



NEPCon Interim Standard for Assessing Forest Management in Thailand

Name of the document	
Type of document:	NEPCon Standard
Title:	NEPCon Interim Standard for Assessing Forest Management in Thailand
Document code:	FM-32 - Thailand
Scope:	Thailand
Status of document:	Approved
Version:	12-14
Date:	5 December 2014
Official language(-s)	
Consultation period:	CLOSED
Approval body:	NEPCon QA
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1 Introduction

A key purpose of NEPCon is to recognize good forest managers through credible independent certification of forestry practices. NEPCon is a certification body accredited by the Forest Stewardship Council™. The purpose of these standards are to provide forest managers, landowners, forest industry, scientists, environmentalists and the general public with information on the aspects of forest management operations that NEPCon evaluates to make certification decisions in the Forest Stewardship Council (FSC™) certification system.

The principles, criteria and indicators¹ in this document are applicable for assessing all forest management operations (FMEs) with wood production as a major (though not exclusive) objective. These standards are global in application, for all forest types. This Standard will be reviewed annually and revised if needed to ensure continued conformance with all approved FSC policies, standards, directives, guidelines and advice notes that apply to the interpretation of the FSC Principles and Criteria.

NB: From 1st October 2018, NEPCon and RA-cert have joined to unify their credible sustainability certification services at a global scale, engage widely with a diverse range of stakeholders, and productively contribute to the development of schemes for environmental and socially responsible practices. In order to minimize the negative impacts of the joining the former RA-cert FSC FM national standards are maintained unchanged except for the formatting until actual changes are required by the system.

2 Background

Forests can be managed for many different objectives and products. Such management can occur in natural forests or plantations, for timber or non-timber forest products, include mechanized or manual harvesting, and managed by a large industrial operation or a local community or landowner cooperative. Many combinations are possible. A critical question has been - how to evaluate the wide range of ecological, socioeconomic and silviculture impacts of forest management activities in a clear and consistent fashion, based on a combination of scientific research and practical experience?

3 Public Comment

The certification process has both public and private aspects. Certification assessments are not public documents unless specifically required by law (e.g. for some public forests) or approved for public distribution by the certified operation. However, three public documents are available for each and every certified FME:

¹ It is NEPCon philosophy to keep the certification process as straightforward and simple as possible, without sacrificing technical quality, in order to foster the value of certification as an educational, policy, and training tool. In practice this means writing as clearly as possible and keeping scientific terms to a minimum.

1. A public stakeholder consultation document that announces each certification assessment 45 days prior to field work;
2. The certification standard used; and,
3. A public certification summary that is produced with the results of each separate forest certification.

The public stakeholder consultation document informs the public about the assessment at least 45 days prior to it taking place. This document is distributed publicly prior to or during an assessment. The document is typically distributed by hand delivery, FAX, mail, or email and is posted to the NEPCon website at www.nepcon.org. The specific NEPCon standard for each assessment is also publicly available before and during the assessment and is a part of the public record for every forest certification. The public certification summary is produced as a final step of the certification process and is available only after an operation has been approved for certification. For copies of any public stakeholder consultation document or NEPCon interim Forest Management standard, visit our website at nepcon.org. For public certification summaries visit the FSC certified organization website at <http://info.fsc.org/>, or contact NEPCon, certification headquarters (NEPCon | Filosoofi 31 | 50108 Tartu, Estonia). **We strongly encourage you to give us your input, either positive or negative, on our candidate or certified operations, certification standards, or certification procedures.**

Note on the use of this standard.

All aspects of this standard are considered to be normative, including the scope, standard effective date, references, terms and definitions, tables and annexes, unless otherwise stated.

4 Regional Standard

FSC working groups around the world are developing country- or region-specific forest certification standards. NEPCon fully supports, encourages and participates wherever possible in such processes. Our experience is that the regional standard setting process is vital. Regional standard setting is an excellent way of engaging the public in important, broad ranging discussions on the future of forests and human communities. In other words, the regional standards setting process should not be seen just as a technical standard setting process, but also as a process of outreach on the topic of sustainable forest management.

As part of the FSC process, regional standards are developed by a regional working group, field-tested, revised and approved by the regional working group, and then submitted to the FSC's international headquarters for approval. The final product, if approved, is an "FSC accredited standard". Once accredited, all FSC-approved certifiers (like NEPCon) must use the endorsed regional standard as the fundamental starting point for FSC certification in that country/region. Certifiers may choose to be more rigorous than the regional standard, but they cannot be less rigorous.

In all countries or regions not covered by an FSC accredited forest stewardship standard, NEPCon will develop a locally adapted or interim standard for use in evaluating forest management operations in that designated geographic area. The adapted standard is

developed with modification to certification indicators to take into account the national context (e.g. legal requirements, environmental, social and economic perspectives)². This draft will be translated to the official language of the country. Distribution to key stakeholders occurs via the Internet (email and posted on the NEPCon website), mailings and face to face meetings.

5 NEPCon Standard Structure

The NEPCon standards are based directly on the FSC Principles and Criteria for Forest Stewardship (FSC-STD-01-001) and include specific generic indicators for each criterion to create a global NEPCon standard. These indicators are the starting point from which region-specific “NEPCon Interim Standards” are developed for use in the forest by forest auditors to evaluate the sustainability of forest management practices and impacts of candidate FME.

The standards are divided into the following ten principles:

- 1.0 Compliance with Laws and FSC Principles
- 2.0 Tenure and Use Rights & Responsibilities
- 3.0 Indigenous Peoples’ Rights
- 4.0 Community Relations and Workers’ Rights
- 5.0 Benefits from the Forest
- 6.0 Environmental Impact
- 7.0 Management Plan
- 8.0 Monitoring and Assessment
- 9.0 Maintenance of High Conservation Value Forests
- 10.0 Plantations

In the standard, each FSC principle and its associated criteria is stated, along with the NEPCon indicators. All criteria in all principles must be evaluated in every assessment; unless certain principles are deemed not applicable by NEPCon auditors (e.g. Principle 10 will not be applicable if there are no plantations).

6 Indicators for Small and Large FMEs

As required under FSC policy NEPCon has developed indicators for certain criteria³ that are specific to certain sizes of operations. Clear quantitative definitions for small versus large FMEs are included in regionalized NEPCon Interim Standards. Where these NEPCon regional thresholds are not established, large FME should be considered those larger than 50,000 ha. Small FME definition is determined by FSC regional thresholds set for small

² Future standards will be developed following FSC FSC-PRO-60-007

³ Criteria 6.1, 6.2, 6.4, 7.1, 7.2, 7.3, 7.4, 8.1, 8.2, 8.3, 8.4, 8.5. 9.1, 10.5 and 10.8.

and low intensity managed forests (SLIMF) which have been set either globally by FSC (100 ha) or by FSC National Initiatives.

7 Content

7.1 Scope

This standard shall be the basis for FSC forest management certification of forest management enterprises in Thailand

7.2 Standard effective date

This standard shall be effective from May 2008.

7.3 References

FSC-STD-01-001 v. 4.0 FSC Principles and Criteria for Forest Stewardship

FSC-STD-01-002 (v1-0) FSC Glossary of Terms

7.4 Terms and definitions

See annex A for glossary.

Acronyms:

FME : Forest management enterprise

FSC : Forest Stewardship Council

HCVF : High conservation value forests

SLIMF : Small and Low Intensity Managed Forests

7.5 NEPCon Interim Standard for Assessing Forest Management in Thailand

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.

1.1 Forest management shall respect all national and local laws and administrative requirements.

1.1.1 FME shall demonstrate a record of compliance with relevant federal, provincial/state, and local laws and regulations.

1.1.2 FME should have texts of existing relevant national laws available in the forest management unit. Relevant laws are listed in Annex 1⁴.

1.2 All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.

1.2.1 FME shall be up-to-date in payment of applicable fees, taxes, timber rights or leases, royalties, etc.

1.2.2 Where FME is not up-to-date on payments, a plan for completing all payments shall have been agreed to with the relevant institution.

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.

1.3.1 FME shall be aware of and understand the legal and administrative obligations with respect to relevant international agreements to which Thailand is a signatory. These are listed in Annex 2.

1.3.2 FME operations shall meet the intent of applicable conventions including CITES, Convention on Biological Diversity and ILO conventions (29, 87, 98, 100, 105, 111, 138, 182 and other binding conventions).

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 involved or affected parties.

1.4.1 Conflicts between laws, FSC P&C and international treaties or conventions shall be identified by FME.

1.4.2 FME should work in conjunction with the appropriate regulatory bodies and other parties to resolve conflicts between laws/regulations and FSC Principles or Criteria.

1.5 Forest management areas should be protected from illegal harvesting, settlement and other unauthorised activities.

1.5.1 The forest management unit(s) shall be protected from unauthorized harvesting activities and other activities not controlled by forest manager or local people with use rights.

1.5.2 For large operations, a system shall exist for documenting and reporting to the appropriate authority instances of illegal harvesting, settlement, occupation or other unauthorized activities.

⁴ The list of national and state-specific laws is not comprehensive; it is provided only as a guide to relevant legislation and regulations for forest management across all regions or in different regions.

1.6 Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.

1.6.1 For large operations, FME shall have a publicly available policy or statement committing the organization to adhere to the FSC certification standards on the forest under assessment.

1.6.2 FME shall not implement activities that blatantly conflict with the FSC P&C on forest areas outside of the forest area under assessment.

1.6.3 FME shall disclose information on all forest areas over which the FME has some degree of management responsibility to demonstrate compliance with current FSC policies on partial certification and on excision of areas from the scope of certification.

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.

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.

2.1.1 FME shall have documented evidence of legal, long term (at least one rotation length or harvest cycle) rights to manage the lands and to utilize the forest resources for which certification are sought.

2.1.2 Plantation lands are registered under the Plantation Law (1992)

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.

2.2.1 All legal or customary tenure or use rights to the forest resource of all local communities shall be clearly documented by the forest managers.

2.2.2 FME shall provide evidence that free and informed consent to management activities affecting use rights has been given by local communities or affected parties.

2.2.3 FME planning processes shall include participation of local communities or parties with legal or customary tenure or use rights.

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.

2.3.1 FME shall use mechanisms for resolving disputes over tenure claims and use rights that respectfully involve the disputants and are consistent in process.

2.3.2 FME should not be involved in outstanding disputes of substantial magnitude on the candidate forest area that involve a significant number of interests.

2.3.3 FME shall demonstrate significant progress achieved to resolve major disputes.

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 recognised and respected.

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.

3.1.1 FME shall identify Indigenous peoples with customary/traditional rights to forest resources (timber and non-timber) where indigenous people have established customary or legal rights to their land/territories or forest resources and their entitlements formally recognized in mutually accepted agreements.

3.1.2 No forest management operations shall take place in areas identified under 3.1.1 above, without clear evidence of free and informed consent of the indigenous peoples claiming such land, territories or customary rights. .

3.1.3 Agreements with indigenous groups shall be honored.

3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.

3.2.1 There shall be no evidence or indication that the FME threatens the rights and resources of indigenous peoples.

3.3 Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in co-operation with such peoples, and recognised and protected by forest managers.

3.3.1 Special sites of indigenous cultural, ecological, economic or religious significance shall be documented in management planning documents. They should be identified on maps or in the forest.

3.3.2 Policies and procedures shall include the involvement of indigenous people, or specialists they designate, in the identification of special sites.

3.3.3 Special sites should be identified in management/operational plans.

3.3.4 Special sites shall be protected during forest operations.

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.

3.4.1 Written or verbal agreements on terms of compensation shall exist when there is use of traditional knowledge for commercial purposes.

3.4.2 Compensation systems for the use of traditional knowledge shall be in place prior to commencement of forest operations which affect indigenous interests.

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.

4.1 The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.

4.1.1 Local communities and residents shall be given equal or preferential opportunities in forest management activities in terms of employment, training, and provision of supplies to FME, and other benefits or opportunities.

4.1.2 Evidence that a significant portion of workforce originates from local communities.

4.2 Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.

4.2.1 Wages and other benefits (health, retirement, worker's compensation, housing, food) for full-time staff and contractors shall be consistent with (not lower than) prevailing local standards.

4.2.2 FME shall implement a program of worker safety.

4.2.3 Health and safety measures shall comply with national minimum requirements.

4.2.4 Workers (staff and contractors) shall be provided with safety equipment in good working order, appropriate to the tasks of workers and the equipment used (e.g. local norms are important, ideally the following: hard hats, hearing protection, high visibility vests, steel toe boots and chainsaw proof chaps).

4.2.5 FME shall maintain up to date records of work-related accidents, and preferably all safety performance.

4.2.6 FME policies and practices shall ensure equal treatment of employees in terms of hiring, advancement, dismissal, remuneration and employment related social security.

4.3 The rights of workers to organise and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labour Organisation (ILO).

4.3.1 FMEs, by their actions and policies, shall respect the rights of workers (staff and contractors) to organize or join trade unions and to engage in collective bargaining as outlined in ILO Conventions 87 and 98.

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.

4.4.1 In conjunction with local stakeholders and other interested parties, the FME shall evaluate socio-economic impacts associated with forest management activities. The evaluation shall be in accordance to the scale and intensity of operations.

4.4.2 FME shall demonstrate that input from community participation was considered and/or responded to during management planning and operations.

4.4.3 Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.

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.

4.5.1 FME shall make all reasonable efforts to avoid losses and damages affecting local peoples, and in resolving grievances related to legal rights, damage compensation and negative impacts.

4.5.2 Procedures for consistently and effectively resolving grievances and determining compensation for loss or damage shall be implemented.

(Note: See Criterion 2.3 for resolution of land tenure (e.g. property or use rights) challenges.)

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.

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.

5.1.1 Budgets shall include provision for environmental and social as well as operational costs necessary to maintain certifiable status (e.g. management planning, road maintenance, silvicultural treatments, long-term forest health, growth and yield monitoring, and conservation investments).

5.1.2 The income predicted in the operating budgets shall be based upon sound assumptions.

5.2 Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.

5.2.1 FME should seek the "highest and best use" for individual tree and timber species.

5.2.2 FME should encourage utilization of frequently occurring, lesser known, or less-commonly utilized plant species for commercial and subsistence uses.

5.2.3 Non-timber forest products (NTFPs) should be considered during forest use and processing.

5.2.4 Local processing should be emphasised where possible.

5.3 Forest management should minimise waste associated with harvesting and on site processing operations and avoid damage to other forest resources.

5.3.1 Harvesting techniques shall be designed to avoid log breakage, timber degradation and damage to the forest stand and other resources.

5.3.2 Waste generated through harvesting operations, on-site processing and extraction shall be minimized.

(Note: See Principle 6 for assessing damage to forest resources)

5.4 Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.

5.4.1 FME should foster product diversification and exploration of new markets and products (also Criterion 5.2).

5.4.2 FME should support local value added processing.

5.5 Forest management operations shall recognise, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.

5.5.1 FME shall protect the full range of forest services associated with the defined forest area including: municipal watersheds, commercial and recreational fisheries (or the supply of water to downstream fisheries), visual quality, contributions to regional biodiversity, recreation and tourism.

5.5.2 FME shall protect riparian zones along all watercourses, streams, pools, springs and lakes/ponds, consistent with the requirement of national regulations or best management practices.

5.5.3 FME should map riparian protection zones that enhance the value of forest services and resources, such as watershed and fisheries.

5.6 The rate of harvest of forest products shall not exceed levels which can be permanently sustained.

5.6.1 Appropriate to the scale and intensity of operations, estimates of total periodic timber growth on the defined forest area - by species categories - shall be generated through a combination of empirical data and published literature.

5.6.2 Allowable harvest levels shall be based on conservative, well-documented and most current estimates of growth and yield.

5.6.3 Harvesting shall be based on a calculated periodic allowable harvest (e.g. annual allowable cut) and actual harvests do not exceed calculated replenishment rates over the long term.

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.

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. Environmental impacts shall be assessed prior to commencement of site disturbing operations.

6.1.1 Environmental assessments shall be completed during management planning.

6.1.2 Environmental assessments shall consistently occur prior to site disturbing activities.

6.1.3 Environmental impacts of on-site processing facilities shall be controlled (e.g. waste, construction impacts, etc.).

6.1.4 Landscape level impacts of forest management (e.g. cumulative effects of forest operations within and nearby the FMU) shall be considered.

6.1.5. Applicable to SLIMF FMEs only (note: above indicators do not apply) Before initiating any operation, the possible negative environmental impacts shall be identified and the operation is designed to minimize them. Assessments do not need to be documented unless legally required

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.

6.2.1 The likely presence of rare, threatened or endangered species and their habitats (e.g. nesting and feeding areas) shall be assessed on the basis of the best available information. A list of endangered and threatened species in Thailand is referenced in Annex 3.

6.2.2 Timber species on either local and/or international endangered or threatened species lists (e.g. CITES Appendix 1, national lists) shall not be harvested.

6.2.3 Appropriate to the scale and intensity of management, conservation zones, protection areas or other protection measures shall be established based on technically sound requirements for the protection of rare, threatened and endangered species and their habitats.

6.2.4 Conservation zones should be demarcated on maps, and where feasible, on the ground.

6.2.5 Effective procedures shall be implemented during forest operations to protect conservation zones, identified species and their habitats

6.2.6 Hunting, fishing, trapping and NTFP collecting shall be controlled in the forest.

6.2.7 Applicable to SLIMF FMEs only: (note: indicators 6.2.1 – 6.2.5 do not apply) Where information exists on rare, threatened and endangered species and their habitat, the FME shall use this information to protect these resources.

6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including:

- a) Forest regeneration and succession.
- b) Genetic, species, and ecosystem diversity.
- c) Natural cycles that affect the productivity of the forest ecosystem.

6.3.1 The forest manager shall have site-specific data or published analyses of local forest ecosystems that provides information on the FMU with regards to:

- regeneration and succession
- genetic, species and ecosystem diversity
- natural cycles that affect productivity

6.3.2 Forest management systems shall maintain, enhance or restore ecological functions and values of the FMU based on the data in 6.3.1. Management systems shall include:

- Silvicultural and other management practices which are appropriate for forest ecosystem function, structure, diversity and succession
- Where appropriate, a program for the restoration of degraded sites
- Natural regeneration, unless data shows that enrichment planting or artificial reforestation will enhance or restore genetic, species or ecosystem diversity.

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.

6.4.1 Representative samples of existing ecosystems shall be protected in their natural state, based on the identification of key biological areas and/or consultation with environmental stakeholders, local government and scientific authorities.

6.4.2 In conjunction with experts, restoration and protection activities shall be defined, documented, and implemented in the forest.

6.4.3 Applicable to SLIMF FMEs only: (note: above indicators do not apply) Where representative samples of ecosystems are known to exist in the FMU these shall be protected.. .

6.5 Written guidelines shall be prepared and implemented to: control erosion; minimise forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.

6.5.1 All forest operations with the potential for negative environmental impact (as identified in 6.1) shall have written guidelines defining acceptable practices which are available to forest managers and supervisors. Such operational guidelines shall meet or exceed national or regional best management practices.

6.5.2 Maps and/or work plans shall be produced at a scale that allows effective supervision of soil and water resource management and protection activities.

6.5.3 Topographic maps should be prepared before logging or road construction occurs.

6.5.4 Topographic maps should specify areas suitable for all-weather harvesting or dry-weather only; and indicate locations for extraction (or haul) roads, loading ramps (or log yards), main skid (or snig) trails, drainage structures, buffer zones, and conservation areas.

6.5.5 Training shall be given to FME staff and contractors to meet guidance requirements.

6.5.6 Road construction, maintenance and closure standards shall be followed in the forest.

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 Organisation 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 minimise health and environmental risks.

6.6.1 Forest managers shall employ silvicultural systems, integrated pest management and vegetation control strategies that result in the least adverse environmental impact. Pesticides are used only when non-chemical management practices have been proven ineffective or cost prohibitive.

6.6.2 If chemicals are used, the following requirements apply:

- A complete inventory of chemicals shall be provided by the FME and detailed inspections of storage areas or other facilities validate that inventory is complete and accurate;
- Records shall be kept of all chemical used by the FME including name of the product, location and method of application, total quantity of chemical used and dates of application.

- Safe handling, application (using proper equipment) and storage procedures shall be followed; and,
- Staff and contractors shall receive training in handling, application and storage procedures.

6.6.3 Chemicals prohibited by the FSC (FSC-POL-30-601) or those banned in Europe, U.S. and target country, or World Health Organization Type 1A or 1B and chlorinated hydrocarbon pesticides shall not be used. The exception is when a formal derogation has been granted by the FSC. In such cases, the FME follows the terms of the approved derogation.

6.7 Chemicals, containers, liquid and solid non organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off site locations.

6.7.1 Chemical, container, liquid and solid waste shall be disposed of off-site in an environmentally sound and legal manner, whether from forest operations or processing facilities.

6.8 Use of biological control agents shall be documented, minimised, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.

6.8.1 Use of biological control agents shall be documented, minimized, monitored and strictly controlled.

6.8.2 Use of genetically modified organisms (GMOs) shall be prohibited.

6.9 The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.

6.9.1 Use of exotic species should be discouraged and carefully controlled, i.e. when used it is for well-justified and specific purposes (e.g. environmental benefit) and monitored for environmental impact.

6.9.2 Where exotic species are planted, measures shall occur to prevent spontaneous regeneration outside plantation areas, unusual mortality, disease, insect outbreaks or other adverse environmental impacts.

6.10 Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:

- Entails a very limited portion of the forest management unit; and,
- Does not occur on high conservation value forest areas; and,
- Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.

6.10.1 FME shall not convert forests, or threatened non-forested habitat to plantations or non-forest land uses, except where the conversion meets the conditions of 6.10.2 – 6.10.4.

6.10.2 If conversion occurs, it shall be very limited in scale and not exceed 5% of the forest management unit over any 5 year period (See FSC-DIR-20-007-ADV-10)

6.10.3 If conversion occurs, the forest manager shall demonstrate that any conversion produces long term conservation benefits across the FMU.

6.10.4 If the conversion occurs, plantations or non-forest uses shall not replace high conservation value forest.

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.

7.1 The management plan and supporting documents shall provide:

- a) Management objectives.
- 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.
- c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.
- d) Rationale for rate of annual harvest and species selection.
- e) Provisions for monitoring of forest growth and dynamics.
- f) Environmental safeguards based on environmental assessments.
- g) Plans for the identification and protection of rare, threatened and endangered species.
- h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.
- i) Description and justification of harvesting techniques and equipment to be used.

7.1.1 FME Management plan, or appendices or reference documents, shall include presentation of the following components:

- a) Management objectives;
- b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socioeconomic conditions, and a profile of adjacent lands;
- c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories;
- d) Description and justification for use of different harvesting techniques and equipment;

- e) Description and justification of forest management prescriptions and their silvicultural and ecological rationale i.e. based on site specific forest data or published analysis of local forest ecology or silviculture;
- f) Rate of harvest of forest products (timber or non-timber, as applicable) and species selection including justification;
- g) Measures for identifying and protecting rare, threatened and endangered species and/or their habitat;
- h) Map(s) describing the forest resource including forest types, watercourses and drains, compartments/blocks, roads, log landings and processing sites, protected areas, unique biological or cultural resources, and other planned management activities;
- i) Environmental safeguards based on environmental assessments (see criterion 6.1); and,
- j) Plans for monitoring of forest growth, regeneration and dynamics.

7.1.2 NTFP resources and uses should be inventoried and their management explicitly considered during planning.

7.1.3 Maps that are presented shall be accurate and sufficient to guide forest activities (also see Criterion 6.5).

7.1.4 Management plans or related annual operating or harvesting plan shall be available to staff and used in the forest.

7.1.5 Applicable to SLIMF FMEs only: (note: above indicators do not apply) A written management plan exists that includes at least the following:

- a) The objectives of management;
- b) A description of the forest;
- c) How the objectives will be met, harvesting methods and silviculture (clear cuts, selective cuts, thinnings) to ensure sustainability;
- d) Sustainable harvest limits (which must be consistent with FSC criteria 5.6);
- e) Environmental/ social impacts of the plan;
- f) Conservation of rare species and any high conservation values;
- g) Maps of the forest, showing protected areas, planned management and land ownership; and,
- h) Duration of the plan.

7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.

7.2.1 A technically sound and financially realistic timeframe shall exist for revision/adjustment of the management plan.

7.2.2 Management plan (and/or annual operating plan) revision or adjustments shall occur on timely and consistent basis.

7.2.3 Management plan revisions shall incorporate the results of monitoring or new scientific and technical information regarding changing silvicultural, environmental, social and economic conditions.

7.2.4 Applicable for SLIMF FME-s only (Note: above indicators do not apply)
Management plan shall be reviewed at least every 5 years and updated, if necessary, incorporating the results of monitoring to plan and implement future management.

7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.

7.3.1 Evidence of formal or informal training of forest workers to ensure proper implementation of the management plan shall exist in the forest. Applicable to all FMEs including SLIMFs.

7.3.2 For large FMEs, a formal training plan for staff and forest workers related to the management plan and its implementation should be documented.

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.

7.4.1 FME shall make publicly available a summary of the management plan including information on elements listed in criterion 7.1..

7.4.2 Applicable for SLIMF FME-s only (Note: above indicators do not apply): Upon request, FME shall make available relevant parts of the management plan to stakeholders who are directly affected by the forest management activities of FME (e.g. neighboring landowners).

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.

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.

8.1.1 A plan and design, based on consistent and replicable procedures, shall exist for periodic monitoring and reporting.

8.1.2 The frequency and intensity of monitoring shall be based on the size and complexity of the operation and the fragility of the resources under management.

8.1.3 Applicable to SLIMF FMEs only (Note: above indicators do not apply): FME should conduct regular and consistent monitoring in connection with harvesting operations and reforestation.

8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:

- a) Yield of all forest products harvested.
- b) Growth rates, regeneration and condition of the forest.
- c) Composition and observed changes in the flora and fauna.
- d) Environmental and social impacts of harvesting and other operations.
- e) Costs, productivity, and efficiency of forest management.

8.2.1 The monitoring plan should be technically sound and identify/describe observed changes in conditions in terms of:

- Silviculture (growth rates, regeneration and forest condition, typically as part of a suitable continuous forest inventory system);
- Commercial harvest including NTFPs;
- Environment (environmental changes affecting flora, fauna, soil and water resources) (outbreak of pest, invasive species, nesting sites for endangered bird species);
- Socioeconomic aspects (forest management costs, yields of all products, and changes in community and worker relations or conditions, accident rates); and,
- Identified high conservation value forest attributes.

8.2.2 Applicable to SLIMF FMEs only (Note: above indicators do not apply): FME shall at a minimum monitor and record information on the following:

- Amount of products harvested;
- Regular monitoring of any identified high conservation values;
- Invasive exotic species;
- Growth and regeneration of managed species;
- Post harvest inspection for erosion and estimate of residual basal area; and,
- Periodic inventory (10 years).

8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organisations to trace each forest product from its origin, a process known as the "chain of custody."

8.3.1 Volume and source data on harvested forest products shall be available (i.e. scaled, inventoried, measured) in the forest, in transport, at intermediate storage yards (e.g. log yards), and processing centers controlled by FME. (not applicable to SLIMFs)

8.3.2 Sales invoices and other documentation related to the sale of certified products shall include the chain of custody certificate code in the correct format (e.g. RA-FM/COC-XXXX).

8.3.3 Certified forest products shall be clearly distinguished from non-certified products through marks or labels, separate documented storage, and accompanying invoices up to the point of sale (i.e. up to the “forest gate”).

8.3.4 Applicable to SLIMF FMEs only (indicators 8.3.1 and 8.3.3. do not apply): Documentation shall be available allowing products to be traced from the forest to the forest gate..

8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.

8.4.1 FME shall demonstrate that monitoring results are incorporated into revisions of the management plan.

(For SLIMF see criterion 7.2)

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.

8.5.1 For large operations, results of monitoring shall be incorporated into summaries and other documents that are publicly available.

8.5.2 Applicable for medium size and SLIMF FMEs only: (Note: the above indicator does not apply) Upon request, FME shall make available relevant parts of the management plan to stakeholders who are directly affected by the forest management activities of FME (e.g. neighboring landowners).

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.

9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.

9.1.1 FMEs shall have conducted an assessment to identify HCVs. Such an assessment should include:

- Consultation with conservation databases and maps;
- Consideration of primary or secondary data collected during forest inventories on the designated forest area by FME staff, consultants or advisors;
- Interviews with environmental/biological specialists indigenous/local communities, and scientific experts, etc.;
- Documentation of threats to HCVs; and,

- If threats to HCVs or HCVF exist, identification of actions to address the threats.

9.1.2 For large operations, FME shall:

- Produce written HCVF assessment(s) that identify(ies) HCVs or HCVF and proposes strategies to ensure their protection; and,
- Conduct credible, independent, technically qualified review of the HCVF assessment and related recommendations to address HCV threats and protection; and,
- Demonstrate that credible actions are being taken to address HCV/HCVF protection and/or threat reduction.

9.1.3 Applicable to SLIMF FMEs only: Consultations shall have occurred with environmental stakeholders, government or scientists to identify HCVs and/or HCVF. If HCVs or HCVF are present, FME shall take all reasonable steps to protect these values and/or reduce threats.

9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.

9.2.1 FME consultations with stakeholders shall clearly outline identified conservation attributes as well as proposed strategies for their maintenance or threat reduction. .

9.2.2 For large operations, the stakeholder consultation for HCVF strategy development, and actions taken in response to such consultation, shall be documented.

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.

9.3.1 If HCVF or HCVs are present, planning documents shall provide site-specific information which describes the measures taken to protect or restore such values.

9.3.2 Measures to protect HCVF values shall be available in public documents or in the FME management plan summary.

9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.

9.4.1 A system for continuous monitoring of HCVF values shall be incorporated into the FME's planning, monitoring and reporting procedures.

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.

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.

10.1.1 Objectives of tree planting shall be explicit in the management plan, with clear statements regarding the relationship between tree planting and the silviculture, socioeconomic and environmental (i.e. forest conservation and restoration) realities in the region.

10.1.2 Management objectives for conservation of natural forest and restoration shall be described in the management plan.

10.1.3 Management objectives, specifically those related to natural forest conservation and restoration, shall be demonstrated in forest management activities.

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. 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.

10.2.1 FMEs should demonstrate through action their commitment to protect, restore and conserve key areas of natural forest within the ownership.

10.2.2 Buffer zones along watercourses and around water bodies shall be established according to regional best management practices or local laws and regulations. Buffer zones should be indicated on maps.

10.2.3 FME shall establish wildlife habitat and corridors, suitably located across plantation areas, in consultation with acknowledged experts.

10.2.4 Plantations shall be designed so as to maintain or enhance the visual character of the landscape (i.e. design is based on the scale and intensity of natural patterns of disturbance and planting and harvest regimes within the region).

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.

10.3.1 Plantation management should maintain and/or enhance landscape diversity by varying block size and configuration, species, genetic diversity, age class and structure.

10.3.2 Emphasis should be placed on planting and/or applied research on forest species native to the region.

(Note: Also see Criteria 6.4 and 6.10.)

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.

10.4.1 Plantation species shall be selected based on suitability to site conditions (soils, topography and climate) and management objectives.

10.4.2 Where exotic species have been selected, the FME shall explicitly justify this choice demonstrating that their performance is greater than that of native species.

10.4.3 No species shall be planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site and that invasive characteristics, if any, can be controlled.

10.4.4 When exotic species are used the specific measures to prevent spontaneous regeneration outside plantation areas, unusual mortality, disease, insect outbreaks or other adverse environmental impacts shall be documented

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 restore the site to a natural forest cover.

10.5.1 Representative samples of existing natural ecosystems shall be protected or restored to their natural state, based on the identification of key biological areas, consultation with stakeholders, local government and scientific authorities. (Note: Also see Criterion 6.4.)

10.5.2 Applicable to SLIMF FMEs only (note: above indicator does not apply): Plantation design and management practices shall protect ecological values, especially around conservation features or protected areas.

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.

10.6.1 Explicit measures shall be taken to maintain or enhance the soil in terms of structure, fertility and biological activity.

10.6.2 Plantation design and management shall not result in soil degradation.

10.6.3 Forest operations shall not degrade water quality or negatively impact local hydrology.

10.6.4 Where negative impacts on soil or water resources is identified, FME shall take steps to reduce or eliminate such impacts.

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.

10.7.1 Measures shall be taken in the forest to prevent outbreaks of pests, disease, fire and invasive plant introductions.

10.7.2 A plan should exist for forest fire prevention and control.

10.7.3 An integrated pest management plan shall exist that identifies pests, determines acceptable injury or action thresholds, and alternative methods of addressing threats.

10.7.4 FME shall have a policy and strategy to minimize use of chemical pesticides and fertilizers.

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 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.

10.8.1 Monitoring shall include evaluation of potential onsite and off-site ecological and social impacts of plantation activities. (also see criterion 8.2)

10.8.2 Applicable to SLIMF FMEs only (note: above indicator does not apply): FME shall document negative environmental or social impacts and design and implement measures to address the impacts.

10.8.3 The purchase of lands or land leases for plantation establishment should not adversely impact the community and/or resource use by local people.

(Note: For exotic or invasive species issues, see Criterion 10.4.)

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.

10.9.1 The plantation shall not occupy land converted from natural forest since November 1994, unless clear evidence exists that the current manager/owner was not directly or indirectly responsible.

(Note: See also Criterion 6.10.)

Annex 1: FSC Glossary of terms

Biological diversity: The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems. (See Convention on Biological Diversity, 1992)

Biological control agents: Living organisms used to eliminate or regulate the population of other living organisms.

Biological diversity values: The intrinsic, ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components. (See Convention on Biological Diversity, 1992)

Chain of custody: The channel through which products are distributed from their origin in the forest to their end-use.

Chemicals: The range of fertilizers, insecticides, fungicides, and hormones which are used in forest management.

Criterion (pl. Criteria): A means of judging whether or not a Principle (of forest stewardship) has been fulfilled.

Customary rights: Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit.

Ecosystem: A community of all plants and animals and their physical environment, functioning together as an interdependent unit.

Endangered species: Any species which is in danger of extinction throughout all or a significant portion of its range.

Exotic species: An introduced species not native or endemic to the area in question.

Forest integrity: The composition, dynamics, functions and structural attributes of a natural forest.

Forest management/manager: The people responsible for the operational management of the forest resource and of the enterprise, as well as the management system and structure, and the planning and field operations.

Forest management unit (FMU): A clearly defined forest area with mapped boundaries, managed by a single managerial body to a set of explicit objectives which are expressed in a self-contained multi-year management plan.

Forest stewardship: forest management which, in conformity with the FSC Principles and Criteria for Forest Stewardship, is environmentally responsible, socially beneficial, and economically viable.

Genetically modified organisms: Biological organisms which have been induced by various means to consist of genetic structural changes.

Indicator: a quantitative or qualitative variable which can be measured or described, and which provides a means of judging whether a forest management unit complies with the requirements of an FSC Criterion. Indicators and the associated thresholds thereby define the requirements for responsible forest management at the level of the forest management unit and are the primary basis of forest evaluation.

Indigenous lands and territories: The total environment of the lands, air, water, sea, sea-ice, flora and fauna, and other resources which indigenous peoples have traditionally owned or otherwise occupied or used. (Draft Declaration of the Rights of Indigenous Peoples: Part VI)

Indigenous peoples: "The existing descendants of the peoples who inhabited the present territory of a country wholly or partially at the time when persons of a different culture or ethnic origin arrived there from other parts of the world, overcame them and, by conquest, settlement, or other means reduced them to a non-dominant or colonial situation; who today live more in conformity with their particular social, economic and cultural customs and traditions than with the institutions of the country of which they now form a part, under State structure which incorporates mainly the national, social and cultural characteristics of other segments of the population which are predominant." (Working definition adopted by the UN Working Group on Indigenous Peoples).

High Conservation Value Forests: High Conservation Value Forests are those that possess one or more of the following attributes:

- a) Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia); and/or large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance
- b) Forest areas that are in or contain rare, threatened or endangered ecosystems
- c) Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control)
- d) Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health) and/or critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Landscape: A geographical mosaic composed of interacting ecosystems resulting from the influence of geological, topographical, soil, climatic, biotic and human interactions in a given area.

Local laws: Includes all legal norms given by organisms of government whose jurisdiction is less than the national level, such as departmental, municipal and customary norms.

Long term: The time-scale of the forest owner or manager as manifested by the objectives of the management plan, the rate of harvesting, and the commitment to maintain permanent forest cover. The length of time involved will vary according to the context and ecological conditions, and will be a function of how long it takes a given ecosystem to recover its natural structure and composition following harvesting or disturbance, or to produce mature or primary conditions.

Native species: A species that occurs naturally in the region; endemic to the area.

Natural cycles: Nutrient and mineral cycling as a result of interactions between soils, water, plants, and animals in forest environments that affect the ecological productivity of a given site.

Natural Forest: Forest areas where many of the principal characteristics and key elements of native ecosystems such as complexity, structure and diversity are present, as defined by FSC approved national and regional standards of forest management.

Non-timber forest products: All forest products except timber, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products.

Other forest types: Forest areas that do not fit the criteria for plantation or natural forests and which are defined more specifically by FSC-approved national and regional standards of forest stewardship.

Plantation: Forest areas lacking most of the principal characteristics and key elements of native ecosystems as defined by FSC-approved national and regional standards of forest stewardship, which result from the human activities of either planting, sowing or intensive silvicultural treatments.

Precautionary approach: Tool for the implementation of the precautionary principle.

Principle: An essential rule or element; in FSC's case, of forest stewardship.

Silviculture: The art of producing and tending a forest by manipulating its establishment, composition and growth to best fulfil the objectives of the owner. This may, or may not, include timber production.

SLIMF (small or low intensity managed forest): A forest management unit which meets specific FSC requirements related to size and/or intensity of timber harvesting, and can therefore be evaluated by certification bodies using streamlined evaluation procedures. The applicable FSC requirements are defined in *FSC-STD-01-003 SLIMF Eligibility Criteria*.

Stakeholder: Individuals and organizations with a legitimate interest in the goods and services provided by an FMU; and those with an interest in the environmental and social effects of an FMU's activities, products and services. They include: those individuals and organizations which exercise statutory environmental control over the FMU; local people; employees; investors and insurers; customers and consumers; environmental interest and consumer groups and the general public [modified from Upton and Bass, 1995].

Succession: Progressive changes in species composition and forest community structure caused by natural processes (nonhuman) over time.

Tenure: Socially defined agreements held by individuals or groups, recognized by legal statutes or customary practice, regarding the "bundle of rights and duties" of ownership, holding, access and/or usage of a particular land unit or the associated resources there within (such as individual trees, plant species, water, minerals, etc.).

Threatened species: Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Use rights: Rights for the use of forest resources that can be defined by local custom, mutual agreements, or prescribed by other entities holding access rights. These rights may restrict the use of particular resources to specific levels of consumption or particular harvesting techniques

Annex 2: List of national and local forest and related laws and administrative requirements which apply in Thailand

- Forest Law (1941)
- National Park Act (1961)
- Forest Reserve Act (1964)
- Environmental Quality Act (1992)
- Forest Plantation Act (1992)
- Wildlife Sanctuary Law of (1964)
- Watershed Classification Act (1985),
- Local Administration Act (1994)
- Logging Ban (1989)
- Safety Act (1992)
- Labor Protection Law (1998)
- Constitution of Thailand (1991)

Annex 3: List of the multilateral environmental agreements and ILO Conventions that Thailand has ratified

Thailand is a signatory to the following conventions:

- Forced Labour Convention, 1930 (No. 29)
- Abolition of Forced Labour Convention, 1957 (No. 105)
- Equal Remuneration Convention, 1951 (No. 100)

Annex 4: List of officially endangered species in Thailand

Threatened Species: The following list includes all mammals which occur in Thailand and are rated as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU) in the 2004 IUCN Red List of Threatened Animals.

- Critically Endangered:
 - o Javan Rhinoceros (*Rhinoceros sondaicus*).
 - o Kouprey (*Bos sauveli*).
 - o Sumatran Rhinoceros (*Dicerorhinus sumatrensis*).
- Endangered:
 - o Asian Elephant (*Elephas maximus*).
 - o Banteng (*Bos javanicus*).
 - o Kitti's Hog-nosed Bat (*Craseonycteris thonglongyai*). (Endemic to Thailand.)
 - o Lesser Roundleaf Bat (*Hipposideros turpis*).
 - o Neill's Long-tailed Giant Rat (*Leopoldamys neilli*). (Endemic to Thailand.)
 - o Otter Civet (*Cynogale bennetti*).
 - o Particolored Flying Squirrel (*Hylopetes alboniger*).
 - o Tiger (*Panthera tigris*).
 - o Wild Water Buffalo (*Bubalus arnee*).
- Vulnerable:
 - o Asiatic Black Bear (*Ursus thibetanus*).
 - o Asiatic Golden Cat (*Catopuma temminckii*).
 - o Assamese Macaque (*Macaca assamensis*).
 - o Back-striped Weasel (*Mustela strigidorsa*).
 - o Bourret's Horseshoe Bat (*Rhinolophus paradoxolophus*).
 - o Clouded Leopard (*Neofelis nebulosa*).
 - o Dhole (*Cuon alpinus*).
 - o Dugong (*Dugong dugon*).
 - o Eld's Deer (*Cervus eldi*).
 - o Eurasian Otter (*Lutra lutra*).

- o Fishing Cat (*Prionailurus viverrinus*).
- o Flat-headed Cat (*Prionailurus planiceps*).
- o Gaur (*Bos frontalis*).
- o Long-tailed Goral (*Naemorhedus caudatus*).
- o Mainland Serow (*Capricornis sumatraensis*).
- o Malayan Porcupine (*Hystrix brachyura*).
- o Malayan Tapir (*Tapirus indicus*).
- o Marbled Cat (*Pardofelis marmorata*).
- o Northern Pigtail Macaque (*Macaca leonina*).
- o Pig-tailed Macaque (*Macaca nemestrina*).
- o Pileated Gibbon (*Hylobates pileatus*).
- o Sikkim Rat (*Rattus sikkimensis*).
- o Smooth-coated Otter (*Lutra perspicillata*).
- o Stumptail Macaque (*Macaca arctoides*).
- o Surat Serotine (Bat) (*Eptesicus demissus*). (Endemic to Thailand.)
- Other:
 - o Fea's Muntjac (*Muntiacus feae*). (Rated Endangered in the 1994 Red List; rated Data Deficient in the 1996 and 2000 Red Lists.)

Annex 5: Summary of the Certification Assessment Process⁵

The certification assessment process begins with a candidate operation submitting an application to NEPCon. Based upon a review of the application, the scope of the area to be certified and discussions with the candidate, NEPCon will propose a certification process that includes either a preassessment and then a main assessment, or goes directly to a main assessment. Every candidate operation is assigned a NEPCon task manager who will liaise with the assessment lead auditor and the candidate to schedule and perform the evaluations.

NEPCon auditors are provided with detailed guidance on the certification process, including pre-assessment briefings (either in person or by telephone) and access to a written NEPCon handbook for forest assessment. The purpose of these briefings and the manual is to ensure that a consistent and thorough certification process is followed.

In addition to following the NEPCon procedures outlined in our forest evaluation handbook, there are three other ways in which we ensure accuracy and fairness in our certifications:

1. The assessment must involve individuals who are familiar with the particular region and type of forest management operation under evaluation. It is NEPCon policy to involve local specialists in all assessments.
2. Team members must be familiar with NEPCon certification procedures. Each NEPCon certification assessment has a designated lead auditor who must have participated in a formal NEPCon auditor-training course or previously participated in other NEPCon forest management assessments or audits.
3. The assessment must use region-specific standards (i.e. accredited FSC standard or a "regionalized" NEPCon Interim Standard, based on this NEPCon Generic Standard).

Team Selection and Planning: NEPCon selects a qualified lead auditor and other team members to participate in the assessment. The lead auditor's first task is to ensure that all team members understand the scope and intent of the assessment process. Responsibility for evaluation of different sections (i.e. specific criteria and indicators) of the standard are assigned to different team members, depending on their particular training and expertise. All team members can provide input into any principle, but lead responsibility is assigned for data collection, analysis and writing for each criterion and indicator.

Stakeholder notification: At least 45 days prior to forest evaluation, NEPCon notifies stakeholders of the pending assessment and requests stakeholders' observations or comments with regard to the operations conformance with the certification standard.

Fieldwork and Data Collection: Evaluation of conformance with the standard is based upon data collection by the auditors through review of FME management documentation, interviews with staff and stakeholders, and field observations and measurements. The team organizes opening meetings with the FME staff to review the assessment scope and procedures and certification standards. Documentation review and interview with FME staff begin immediately. The assessment process then moves quickly to the field phase.

⁵ For detailed information about procedures, contact our headquarters or regional offices through www.nepcon.org

Inspections are made to sites chosen by NEPCon auditors based on a comprehensive review of the candidate FME's forest holdings and management activities, discussions with interested/affected parties, and identification of critical issues or challenging sites. Site visits occur in the forest, at processing facilities, and in surrounding communities. Visits emphasize management activities of all types and phases and different biological or physical conditions.

Team members meet independently with stakeholders. All assessments solicit and incorporate input (confidential and/or open) from directly affected and/or knowledgeable stakeholders, including local communities, adjoining landowners, local forest industry, environmental organizations, government agencies, and scientific researchers. During these consultations, assessment team members explain the assessment process, solicit opinions, and gather impressions about the field performance of the operation being assessed.

Data Analysis and Decision making: Throughout the assessment the team meets independently to discuss progress in gathering information, and discuss preliminary findings. The assessment team works in a consensus fashion to analyze information and evidence gathered, evaluate conformance and reach agreement on their findings as to the certification of the candidate operation.

The assessment team evaluates performance by the FME at the indicator level of the standard. Any non-conformances are analyzed and classified as either minor or major. A nonconformance is considered major if it results in a fundamental failure to achieve the objective of the relevant criterion in the standard. Conversely, a nonconformance is considered minor if the impacts are limited in scale, prompt corrective action has been taken to ensure it will not be repeated and it does not result in a fundamental failure to achieve the objective of the relevant criterion. For each area of nonconformance identified, the assessment team develops a nonconformity report (NCR) which is classified as follows:

- **Major Nonconformity Report (NCR)** is issued to document a major nonconformance with an indicator(s)/criterion that the candidate FME must correct before NEPCon certification is granted;
- **Nonconformity Report (NCR)** is issued to document a minor nonconformance that candidate FME must correct by a specific deadline (i.e. short term - usually within one year) during the renewable five-year certification period (which is the standard FSC certification contract period); and,
- **Observation** is a very minor problem or the early stages of a problem which do not of itself constitute a nonconformance, but which the auditor considers may lead to a future nonconformance if not addressed by the client. An observation may be a warning signal on a particular issue that, if not addressed, could turn into a nonconformance in the future.

Report Write-up: Following the forest evaluation, the team prepares the certification assessment report. This report follows a standardized format and includes detailed findings of performance and proposes pre-conditions (major non-conformances), NCRs or observations.

Review of Assessment Report by Candidate Operation, Independent Peer Reviewers and NEPCon Decision Review: The candidate operation, at least one peer reviewer, and NEPCon regional staff, review each certification assessment report.

Certification Decision: Once the above steps are completed, the applicable NEPCo regional office coordinates a certification decision process. If a certification decision is to approve certification, a five-year certification contract will be executed which requires annual on-site audits. If an operation is not approved, the certification decision will establish what must be done in order for the operation to achieve certified status in the future.

About NEPCon

NEPCon (Nature Economy and People Connected) is an international non-profit organisation working to support better land management and business practices that benefit people, nature and the climate in 100+ countries around the world. We do this through innovation projects, capacity building and sustainability services. We focus on forest and climate impact commodities and related sectors, such as tourism.

We are accredited certifiers for sustainability schemes such as FSC™ (Forest Stewardship Council™), PEFC (Programme for the Endorsement of Forest Certification), RSPO (Roundtable on Sustainable Palm Oil), Rainforest Alliance Sustainable Agriculture and SBP (Sustainable Biomass Program). We also certify to our own LegalSource™, Sustainable Tourism and Carbon Footprint Management standards. A self-managing division of NEPCon promotes and delivers our certification services. Surplus from certification activities supports NEPCon's non-profit activities.

NEPCon is recognised by the EU as a Monitoring Organisation under the EU Timber Regulation.

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