeable and experienced staff.

Cumulative- average requirement for three districts (Natural Forest)

After combining the requirements from three districts, the results were described in descending order according to their priorities.

- (i) to conduct technical trainings that can support C&I for forest management certification (22.22%)
- (ii) to cooperate with related government sectors in implementing forest management certification (13.95%)
- (iii) to allocate sufficient amount of budget for forest management process (13.48%)
- (iv) to provide necessary equipment (Computers, GPS, forest measurement tools, etc) (12.06%)
- (v) to promote local peoples' participation (10.17%)
- (vi) to allocate enough time to study forest management standards (9.22%)
- (vii) to review and update forest law that can support forest management on ground (8.27%)

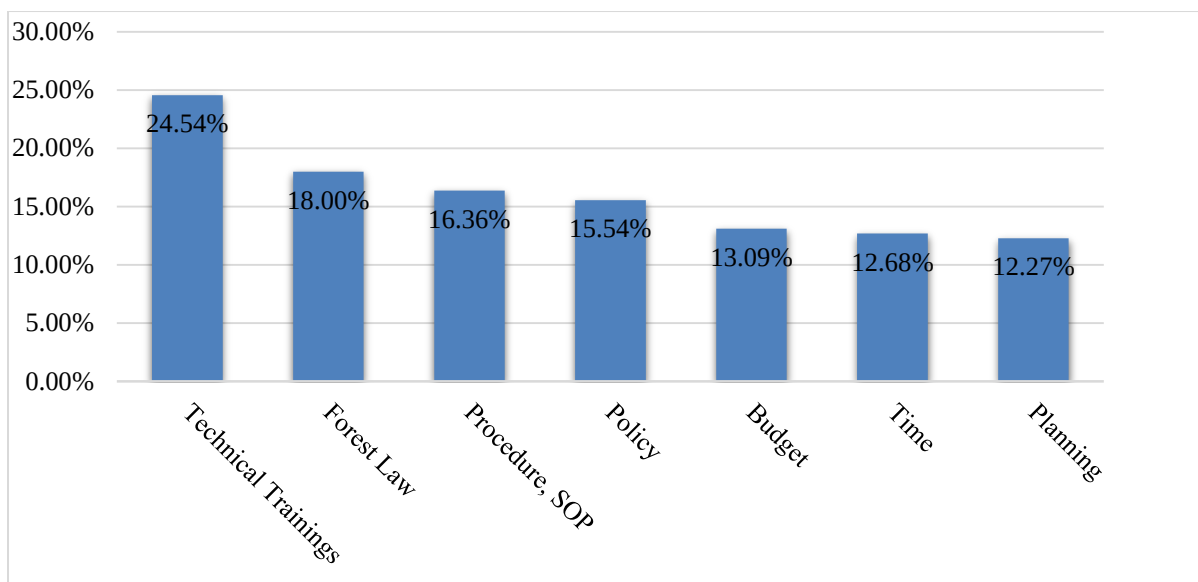


Figure 2. Requirements for the implementation of the standards (plantation)

Tharyarwaddy district

The results for the requirements of implementing standards are: (i) regulations, (ii) law, (iii) policy, (iv) equipment, (v) insufficient time and budget to study C&I, (vi) technical trainings, (vii) law enforcement, (viii) cooperation with related departments and (xi) unfavorable working environment.

Katha district

The results for the requirements of implementing standards are: (i) technical trainings, (ii) cooperation with local peoples and related departments, (iii) experienced workers, (iv) policy and law, (v) information.

Gangaw district

The requirements for forest management standards are: (i) technical trainings, (ii) stakeholder engagement and (iii) technical trainings and (iv) insufficient knowledgeable and experienced staff.

Cumulative- average requirement for three districts (Plantation)

After combining the requirements from three districts, the requirements are described in descending order according to their priorities.

- (i) to conduct technical trainings that can support C&I for forest management certification (24.54%)
- (ii) to review and update forest law that can support forest management on ground (18%)
- (iii) lack of departmental instructions (16.36%)
- (iv) updated policy (15.54%)
- (v) to allocate sufficient amount of budget (13.09%)
- (vi) to allocate enough time to study forest management standards (12.68%)
- (vii) practicable (long-short term) planning (12.27%)

5.3. Suggestions for implementation of forest management standards

Suggestions for natural forest and plantation to implement C&I for forest management certification are described as shown in table 6.

Table 6. List of suggestions for forest management standards (natural forest and plantation)

Suggestions	Counts	Percentage (%)
- to update the policies and laws to forest	37	33.64

management standard,		
- to conduct technical trainings in order to provide forest management certification process	24	21.82
- to strengthen cooperation with related governmental sectors and stakeholders	11	10
- to document and distribute policies, laws and regulations of other related sectors	7	6.36
- to promote awareness raising activities	4	3.64
- to explore suitable economic investments	4	3.64
- to conduct EIA and SIA	4	3.64
- to develop plantation policy	3	2.73
- to use environmentally friendly methods	2	1.82
- to keep plantation documents for C&I	2	1.82
- to implement with international plantation practices	2	1.82
- to establish seed production areas (SPAs)	2	1.82
- to provide transportation for field staff	2	1.82
- to choose plantation site in accessible and water sufficient places	2	1.82
- to conduct field testing(s) for HCVFs	1	0.91
- to do researches for exotic species	1	0.91
- to demarcate protected areas firstly	1	0.91
- to organize preliminary meetings and aggrievance mechanism for conflict resolution	1	0.91
Total	110	100

5.4. Validating result

Table 7. List of Assistant Directors responding questionnaire

	State and Divisions														Total
	Kachin	Kayah	Kayin	Chin	Sagaing	Tanintharyi	Bago	Magway	Mandalay	Mon	Rakhine	Yangon	Shan	Ayeyarwaddy	
No. of response	0	1	1	1	2	0	1	1	2	0	3	0	3	0	15

In order to validate the results from 3 districts questionnaire was formulated and sent to Assistant Directors of all states and divisions, only a total of 15 respondents was received for

further assessment. Their experience in natural forest management and plantation were found out between 6 to 20 years and 5 to 31 years respectively.

Table 8. Result of no.5 to 11 of questionnaire from (15) Assistant Directors

Question No.	Questions to Assistant Directors	Yes	Fair	No
5	Do you understand ITTO based C&I for SFM?	3	9	1
6	Do you understand C&I for forest management certification which is recently developed?	6	8	0
7	Do you think it is necessary to assess forest management (natural forest and plantation) is aligned with SFM (social, economy, environment)?	14	0	0
8	Is there possibility to implement forest management standard within existing situation?	4	10	1
9	Is the standard still need to be revised or edited?	2	3	8
10	Do you fairly agree the results from the field test?	11	3	0
11	Any open suggestion (to be shown in separate table)			

Question numbers in above table were referred to number in questionnaire. Result of number (5) indicated that only 3 out of 15 Assistant Directors experienced ITTO's framework based C&I for SFM. In question number (6), 6 out of 15 Assistant Directors understand the forest management standards for certification which is recently approved the draft in 2016. Question number (7), almost 14 respondents together shown agree forest management to be aligned with SFM composing three basic pillars (social, economy and environment). Question (8) for possibility to implement forest management standard within existing situation, only 4 answered possibility and 10 responded fair status. In question number (9), a few respondents show the standard needed to revise or edit. In question (10), 11 out of 15 basically agree the result from field test.

Requirements from (15) Assistant Directors to implement the standards with existing recent situation

The results of requirements for implementing standards from fifteen Assistant Directors are arranged descending order.

- (i) technical trainings on C&I (16.28%)
- (ii) strengthen law enforcement (16.28%)
- (iii) importance of knowledgeable and experienced staffs (11.63%)
- (iv) sufficient budget allocation (11.63%)
- (v) updated law to be enacted, cooperation with related governmental sectors and local people (6.98%)

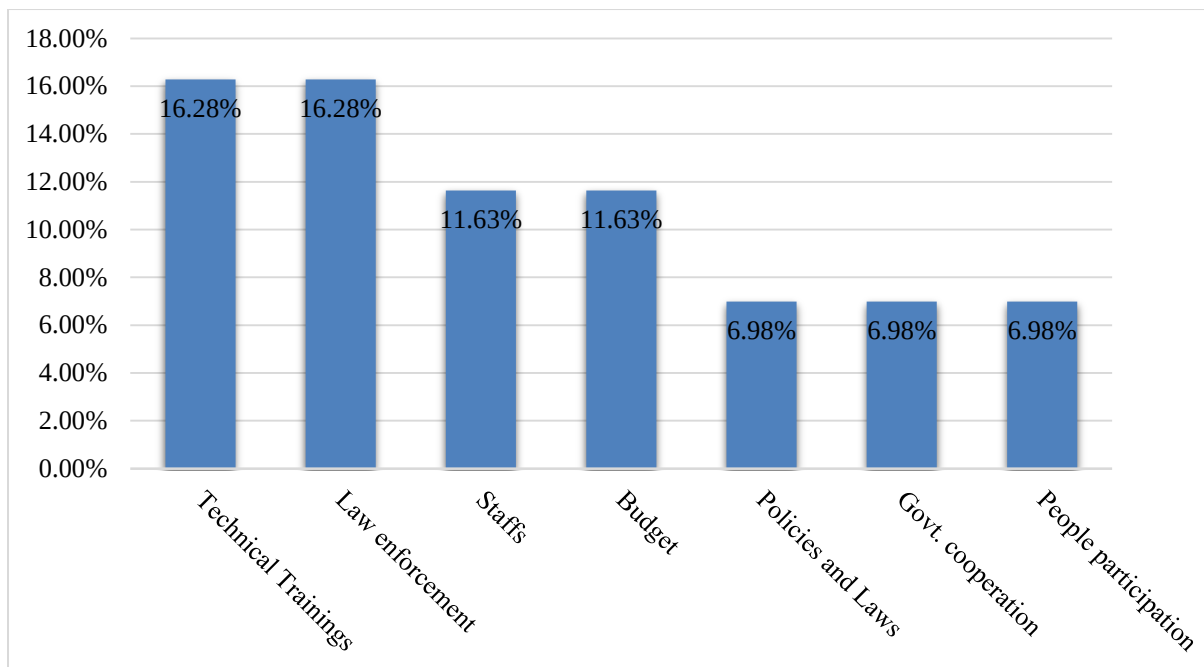


Figure 3. Requirements from (15) Assistant Directors to implement the standards
Summary of open suggestions from no. 11 of questionnaire are described as follow.

- To regular monitoring private plantations establishment
- To contribute poverty alleviation
- Forest management plan to be adapted with local contexts
- To strengthen cooperation of local people and related governmental sectors
- To support to local private sectors in production of finished products
- To support basic needs of the government staff/ incentive plan
- To allocate enough time for every step of implementation for the standards

6. Conclusion

However, the field test team made attempt in every way possible to explore realistic situation and propose practicable result, there were limitations observed in the field test as follows.

- Effect of available time,
- Effect of composition and team strength,
- Effect of respondent's perception,
- Effect of decision maker's commitment and supports,

Finally, the study briefly outlines the likelihood status, requirements and suggestions from three districts to implement forest management standards. The results were additionally complemented by (15) Assistant Directors of Forest Department. Finally, the paper concludes as follows.

- (1) The requirement and suggestion to practice forest management standard are realistic and practicable in field levels.
- (2) Forest management certification in forestry sector in Myanmar, likes in other countries in the region, comprises multi-dimensional and stepwise approaches with certain time frame in initial stage.
- (3) The forest management certification can only be developed with supports, and its future may rely on dynamic of political, economic and social context in the country.

7. References

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This test of standards was entirely contributed around the expertise and intellectual experience of Assistant Directors in three districts (Tharyarwaddy, Katha and Gangaw) and additionally validated with comments and suggestions of another (15) Assistant Directors from different regions of the country. This is a report of their work. Our sincere thanks to all of them. We hope that we have reported and analyzed their results accurately and well. Any omissions and errors in this paper are ours.

Appendix



Figure 4. Field test in Tharyarwaddy District



Figure 5. Field test in Katha District



Figure 6. Field test in Gangaw District

Questionnaire for assessment of principle, criteria and indicators for sustainable forest management (Natural forest and Plantation) (For Assistant Directors only)

☒ To copy for answer

1. State/regions and organization	2. Total services () years	
3. Experience in natural forest management () years	4. Experience in Plantation management () year	
Other experiences (Answer with key words)	(a) (b) (c)	() year () year () year
5. Do you understand ITTO based C&I for SFM?		
(a) Yes ()	(b) Some extent ()	(c) No ()
6. Do you understand C&I for forest management certification which is recently developed?		
(a) Yes ()	(b) Some extent ()	(c) No ()
7. Do you think it is necessary to assess forest management (natural forest and plantation) contributing SFM (social, economy, environment) by using C&I?		
(a) Necessary ()	(b) Not necessary ()	(c) No idea ()
Because....		
8. Is there possibility to implement forest management standard within existing situation?		
(a) Yes ()	(b) Some extent ()	(c) No idea ()
Because only who answered b and c. a) b) c) d) e) (e.g policy, law, procedure, instructions, technical training, human resource, investment, incentive, cooperation, sub-national government, etc;)		
9. Is the standard still need to be revised or edited?		
(a) Yes ()	(b) Some ()	(c) No ()
10. Do you fairly agree the results from the field test?		
(a) Yes ()	(b) Fair ()	(c) No
11. Any open suggestion.		
(a) Yes () (if anything else, please describe below)		(b) No
(1)	(2)	
(3)	(4)	

Feel free to send your comments and suggestion please write to
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please contact via: 09 979 446 700 (Viber) who don't have email address,

Figure 7. Questionnaire