FCP Draft Interim Standard
For Forest Management Certification in State of Hawaii
Under the Forest Stewardship Council

A. INTRODUCTION

This document contains the Interim Standard for Forest Management Certification in the state of Hawaii used by Scientific Certification Systems' Forest Conservation Program. The scope of this standard includes both natural and plantation forests. This standard is designed to be used in absence of a Forest Stewardship Council accredited Forest Stewardship Standard covering Hawaii. In the event that such a standard is created, all further evaluations will be done against said standard, and any forest management operations certified under the interim standard will be required to conform to the new standard within one year.

This standard is based mainly on the SCS Generic Interim Standard, but also incorporates elements of the FSC-US national indicators and other stakeholder comments.

B. STANDARD USE

Conformance with locally adapted standards produced from this generic standard shall be determined by evaluating observed performance at the Forest Management Unit (FMU) level against each indicator of the standard, and in comparison with any performance threshold(s) specified for the indicator. The indicators here apply to all forests covered by the scope of the standard, including SLIMF's, unless otherwise specified.

In the process of adapting this standard for on the assessment of a particular forest operation, it may be restructured in order to improve its implementation on the ground or to ease stakeholder interpretation of the standard, but only if pre-approved by the SCS Director of Forest Certification. Restructuring or adapting this standard shall not affect the requirements for conformance and certification decision making. If a complaint or appeal is filed, the complete standard shall be considered definitive.

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.

Performance Indicators:

1.1.1) An up-to-date register (reference list) of all pertinent statutes and bodies of regulations is maintained and is available to forest managers; summaries of key regulations are kept in field offices

1.1.2) Forest managers demonstrate a working knowledge of the regulatory framework in which they operate

1.1.3) The frequency and nature of regulatory violations shall not be indicative of widespread and systemic non-compliance; when violations occur, forest managers act promptly to correct and remediate the circumstances associated with the violation **Note: Non-conformance to this Indicator constitutes a *Major Failure* and precludes award of certification until appropriately corrected.**

1.1.4) The relationship between the forest managers and personnel from pertinent regulatory agencies can be characterized as productive and collaborative.

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

Performance Indicators:

1.2.1) Forest managers demonstrate a working knowledge of all applicable fees, royalties, taxes and other charges that apply to their operations

1.2.2) There is no evidence of chronic non-payment; rather, payments are regularly made in a time manner

1.2.3) Up-to-date records are kept of all payments and are available to the SCS auditor(s)

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.

Performance Indicators:

1.3.1) Forest managers are aware of which binding international agreements apply to the nation in which their forest operations reside

1.3.2) Forest managers demonstrate a sensitivity to all binding international agreements and endeavor to respect their requirements, at a level of effort scaled to the size and intensity of the forest operation

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 by the involved or affected parties.

Performance Indicators:

1.4.1) Forest managers are forthright in informing the SCS auditor(s) of any possible conflicts between laws, regulations and the FSC Principles and Criteria

1.4.2) Forest managers are willing to participate in appropriate processes for resolving conflicts, at the request of SCS and/or the FSC

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

Performance Indicators:

1.5.1) The management plan contains express policies stating that the defined forest area shall be protected from illegal harvesting, settlement and other unauthorized activities

1.5.2) Forest managers devote sufficient resources (manpower and money) to conduct surveillances of the defined forest area so that unauthorized activities are promptly found and controlled

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

Performance Indicators:

1.6.1) In the management plan, and the public summary thereof, or another appropriate document of broad public availability, there is an express statement of commitment to the FSC Principles and Criteria

1.6.2) Written copies of the FSC Principles and Criteria are available to all management and field personnel; forest managers demonstrate a general conversancy with the P&C

1.6.3) The scale of investment in forest management and administration is consistent with a long-term commitment to forest stewardship

1.6.4) If the defined forest area for which certification is being sought does not constitute the entire ownership, management activities on the portions of the ownership not undergoing certification evaluation are generally compatible with the P&C, as determined through appropriate means by the SCS auditor(s)

1.6.5) Subject to market conditions and experiences gained through partial estate certification, owners/managers of large forest enterprises express a willingness to undergo the certification evaluation process on the entire estate over a reasonable time frame

1.6.6) Forest owners or managers document the reasons for seeking partial 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.

Performance Indicators:

2.1.1) There is bonafide, written documentation of legal use rights to the defined forest area undergoing certification evaluation. Legal use rights may be associated with: fee-simple ownership, long-term or renewable lease rights, long-term or renewable exclusive management agreements, or other mechanisms allocating long-term or renewable management rights and responsibilities to the parties contracting with SCS (or to the intended holders of a certificate, if the cost of the evaluation is being paid by a third-party)

2.1.2) Forest managers/owners support legally-recognized mechanisms for resolving land claims being made by parties such as indigenous peoples

2.1.3) If forest management activities occur on or near property boundaries, those boundaries are identified on the ground prior to commencement of activities.

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.

Performance Indicators:

2.2.1) Local communities, and/or other stakeholders with duly recognized legal or customary tenure or use rights within the defined forest area have been identified and the nature of these rights are described and documented

Examples of legal or customary tenure or use-rights may include:
-public rights of way
-established easements
-collection of non-timber forest products
-hiking, fishing, hunting, or other recreation
-firewood collection
-visitation of culturally significant sites

2.2.2) Forest managers maintain positive/collaborative working relationships with holders of duly recognized legal or customary tenure or use rights

2.2.3) Allocation, by local communities, of duly recognized legal or customary tenure or use rights to other parties is documented, with evidence of free and informed consent

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.

Performance Indicators:

2.3.1) Records are kept of past disputes over tenure claims and use rights, to a level of detail sufficient to enable the SCS auditor(s) to ascertain the nature and magnitude of the disputes

2.3.2) Forest owners or managers maintain communications with community stakeholders to identify disputes in their early stages. If disputes arise, the forest owner or manager initially attempts to resolve them through direct discussions, negotiations, and/or mediation. If these good-faith efforts fail, federal, state, local, and/or tribal laws are employed to resolve disputes over tenure (see Glossary) and rights of use.

2.3.3) The magnitude and severity of unresolved tenure claims and use rights disputes are minor, relative to the scale of forest management operations

PRINCIPLE #3: INDIGENOUS PEOPLES' RIGHTS

The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.

Applicability note to Principle 3: The terms "indigenous", "tribes," "tribal," or "American Indian groups," used in indicators under Principle 3, include all indigenous people in the US—individuals (such as allottees, see Glossary) or groups, who may be organized in recognized or unrecognized tribes, bands, nations, native corporations, pueblos, rancherias (*see Glossary*)*, or other designations.*

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.

Performance Indicators:

3.1.1) Forest managers affirmatively seek to determine if there are existing indigenous peoples issues (e.g., land claims) associated with the defined forest area that is the focus of the certification evaluation

3.1.2) If the defined forest area is comprised of or includes lands or territories duly owned or controlled by indigenous peoples, management of said lands is either: i) under the control of the indigenous peoples or ii) undertaken by other parties to whom free and informed consent to manage has been granted, and appropriately documented, by appropriate indigenous representatives

3.1.3) Where rights and use issues involving indigenous peoples are in dispute, an appropriate process for addressing and resolving grievances is in place and being actively utilized by the forest managers/owners

3.1.4) When requested to do so by the owner of a tribal forest, the manager uses tribal experience, knowledge, practices, and insights in forest management planning and operations.

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

Performance Indicators:

3.2.1) Forest management planning and its implementation incorporate measures to protect tribal resources (e.g., subsistence gathering areas, fisheries, etc. – whether on or off the forest) that may be adversely affected by management activities.

3.2.2) As appropriate, indigenous peoples are afforded opportunities to participate in management planning, research, and monitoring on forest areas associated with indigenous resources and tenure rights

3.2.3) Forest managers solicit—through effective consultative mechanisms—the concerns and perspectives of potentially affected indigenous peoples; the results of such consultation are documented, including the actions taken to reasonable accommodate concerns and perspectives that have been received

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

Performance Indicators:

3.3.1) Management activities with potential impacts to sites of special cultural, ecological, economic or religious significance to indigenous peoples are guided by the precautionary principle

Examples of sites may include:
-ceremonial, burial, or village sites
-areas used for hunting, fishing, or trapping
-areas used for gathering of sustenance and culturally important materials

3.3.2) Forest managers engage in affirmative procedures for identifying and appropriately protecting sites of special cultural or religious significance; the processes for identifying and protecting such sites are documented; the management plan contains express written policies for the identification and protection of such sites

3.3.3) Field workers are appropriately trained in the procedures employed for protecting sites of special significance to indigenous peoples

3.3.4) Confidential maps recording the locations of sites of special significance are maintained up-to-date and are used by forest managers and field workers

3.3.5) As appropriate, indigenous peoples are afforded opportunities to participate in the identification and protection of sites of special cultural, ecological, economic or religious significance within the defined forest area

3.3.6) The confidentiality of sensitive tribal knowledge is maintained in keeping with applicable laws and at the behest of tribal representatives.

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.

Performance Indicators:

3.4.1) Forest managers seek to identify and document circumstances in which management activities on the defined forest area are reliant upon or are based upon the application of traditional knowledge traceable to particular indigenous peoples

3.4.2) If commercial utility is created through direct application of traditional knowledge, forest managers seek to compensate, through appropriate mechanisms, those indigenous peoples with whom the traditional knowledge is associated

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.

Performance Indicators:

4.1.1) The management plan, or other pertinent policy document, contains express provisions demonstrating a commitment to hiring and contracting, locally, to the extent feasible in light of local capacity and needed workplace skills

4.1.2) Qualified people in local communities are given preferential opportunities in employment and contracting; the forest management operation actively targets the local workforce

Examples may include:
-employment and contractual opportunities offered locally before they are offered outside the region

4.1.3) Forest managers contribute to or directly develop training programs designed to enhance the capabilities and qualifications of local workers

4.1.4) There is active dialogue with representatives of local communities, aimed at identifying employment, contracting and training opportunities

4.1.5) Forest managers give preference to local vendors of equipment and miscellaneous services, subject to cost considerations

Examples may include:
-timber being offered to local processors before being sold out of the region
-utilization of local banks, insurance companies, etc.

4.1.6) Forest owners or managers contribute to public education about forestry practices in conjunction with schools, community colleges, and/or provide other opportunities for training and education.

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

Performance Indicators:

4.2.1) The forest management operation demonstrates a priority towards worker safety; there is an active safety program, appropriate to the scale of operations

4.2.2) Written guidelines and policies, appropriate to the scale of operations, exist for workplace health and safety

4.2.3) Appropriate safety equipment is made available to all workers

4.2.4) All equipment is periodically inspected and tested for safety performance

4.2.5) Up-to-date information on pertinent health and safety laws and regulations is maintained by forest managers and appropriately disseminated to forest workers

4.2.6) Forest managers maintain up-to-date safety records; such records indicate exemplary performance relative to industrial norms

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

Performance Indicators:

4.3.1) Forest managers, by their actions and policies, respect the rights of workers to organize or join trade unions and to engage in collective bargaining

4.3.2) Issues and grievances raised by workers and/or their organizations are investigated fairly and objectively

4.3.3) There are documented procedures for conflict resolution

4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups directly affected by management operations.

Performance Indicators:

4.4.1) The management plan for the defined forest area contains a section presenting the results of periodic social impact assessments, appropriate to the scale of operations

4.4.2) Management activities and policies are modified, as appropriate, in response to the results of social impact assessment

4.4.3) Forest managers engage in regular communications with neighbors and other stakeholders within the local communities; to the extent practicable, management policies and activities are sensitive to stakeholder concerns and expectations

4.4.4) The forest management operation can be fairly characterized as a "good neighbor" within the regional context

4.4.5) Forest managers endeavor to keep neighbors and members of the community informed as to planned activities on the defined forest area

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.

Performance Indicators:

4.5.1) Where they exist and can be established according to bonafide procedures, preferably within legal frameworks, forest managers recognize and respect legal or customary rights that are subject to influence from management activities on the defined forest area

4.5.2) Forest managers endeavor, through actions and policies, to avoid adverse impacts to the property, resources and/or livelihoods of local peoples

4.5.3) Adequate procedures are employed for resolving grievances and providing fair compensation where forest operations lead to loss or damage to property, resources, livelihoods and/or legal or customary use rights of local peoples

4.5.4) Forest owners or managers and their contractors maintain liability insurance or post bonds to cover potential liabilities.

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.

Performance Indicators:

5.1.1) The forest operation has sufficient financial capital and human resources to implement the management plan, over the long run

5.1.2) The full costs of forest management, including environmental and social costs, are considered and adequately covered by the financial resources of the forest operation

5.1.3) Adequate investments of capital, machinery and human resources are made so as to maintain or restore the productive capacity, ecological integrity and socio-economic profile of the define forest area

5.1.4) Commercial (income generating) activities are financially viable, given short and medium-term market conditions and costs

5.1.5) Responses (e.g., increases in harvests or debt load) to short-term financial factors (e.g., fluctuations in the market, requirements for cash flow, need for sawmill equipment and log supplies) are limited to levels that enable fulfillment of the management plan.

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

Performance Indicators:

5.2.1) Management and marketing policies, as well as field-level decisions, systematically assure that commercial forest products are being sold for their highest and best uses

Examples may include:
-new products are explored and developed for common but less used species
-access to new markets is explored and developed

5.2.2) Forest managers strive to diversify the mix of commercial products recovered from the forest and marketed

5.2.3) The forest operation has a demonstrated track record of favoring or encouraging local processing of wood products, subject to competitive pricing and logistical considerations

5.2.4) When non-timber products are harvested, the management and use of those products are incorporated into the management strategy.

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

Performance Indicators:

5.3.1) Harvesting operations minimize waste and residual stand damage

Examples may include:
-bumper trees and directional felling techniques are used to minimize unintentional tree damage

5.3.2) Yarding and log sorting operations minimize product wastage, de-grade and foregone revenue opportunities

5.3.3) Log landings are kept to a minimum practicable number and size and are located so as to minimize adverse environmental impacts

5.3.4) Post-harvest audits within harvest units, log landings, log sort yards are systematically conducted to identify avoidable wastage

5.3.5) Where on-site processing takes place, the foot print of the milling facility is kept to the smallest practicable size; the processing facilities are located in the most environmentally benign locales as well as in locations where losses to productive forest area are minimized

5.3.5) While minimizing undue waste, forest managers establish field guidelines that recognize the ecological value of biomass (e.g., tops and branches) being left on site; forest managers have written guidelines for retention of downed woody debris and standing snags within harvest areas

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

Performance Indicators:

5.4.1) Forest managers can demonstrate their efforts to diversify the mix of commercial products recovered from the forest and marketed

5.4.2) Appropriate to the scale of operations, multiple forest products are harvested and marketed

5.4.3) Appropriate to the scale of operations, forest managers provide financial incentives for the establishment and/or expansion of local forest products manufacturing businesses; forest managers can demonstrate efforts taken to encourage local value-added processing

5.4.4) Where market opportunities exist and where such use does not compromise the ecological health of the forest, the marketing of non-timber forest products is undertaken by forest managers

Examples may include:
-compatible uses such as recreation, ecotourism, hunting, fishing, specialty product harvesting, Christmas tree cutting, etc.

5.4.5) Forest managers are cognizant of local/regional economic development plans and strategies; forest managers take what actions they can to support these plans and strategies

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

Performance Indicators:

5.5.1) The management plan addresses 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) Timber management activities are designed and implemented, spatially and temporally, with due consideration to the impacts on other forest services

5.5.3) Forest managers demonstrate an awareness of and sensitivity to non-timber forest services, many of which may not generate income

5.5.4) Forest managers engage in regular dialogue with stakeholders and advocates of forest services that subject to impact from forest operations

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

Performance Indicators:

5.6.1) Appropriate to the scale of operations and the frequency of commercial activity, timber harvesting is guided by a timber management plan that includes a calculated periodic allowable harvest

5.6.2) The timber management plan, including total harvest level, the temporal and spatial pattern of harvests, and the planned prescriptions are being faithfully implemented in the field

5.6.3) Forest managers keep accurate records of the harvest volume, by species groups; average annual harvests due not exceed the calculated allowable harvest

5.6.4) Appropriate to the scale of operations and the frequency of commercial activity, estimates of total periodic timber growth on the defined forest area—by species categories—are generated through a combination of empirical data and published literature; growth estimates are conservative

5.6.5) Harvest levels shall be set such that inventories of desired species increase over time, unless it is established (in the management plan) that current inventories (measured in average standing volume per hectare) exceed optimal levels

5.6.6) For operations entailing regular annual harvesting, the 10-year rolling average harvest level does not exceed average annual increment

5.6.7) For smaller operations that do not harvest annually, the frequency and intensity of harvest entries is set such that inventory levels are allowed to recover—and increase, as appropriate—between entries

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. Assessments 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.

Performance Indicators:

6.1.1) Standard operating procedures for the defined forest area include the completion of project (site)-level environmental impacts assessments, scaled to the size and complexity of operations, prior to commencement of site disturbing activities

6.1.2) In addition to project-level assessments, forest managers also complete landscape-levels environmental impact assessments where, for instance, the cumulative effects of forest operations within and nearby the defined forest area are addressed

6.1.3) To provide background for environmental impact assessments, the regional, sub-regional, and landscape environmental context of the defined forest area is established and documented (preferably in the management plan), consistent with the scale and intensity of operations

6.1.4) Planned management activities are appropriately modified based upon the results of the environmental impact assessments; that is, day-to-day activities are influenced by environmental assessments

6.1.5) Information and data necessary to complete competent impact assessments are being systematically gathered by forest managers

6.1.6) Current ecological conditions are compared to historical conditions at the landscape level by using information generated from environmental impact assessments

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

6.1.7) The forest operation demonstrates knowledge of the possible negative impacts of its activities and seeks to minimize them.

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.

Performance Indicators:

6.2.1) Management policies are established and duly documented that commit the forest operation to protect rare, threatened and endangered species and their habitats

6.2.2) Endangered species polices comply with all pertinent local, state and federal laws and regulations, as well as international treaties, regarding endangered species

6.2.3) Forest operations demonstrably adhere to the endangered species policies set by the forest managers

6.2.4) Forest managers forge positive and collaborative working relationships with pertinent officials from local, state and federal agencies charged with enforcing endangered species statutes

6.2.5) "Listed" species, their habitats, and sites with unusually high species and/or ecosystem diversity are identified through field surveys or other sources and protected or managed at a level sufficient to ensure that viable populations are maintained or restored; the level of effort should be scaled to the size and complexity of the forest operation

6.2.6) As appropriate, field employees are trained in the recognition of endangered species and their habitats

6.2.7) Areas of critical habitat for listed species are duly delineated, appropriately managed, and recorded on maps of appropriate scale

6.2.8) When rare, threatened or endangered species or plant community types are present or assumed to be present, control of hunting, fishing, trapping and collecting is adequate to protect species and/or plant communities.

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

6.2.9) Where information exists on rare, threatened and endangered species and their habitats, the forest manager uses this information to map and protect them.

6.2.10) Habitat features that are important for conservation are identified and protected.

6.2.11) Hunting or fishing for commercial purposes is regulated. Fishing using dynamite and toxic substances is not permitted. Other inappropriate hunting fishing, trapping and collecting are controlled.

6.2.12) The use of fires is controlled inside the FMU and the forest manager assists in fire prevention or regulation in the surrounding area

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.

Performance Indicators:

6.3.1) Known ecological functions and values are described in the management plan and updated periodically as additional information/knowledge is acquired; forest managers take affirmative steps to eliminate gaps in information and knowledge about ecological functions within the defined forest area

6.3.2) Subject to the scale operations, the forest is managed so as to maintain a full range of successional stages at distributions within the range of natural variability

6.3.3) The management plan incorporates principles of landscape and ecosystem-based planning; the plan contains goals pertaining to biological diversity for the range of spatial scales from genetic diversity to landscape diversity

6.3.4) Harvesting prescriptions maintain, enhance or restore natural forest composition; management is aimed at maintaining all naturally occurring species

6.3.5) Harvesting is designed and laid out, over time and space, with consideration of the types, sizes and frequency of natural disturbances as well as connectivity of wildlife habitats

6.3.6) Regeneration after final harvests are timely and successful; young stands, either planted or naturally established, are well-stocked with desired species, vigorous and on the trajectory to healthy merchantable stands

6.3.7) Managers work with rather than fight natural regeneration; natural regeneration, even in planted stands, is managed so as to enhance species and structural diversity

6.3.8) Forest managers, through their actions, policies and prescriptions, demonstrate a working knowledge of ecological functions pertinent to the forest types in which they are working

6.3.9) Special habitats (such as wetlands, riparian areas, unstable slopes and rock outcrops) are protected

6.3.10) Site disturbing activities (e.g., harvesting, road building, site preparation, planting) minimize adverse impacts to soil fertility, structure, organic layers and nutrients

6.3.11) Coarse woody debris is maintained in the form of large fallen trees, large logs, and snags of various sizes.

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.

Performance Indicators:

6.4.1) Appropriate to the scale and intensity of operations, a network of protected areas is established within the defined forest area; in establishing the network, forest managers balance ecological and economic considerations in an exemplary manner

6.4.2) Forest managers compile information regarding the extent to which representative samples of existing ecosystems are protected within the regional landscape; where gaps exist within the landscape, forest managers take actions that contribute to correcting those deficiencies, appropriate to the scale and intensity of operations

6.4.3) Areas of ecological significance within the defined forest area (e.g., due to uniqueness or rarity) are appropriately protected

6.4.5) Protected areas within the defined forest area are delineated on maps and addressed in the management plan, including written management and protection policies

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

6.4.6) Representative samples of ecosystems are identified, recorded on maps, and excluded from the harvesting area. If existing representative samples of ecosystems are already adequately protected on other private or public properties within the region then no additional samples would need to be identified and protected

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

Performance Indicators:

6.5.1) The management plan, or another pertinent policy document, contains express written guidelines for effectively minimizing soil erosion as a result of site disturbing activities

6.5.2) The management plan, or another pertinent policy document, contains express written guidelines for effectively minimizing damage to forest vegetation as a result of site disturbing activities

6.5.3) The management plan, or another pertinent policy document, contains express written guidelines for effectively protecting water resources (e.g., stream courses and adjoining riparian areas, wetlands, seeps and springs) found within the defined forest area; protection measures exceed applicable regulatory requirements and/or best management practices

6.5.4) Forest managers and forest workers demonstrate a working knowledge of these protection guidelines and, in fact, systematically comply with them in day-to-day operations

6.5.5) All watershed, riparian, and aquatic features are identified, classified, and mapped

6.5.6) Road construction, maintenance and closure standards are followed in the field; road surfaces are well drained, culverts are large enough to accommodate peak flow, and water bars are appropriately installed and they operate effectively

6.5.7) Logging operations and construction of roads and skid trails are conducted only during periods of weather when soil compaction, surface erosion, or sediment transport into streams and other bodies of water can be minimized.

6.5.8) Stream crossings are located and constructed to minimize impacts on water quality and fragmentation of aquatic habitat (see Glossary).

6.6. Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.

Performance Indicators:

6.6.1) All chemical pesticide use occurs within the context of an integrated pest management program, appropriate to the scale and intensity of operations

6.6.2) A complete and up-to-date list of all chemical pesticides used on the defined forest area shall be maintained and made available to the SCS auditor(s); Forest owners and managers demonstrate conformance with FSC Policy paper "Chemical Pesticides in Certified Forests, Interpretation of FSC Principles and Criteria, July 2002" **Note: Non-conformance to this Indicator constitutes a *Major Failure* and precludes award of certification until appropriately corrected.**

6.6.3) All pesticide use is guided by site-specific written prescriptions designed to avoid human and environmental hazard and to maximize efficacy of use

6.6.4) Field personnel applying pesticides are properly licensed (where applicable) and trained; appropriate equipment and gear to assure safe application is made available and used by field personnel

6.6.5) Appropriate to the scale and type of operations, there is on-site supervision by a professional forester during pesticide applications

6.6.6) Silvicultural prescriptions are selected and designed so as to minimize reliance upon chemical pesticides

6.6.7) Forest managers demonstrate a commitment to reducing, and eliminating in due course, planned reliance upon chemical pesticides

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.

Performance Indicators:

6.7.1) Toxic chemicals and their containers are disposed of, off site, in an environmentally sound and legal manner, whether from forest operations or processing facilities

6.7.2) There are contingency plans and procedures for prevention and cleanup following spills or other accidents involving chemical pesticides, oils and fuels

6.7.3) There are on-site facilities for secure collection of waste

6.7.4) Fuel tanks and storage areas are located, and equipment is parked, outside of riparian management zones and away from sinkholes. There is no evidence of ground or surface water contamination

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

Performance Indicators:

6.8.1) There shall be no use (defined as commercial use as well as research) of genetically modified organisms within the defined forest area

6.8.2) All use of biological control agents takes place within the context of an integrated pest management program

6.8.3) Use of biological control agents takes place only where demonstrably necessary and only under strict protocols in compliance with applicable laws and regulations

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

Performance Indicators:

6.9.1) Exotic species (tree species as well as other flora and fauna) are introduced into the defined forest area only after active investigation of the potential environmental hazards

6.9.2) When exotic species are used, it is governed by written guidelines for controlling off-site regeneration; active ongoing monitoring is mandatory

6.9.3) Invasive exotic species are not used

6.9.4) Forest owners or managers develop and implement control measures for invasive exotic plants.

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.

Performance Indicators:
6.10.1) No more than 5% of the defined forest area has (since 1994) or will be converted to plantations (as defined by the FSC); note that planted stands are not necessarily plantations, in the FSC use of the term

6.10.2) Forest managers are able to demonstrate the conservation benefits of converting portions of the defined forest area to plantations

6.10.3) Areas of high conservation value are not being converted to plantations

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.

Performance Indicators:
7.1.1) There shall be a written management plan for the defined forest area that addresses the subjects and plan components enumerated in this criterion, above

Note: Non-conformance to this Indicator constitutes a *Major Failure* and precludes award of certification until appropriately corrected.

7.1.2) The management plan contains both long term goals and objectives as well as short and near term tactical direction

7.1.3) Forest managers and forest workers, through their actions and policies, demonstrate a commitment and ability to implement the management plan; funding levels are sufficient to support full plan implementation

7.1.4) The format, detail, length and function of the management plan is appropriate to the scale and intensity of operations

7.1.5) The management plan is revised and updated at regular intervals, the frequency of which is appropriate to the scale and intensity of operations

7.1.6) There are sufficient resources invested in plan development so as to produce a functional and effective management plan

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

7.1.7) A written management plan exists and is implemented. The management plan includes which 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

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.

Performance Indicators:

7.2.1) The management plan is revised and updated at regular intervals, the frequency of which is appropriate to the scale and intensity of operations

7.2.2) As described in more detail in principle 8, forest managers design and implement systematic monitoring of forest conditions and plan implementation, the results of which are considered during periodic plan revisions

7.2.3) Forest managers maintain conversancy in emerging scientific and technical information pertinent to the management of the defined forest area

7.2.4) Sufficient resources are invested in periodic monitoring so as to maintain up-to-date knowledge of emerging conditions and circumstances

7.2.5) Over time, the management plan is kept current and relevant; as such, the plan is able to provide ongoing guidance to the management of the defined forest area

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

7.2.6) The management plan is revised and updated at regular intervals, the frequency of which is appropriate to the scale and intensity of operations. The results of monitoring inform future management.

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

Performance Indicators:

7.3.1) Appropriate to the scale and intensity of operations, there is a documented protocol by which forest workers are duly trained as to their role in implementing the management plan

7.3.2) Standard operating procedures for indoctrination of new forest workers includes training regarding the management plan and their role therein

7.3.3) Records are maintained as to when each forest worker received management plan training

7.3.4) There is a demonstrable track record of compliance with and implementation of the management plan

7.3.5) Both employees and contractors receive appropriate levels of training with respect to the management plan

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

7.3.6) Appropriate to the scale and intensity of operations, forest workers are duly trained, according to a documented protocol, as to their role in implementing the management plan

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.

Performance Indicators:

7.4.1) Interested stakeholders are readily able to obtain a public summary of the management plan

7.4.2) The public summary is appropriate to the scale and intensity of operations

7.4.3) The public summary provides information on the primary elements of the plan, including those enumerated in criterion 7.1

7.4.4) The public summary is updated periodically, at a frequency appropriate to the scale and intensity of operations

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

7.4.5) Interested stakeholders are readily able to obtain a public summary of the management plan

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.

Performance Indicators:

8.1.1) Appropriate to the scale and intensity of operations, there are written protocols for periodic monitoring of forest conditions, management activities, plan compliance and chain-of-custody

8.1.2) Forest managers have a demonstrated track record of complying with the monitoring protocols

8.1.3) Results of monitoring are used adaptively to modify management activities, goals and objectives, the management plan, and chain-of-custody procedures

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

8.1.4) Appropriate to the scale and intensity of operations, periodic monitoring of forest conditions, management activities, plan compliance and chain-of-custody is conducted, and done so according to written protocols.

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.

Performance Indicators:

8.2.1) Appropriate to the scale and intensity of operations, forest managers periodically gather information on the indicators enumerated in this criterion, above

8.2.2) The information that is gathered is utilized, appropriately

8.2.3) Written records are kept of the annual or periodic harvest levels, at levels of specificity appropriate to the scale and intensity of operations

8.2.4) Forest managers demonstrate a commitment to acquiring and utilizing information on key indicators pertaining to the production, environmental and socio-economic profiles of their operation

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

8.2.5) Appropriate to the scale and intensity of operations, forest managers periodically gather information on the indicators enumerated in this criterion, above

8.2.6) The manager knows what information they need in order to judge progress towards their objectives. The information is collected and recorded. In all cases this will include:

- Amount of products harvested
- Effects of operations as identified under Criteria 6.1
- Changes in features identified under Criteria 6.2
- At least annual monitoring of high conservation values identified under Criteria 9.1
- Invasive exotic species

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

Performance Indicators:

8.3.1) In forest management certification evaluations where the landowner/manager wishes to make on-product use of the FSC logo, pertinent individuals are knowledgeable of the FSC's chain of custody requirements

8.3.2) For "stump to forest gate," there exist written descriptions of the materials handling and inventory control procedures (i.e., chain-of-custody procedures) to are employed for assuring that only logs from a the certified forest area carry the FSC logo.

8.3.3) For vertically integrated operations where a processing facility such as a sawmill is being jointly evaluated with the defined forest area, facility managers make available to the SCS auditor(s) a written chain-of-custody protocol for the facility; note: there are separate and additional evaluation criteria employed for chain-of-custody assessments (available from SCS and/or FSC)

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

8.3.4) In forest management certification evaluations where the landowner/manager wishes to make on-product use of the FSC logo, pertinent individuals are knowledgeable of the FSC's chain of custody requirements

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

Performance Indicators:

8.4.1) Forest managers and planners demonstrate a commitment to adaptive management where information gathered during systematic monitoring is incorporated into revisions to the management plan as well as revisions to standard operating procedures

8.4.2) The evolution of the management plan over successive revisions demonstrates that the results of monitoring are being appropriately incorporated

8.4.3) Records of monitoring activities are available to the SCS auditor(s)

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

8.4.4) Forest managers and planners demonstrate a commitment to adaptive management where information gathered during systematic monitoring is incorporated into revisions to the management plan as well as revisions to standard operating procedures, 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.

Performance Indicators:

8.5.1) Interested stakeholders are readily able to obtain a public summary of the results of periodic monitoring that addresses the indicators listed in criterion 8.2; the results of periodic monitoring are summarized in a document released by the forest managers or incorporated into the annual certification audit report released by SCS

8.5.2) Forest managers endeavor to the keep the monitoring summary up-to-date

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

8.5.3) Interested stakeholders are readily able to obtain a public summary of the results of periodic monitoring that addresses the indicators listed in criterion 8.2; the results of periodic monitoring are summarized in a document released by the forest managers or incorporated into the annual certification audit report released by SCS, see Criterion 7.4

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.

Note: FSC defines High Conservation Value Forests as 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).

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.

Performance Indicators:

9.1.1) An assessment of the defined forest area has been completed for the presence of areas meeting the FSC definition of high conservation value (see glossary); the methodology and results of the assessment are made available the SCS auditor(s)

9.1.2) The assessment for the presence of HCVFs includes consultation with pertinent stakeholders and outside experts

9.1.3) Forest managers demonstrate a working understanding of the HCVF concept and definition and endeavor to comply with the spirit of this principle

9.1.4) If HCV attributes are determined to be within the forest, forest owners or managers delineate or map their locations.

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

9.1.5) An assessment of the defined forest area has been completed for the presence of areas meeting the FSC definition of high conservation value (see glossary); the methodology and results of the assessment are made available the SCS auditor(s)

9.1.6) The assessment for the presence of HCVFs includes consultation with pertinent stakeholders and outside experts

9.1.7) Where a national toolkit for identifying HCVs exists, forest managers have assessed their forest for high conservation values.

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

Note: This criterion primarily addresses obligations of the certifier, not the forest management operation.

Performance Indicators:

9.2.1) Forest managers provide to SCS a list of pertinent stakeholders who may be consulted regarding HCVFs

9.2.2) Stakeholder consultation indicates that the forest management operation consistently considers and protects areas of high conservation value

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.

Performance Indicators:

9.3.1) The management plan, and the public summary thereof, contains a section pertaining to HCV areas found within the defined forest area

9.3.2) The conservation values of each identified HCV area are described

9.3.3) The plan and public summary contains management and protection policies for the identified HCV areas that are precautionary, readily assuring that the defining conservation values will be maintained or enhanced

9.3.4) Stands and forests designated as HCVFs, which have been entered in order to harvest timber, are managed over the long term to assure that both the quality of their HCVF attributes and their area are not reduced.

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

Performance Indicators:

9.4.1) Measurable effectiveness indicators are developed and presented in the HCVF section of the management plan

9.4.2) Appropriate to the scale of and intensity of operations, annual monitoring is conducted that focuses on the effectiveness by which HCVF management and protection measures are maintaining and/or enhancing the pertinent conservation attributes

9.4.3) The results of HCVF monitoring are used adaptively in modifying HCVF management and protection policies as well in revising the management plan

9.4.4) The results of annual HCVF monitoring are made available to the SCS auditor(s)

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.

Applicability Note: Plantations, are *defined as tree-dominated areas substantially lacking in natural forest attributes (e.g. structure and species composition native to the area) that usually require human intervention in order to be maintained. A "planted forest" is not necessarily a "plantation" since it may be part of a management regime that maintains most natural forest attributes indigenous to the area. The following practices contribute to a management regime being considered plantation forestry and the land managed being classified as a plantation*:

- *cultivation of exotic species*

- *use of even-aged silviculture for forest types that do not regenerate naturally through stand-replacing events*
- *use of even-aged silviculture with rotations so short as to preclude the development of mid-successional stand characteristics.*
- *use of even-aged regeneration units that lack retention, and are uncharacteristic of the natural disturbance regimes referred to in 6.3.a.4.*
- *systematic use of, and reliance on, chemical herbicides, pesticides, and fertilizers*
- *through planting or thinning practices, a single species is maintained on sites normally occupied by multiple-species 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.

Performance Indicators:

10.1.1) The management plan for the defined plantation forest area includes a presentation of the landowner and/or plantation owner objectives

10.1.2) The plantation forest objectives include express policies for natural forest conservation as well as restoration of degraded natural forest areas. The proportion of the plantation forest operation that is allocated to natural forest maintenance and restoration exceeds regional norms

10.1.3) Plantation forest managers demonstrate a systematic pattern of implementing the management plan

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.

Performance Indicators:

10.2.1) Plantation forest managers demonstrate a willingness to protect, restore and conserve key areas of natural forests within the ownership

10.2.2) The flow of forest products from the plantation forest contribute to regional demands and thereby help to reduce pressures on natural forests within the region

10.2.3) The spatial pattern of planted stands within the plantation forest operation mimics natural patterns found within the landscape

10.2.4) Streamside buffer zones of generous widths are established, within which natural vegetative cover is maintained or established

10.2.5) Appropriate to the scale and intensity of operations, natural vegetative corridors are established for wildlife movement

10.2.6) Even-aged harvests lacking within-stand retention are limited to forty acres, unless a larger opening can be justified by credible scientific analysis

10.2.7) Before an area is harvested, regeneration in previously harvested adjacent areas reaches a mean height of at least ten feet or achieves canopy closure along at least 50% of its perimeter

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.

Performance Indicators:

10.3.1) A variety of species or provenances are employed in the planting program

10.3.2) The management regime introduces diversity through practices such as: variable rotations, cut blocks of different size and shape, maintenance of volunteer (naturally established) seedlings within planted stands

10.3.3) The plantation forest management plan contains biodiversity objectives, policies and guidelines

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.

Performance Indicators:

10.4.1) Exotic tree species are planted only after an assessment of native species is conducted, in which it is demonstrated that native species cannot achieve comparable performance levels

10.4.2) Periodic monitoring is conducted of the adaptability of exotic stands, as indicated by measured levels of mortality, disease and insect outbreaks; the results of monitoring are summarized and made available to the SCS auditor(s)

10.4.3) Selection of plantation species and provenances is based on documented trials that demonstrate their suitability to the plantation sites and management objectives

10.4.4) Information about the source of seed or planting stock is presented in the management plan or another suitable document

10.5. A proportion of the overall forest management area, appropriate to the scale of the plantation, shall be managed so as to restore the site to a natural forest cover.

Performance Indicators:

10.5.1) Representative samples of existing natural ecosystems are being protected or restored in their natural state

10.5.2) The percentage of the plantation forest operation that is devoted to natural forest cover exceeds regional plantation forestry norms

10.5.3) Areas of natural forest or natural vegetative cover are delineated on maps and, as necessary, delineated in the field for purposes of assuring protection

10.5.4) The management plan contains policies and guidelines for natural area reserves within the plantation forest operation

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

10.5.5) Improvements to the ecological value of the plantation are made particularly around conservation features

10.5.6) Where it is ecologically and economically unviable for a small plantation to manage a restoration area, the plantation manager or group is able to demonstrate off-site contributions to the management and/or restoration of similar landscape and ecosystem types either jointly with other adjacent small operations, or in-kind by supporting an existing protected area.

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.

Performance Indicators:

10.6.1) Plantation forest managers actively engage in field research to assess trends in soil productivity; soil types found within the plantation forest area are mapped and considered during field operations

10.6.2) Prescriptions for the establishment, tending and final harvest of planted stands are designed with consideration to soil health and productivity

10.6.3) Site disturbing activities do not adversely impact aquatic and riparian resources including water quality and do not significantly alter the hydrologic

characteristics of the site; planted stand establishment is limited to flat or gently sloping terrain

10.6.4) All stream courses within the operating area are identified and mapped

10.6.5) The management plan contains policies and guidelines for soil maintenance and water quality protection

10.6.6) Fertilizer is applied only when the following conditions are met:

1. Soil classification or foliar analysis indicates one or more nutrients would be the limiting factor for tree growth.
2. Records are on file for prescriptions and applications.
3. Data and/or scientific literature suggest that the response to fertilization is economically justified.
4. There is no runoff or leaching of fertilizer into low-nutrient systems, such as pitcher plant bogs.

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.

Performance Indicators:

10.7.1) Plantation forest standard operating procedures include regular monitoring for pest and pathogen activity, inordinate levels of mortality, and the spread of invasive exotic plants

10.7.2) The management plan contains policies and guidelines for integrated pest management that are demonstrably followed in the field

10.7.3) Forest managers, through their policies and actions, demonstrate a commitment to minimize the use of chemical pesticides and fertilizers

10.7.4) Appropriate to the scale and intensity of operations, there is a written fire prevention and suppression plan

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.

Performance Indicators:

10.8.1) Monitoring incorporates ecological and social impacts of plantation forest activities

10.8.2) Monitoring focuses on both on-site and off-site impacts such as landscape level effects generated by the species that are being planted

10.8.3) Species are selected for planting only after local trials and other empirical evidence demonstrates their suitability to the site

10.8.4) Acquisition of land for establishment of plantation forests does not adversely impact, without due compensation, local ownership rights or access/use patterns

For FMU's meeting SLIMF requirements, only the following indicator(s) apply

10.8.5) Monitoring incorporates ecological and social impacts of plantation forest activities, see Criterion 4.4 and 8.2.

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.

Performance Indicators:

10.9.1) Records are of sufficient detail to enable the SCS auditor(s) to determine if conversion of natural forests to plantations has occurred since November, 1994

10.9.2) Any such conversions, if they have taken place, can be demonstrated to not be attributable to the current managers/owners

10.9.3) Plantation stands established through conversion after 1994 may be considered for certification if a plan to restore these stands to natural forest conditions is being implemented.

Annex 1- Pertinent Laws and Regulations

Federal Laws and Policies

- Endangered Species Act.

- Migratory Bird Treaty Act.
- Lacey Act (concerning trade in illegally taken fish, wildlife, or plants).
- Federal Plant Pest Act and the Plant Quarantine Act.
- Coordinated Framework for the Regulation of Biotechnology, Office of Science & Technology, 19986.
- Federal Water Pollution Control Act/Clean Water Act.
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Federal Environmental Pesticide Control Act (FEPCA).
- Resource Conservation & Recovery Act (RCRA), in relation to hazardous chemicals.
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, commonly known as "Superfund").
- Clean Air Act.
- National Historic Preservation Act, including in relation to American Indian sites.
- Occupational Safety & Health Act.
- Federal policy on income taxes, capital gains taxes, inheritance taxes, reforestation tax credits, and other relevant taxes.
- Federal business practices law.
- Hawai‘i Endangered Species law (Haw. Rev. Stat. §195D et seq.)

Annex 2- International Agreements

International treaties and agreements to which the U.S. is a signatory or a party:

Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (Washington, 1940)
Convention on Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR) (2 Feb 1971)
Convention for the Protection of the World Cultural and Natural Heritage (16 Nov 1972)
Convention concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972)
Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, 1973)
International Plant Protection Convention (1979 Revised Text) (Rome, 1979)
Convention on the Conservation of Migratory Species of Wild Animals (23 Jun 1979)
Amendment to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Art.XI) (Bonn, 1979)
Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991)
Convention for the Conservation of Anadromous Stocks (Moscow, 1992)
Agenda 21, United Nations Convention on Environment & Development (UNCED), Rio de Janeiro, 1992.
Forest Principles, UNCED, 1992.
Convention on Biological Diversity (5 Jun 1992)

Framework Convention on Climate Change, UNCED, 1992.
International Tropical Timber Agreement (Geneva, 1994)
Withdrawn, Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto, 1997)

Annex 3- Endangered Species

The listing of federally endangered species within the State of Hawaii is maintained by the U.S. Fish and Wildlife Service. The federal list of endangered animals and plants can be found through the FWS website, http://endangered.fws.gov/wildlife.html, or by directly visiting: http://ecos.fws.gov/tess_public/servlet/gov.doi.tess_public.servlets.UsaLists?state=HI. In addition, Hawai'i State law protects endangered plants and animals under HRS 195-D. The state law is more restrictive regarding take of listed plants than the US law. In cases where state law provides greater protections, the federal law rises to meet the State standard. The State endangered law can be found through the "Bill Status and Documents" link on the State government website at: http://www.capitol.hawaii.gov/. The State list of endangered plant species may be found at http://www.state.hi.us/dlnr/dofaw/pubs/TEplant.html.

Annex 4- Glossary

Words in the P&C are used as defined in most standard English language dictionaries. The precise meaning and local interpretation of certain phrases (such as local communities) should be decided in the local context by forest managers and certifiers. In this document, the words below are understood as follows:

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.

Biological diversity values: The intrinsic, ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components.

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

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.

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.

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

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.

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.

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

Restoration : The act of modifying a habitat or ecosystem to introduce or reintroduce components and characteristics appropriate to the site both ecologically and historically.

Seral stage: a temporary community of vegetation, defined by the dominant species, which indicates the successional phase of the ecosystem

Short rotation coppice systems -- harvest systems, which are typically perpetuated long-term, and in which only a few characteristics of an indigenous ecosystem remain.

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

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.