



# SmartWood

*Practical conservation through certified forestry*

## Rainforest Alliance/SmartWood Interim Standards for Assessing Forest Management

(July 2005)

### **PURPOSE AND DEVELOPMENT OF THE NEPAL INTERIM STANDARDS**

These interim standards have been developed through Nepali stakeholder consultation to provide forest managers, landowners, forest industry, scientists, environmentalists and the general public with information on the aspects of forest management operations in Nepal that SmartWood evaluates to make certification decisions in the Forest Stewardship Council (FSC) certification system. The principles, criteria and indicators<sup>1</sup> in this document are applicable for assessing all forest management operations (FMOs) with NTFP and/or timber production as a primary objective. A list of who provided direct input and documents consulted in developing the interim standards can be found in the appendix.

The first Nepal interim standards for NTFPs were developed in November 2003 as described above. NTFPs are a primary source of community forestry revenue, food, fodder and medicinal products in Nepal. The initial Nepali FSC certifications were focused on NTFPs in the upper temperate forest in the midlands where NTFPs are commercially important and timber is a minor forest product primarily for local use. Although most communities use timber locally, given the lack of an adequate transportation system, they wanted to include FSC certification as a way of increasing awareness amongst local people of the importance of FSC certification. Moreover, timber products, especially in the sub-tropical zone of the Terai, may gain international markets where FSC certification could provide environmental and social assurances to buyers. Thus in July 2005 interim timber standards were incorporated to produce a comprehensive set of standards that include both timber and NTFPs.

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<sup>1</sup> It is SmartWood 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.

## 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 concern 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?

The Nepal Interim Standards for Assessing Forest Management was primarily based on the SmartWood Generic Standards for Assessing Forest Management June 2005. In 1991, the SmartWood Program put forth the *first* set of global standards for forest management certification, entitled “Generic Guidelines for Assessing Natural Forest Management” applicable at the field or operational level for forest operations. In 1991, SmartWood also distributed the first region-specific guidelines for management of natural forests in Indonesia. In 1993, SmartWood distributed the draft “Generic Guidelines for Assessing Forest Plantations” and revised guidelines for natural forest management. The initial Working Group for developing the first FSC Principles and Criteria in 1991-1993 was co-chaired by a SmartWood Director. In 1998, after seven years of application and “learning by doing” through forest assessments and audits, SmartWood conducted a major revision of its standard for assessing forest management in both natural forests and tree plantations.

The SmartWood generic standards were developed in consultation with our staff and representatives of the SmartWood Program worldwide, as well as other professional foresters, ecologists, social scientists and other forest practitioners. SmartWood representatives have in-depth field experience developing region-specific forest certification standards, some going back as far as 1989 (Indonesia, California). We believe these standards are in accord with FSC requirements as well as other forest management and biological conservation guidelines issued by the International Union for the Conservation of Nature (IUCN) and the International Tropical Timber Organization (ITTO). We have also drawn on work of our SmartWood Network partners (Imaflora in Brazil and NEPCon in Denmark and Eastern Europe), Center for International Forestry (CIFOR), International Labor Organization (ILO), many scientists, forest industry, non-governmental organizations (NGOs), and FSC regional standards working groups. We would like to acknowledge the significant contributions made by these and other international, national and local organizations, and the many forestry operations (certified and uncertified), foresters, loggers, and local stakeholders who have critiqued past versions of the SmartWood standards and provided suggestions for improvement.

## REGIONAL STANDARDS

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 endorsed standard". Once endorsed, all FSC-approved certifiers (like SmartWood) must use the endorsed regional standard as the fundamental starting point for FSC certification in that country/region. Certifiers can choose to be more rigorous than the regional standard, but they cannot be less rigorous. Nepal is in the very early stages of forming an FSC regional working group for developing regional standards.

Operations certified under a previous FSC or SmartWood standard have a minimum of one year to meet any newly endorsed FSC regional standard. Sometimes a longer transition may be needed. Where necessary, SmartWood coordinates with the FSC to establish an acceptable transition schedule for the certified FMO.

## PUBLIC INPUT AND COMMENT ON SMARTWOOD STANDARD AND CERTIFICATION PROCESSES

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 FMO:

1. A public stakeholder consultation document that announces each certification assessment 30 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 30 days prior to it taking place. This document is distributed publicly prior to or during an assessment. The document is typically distributed through by hand delivery, FAX, mail, or email. The specific SmartWood 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 of the above documents, contact SmartWood headquarters (61 Millet Street, Suite 201, Richmond, Vermont USA 05477, telephone 802-434-5491 or FAX 802-434-3116) or visit our website at [www.smartwood.org](http://www.smartwood.org). **We strongly encourage you to give us your input, either positive or negative, on our candidate or certified operations, certification standards, or certification procedures.**

## **PHILOSOPHY OF THE SMARTWOOD STANDARD**

The FSC Principles and Criteria for Forest Stewardship (February 2000) form the starting point for every FSC/SmartWood certification globally. SmartWood developed the indicators presented here as a global standard. These indicators are the basis upon which region-specific “SmartWood Interim Standards” are to be developed for use in the field by forest assessors to evaluate the sustainability of forest management practices and impacts of candidate FMOs.

Certified operations may not be scientifically or definitively “sustainable” in all aspects; but they will have demonstrated a clear commitment to sustainable forest management policy and practice. The three concepts that SmartWood considers the fundamental aspects of sustainable forest management are:

1. Forest operations must maintain environmental functions, including watershed stability, conservation of biological resources and protection of wildlife habitat;
2. Management planning and implementation must incorporate economically sustainable yield concepts for all harvested or utilized forest products, based on an understanding of, and documentation related to, local forest ecology; and,
3. Activities must have a positive impact on the long-term social and economic well being of local communities.

## **STANDARDS STRUCTURE**

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 Rainforest Alliance/SmartWood Nepal specific indicators. All criteria in all principles must be evaluated in every assessment; unless certain principles are deemed not applicable by SmartWood auditors (e.g. Principle 10 will not be applicable if there are no plantations).

## SYNOPSIS OF THE CERTIFICATION ASSESSMENT PROCESS<sup>2</sup>

SmartWood assessors are provided with detailed guidance on the certification process, including pre-assessment briefings (either in person or by telephone) and access to a written SmartWood 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 SmartWood 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 SmartWood policy to involve local specialists in all assessments.
2. Team members must be familiar with SmartWood certification procedures. Each SmartWood certification assessment has a designated lead auditor who must have either participated in a formal SmartWood assessor-training course and have previously participated in another SmartWood forest management assessments and audits.
3. The assessment must use region-specific standards (i.e. endorsed FSC standard or a “regionalized” SmartWood Interim Standard, based on this SmartWood Generic Standard).

Team Selection and Planning – SmartWood 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 30 days prior to field evaluation, SmartWood notifies stakeholders of the pending assessment and requests stakeholders observations or comments with regard to the operations compliance 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 FMO management documentation, interviews with staff and stakeholders, and field observations and measurements. The team organizes an opening meetings with the FMO staff to review the assessment scope and procedures and certification standards.

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<sup>2</sup> For detailed information about procedures, contact our headquarters or regional offices through [www.smartwood.org](http://www.smartwood.org).

Documentation review and interview with FMO staff begin immediately. The assessment process then moves quickly to the field phase. Inspections are made to sites chosen by SmartWood assessors based on a comprehensive review of the candidate FMO'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 as directly affected and/or knowledgeable stakeholders as possible, 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 constantly meets 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. Auditor-only meetings happen throughout the assessment process.

The assessment team reviews performance by the FMO at the indicator level of the standard. Any non-conformances is analyzed and classified as either minor or major. A noncompliance is considered major if it results in a fundamental failure to achieve the objective of the relevant criterion in the standard. For each areas of nonconformance identified, the assessment team develops corrective actions which are classified as follows:

- **Pre-conditions** are improvements addressing major nonconformances that candidate FMO must implement before SmartWood certification is granted;
- **Corrective action requests** are improvements addressing minor nonconformances that candidate FMO must implement by specific deadlines (i.e. short term - usually within one year) during the renewable five-year certification period (which is the standard FSC certification contract period); and,
- **Observations** are voluntary improvements related to very minor conformance problems (compliance not mandatory or required).

Report Write-up – following the field evaluation the team prepares the certification assessment report. This report follows a standardized format and includes detailed findings of performance and proposes pre-conditions, Corrective action requests or observations.

Review of Assessment Report by Candidate Operation, Independent Peer Reviewers and SmartWood Decision Review – the candidate operation, at least

one peer reviewer, and SmartWood regional staff, review each certification assessment report.

Certification Decision – Once the above steps are completed, SmartWood headquarters 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.

## **INDICATORS FOR SMALL AND LARGE FMOS**

In some cases SmartWood has identified indicators that are specific to certain sizes of operations. Clear quantitative definitions for small versus large FMOs shall be included in regionalized SmartWood Interim Standards. Where these SmartWood regional thresholds are not established, large FMO should be considered those larger than 50,000 ha. Small FMO definition is determined by FSC regional thresholds set for small and low intensity managed forests (SLIMF) which have been set either globally by FSC or by FSC National Initiatives.

## **FSC Principles and Criteria & SmartWood Interim Nepal Indicators**

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.

Timber

1.1.1 FMO shall demonstrate a record of compliance with national, regional, district and local laws and regulations.

1.1.2 FMO shall undertake specific corrective actions when incidences of non-compliance are identified.

**NTFP**

Same as above

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

Timber

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

**NTFP**

1.2.1 The FMO or NTFP harvester(s) maintains up-to-date harvesting permits, collecting licenses, collecting contracts or cultivation permits and duly pays any fees, leases, royalties etc.

**Timber**

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

**NTFP**

1.2.2 Same as above

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.

**Timber**

1.3.1 FMO shall be aware of and understands the legal and administrative obligations with respect to relevant international agreements.

**NTFP**

1.3.1 Same as above

**Timber**

1.3.2 FMO 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).

**NTFP**

**1.3.2 Same as above including NTFPs on CITES Appendix 1 are not being harvested.**

**Timber**

1.3.3 Major contraventions to applicable international agreements shall not be allowed.

**NTFP**

1.3.3 Same as above

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.

**Timber**

1.4.1 Conflicts between laws, FSC P&C and international treaties or conventions shall be identified by FMO (or SmartWood auditors during certification assessment).

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

**NTFP**

1.4.1 Same as above

1.4.2 Same as above

1.4.3 Collection of forest resources (e.g. NTFPs, firewood, timber, game etc.) for commercial purposes by third party NTFP harvesters (e.g. local communities, individuals external to the FMO) throughout the forest management area is monitored, and if necessary, controlled.

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

**Timber**

1.5.1 The forest management unit(s) shall be protected from harvesting activities and other activities not controlled by forest manager or local people with use rights. (.e.g. settlement, poaching, illegal harvesting).

1.5.2 There should be little to no evidence of unauthorized activities in forest management areas.

1.5.3 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.

**NTFP**

1.5.1 Same as above

1.5.2 Same as above

1.5.3 Same as above

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

**Timber**

1.6.1 FMO shall have a publicly available policy or statement committing the organization to adhere to the FSC certification standards.

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

**NTFP**

1.6.1 Same as above.

1.6.2 Same as above

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.

Timber

2.1.1 Ownership of the land by FMO shall be demonstrated or FMO shall obtain the legal right to manage the lands and to utilize the forest resources for which certification are sought.

2.1.2 CFUGs have certificates of their operational plan (OP) and constitution.

2.1.3 Customary use rights, leases or other use rights shall be documented in the OP, constitution and minutes

NTFP

2.1.1 Same as above

2.1.2 Same as above

2.1.3 Same as above

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.

Timber

2.2.1 All legal or customary tenure or use rights to the forest resource of all local communities are clearly documented in the resource inventory and mapped in the OP.

2.2.2 FMO shall provide evidence in their minutes and records that free and informed consent to management activities affecting use rights has been given by local communities.

2.2.3 Controlled access should be given or offered to local communities for timber and non-timber forest products based on either legal agreements or longstanding local arrangements and verified in the OP.

NTFP

2.2.1 Same as above

2.2.2 Same as above

2.2.3 Same As above

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.

Timber

- 2.3.1 FMO shall use appropriate mechanisms for resolving disputes over tenure claims and use rights. This shall be verified in the OP, constitution and recorded in meeting minutes
- 2.3.2 FMO should not be involved in outstanding disputes of substantial magnitude on the candidate forest area that involve a significant number of interests. Identification of major disputes of this character shall preclude certification of the FMO

**NTFP**

- 2.3.1 Same as above
- 2.3.2 Same as above

**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.

**Timber**

- 3.1.1 FMO 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 the land or forest resources and their entitlements formally recognized in the OP and the specific areas marked on maps.
- 3.1.2 Forest operations begin only once disputes have been resolved or all reasonable means have been taken to resolve them. Resolution is documented in meeting minutes
- 3.1.3 Agreements with indigenous groups shall be honored and documented in meeting minutes.

**NTFP**

- 3.1.1 Same as above
- 3.1.2 Same as above
- 3.1.3 Same as above

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

**Timber**

- 3.2.1 FMO shall document any potential threats in the OP and meeting minutes, direct and indirect, to indigenous resources or tenure and undertake actions to prevent negative impacts.

**NTFP**

- 3.2.1 Same as above

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.

Timber

3.3.1 Sites of special indigenous cultural, ecological, economic or religious significance shall be identified in the OP and on field maps or in the field.

3.3.2 Policies and procedures shall include the involvement of indigenous people in the identification of special sites.

3.3.3 Special sites shall be identified in operational plans and protected during field operations.

NTFP

3.3.1 Same as above

3.3.2 Same as above

3.3.3 Same as above

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.

Timber

3.4.1 Written or verbal agreements shall be recorded in the OP when there is use of traditional knowledge for commercial purposes.

3.4.2 Where applicable, compensation systems shall be in place prior to commencement of forest operations which affect indigenous interests.

NTFP

3.4.1 Same as above

3.4.2 Same as above

**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.

Timber

4.1.1 Local communities and residents shall be given equal preferential opportunities in timber harvesting and other forest management activities

in terms of employment, training, and provision of supplies to FMO, and other benefits or opportunities.

- 4.1.2 FMO policies and practices shall ensure equity for employees in terms of hiring, advancement, dismissal, remuneration and employment related social security. They shall consider involving women, disadvantaged and dalit groups. This shall be documented in minutes and records.

**NTFP**

- 4.1.1 Local communities and residents are given first preference in harvesting and other NTFP management activities in terms of ownership, management, training, labor pool, provision of supplies to the FMO and other benefits or opportunities. This shall be documented in minutes and records.

- 4.1.2 Same as above

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

**Timber**

**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. Women and ethnic minorities are compensated at the same rate for their job classification as majority men.**

- 4.2.2 FMO shall implement a program of worker safety.
- 4.2.3 Health and safety measures comply with national minimum requirements.
- 4.2.4 FMO shall maintain up to date records of safety performance including work related accidents.
- 4.2.5 Workers are provided with safety equipment in good working order, appropriate to the tasks of workers and the equipment used.

**NTFP**

**4.2.1 Same as above**

- 4.2.2 Same as above
- 4.2.3 Health and safety measures comply with national minimum requirements. NTFP harvest and processing methods and facilities are safe and sanitary for both workers and end consumers.
- 4.2.4 Same as above
- 4.2.5 Same as above

**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).**

**Timber**

4.3.1 FMOs, by their actions and policies (in OPs and minutes), shall respect the rights of workers (Workers can be both worker-users and employees involved in the NTFP management) to organize or join trade unions and to engage in collective bargaining as outlined in ILO Conventions 87 and 98.

**NTFP**

4.3.1 Same as above

**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.**

**Timber**

4.4.1 In conjunction with local stakeholders the FMO 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 FMO shall demonstrate that input from community participation was considered and/or responded to during management planning and operations.

**NTFP**

4.4.1 Same as above.

4.4.2 Same as above.

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.

**Timber**

4.5.1 FMO shall make all reasonable efforts to avoid losses and damages affecting local peoples and user groups and in resolving grievances related to legal rights, damage compensation and negative impacts. Records of such grievances shall be kept.

4.5.2 Appropriate procedures for resolving grievances and determining compensation for loss or damage shall be established, implemented and recorded.

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

**NTFP**

4.5.1 Same as above.

4.5.2 Same as above

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.

Timber

5.1.1 Current and future budgets include provision for environmental and social as well as operational costs 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 is based upon sound assumptions.

NTFP

5.1.1 Current and future budgets include provision for environmental and social as well as operational costs e.g. management planning, road maintenance, long-term forest health, NTFP regeneration monitoring, and conservation investments.

5.1.2 Same as above.

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

Timber

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

5.2.2 FMO 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.

NTFP

5.2.1 FMO should seek the "highest and best use" for individual NTFP species.

**5.2.2 FMO should encourage utilization of frequently occurring,**

**lesser known, or less-commonly utilized plant species for commercial**

**and subsistence uses. However, the utilization of lesser-known species**

**does not compromise local NTFP needs (e.g. for fruits, medicines,**

**game-attracting species, etc.) and does not negatively impact forest diversity.**

5.2.3 Timber forest products should be considered during forest use and processing.

5.2.4 Same as above

5.2.5 When feasible and applicable, the FMO applies multiple certification systems (e.g. FSC, organic, fair trade) to NTFP resources.

5.2.6 The potential of utilizing byproducts that result from NTFP harvesting and incorporating them in commercial activities are investigated.

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

Timber

5.3.1 Harvesting techniques shall be designed to avoid log breakage, timber degrade 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.

NTFP

5.3.1 Harvesting techniques shall be designed to avoid damage to residual NTFPs and other resources. (Note: See Principle 6 for assessing damage to forest resources.

5.3.2 FMO and processing centers minimize waste associated with harvesting or processing and encourage utilizing (recycling) the wastages.

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

Timber

5.4.1 FMO should foster product diversification and exploration of new markets and products (also Criterion 5.2) including opportunities like ecotourism.

5.4.2 FMO should support local value added processing.

5.4.3 FMO forest operation supports livelihood opportunities for local communities as appropriate to the local condition

NTFP

5.4.1 Same as above.

5.4.2 Same as above.

5.4.3 Same as above

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

watersheds and fisheries.

Timber

5.5.1 FMO management 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), grazing, visual quality, contributions to regional biodiversity, recreation and tourism

5.5.2 FMO shall map and protect protection zones along all water streams, pools and high bogs, consistent with the requirement of national regulations or best management practices. (Note: See 6.5)

NTFP

5.5.1 Same as above

5.5.2 Same as above

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

Timber

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 Timber harvesting is based on a calculated periodic allowable harvest (e.g. annual allowable cut).

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

5.6.4 Actual harvests do not exceed calculated replenishment rates over the long term.

NTFP

5.6.1 Appropriate to the scale and intensity of operations, the intensity, frequency and seasonality of NTFP harvest, by area and volume, is based on a combination of scientific study and/or long-term local/traditional experience and knowledge and does not exceed sustainable levels.

5.6.2 NTFP harvest rates, cultural techniques and harvest methods are appropriate for the particular plant part used (exudate, reproductive propagule, vegetative structure) and management activities maintain viable populations of target NTFPs.

5.6.3 Allowable harvest levels shall be based on conservative, well-documented and most current estimates of growth and/or regeneration.

5.6.4 Same as above.

**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.

Timber

- 6.1.1 Environmental assessments shall be completed during management planning. In the case of community forestry, environmental impacts assessments are done by Forest User Groups during the operational plan preparation.
- 6.1.2 Environmental assessments shall consistently occur prior to forest management activities or other site disturbances.
- 6.1.3 Environmental impacts of on-site processing facilities shall be assessed and 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 FMO-s only:** FMO shall demonstrate knowledge of the possible negative impacts of its activities and seeks to minimize them.
- 6.1.6. In case of community based and private forestry, management plan must be approved by DFO.

NTFP

- 6.1.1 Same as above
- 6.1.2 Same as above
- 6.1.3 Same as above
- 6.1.4 Same as above
- 6.1.5. Same as above

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.

Timber

- 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. .
- 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 shall be demarcated on maps, and where feasible, on the ground.
- 6.2.5 Effective procedures shall be implemented during forest operations to protect 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 FMO-s only:** Where information exists on rare, threatened and endangered species and their habitat the FMO shall use this information to map and protect these resources.
- 6.2.8 Rare, threatened and endangered species should be listed in the OP, and awareness shall be raised among stakeholders.

**NTFP**

- 6.2.1 Same as above
- 6.2.2 Same as above
- 6.2.3 Same as above
- 6.2.4 Same as above
- 6.2.5 Same as above
- 6.2.6 Same as above
- 6.2.7 Same as above
- 6.2.8 Same as above

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.**

**Timber**

- 6.3.1 Silviculture and/or other management systems shall be appropriate to the ecology of the forest and other resources (e.g. soils, hydrology...).
- 6.3.2 Ecological and silviculture rationale behind management prescriptions shall be well-documented, i.e. based on site-specific field data or published analyses of local forest ecology (e.g. regeneration and succession) or silviculture.
- 6.3.3 Management prescriptions should maintain, enhance or restore forest composition (i.e. species numbers and diversity) and structure.
- 6.3.4 Management is designed to ensure that the full complement of tree species regenerates successfully in the forest area over the duration of the rotation.
- 6.3.5 Standing and fallen dead wood habitats should be retained, appropriate to the local situation.

**NTFP**

- 6.3.1 Ecological rationale behind management prescriptions is well-documented, i.e. based on site-specific field data or published analyses of local ecology

- (e.g. regeneration and succession) and government regulations.
- 6.3.2 Management prescriptions should maintain, enhance or restore NTFP composition (i.e. species numbers and diversity) and structure.
  - 6.3.4 NTFP harvest and management takes into account the ecological role and requirements of the target NTFP and other associated species, e.g. food for frugivorous birds and mammals, animal dispersal of seeds, maintenance of specific ecological interdependencies, etc.
- 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.

Timber

- 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 (a 10% target figure is encouraged by not mandatory).
- 6.4.2 In conjunction with experts, appropriate restoration, management and protection activities shall be defined, documented, and implemented in the field.
- 6.4.3 **Applicable to SLIMF FMO-s only:** Representative samples of ecosystems that are unique and not under protection by public or private agencies known to exist in the FMU shall be identified, recorded on maps and excluded from the harvest area.

NTFP

- 6.4.1 Same as above
- 6.4.2 Same as above
- 6.4.3 Same as above

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.

Timber

- 6.5.1 Written guidelines shall be available which cover the aspects of management that have demonstrated impact in the forest, typically including silvicultural operations, biological conservation, technical specifications for skid trail (location, width and density), road design and conservation structures, and handling of chemicals.
- 6.5.2 Maps and work plans shall be produced at adequate scale to be useful for supervision of soil and water resource management and protection activities and to facilitate on-site monitoring thereof.
- 6.5.3 Maps shall be prepared before logging or road construction occurs.

- 6.5.4 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, streamside and/or roadside buffer zones, and conservation areas.
- 6.5.5 Training shall be given to field staff, forest users, contractors and local community to meet guidance requirements.
- 6.5.6 Road construction, maintenance and closure standards shall be followed in the field.

#### **NTFP**

- 6.5.1 Written guidelines shall be available which cover the aspects of management that have demonstrated impact in the forest, typically including harvest operations, biological conservation, technical specifications for work trail, road design and conservation structures, and handling of chemicals.
- 6.5.2 Same as above
- 6.5.3 Maps shall be prepared before harvesting and work trail construction.
- 6.5.4 Maps should specify areas suitable for NTFP seasonal harvesting and indicate locations of harvesting, streamside buffer zones, and conservation areas.
- 6.5.5 Same as above.
- 6.5.6 Same as above.

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.

#### **Timber**

- 6.6.1 Forest managers shall demonstrate a commitment to reducing and eliminating in due course, planned reliance upon chemical pesticides
- 6.6.2 If chemicals are used in the forest, they should be used as part of an integrated pest management (IPM) system that carefully identifies threats and analyzes chemical and non-chemical alternatives. .
- 6.6.3 If chemicals are used:
  - A complete inventory of chemicals shall be provided by the FMO 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 FMO including name of the product, location and method of application, total quantity of chemical used and dates of application.
  - Safe handling, application and storage procedures shall be followed; and,

- Staff, contractors, forest users and local community shall receive training in handling, application and storage procedures.
- 6.6.4 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 a consensus must be reached and documented through discussions with government agencies, environmental, other stakeholder groups and the FSC, and extremely careful use procedures and training must be in place.

**NTFP**

- 6.6.1 Same as above
- 6.6.2 Same as above
- 6.6.3 Same as above
- 6.6.4 Same as above

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.

**Timber**

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.

**NTFP**

6.7.1 Same as above

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.

**Timber**

- 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.

**NTFP**

- 6.8.1 Same as above
- 6.8.2 Same as above

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

### Timber

- 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 Emphasis should be placed on planting, and/or applied research on, forest species native to the region.
- 6.9.3 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.

### NTFP

- 6.9.1 Same as above
- 6.9.2 Same as above
- 6.9.3 Same as above

- 6.10 Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:**
  - a) Entails a very limited portion of the forest management unit; and,**
  - b) Does not occur on high conservation value forest areas; and,**
  - c) Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.**

### Timber

- 6.10.1 FMO should not convert primary, degraded primary, mature secondary forests, or threatened non-forested habitat to plantations or non-forest land uses.
- 6.10.2 If conversion occurs, it shall not exceed 5% of the forest management unit over any 5 year period, and conversions shall have the support of environmental and social stakeholders.
- 6.10.3 If plantations or non-forest land uses are established in forest or grassland areas, clear verbal, written or visual guidelines shall be given to field staff for identifying acceptable areas and implementing technically sound practices.
- 6.10.4 Any conversion should produce clear long term conservation benefits across the FMU.
- 6.10.5 Plantations or non-forest uses shall not replace high conservation value forest.
- 6.10.6 FMO should take measures to restore, conserve or manage natural forest or grasslands in surrounding or adjoining areas equal to or exceeding the area disturbed; and support for such actions exists amongst environmental and other stakeholders.

### NTFP

- 6.10.1 FMO should not convert primary, degraded primary NTFPs, or threatened non-forested habitat to plantations or non-forest land uses.
- 6.10.2 Natural forest areas should not be converted to NTFP production areas

- 6.10.3 If conversion occurs, it shall not exceed 5% of the forest management unit over any 5 year period, and conversions shall have the support of environmental and social stakeholders.
- 6.10.4 If plantations, NTFPs or non-forest land uses are established in forest or grassland areas, clear verbal, written or visual guidelines shall be given to field staff for identifying acceptable areas and implementing technically sound practices.
- 6.10.4 Any conversion should produce clear long term conservation benefits across the FMU.
- 6.10.5 Plantations or non-forest uses shall not replace high conservation value forest.
- 6.10.6 FMO should take measures to restore, conserve or manage natural forest or grasslands in surrounding or adjoining areas equal to or exceeding the area disturbed; and support for such actions exists amongst environmental and other stakeholders.

**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.**

**Timber**

- 7.1.1 FMO Management plan, or its appendices 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, 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) 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 field 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)**
  - 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 field 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 field
- 7.1.5 **Applicable to SLIMF FMO-s 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) plans for monitoring forest growth
  - f) environmental/ social impacts of the plan
  - g) conservation of rare species and any high conservation values
  - h) maps of the forest, showing protected areas, planned management and land ownership
  - i) Pest and weed control planned
  - j) Duration of the plan

**NTFP**

FMO Management plan, or its appendices 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, socio economic conditions, and a profile of adjacent lands.
  - c) Description of management systems, 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 ecological rationale i.e. based on site specific field data or published analysis of local forest ecology or regeneration patterns.
  - 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, 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)**
  - j) Plans for monitoring of NTFP growth, regeneration and dynamics.**
  - k) Financial management plan**
- 7.1.2 Timber resources and uses should be inventoried and their management explicitly considered during planning.
- 7.1.3 Same as above
- 7.1.4 Same as above
- 7.1.5 **Applicable to SLIMF FMO-s 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 to ensure sustainability
  - d) NTFP harvest rates, cultural techniques and harvest methods are appropriate for the particular plant part used (exudate, reproductive propagule, vegetative structure) and management activities maintain viable populations of target NTFPs. (See criterion 5.6)
  - e) plans for monitoring NTFP growth and regeneration
  - f) environmental/ social impacts of the plan
  - g) conservation of rare species and any high conservation values
  - h) maps of the forest, showing protected areas, planned management and land ownership
  - i) Pest and weed control planned

- j) Duration of the plan
- k) Financial management 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.

Timber

- 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 should 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 FMO-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.

NTFP

- 7.2.1 Same as above
- 7.2.2 Same as above
- 7.2.3 Management plan revisions shall incorporate the results of monitoring or new scientific and technical information regarding changing harvest regime, environmental, social and economic conditions.
- 7.2.4 Same as above

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

Timber

- 7.3.1 Evidence of formal or informal training shall exist in the field.
- 7.3.2 For **large** FMOs, a formal training plan should exist.

NTFP

- 7.3.1 Same as above
- 7.3.2 Same as above

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.

Timber

- 7.4.1 FMO shall make publicly available a public summary of the management plan including a information on elements listed in criterion 7.1..
- 7.4.2 **Applicable for SLIMF FMO-s only** (Note: above indicators do not apply):  
At minimum FMO shall be willing to provide access to relevant parts of the management plan to stakeholders who have justified interest in the forest management activities of FMO (e.g. neighbouring landowners and local inhabitants)

NTFP

- 7.4.1 Same as above
- 7.4.2 Same as above

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.

Timber

- 8.1.1 A plan and design 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 Monitoring procedures should be consistent and replicable over time to allow comparison and assessment of change.
- 8.1.4 **Applicable to SLIMF FMO-s only** (Note: above indicators do not apply):  
FMO should conduct regular and consistent monitoring in connection with harvesting operations and re-forestation.

NTFP

- 8.1.1 Same as above
- 8.1.2 Same as above
- 8.1.3 Same as above
- 8.1.4 **Applicable to SLIMF FMO-s only** (Note: above indicators do not apply):  
FMO should conduct regular and consistent monitoring in connection with harvesting operations and regeneration appropriate for the particular plant part used (exudate, reproductive propagule, vegetative structure).

- 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.**

**Timber**

- 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);**
- 8.2.2. Commercial harvest including NTFPs.**
- 8.2.3. Environment (environmental changes affecting flora, fauna, soil and water resources) (outbreak of pest, invasive species, nesting sites for endangered bird species) and,**
- 8.2.4. Socioeconomic aspects (forest management costs, yields of all products, and changes in community and worker relations or conditions) and marketing information.**
- 8.2.5. Identified high conservation value forest attributes.**
- 8.2.6 Applicable to SLIMF FMO-s only (Note: above indicators do not apply): FMO shall at a minimum monitor and record information on the following:**
- Amount of products harvested**
  - Effects of operations as identified under Criteria 6.1**
  - Changes in rare, threatened or endangered species or natural communities**
  - At least annual monitoring of any identified high conservation values**
  - Invasive exotic species**
  - Forest regeneration**
  - Post harvest inspection for erosion and estimate of residual basal area.**
  - Periodic inventory (5-10 years).**

**NTFP**

- 8.2.1 The monitoring plan should be technically sound and identify/describe observed changes in conditions in terms of: Regeneration appropriate for the particular plant part used (exudate, reproductive propagule, vegetative structure), and forest condition, typically as part of a suitable continuous forest inventory system);**
- 8.2.2. Commercial harvest including timber.**
- 8.2.3. Same as above**

**8.2.4. Same as above**

**8.2.5. Same as above.**

**8.2.6** Applicable to SLIMF FMO-s only (**Note: above indicators do not apply**):  
**FMO shall at a minimum monitor and record information on the following:**

- **Amount of products harvested**
- **Effects of operations as identified under Criteria 6.1**
- **Changes in rare, threatened or endangered species or natural communities**
- **At least annual monitoring of any identified high conservation values**
- **Invasive exotic species**
- **NTFP regeneration appropriate for the particular plant part used (exudate, reproductive propagule, vegetative structure)**
- **Post harvest inspection for erosion and estimate of residual NTFP plants or structure.**
- **Periodic inventory (5-10 years).**

8.2 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."

Timber

8.3.1 Volume and source data on harvested forest product 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 FMO..

8.3.2 Sales invoices and other documentation related to the sale of certified products shall include the chain of custody certificate code (SW-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").

NTFP

8.3.1 Volume and source data on harvested forest product shall be available (i.e. weighed, inventoried, measured) in the forest, in transport, at intermediate storage yards, and processing centers controlled by FMO.

8.3.2 Same as above

8.3.3 Same as above

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

Timber

8.4.1 FMO shall demonstrate that monitoring results are incorporated into revisions of the management plan. ( For SLIMF see criterion 7.2)

**NTFP**

8.4.1 Same as above

8.4 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.

**Timber**

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

8.5.2 Applicable for medium size and SLIMF FMO-s only: At minimum FMO shall be willing to provide access to relevant parts of the management plan to stakeholders who have justified interest in the forest management activities of FMO (e.g. neighbouring landowners and local inhabitants).

**NTFP**

8.5.1 Same as above

8.5.2 Same as above

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.**

**Timber**

9.1.1 FMOs shall have conducted an assessment to identify HCVs and HCVF.

9.1.2 For **large** operations, FMO shall:

- **Produce a written HCVF assessment; and,**
- **Have credible, technically qualified and independent review of the HCVF assessment;,**

9.1.3 Applicable to SLIMF FMOs only: consultations shall have occurred with environmental stakeholders, government or scientists to determine whether forest areas should be considered HCVF. This may occur during the actual certification assessment. If HCVF values are present, FMO shall take all reasonable steps to protect these values.

**NTFP**

9.1.1 Same as above

- 9.1.2 Same as above
- 9.1.3 Same as above

**9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof<sup>3</sup>.**

**Timber**

- 9.2.1 FMO consultations with stakeholders shall clearly outline identified conservation attributes as well as proposed strategies for their maintenance. .
- 9.2.2 For **large** operations, the stakeholder consultation for HC VF strategy development shall be in writing.

**N T F P**

- 9.2.1 FMO consultations with stakeholders shall clearly outline identified conservation attributes as well as proposed strategies for their maintenance. Consultations to determine the status of a HC VF specifically include NTFPs as an element of the social analysis section covering forest importance to local communities (as per definition “d” of HC VF provided by FSC).
- 9.2.2 Same as above

**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.**

**Timber**

- 9.3.1 If HC VF 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 HC VF values shall be available in public documents or in the FMO management plan summary.

**N T F P**

- 9.3.1 Same as above
- 9.3.2 Same as above

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

**Timber**

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<sup>3</sup> In April 2003 the FSC provided an “Advice Note” clarifying the intent of Criterion 9.2 to focus *not* just on the FSC certified consultative process. In summary “FSC Criterion 9-2 requires that the forest manager should consult with stakeholders on the identification of the High Conservation Values, and the management options thereof. During evaluation for certification the certification body should consult to confirm whether the manager’s consultation was adequate.”

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

NTFP

9.4.1 Same as above

**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.**

Timber

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, which balance production and 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 field implementation.

NTFP

10.1.1 The NTFP plantation management plan articulates objectives for NTFP production.

10.1.2 Management objectives, which balance production and conservation of natural forest NTFPs and restoration, shall be described in the management plan.

10.1.3 Management objectives, specifically those related to natural forest NTFP conservation and restoration shall be demonstrated in field implementation.

**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.**

Timber

- 10.2.1 FMOs should demonstrate a commitment and actions to protect, restore and conserve key areas of natural forest within the ownership.
- 10.2.2 Buffer zones along watercourses and around waterbodies shall be established according to regional best management practices and indicated on maps.
- 10.2.3 FMO shall establish a network of suitably located sites across plantation areas which are restored as wildlife habitat and corridors, 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)

### **NTFP**

- 10.2.1 Intensive management, enrichment planting, or cultivation of understory NTFPs in natural forests does not adversely impact the overstory or understory diversity across the forest landscape.

**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.**

### **Timber**

- 10.3.1 Plantation management should 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. )

### **NTFP**

- 10.3.1 Plantation management should enhance landscape diversity by varying scale and configuration, species, genetic diversity.
- 10.3.2 Same as above

**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.**

### **Timber**

- 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 have been selected, the FMO shall explicitly justify this choice and document specific measures to prevent spontaneous regeneration outside plantation areas, unusual mortality, disease, insect outbreaks or other adverse environmental impacts.
- 10.4.3 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,

**NTFP**

- 10.4.1 NTFP species shall be selected based on suitability to site conditions (soils, topography and climate) and management objectives.
- 10.4.2 Same as above
- 10.4.3 Same as above

**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.**

**Timber**

- 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 (a 25% target figure for native vegetation or ecosystems is encouraged but not mandatory). (Note: Also see Criterion 6.4.)
- 10.5.2 **Applicable to SLIMF FMOs only** (note: above indicator does not apply): Plantations design and management shall enhance ecological values, especially around conservation features.

**NTFP**

- 10.5.1 Same as above
- 10.5.2 **Applicable to SLIMF FMOs only** (note: above indicator does not apply): Plantations design and management shall enhance ecological values, especially around conservation features.

**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.**

**Timber**

- 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 that might degrade water quality or negatively impact local hydrology shall be minimized.

**NTFP**

- 10.6.1 Same as above
- 10.6.2 Intensive management or cultivation of understory NTFPs in natural forests does not cause erosion, reduce water quality or adversely impact soil structure or fertility..

**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.**

**Timber**

- 10.7.1 Measures shall be taken in the field 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 should exist that identifies pests, determines acceptable injury or action thresholds, and alternative methods of addressing threats.
- 10.7.4 FMO shall have a policy and strategy to minimize use of chemical pesticides and fertilizers.
- 10.7.5 Forest management plan should reflect/describe preventive measures for the identified pest and disease in the forest.

**NTFP**

- 10.7.1 Same as above
- 10.7.2 An integrated pest management plan should exist that identifies pests, determines acceptable injury or action thresholds, and alternative methods of addressing threats.
- 10.7.3 FMO shall have a policy and strategy to minimize use of chemical pesticides and fertilizers.
- 10.7.4 Forest management plan should reflect/describe preventive measures for the identified pest and disease in the forest.

**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.**

**Timber**

10.8.1 Monitoring shall include evaluation of potential onsite and off-site ecological and social impacts of plantation activities,

10.8.2 **Applicable to SLIMF FMO-s only** (note: above indicators do not apply): FMO shall record any negative environmental or social impacts identified and design appropriate alleviating measures.

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. )

**NTFP**

10.8.1 Same as above

10.8.2 Same as above

10.8.3 Same as above

(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.**

**Timber**

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 responsible.

10.9.2 Primary, degraded primary and mature secondary forests, and threatened or endangered ecosystems shall not be cleared or converted by current forest managers to create tree plantations.

(Note: See also Criterion 6.10. )

**NTFP**

10.9.1 Same as above

10.9.2 (Note: See Criterion 6.10. )