



Introduction Page

Scientific Certification Systems (SCS) Draft Interim Standard for New Zealand Plantation Forest Management Certification

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This draft of the SCS Interim Standard is based on the SCS Generic Interim Standard and incorporates applicable elements of the New Zealand FSC Draft National Standard

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**SCS Interim Standards
For New Zealand Plantation Forest
Management Certification
*Under the Forest Stewardship Council***

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 & local laws and administrative requirements

Performance Indicators:

- a) 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

Relevant pieces of legislation include:

- Resource Management Act 1991
 - Historic Places Act 1993
 - Conservation Act 1987
 - Biosecurity Act 1993
 - Forest and Rural Fires Act 1977
 - Hazardous Substances and New Organisms Act 1996
 - Workplace Relations Act 2000
 - Health & Safety in Employment Act 1992
 - Wildlife Act 1953
 - The Forests Act 1949
 - Employment Relations Act 2000
 - Treaty of Waitangi Act 1975
 - Fencing Act 1978
 - Wild Animal Control Act 1977
 - Trespass Act 1980
 - Crown Forests Asset Act 1989
 - Rural Fire District Regulations 1980
- b) Forest managers demonstrate a working knowledge of the regulatory framework in which they operate. Managers interpret obligations of district and regional plans and regional pest management strategies and incorporate those into the operational requirements of c) below.
- c) Relevant statutes and regulations are implemented through operational guidelines and procedures.

- d) There are systems for checking if
 - a. a resource consent is required, obtaining consents, and communicating local authority rules and consent conditions to an operational level.
 - b. historic sites are present and applying for Historic Places Authority if necessary
- e) There is a system for monitoring compliance with local authority consents and rules. The frequency and nature of regulatory violations is not indicative of widespread and systemic non-compliance; when violations occur, forest managers act promptly to correct and re-mediate the circumstances associated with the violation
- f) The relationship between the forest managers and personnel from pertinent regulatory agencies can be characterised as productive and collaborative. There is a system for recording visits and correspondence from local authority officials and responding to issues raised

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

Performance Indicators:

- a) Forest managers demonstrate a working knowledge of all applicable fees, royalties, taxes and other charges that apply to their operations
- b) There is no evidence of chronic non-payment; rather, payments are regularly made in a timely manner
- c) 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 the binding international agreements such as CITES, ILO conventions, ITTA, and Convention on Biological Diversity, shall be respected

Performance Indicators:

- a) Forest managers are aware of which binding international agreements apply to the nation in which their forest operations reside
- b) 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 the involved or affected parties.

Performance Indicators:

- a) Forest managers are forthright in informing the SCS auditor(s) of any possible conflicts between laws, regulations and the FSC Principles and Criteria. Any identified conflicts are formally documented
- b) 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 unauthorised activities

Performance Indicators:

- a) The management plan contains express policies stating that the defined forest area shall be protected from illegal harvesting, settlement and other unauthorised activities
- b) Forest managers devote sufficient resources (manpower and money) to conduct surveillance of the defined forest area so that unauthorised activities are promptly found and controlled.
- c) With respect to illegal cultivations, certificate holders shall provide appropriate assistance to the police consistent with legal obligations and the safety of personnel and the public

1.6 Forest managers (certificate holders) shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria

Performance Indicators:

- a) 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
- b) Written copies of the FSC Principles and Criteria are available to all management and field personnel; forest managers are generally conversant with the P&C
- c) The scale of investment in forest management and administration is consistent with a long-term commitment to forest stewardship
- d) 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). Full disclosure of all forest areas and an explanation of the rationale for any exclusion is required
- e) 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

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 tenure and forest use rights to the land (e.g. land title, customary rights, or lease agreements) shall be demonstrated

Performance Indicators:

- a) 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, Crown forest licences, forestry 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)

- b) There is documentation indicating the existence of any Treaty of Waitangi land claim over the forest

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:

- a) Local communities (mana whenua), and/or other stakeholders with duly recognised 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
- b) All holders of such rights shall be made aware of current and proposed forest operations that may affect their use rights
- c) Forest managers maintain positive/collaborative working relationships with holders of duly recognised legal or customary tenure or use rights
- d) Allocation, by local communities, of duly recognised 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:

- a) 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
- b) Forest managers can demonstrate, through appropriate documentation, that appropriate mechanisms have been employed to resolve disputes over tenure claims and use rights
- c) The magnitude and severity of unresolved tenure claims and use rights disputes are minor, relative to the scale of forest management operations and the interests of the local communities

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

Performance Indicators:

- a) Tāngata Whenua and their representative bodies are identified. The manager maintains an up to date list of Tāngata Whenua, and their representative bodies, including contact persons and their contact details.
- b) Tino Rangatiratanga – Provision shall be made for the right of Tāngata Whenua to exercise full authority and control over their lands, resources and taonga in accordance with the Treaty of Waitangi.
- c) Customary/traditional rights of Tāngata Whenua to own, manage or use forest resources (timber and non-timber) have been identified and are being met. There is an understanding and recognition of the principles of the Treaty of Waitangi, particularly regarding rights of Tāngata Whenua to land, water and traditional resources. Agreed use rights are documented in writing, or defined by clear (on both sides) verbal understandings (at least minuted as to date and parties to the verbal agreement, and signed by those parties), and are honoured. The certificate holder shall have a procedure whereby customary/traditional rights are recognised. Tāngata Whenua with relevant interests indicate that the manager respects customs and/or protocols.
- d) There are records of all previous and on-going disputes over customary/traditional rights
- e) Appropriate mechanisms are employed to resolve disputes, including legal requirements and internal procedures
- f) There is a commitment to resolving on-going disputes where the disputes are not vexatious or frivolous
- g) If requested by the Tāngata Whenua there is an annual hui between Tāngata Whenua and the manager (or persons with delegated responsibility) to review forest operations. Annual hui are conducted, and the manager holds records of hui dates, discussions, any agreed actions, and responsibility for implementation of actions.

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

Performance Indicators:

- a) Provision shall be made for the right of Maori to exclusive and undisturbed possession of their lands, forests, estates, fisheries and other taonga in accordance with the Treaty of Waitangi.
- b) Documents are present describing the legal status of the land and plantation forest. These may include:
 - Land certificates and title

- Registered rights such as leases or rights of way
- Unregistered leases or licenses to occupy
- Crown Forest Licenses
- Forestry rights
- Crown leases
- Give and take boundary agreements
- Existing Covenants or Agreements (e.g. Nga Whenua Rahui)
- QEII Trust or Local Authority Agreement
- Unregistered Wahi tapu areas
- “Silent File” records

The certificate holder shall have a procedure whereby tenure rights are recognised at a stage in the planning process that enables modifications to be made to the plan as appropriate. There is a process that involves Tāngata Whenua for obtaining silent file information.

- c) Maps should record important/land tenure information including boundaries (Maps would not normally record “silent file” information)
- d) Tāngata Whenua do not perceive operations as a major threat to their resources. There is a process that involves Tāngata Whenua for identifying and registering mahinga kai resources (e.g. fisheries) with appropriate security of information concerning sites which are confidential. Resources of special significance requiring protection, or specific management consideration, are indicated on maps included in management planning. Resources are protected, or appropriately managed, in the field. Tāngata Whenua are permitted to access and use these resources. There is a process that involves Tāngata Whenua, for monitoring the condition of these resources.
- e) Management takes explicit actions to ameliorate threats or diminishment to resources or tenure of Tāngata Whenua. These actions are documented.

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:

- a) Active Protection of Taonga and Maori Interests – Provision shall be made for the active protection of taonga for as long as Maori wish it.
- b) Kaitiakitanga – Provision shall be made to enable Maori to undertake their duty of custodianship, stewardship and guardianship over their lands, resources and taonga in accordance with the Treaty of Waitangi.
- c) Known sites of special cultural, historical, ecological, or religious significance are identified (and described) in co-operation with Tāngata Whenua. Sites of special significance requiring protection, or specific management consideration, are indicated on maps. Sites are protected, or appropriately managed, in the field. There is a process that involves Tāngata Whenua, for monitoring these sites
- d) There is a clearly defined process for identifying other such sites, including the survey of land and a process for registering claims relating to such areas, and a process for conflict resolution. There is a process that

involves Tāngata Whenua, for identification and registering of Wāhi Tapu/Taonga sites with appropriate security of information concerning sites which are confidential. There is a process for identification and registering of sites that may have historic or cultural interest to all New Zealanders.

- e) Appropriate rights of access for Tāngata Whenua to these areas is permitted. Members of the Tāngata Whenua are permitted to visit Wāhi Tapu/Taonga as required by their tikanga.
- f) Accidental discovery protocols are in place. If discovery of a new site occurs during forest operations, the site will be protected (work stopped, manager notified, and assessment arranged and undertaken with Tāngata Whenua). Operators and contractors are trained to identify such sites in the field. All discovered Wāhi Tapu sites are provided with full protection from possible damage. Other sites of historic, cultural, or scientific interest are provided with protection appropriate to their status. There is a process that involves Tāngata Whenua, for monitoring these sites.

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:

- a) Traditional practices or knowledge of Tāngata Whenua that is being, or may be, utilised commercially by the manager, is recognised, with permission to use such practices or knowledge having been obtained prior to use. Documentation of traditional practices or knowledge that is being utilised commercially is held, along with permission from appropriate representatives of Tāngata Whenua, for said use.
- b) When traditional knowledge is used commercially by the manager (or any other organisation under an agreement with the manager), compensation is formally agreed before forest operations commence. All agreed compensation is paid.

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:

- a) 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, and a commitment to the enhancement of the capabilities and qualifications of local workers
- b) Appropriately qualified people in local communities and local enterprises are given preferential opportunities in employment and contracting; the forest management operation actively targets the local workforce
 - c) Forest managers contribute to or directly provide training programs designed to enhance the capabilities and qualifications of local workers. Contributions to, and involvement in, such training programs are documented.
 - d) There is active dialogue with representatives of local communities, aimed at identifying employment, contracting and training opportunities
 - e) Forest managers give preference to local vendors of equipment and miscellaneous services, subject to cost considerations

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:

- a) The forest management operation complies with the HSE Act and the relevant codes of practice. It demonstrates a priority towards worker safety; there is an active safety program, appropriate to the scale of operations
- b) Written guidelines and policies, appropriate to the scale of operations, exist for workplace health and safety
- c) Appropriate safety equipment is made available to all workers, and there are documented procedures for training workers in its use
- d) All equipment is periodically inspected and tested for safety performance
- e) Up-to-date information on pertinent health and safety laws and regulations is maintained by forest managers and appropriately disseminated to forest workers
- f) Forest managers maintain up-to-date safety records; such records indicate exemplary performance relative to industrial norms
- g) Monitoring and reporting of performance shall meet or exceed statutory requirements. This standard shall be met if an audit has been successfully completed under the Accredited Employer Scheme (AES) and/or the “primary” requirements of the ACC Partnership programme. If a successful AES audit has not been completed the following performance indicators will hold:
 - Managers, employees and contractors understand their responsibilities under the HSE Act
 - All forest employees are qualified in skills that are relevant to the tasks they are performing, or be under training to acquire such skills
 - There are up to date training records or other documented skills records for employees and contractors
 - There are up to date health & safety induction records for employees and contractors
 - Hazard identification is undertaken
 - Accident reports are documented and up to date

- There are regular and documented compliance checks against the relevant Code(s) of Practice
- Communication from the regulatory authority is recorded and responded to
- Contract provisions of service contractors include HSE Act compliance requirements

4.3 The rights of the 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)

Performance Indicators:

- a) Where the forest management operation directly employs labour, the managers demonstrate compliance with the Employment Relations Act (2000), the Holidays Act (1991), the Minimum Wages Act (1985) and the Wages Protection Act (1983),
- b) Forest managers, by their actions and policies, respect the rights of workers to organise or join trade unions and to engage in collective bargaining. Union representatives are provided with information on employee numbers and location on request.
- c) Employers who directly employ labour have documented policy and procedures that include provisions ensuring that:
 - Staff members with the responsibility/delegated authority to liaise/ negotiate with Union(s) and non-union employees are confirmed and identified.
 - All employees are qualified in skills that are relevant to the tasks they are performing or are under training to acquire such skills.
 - Issues raised by employees or Unions are treated promptly, constructively, objectively and in good faith.
 - There are documented procedures for resolving employment relationship problems. These include provisions for both direct dialogue between staff, Unions and management and for independent third party mediation assistance.
- d) Issues and grievances raised by workers and/or their organizations are investigated promptly, fairly and objectively

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

Performance Indicators:

- a) There are documented policies and procedures for assessing the social implications of forest management plans (including new afforestation projects), policy changes, and forest operations
- b) 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
- c) Management activities and policies are modified, as appropriate, in response to the results of social impact assessment

- d) There is a database or other record of neighbours and other stakeholders
- e) Forest managers engage in regular communications with neighbours and other stakeholders within the local communities; to the extent practicable, management policies and activities are sensitive to stakeholder concerns and expectations.
- f) The forest management operation can be fairly characterised as a “good neighbour” within the regional context
- g) Forest managers endeavour to keep neighbours and members of relevant local communities 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:

- a) Where they exist and can be established according to *bona fide* procedures, forest managers recognise and respect legal or customary rights that are subject to influence from management activities on the defined forest area
- b) Forest managers endeavour, through actions and policies, to identify and avoid, and mitigate adverse impacts to the property, resources and/or livelihoods of local peoples
- c) Staff members are identified with responsibility for liaison and consultation with local communities and resolution of grievances.
- d) 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. These procedures are documented in management plans, and communicated to neighbours and other local peoples, along with the details of staff members responsible for liaison over grievances.
- e) Third party mediation should be considered when necessary to resolve grievances.
- f) The details of all grievances notified to the forest managers, attempts to resolve such grievances, and the outcomes are documented.

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 towards 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:

- a) The forest operation has sufficient financial capital and human resources to implement the management plan, over the long run
- b) The full costs of forest management, including environmental and social costs, are considered and adequately covered by the financial resources of the forest operation
- c) 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 defined forest area
- d) Commercial (income generating) activities are financially viable, given short and medium-term market conditions and costs

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

Performance Indicators:

- a) Management and marketing policies, as well as field-level decisions, systematically assure that commercial forest products are being sold to their most appropriate and profitable market
- b) Forest managers strive to diversify the mix of commercial products recovered from the forest and marketed, minimising the risk of over-dependency on too few outlets
- c) The forest operation has a demonstrated track record of favoring or encouraging local processing of wood products, subject to competitive pricing and logistical considerations

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

Performance Indicators:

- a) Harvesting operations minimise avoidable waste and residual stand damage, while maximising value recovery from the coupe.
- b) Yarding, log merchandising and log sorting operations minimise product wastage, de-grade and foregone revenue opportunities
- c) Skid sites are kept to a minimum practicable number and size and are located so as to minimise adverse environmental impacts. Any resultant waste on the skid does not accumulate to excess; if necessary, this is spread back over the cut-over.
- d) Post-harvest audits within harvest units, skids, log sort yards are systematically conducted to identify avoidable wastage. Cut-over waste assessments are carried out regularly using a formal sampling method (eg Wagner waste assessment) basis where appropriate
- e) 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 minimised
- f) While minimizing undue waste, forest managers establish field guidelines that recognise the ecological value of biomass (e.g., tops and branches)

being left on site; forest managers have written guidelines for retention of coarse woody debris (CWD) 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:

- a) Forest managers can demonstrate their efforts to diversify the mix of commercial products recovered from the forest and marketed
- b) Appropriate to the scale of operations, multiple forest products are harvested and marketed
- c) 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
- d) 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
- e) 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 recognise, maintain and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.

Performance Indicators:

- a) 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
- b) Forest management demonstrates an intent to accommodate recreational access and operates a permit system or other access management method
- c) Timber management activities are designed and implemented, spatially and temporally, with due consideration to the impacts on other forest services
- d) Forest managers demonstrate an awareness of and sensitivity to non-timber forest services, many of which may not generate income
- e) 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 which can be permanently sustained. [EM drafting changes]

Performance Indicators:

- a) Appropriate to the scale of operations and the frequency of commercial activity, timber harvesting is guided by a long-term (at least one and a half rotations) management plan that includes a calculation of the expected

- wood-flow, yearly through time, given the strategic objectives of the owner. This forecast should indicate the long-term sustainable yield, and the timing when this is to be achieved.
- b) The short-term timber management plan (one to three years) should be integrated and consistent with the long-term plan. It should include the prescription of the harvest level for the current budget year/period, the product yield and the temporal and spatial pattern of harvests.
 - c) A management control system is in place to ensure that the planned prescriptions are being faithfully implemented in the field.
 - d) Forest managers keep accurate records of the planned versus actual harvest volume, by product groups; annual harvests over past years do not exceed the planned harvest, within a permitted operational variance.
 - e) 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 or crop types — are generated through a combination of empirical data and published literature; growth estimates are conservative
 - f) Harvest levels are set such that the condition of the forest estate (measured by age and size classes, levels of growing stock, biodiversity, health, site productivity and value, including non-timber or non-financial values) is maintained or improved over time. A current level of harvest which exceeds that of the long term sustainable yield is acceptable, provided it is temporary and that the long-term management plan establishes that such a level of cut will ultimately improve the forest estate, or that the size of the forest does not permit an annual, non-declining, even-flow harvest
 - g) For operations entailing regular annual harvesting, the 10-year rolling average harvest level does not exceed the long term sustainable average annual increment
 - h) 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 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.**

Performance Indicators:

- a) Standard operating procedures for the defined forest area include the completion of stand-level environmental impacts assessments, scaled to the size and complexity of operations, prior to commencement of site disturbing activities such as harvesting, on-site processing, site preparation, pesticide use, etc. Impact assessments include consideration of impacts on soil, soil hydrology, riparian areas, streams, visual and aesthetic aspects and indigenous biodiversity, in particular the impact on rare or threatened species potentially present in the stand.
- b) In addition to stand-level assessments, forest managers also complete landscape-level environmental impact assessments where, for instance, the cumulative effects of forest operations within and nearby the defined forest area are addressed. Assessments include consideration of impacts on nearby indigenous forest areas (in particular when these are remnant areas of indigenous vegetation or when these are inhabited by rare or threatened species that might require plantation stands as wildlife corridors), wetlands, riparian areas, down-stream habitat, geothermal sites, geopreservation sites, and dunelands. Cumulative effects are considered over the timeframe of a rotation from planting to harvesting.
- c) To provide background for environmental impact assessments, the regional (ecological district), 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. This includes an evaluation of different indigenous ecosystem types within each Ecological District within which the certified forest occurs has been undertaken, and a fine-scale evaluation to determine the viability of poorly represented areas and to establish specific management requirements of such areas.
- d) 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.
- e) Information and data necessary to complete comprehensive impact assessments are systematically gathered by forest managers.

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:

- a) Management plans are established and duly documented that commit the forest operation to protect rare, threatened and endangered species and their habitats.
- b) Endangered species policies comply with all pertinent national and local laws and regulations, as well as international treaties, regarding endangered species. Management plans and policies are prepared in

- consultation with the Department of Conservation. Activities such as hunting, fishing and collecting that may be detrimental for such species are restricted in areas where these occur or are likely to occur.
- c) Forest operations demonstrably adhere to the endangered species policies set by the forest managers.
 - d) Forest managers forge positive and collaborative working relationships with pertinent officials from the Department of Conservation and other national and local government agencies charged with enforcing endangered species statutes.
 - e) Species known to be rare, threatened or endangered, their habitats, and sites with unusually high species and/or ecosystem diversity are identified through field surveys or other sources. They are 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.
 - f) As appropriate, field employees and contractors are trained in the recognition of endangered species and their habitats, and they are encouraged to find and report such species and habitats.
 - g) Areas of critical habitat for listed species are duly delineated, appropriately managed, and recorded on maps of appropriate scale.

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:

- a) 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. Ecological functions and values that shall be maintained intact include, for example, nutrient cycling, integrity of the soil, water quality, and the provision of species habitat within managed areas.
- b) Subject to the scale of operations, the whole forest estate, both production plantation and unplanted non-production areas, is managed as an entity so as to maintain a full range of successional stages at distributions within the range of natural variability. (Although successional processes in a plantation forest of exotic tree species may be limited, compared with those occurring in natural forests, successional stages of the understory vegetation can be considered. A continued presence of both young and mature stands in each forest would ensure that different successional stages can occur.)
- c) 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.

- d) Indigenous species will be maintained outside plantation stands and encouraged on any land that is retired from intensive plantation forestry, such as newly established riparian margins. Although exotic plantation forestry precludes the occurrence of a natural composition of canopy species within stands, naturally occurring succession of understorey species is encouraged (except where control of exotic plant pests such as gorse is necessary).
- e) Harvesting is designed and laid out, over time and space, with consideration of connectivity of wildlife habitats.
- f) 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.
- g) Managers work with, rather than prevent, the development of an indigenous understorey vegetation to enhance species and structural diversity.
- h) 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.
- i) Special habitats (such as wetlands, riparian areas, unstable slopes and rock outcrops) are protected.
- j) Site disturbing activities (e.g., harvesting, road building, site preparation, planting) minimise adverse impacts to soil fertility, structure, organic layers and nutrients. Topsoil displacement will not be permitted. Any impact on riparian areas, wetlands and streams shall be avoided.

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:

- a) Appropriate to the scale and intensity of operations, a network of protected areas is established within the defined forest area. Protected areas include indigenous riparian areas, wetlands, remnants of indigenous vegetation, and wildlife corridors, as well as plantation areas that are inhabited by threatened species if populations of such species would be endangered by harvesting. Protected areas include those managed by the Department of Conservation or other agencies. Where indigenous remnant areas of ecological significance are not viable due to their inappropriate size or shape, the Department of Conservation has been consulted to consider restoration of adjacent plantation areas to indigenous vegetation. In establishing the network, forest managers balance ecological and economic considerations in an exemplary manner.
- b) 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.
- c) The principles of conservation biology have been applied in determining the design of the network of protected areas. Principles include:

Proportion of indigenous ecosystem remaining in ecological district
 Viable size and shape
 Quality of habitat
 Links to other protected areas
 Resilience to introduced species or disturbance events e.g. fire, wind
 Degree of buffering from adjacent land uses or activities.

- d) Areas of ecological significance within the defined forest area (e.g., due to uniqueness or rarity) are appropriately protected. This includes weed and pest control, restriction of hunting and other recreational use (where appropriate, for example, to protect kiwi), restriction of road construction, etc.
- e) Protected areas within the defined forest area are delineated on maps and addressed in the management plan, including written management and protection policies.
- f) Low impact use of protected areas, such as Iwi cultural activities, backcountry recreation, eco-tourism, hunting, trapping or fishing may be acceptable activities in protected areas, if it can be shown the activity is fully compatible with the management of the area in its natural state.

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.

Performance Indicators:

- a) The management plan, or another pertinent policy document, contains express written guidelines for effectively minimising soil erosion as a result of site disturbing activities.
- b) The management plan, or another pertinent policy document, contains express written guidelines for effectively minimising damage to indigenous vegetation in adjacent areas as a result of site disturbing activities, and for preventing damage that would permanently affect the ability of indigenous vegetation to regenerate.
- c) 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 meet applicable regulatory requirements and/or best management practices. This includes (1) trees are felled away from the riparian area, stream or wetland, (2) logs or trees are not dragged through such areas, (3) fuels, oils, agrichemicals or other such substances are not mixed or stored in such areas to prevent contamination, (4) disturbed vegetation, soil or debris does not enter or affect streams and other water bodies. Where any such impact occurs, methods are specified to mitigate these.
- d) Forest managers and forest workers demonstrate a working knowledge of these protection guidelines and systematically comply with them in day-to-day operations.
- e) All watershed, riparian, and aquatic features are identified, classified, and mapped.

- f) 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.

6.6 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 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.

Performance Indicators:

- a) All chemical pesticide use occurs within the context of an integrated pest management program, appropriate to the scale and intensity of operations.
- b) Complete and up-to-date records of all chemical pesticides used, including quantities applied, on the defined forest area is maintained and made available to the SCS auditor(s); no chemicals prohibited under criterion 6.6 are used. There is compliance with the (1) NZ Agrichemical Users Code of Practice, (2) any local authority or other regulatory authority requirements, and (3) the Hazardous Substances & New Organisms Act (HSNO). A justification for the use of pesticides is provided.
- c) All pesticide use is guided by site-specific written prescriptions designed to avoid human and environmental hazard and to maximise efficacy of use.
- d) Field personnel (employees and contractors) 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. Contractors are contractually obliged to comply with the specifications under this criterion.
- e) Appropriate to the scale and type of operations, there is on-site supervision by a professional forester during pesticide applications.
- f) Silvicultural prescriptions are selected and designed so as to minimise reliance upon chemical pesticides.
- g) Forest managers demonstrate a commitment to reducing, and eliminating in due course, planned reliance upon chemical pesticides. Forest managers have a goal to phase out toxic, persistent or bio-accumulative pesticides in a relatively short time-frame.

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:

- a) There is compliance, including documentation where required, with the NZ Agrichemical Users Code of Practice, and any other applicable regulatory authority requirements.
- b) Toxic chemicals and their containers are disposed of, off site, in an environmentally sound and legal manner, whether from forest operations or processing facilities. Containers are preferably (in this order) re-used or recycled, and they shall be triple rinsed prior to disposal if re-use or recycling is not possible.
- c) There are contingency plans and procedures for prevention and cleanup following spills or other accidents involving chemical pesticides, oils and fuels. Procedures include that (1) storage and handling sites are located such that recovery is facilitated in the event of a spill, (2) materials and equipment required in the event of a spill are on site, (3) Staff and contractors are contractually obliged to adhere to these procedures.
- d) There are on-site facilities for secure collection of waste chemicals, fuels and oils. Waste chemicals, fuels and oils are safely transported and recycled or appropriately disposed.

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.

Performance Indicators:

- a) There is no use (defined as commercial use as well as research) of genetically modified organisms in the field within the defined forest area.
- b) Use of biological control agents takes place within the context of an integrated pest management programme.
- c) Use of biological control agents shall be restricted to those approved for use and release under the Hazardous Substances & New Organisms Act. Any use or release shall be in strict accordance with the conditions placed on such use or release by the Environmental Risk Management Authority. Use of biological control agents takes place only where demonstrably necessary.

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

Performance Indicators:

- a) 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. High risk species are avoided.
- b) When exotic species are used, it is governed by written guidelines for controlling off-site regeneration; active ongoing monitoring is mandatory, (see "Guidelines for minimising the risk of unwanted wilding spread from new plantings of introduced conifers" N. J. Ledgard & E.R Langer, Forest Research, 1999).. Wildings in adjacent properties are to be removed before they produce seeds when (1) the adjoining property owner is agreeable to any wilding control activities required on his or her land, (2)

wildings are clearly identified as the progeny of species planted within the plantation area, and (3) wilding spread has occurred from plantations planted after these standards become operative.

- c) Certificate holders shall comply with the regional pest management strategy where this identifies an exotic species as a plant pest / producing wildings.

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:

- a) Afforestation shall be consistent with the principles agreed upon in the NZ Forest Accord (as shown under c). No more than 5% of the defined forest area has been (since 1994) or will be converted to plantations (as defined by the FSC)
- b) Forest managers are able to demonstrate the conservation benefits of converting portions of the defined forest area to plantations.
- c) Areas of high conservation value are not being converted to plantations. These include:
- Any area of 5 ha or greater which has an actual or emerging predominance of naturally occurring indigenous tree species of any height.
 - Any natural indigenous forest vegetation of between 1 and 5 ha in area with an average canopy height of at least 6m, which is practical to protect. This recognises that in some instances some small pockets of native vegetation within a plantation forest management area cannot practically be protected from disturbance. However, viable stands will be excluded from clearance and every reasonable effort made to ensure such areas are not damaged in subsequent forestry operations.
 - Any vegetation recommended for protection in a survey report in the Protected Natural Areas Programme or classified as a site of Special Wildlife Interest (SSWI) in a published report of the former Wildlife Service.
 - Significant Natural Areas (Areas recognised as significant indigenous vegetation or significant habitats of indigenous fauna) as defined in an operative District Plan under the Resource Management Act 1991.
 - Indigenous habitat of rare, threatened or endangered species.
 - Geopreservation Sites as listed in the Geopreservation inventory.
 - Wetlands (as defined in the Resource Management Act 1991)
 - Riparian margins
 - Dunelands where the primary vegetation is indigenous.
 - Geothermal areas where there are indigenous plant communities adapted to geothermal conditions.

The following lands shall not be considered for conversion to plantation forestry unless consultation is undertaken with interested parties of the environment chamber of the NZ National Initiative of FSC. Where resource consent is required under the Resource Management Act, consultation can be undertaken by that process.

- High Country tussock lands, scrublands or herbfIELDS.
- Coastal scrub and coastal herbfIELDS an indigenous plant content of greater than 30% within the area being considered.

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:

- a) There is a written management plan for the defined forest area that addresses the subjects and plan components enumerated in this criterion, above
- b) The management plan contains both long term goals and objectives as well as short and near term tactical direction
- c) 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
- d) The format, detail, length and function of the management plan is appropriate to the scale and intensity of operations

- e) The management plan is revised and updated at regular intervals, the frequency of which is appropriate to the scale and intensity of operations, see 7.2 below.
- f) There are sufficient resources invested in plan development so as to produce a functional and effective management plan
- g) Maps delineate the defined forest area and show all ecosystem and resource attributes, features and characteristics pertinent to forest management planning and operations, at scales relevant to those attributes and the intensity of management.

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 considerations.

Performance Indicators:

- a) The management plan is revised and updated at regular intervals, the frequency of which is appropriate to the scale and intensity of operations and not less than five years
- b) 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
- c) Forest managers maintain conversancy in emerging scientific and technical information pertinent to the management of the defined forest area
- d) Sufficient resources are invested in periodic monitoring so as to maintain up-to-date knowledge of emerging conditions and circumstances
- e) 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

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

Performance Indicators:

- a) 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
- b) Standard operating procedures for indoctrination of new forest workers includes training regarding the management plan and their role therein
- c) Records are maintained as to when each forest worker received management plan training
- d) There is a demonstrable track record of compliance with and implementation of the management plan
- e) Both employees and contractors receive appropriate levels of training with respect to 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:

- a) Interested stakeholders are readily able to obtain a public summary of the management plan
- b) The public summary is appropriate to the scale and intensity of operations
- c) The public summary provides information on the primary elements of the plan, including those enumerated in criterion 7.1
- d) The public summary is updated periodically, at a frequency appropriate to the scale and intensity of operations

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:

- a) 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
- b) Forest managers have a demonstrated track record of complying with the monitoring protocols. Persons responsible for implementing and maintaining monitoring programs are identified
- c) Results of monitoring are used adaptively to modify management activities, goals and objectives, the management plan, and chain-of-custody procedures
- d) Monitoring is carried out in accordance with sound, up to date forest mensuration and sampling principles and techniques
- e) Desired "Probable Limits of Error" are specified in any monitoring or assessment plan involving sampling, and sufficient resources are expended to obtain estimates within these limits
- f) For NZ plantations managed primarily for timber production, monitoring should include assessment / inventory of changes in the state of a stand, variously, at an appropriate level of expenditure and at an appropriate time of a stand's development:
 - a. Pre-establishment /site preparation
 - b. Post establishment survival
 - c. Pre-pruning and thinning readiness and/or rate setting
 - d. Post treatment operational quality control

- e. “Mid” rotation inventory to provide information for yield prediction and regulation
 - f. Pre-harvest (merchantable volume) inventory
 - g. Post harvest and/or logging waste assessment
 - h. Forest health
- g) Monitoring and assessment of environmental impact is carried out, particularly following operations or natural environmental events, as defined and employed under P&C 6.1

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:

- a) Appropriate to the scale and intensity of operations, forest managers periodically gather information on the indicators enumerated in this criterion, above
- b) 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
- c) Data are collected on tree/stand growth rates of the commercially productive area. As appropriate to the scale of operations, a set of permanent sample plots are established and remeasured to monitor actual forest growth, or as part of a larger set of growth and yield experiments for research.
- d) Social impact assessments are carried out when there are significant changes to operations, management practices or levels of staffing.
- e) There is a comprehensive and widely accepted monitoring programme for health and safety.
- f) Written records are kept of the annual or periodic harvest levels, at levels of specificity appropriate to the scale and intensity of operations. A formal comparison is made periodically of actual against forecasted yields from the inventory and yield regulation system
- g) Costs, productivity and the efficiency of forest management are regularly assessed. Contractors’ performance is monitored, including compliance with contract specifications
- h) The information that is gathered is utilised appropriately

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:

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

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

Performance Indicators:

- a) 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
- b) The evolution of the management plan over successive revisions demonstrates that the results of monitoring are being appropriately incorporated
- c) Records of monitoring activities are available to the SCS auditor(s)
- d) Those parameters assessed by the monitoring programme that are likely to be of direct value to operational staff are indeed used by those staff, thus providing a mechanism to validate the data and their utility.

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:

- a) 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 summarised in a document released by the forest managers or incorporated into the annual certification audit report released by SCS
- b) Forest managers keep the monitoring summary up-to-date

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

Performance Indicators:

- a) An assessment of the defined forest area has been completed for the presence of areas meeting the FSC definition of High Conservation Value Forests (HCVF), (see glossary); the methodology and results of the assessment are included in the Management Plan and its summary, and are made available the SCS auditor(s).
- b) The assessment for the presence of HCVFs includes consultation with pertinent stakeholders and outside experts.
- c) The HCVF assessment methodology uses up to date procedures.
- d) Forest managers demonstrate a working understanding of the HCVF concept and definition and endeavour to comply with the spirit of this principle.

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

Performance Indicators:

- a) Forest managers provide to SCS a list of pertinent stakeholders (i.e., relevant individuals within the Department of Conservation, Regional Councils, the Royal Forest and Bird Society, etc.) who may be consulted regarding HCVFs.
- b) Stakeholder consultation indicates that the HCVF assessment methodology is satisfactory and that the forest management operation consistently considers and appropriately manages 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:

- a) The management plan, and the public summary thereof, contains a section pertaining to HCVF areas found within the defined forest area.
- b) The conservation values of each identified HCVF area are described.

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

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:

- a) Measurable effectiveness indicators are developed and presented in the HCVF section of the management plan.
- b) 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.
- c) The results of HCVF monitoring are used adaptively in modifying HCVF management and protection policies as well as revising the management plan.
- d) 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.

10.1 The management objectives of the plantation, including natural forest conversion and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan

Performance Indicators:

- a) The management plan for the defined plantation forest area includes a presentation of the landowner and/or plantation owner objectives. The management plan identifies the boundaries of the area encompassed by the certificate, and this includes the plantation forest area as well as any designated protection areas.
- b) The plantation forest objectives include express policies for natural forest protection 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.
- c) Plantation forest managers demonstrate a systematic approach to 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 within the natural landscape

Performance Indicators:

- a) Plantation forest managers demonstrate a willingness to protect and restore key areas of natural forests within their ownership.
- b) The flow of forest products from the plantation forest contributes to regional demands and thereby helps to reduce pressures on natural forests within the region.
- c) The spatial pattern of planted stands within the plantation forest operation aims at mimicking natural patterns found within the landscape. The forest contains a mixture of stands of different ages such that there will always be a considerable proportion of mature stands that are most desirable as habitat for indigenous species. Visual / aesthetic impacts of plantation forests in general, and of harvesting in particular, are minimised. Manawhenua perceptions of visual landscapes are being considered in plantation management.
- d) Riparian zones on either side of a water course are established, within which indigenous vegetation is maintained or established. These zones should be of sufficient size to act as a buffer to limit toppling of trees into waterways.
- e) Appropriate to the scale and intensity of operations, wildlife corridors, preferably of indigenous vegetation, are established for wildlife movement.

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:

- a) A variety of species or provenances are employed in the planting programme.
- b) The management regime introduces diversity through practices such as: different silvicultural regimes/stocking levels; variable rotations; maintaining a range of age classes; and cut blocks of different size and shape.
- c) The management plan contains biodiversity objectives, policies and guidelines and these are being implemented.

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:

- a) 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.
- b) 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 summarised and made available to the SCS auditor(s). This standard is met by taking part in NZFOA's Forest Health Surveillance Programme. There shall be a procedure for responding to unusual events.
- c) Selection of plantation species and provenances is based on documented trials and analyses of growth and risk that demonstrate their suitability to the plantation sites and management objectives. A variety of provenances are used.
- d) 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 and to be determined in regional standards, shall be managed so as to restore the site to a natural forest cover

Performance Indicators:

- a) Areas that are representative of existing natural ecosystems are being restored to their natural state.
- b) The percentage of the plantation forest operation that is devoted to natural forest cover meets regional plantation forestry norms.
- c) Areas of natural forest or natural vegetative cover restoration are delineated on maps and, as necessary, delineated in the field for purposes of assuring protection.
- d) The management plan contains policies and guidelines for restoring natural area reserves within the plantation forest operation, and specifies the regimes and techniques to be used.

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:

- a) Plantation forest managers actively engage in field monitoring and research to assess trends in soil productivity; soil types found within the plantation forest area are mapped and considered during field operations. This performance indicator shall be met if the certificate holder takes part in the NZ Site Management Cooperative Research Programme which is actively developing best practice techniques related to soil physical impacts, forest nutrition and vegetation management.
- b) Prescriptions for the establishment, tending and final harvest of planted stands are designed with consideration of soil health and productivity.
- c) 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 terrain which can be harvested without creating damage to the soil or causing erosion at a rate or intensity significantly greater than under natural conditions.
- d) All stream courses within the operating area are identified and mapped. Managers must monitor toppling of trees into stream courses, and debris and log jams, acting promptly to avoid downstream adverse effects.
- e) The management plan contains policies and guidelines for soil maintenance and water quality protection. The certificate holder is monitoring representative streams and is taking part in research to provide a sound scientific understanding of the linkages between forest management practices and indicators of water quality.

10.7 Measures shall be taken to prevent and minimise 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 fertilisers. Plantation management should make every effort to move away from chemical pesticides and fertilisers, including their use in nurseries. The use of chemicals is also covered in Criteria 6.6 and 6.7.

Performance Indicators:

- a) Plantation forest standard operating procedures include regular monitoring for pest and pathogen activity, inordinate levels of mortality, and the spread of invasive exotic plants. This performance indicator is met when the certified forest is surveyed within the Forest Health Surveillance Programme.
- b) The management plan contains policies and guidelines for integrated pest management that are demonstrably followed in the field. This includes a pest management strategy that identifies the key pests, damage threshold above which control should take place, and the preferred control methods, in compliance with the regional pest management strategy and with minimal non-target effects. The certificate holder contributes to New Zealand's biosecurity goals. (*Note: The use of new biological control agents is covered by the NZ Environmental Risk Management Authority – ERMA*).

- c) Forest managers, through their policies and actions, demonstrate a commitment to minimise the use of chemical pesticides and fertilisers. (Refer 6.6)
- d) Appropriate to the scale and intensity of operations, there is a written fire prevention and suppression plan. This documentation should include:
- Contractors responsibilities for action
 - Contact details for fire authorities, personnel and neighbours
 - Emergency procedures
 - Maps which include important information such as:
 - Stand identification ,
 - Clear access routes
 - Firebreaks
 - Dams, ponds & other water supplies
 - Helipads
 - Important features for protection such as dwellings (including those on adjacent properties), ecological areas, and infrastructure (power lines etc)
 - Equipment and training for fire suppression
- Key contracts (such as harvesting) deal with fire requirements. There is correspondence and other evidence of involvement with the Rural Fire Authority. There is a system for documenting important records and ensuring compliance with the Forest & Rural Fires Act.
- e) Managers practice effective hygiene when moving plant and equipment between areas with different pest regimes.

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 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:

- a) Monitoring incorporates ecological and social impacts of plantation forest activities appropriate to the scale and intensity of operations.
- b) Monitoring focuses on both on-site and off-site impacts such as landscape level effects generated by the species that are being planted.
- c) Species are selected for planting only after local trials and other empirical evidence demonstrates their suitability to the site (see 10.4 (d) above).
- d) Acquisition of land for establishment of plantation forests does not adversely impact, without due compensation, local ownership rights or access/use patterns.

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:

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

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 fertilisers, 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, recognised 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.