Portuguese Standard

NP 4406
2014

Sustainable Forest Management Systems
Application of the pan-European criteria for sustainable forest management

Sistemas de Gestão Florestal Sustentável
Aplicação dos critérios pan-europeus para a gestão florestal sustentável

Systèmes de Gestion Durable des Forêts
Application des critères paneuropéenes pour la gestion durable des forêts

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Summary ..... Page

Introduction

Society is increasingly confronted with the problems of a growing population explosion, degradation of environmental quality and depletion of natural resources due to their irrational use, including the use of forests. The global influence that forests have on the environment and in particular on some of the most problematic issues, such as the greenhouse effect, water quality and desertification, acting respectively as a carbon dioxide sink and a stabilising element in hydrological cycles and soil conservation, make them one of the natural resources the problems of which society is particularly sensitive toward. The deforestation seen world-wide is the result of diverse factors such as the excessive exploitation of saleable forest resources, the use of wood as an energy source, population growth, principally in developing countries, the pressure of urbanisation, and the effects of air pollution and forest fires; these are some of the problems affecting forests today.

There are also social benefits, such as landscape, employment, recreation and tourism, which confer on forests the universal statute of a natural 'good' that may be used by all.

To demonstrate and monitor a forestry activity that is coherent and in equilibrium with the economic, social and environmental needs and values of the forest space and with the legal demads and forest policy defined for the forest management unit, implies complying with and establishing a set of requirements and procedures that are integrated in a properly structured management system.

This Standard is based on the pan-European criteria and the pan-European guidelines at the operational level for the sustainable forest management, adopted during the Ministerial Conferences for the Protection of Forests in Europe and the best practices determined by the present international initiatives. This Standard is based on the NP EN ISO 9001 and NP EN ISO 14001.

Given the nature of forestry in Portugal, it was deemed necessary to include the requirements for a management system in the Portuguese Standard for sustainable forest management, in this case a Sustainable Forest Management System. A management system based on Deming's Total Quality Cycle (PLAN – DO – CHECK – ACT, i.e. Planning – Operationalization – Monitoring – Act / Review) constitutes a simple and systematic approach that will allow compatibility with international standards for management systems.

The objective of this Standard is to promote sustainable forest management, that is, promote the use of the forest without compromising its economic, social and environmental functions. At the same time, by specifying the requirements of the sustainable forest management system, or in other words, the requirements that can be audited for the certification of that system, it permits demonstration by the manager of a forest management unit to other stakeholders that a sustainable forest management system has been implemented, satisfying the ever stronger environmental conscience of society.

This Standard does not include absolute requirements of forestry performance beyond the commitment, established in the forest policy, to comply with the Portuguese legislation, to comply with applicable regulations as well as other requirements subscribed to by the manager of the forest management unit and to fulfil the pan-European criteria for sustainable forest management.

1. Scope and realm of application

This Standard specifies the requirements of a sustainable forest management system in such a way as to permit any entity, manager of the forest management unit, to define a forest policy and objectives that take into account the legal obligations, the pan-european criteria of sustainable forest management and the social, economic and environmental aspects related to forest management, with potential impact.

The Standard is applicable to any forest management unit for which one intends to:

a) implement, maintain and improve a sustainable forest management system;

b) demonstrate, to third parties, its conformity with an internally defined forestry policy;

c) obtain certification of its sustainable forest management system by an external entity;

The present Standard is applicable to the forest management unit. The application of the Standard will depend on the nature and legal complexity of the manager of the forest management unit and the scale to which applies the forest management systems.

Section 4 defines the forest management system requirements that must be respected by any Manager of the forest management unit.

Annex A defines the criteria and indicators of sustainable forest management and all the requirements for sustainable forest management planning.

Annex B defines all the specifications to apply the requirements for sustainable forest management (section 4) at the regional, in group and individual level.

2. Terms, definitions and acronyms

2.1. Acronyms

For the implementation of the present standard the following acronyms applies:

CITES: Convention on International Trade in Species of Wild Flora and Fauna Threatened with Extinction

R&D: Research and Development

FN: National Forest Inventory

IPCC: Intergovernmental Panel on Climate Change

ITTA: International Agreement on Tropical Wood

NUT: Classifications of Territorial Units for Statistical Purposes

IOL: International Organization Labour

NGO: Non Governmental Organization

WP: Watershed Plan for watershed management

FMP: Forest management pan

RFMP: Regional Forest Management Plan

NSCA: National System for Classified Areas

FMS: Forest management system

IUCN: International Union for Nature Conservation

FMU: Forest management unit

2.2. Terms and definitions

For the implementation of the present standard the following terms and definitions applies:

2.2.1. corrective action

Action undertaken to eliminate the causes of nonconformity, a defect or some other undesirable situation, so as to prevent its repetition.

NOTE: *The preceding definition is applied in the field of quality standards. The term is defined according to NP EN ISO 9000.*

2.2.2. preventive action

Action undertaken to eliminate the causes of potential non-conformities, defects or other undesirable situations so as to avoid their occurrence.

NOTE: *The preceding definition is applied in the field of quality standards. The term is defined according to NP EN ISO 9000.*

2.2.3. production increment (indicator 3.2)

The increment of wood and non-wood production observed in a given period of time.

2.2.4. subscriber

Public and private entities, owning or managing one ore more rural parcels of land, with legal rights upon their own forest properties/plots, coverd by conformatie forest certificate, which have the ability to implement the requirements of present standard and undertaking a written commitment withof the respective forest management system.

NOTE: *The term "the ability to implement the requirements of present standard" requires the the entity to have a long-term legal right to manage the forest and would disqualify one –off contractors from becoming participants in group certification (reginal/group).*

2.2.5. certified area (indicator 6.1)

The forest area covered by the forest certificate conformatie representing the sum of forest areas, consisting of rural parcels of land, declared by the subscribers or by the individual entity and with are included in FMU limits.

2.2.6. set-aside area

Areas which are dedicated to environmental, ecological, cultural and social functions, with appropriately intensity management to the potential goals of recovery associated with any of these functions. These areas are not static and after this recovery is completed, can be intervened according to new planning objectives.

2.2.7. internal audit
Process of systematic verification and documentation executed so as to obtain and evaluate, in an objective manner, evidence that determines whether the forest management system of a forest management unit conforms to the criteria established for that unit for auditing the forest management system, and to communicate the results of that process to the responsible entities.

NOTE: *The preceding definition is adapted from the definition of "internal audit" of an environmental management system, as expressed in the Standard NP EN ISO 14001.*

2.2.8. biodiversity (indicator 4.1)
biological diversity
The variety of life forms and their related processes, including all the living organisms, their genetic differences and the communities and ecosystems where they occur. [5]

2.2.9. conformatie forest certificate
A document confirming that the group organization complies with the requirements of the sustainable forest management standard and other applicable requirements of the forest certification scheme.

NOTE: *the term "conformatie forest certificate" is equivalent to the term "regional/group or individual forest certificate" as it applies to wich level.*

2.2.10. forest certification
Certification assigned to a management organization or to a single holder/manager to whom one conformatie forest certificate is issued.

NOTE: *the term "conformatie forest certificate" is equivalent to the term "regional/group or individual forest certificate" as it applies to wich level.*

2.2.11. composition of a stand (indicator 1.3)
In a restricted sense, refers to the variety and the specific or cultural nature of the individual trees in a stand. A distinction is made between pure stands, composed of only one dominant forest species, and mixed stands, in which individuals belonging to more than one forest species coexist. A stand is considered pure when the percentage of other species is not more than 25%.

2.2.12. biodiversity conservation (indicator 4.1)
biological diversity conservation
Set of physical, ecological, sociological or economic actions oriented toward the maintenance or the recovery of natural values and the valorisation and sustainable use of nature resources. [6]

2.2.13. biological control (indicator 2.3)
Using predator species or adverse parasites of species responsible for agriculture or forest plantations pests.

2.2.14. biochemical control (indicator 2.3)
Using chemical biodegradable products or "environment friendly" to fight pests and diseases.

2.2.15. forest conversion
The direct human-induced conversion of forests to other types of land use including conversion of primary forests to forest plantations.

2.2.16. sanitary cut (indicator 2.3)
Removal of dead, weakened or diseased trees due to a forest fire or attack by insects and/or diseases.

2.2.17. criterion
Aspect considered important and by means of which the performance of forest management is evaluated. Th te role of criteria is to describe or define the essential elements, or set of conditions or processes, in relation to which sustainable forest management may be evaluated.

2.2.18. nutrient deficiency (indicator 2.2)
Deficiency in factors that limit plant growth, such as nitrogen, phosphorous, calcium, potassium and boro.

2.2.19. forestry performance
Measurable results of the forest management system related to control of the indicators**.**

NOTE: *The preceding definition is adapted from the definition of "environmental performance, from Standard NP EN ISO 14001.*

2.2.20. defoliation (indicator 2.3)
Abnormal loss of leaves or needles in forest species, caused by biotic and/or abiotic agents.

2.2.21. document confirming participation in forest certification
A document issued to a subscriber that referes to the conformitie forest certificate (regional or group) and that confirms the participant as being covered by the scope of the forest certification.

2.2.22. disease (indicator 2.3)
Alteration of the normal physiological processes due to the presence of pathogens.

2.2.23. ecosystem (criterions 2, 4 and indicators 5.1, 6.5)
Dynamic complexes of plants, animals and microorganisms that relate to each other and with the non-living environment considered, as a functional unit [6]

2.2.24. management organization
A group of subscriber's representend by the manager of the forest management unit for the purposes of implementation of the sustainable forest management standard and the certification of the respective forest management unit.

NOTE: *the term "management organization" is equivalent to the term "regional/group management organization" as it applies to wich level.*

2.2.25. erosion (indicator 5.1)
Process by which particles of rock and/or soil are separated from their initial location, transported and deposited in another location.

2.2.26. forest areas (indicator 1.1)
Areas occupied with forest stands of any size for wood and non-wood uses, including under canopy grazing, or long term uncultivated lands. It includes planted and not planted forest areas. [13]

2.2.27. forested forest areas (indicator 1.1)
It is constituted by the set of forest stands. Includes plantation areas, seed field areas, areas that are temporarily unstocked as a result of human intervention or natural causes (recently cut or burned areas), nurseries, wind protection areas, forest roads and trails, forest clearings [13]

2.2.28. non forested forest areas (indicator 1.1)
Long term uncultivated lands including shrub lands, natural pastures and unproductive or sterile lands (referring to existing vegetable communities) [13]

2.2.29. endemic specie (indicator 4.2)
Specie which natural distribution is confined to a limited region. lusitanian and iberic endemism should be considered.

2.2.30. species and habitats in danger (indicator 4.2)
Species and habitats which status of conservation is weak, and so have an uncertain probability of survival. The identification of species in danger should considered, not being restricted to, the three IUCN red list categories – Critically endangered, CR (when available data indicate the presence of factors leading to an extremely high risk of extinction in the wild Nature of a given species), Endangered, EN (when there is a very high risk of extinction in the wild, higher than for vulnerable) and Vulnerable, VU (when a species is facing a high risk of extinction in the wild, although less than endangered) - and the Red Book for Vertebrates in Portugal. The identification of these species and habitats must also take into account the Sectoral Plan for Natura 2000.

2.2.31. species and habitats under protection (indicator 4.2)
Species and natural habitats covered by existing legal conservation instruments in the country (Habitat Directive, Birds Directive, Bern, Bonn and CITES Conventions), whose identification should consider, among others, the Sectoral Plan for Natura 2000 and the Report for National Implementation of the Habitat Directive.

2.2.32. phytosanitary condition (indicator 4.3)
Health and vitality shown by plants (including vegetative vigour and the result of the presence and/or action of pests and/or diseases).

2.2.33. structure of a stand (indicator 1.3)
Trees distribution by diameter classes and/or age classes.

2.2.34. forest
Parcel of land with 0, 5 ha, or more, with tree crown cover greater than 10% (defined as the quotient between the surface covered by the horizontal projection of the crowns and the total surface of the parcel). The trees present, dependent on their own characteristics or sylvicultural systems, should have or be able to reach, at maturity, a minimum height of 5 m, independently of the particular phase when observation occurred. This includes young natural stands and all plantations established with forestry objectives that have not yet reached a tree crown cover density of 10% or tree heights of 5 m. It also includes zones integrated in the forest area that are temporarily unstocked as a result of human intervention or natural causes, but where a reconstitution of the forest cover is expected (e.g. areas recently cut or destroyed by fire), as well as forest clearings and infrastructures. It excludes land used mainly for agriculture.[12]

2.2.35. primary Forest
Forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.

***NOTE**: includes areas where non-timber forest products are harvested, provided the human impact is insignificant. Some trees may be removed.*

2.2.36. sustainable forest management
The administration and use of forests in a way and at a rhythm that maintain their biological diversity, productivity, capacity to regenerate, vitality and potential to fulfil, at present and in the future, ecological, economic and social functions at local, regional and global levels, without causing damage to other ecosystems.

2.2.37. habitat (indicator 4.1 and 4.2)
Environment where a species occurs, in any phase of its biological cycle, as determined by the appropriate abiotic and biotic factors.

2.2.38. habitat of a single species (indicator 4.2)
Environment where one species occurs, in any phase of its biological cycle, as determined by the appropriate abiotic and biotic factors. [5]

2.2.39. indicator
Quantitative, qualitative or descriptive measure or parameter that, when periodically monitored or measured, shows the direction of change of a criterion.

2.2.40. FMU intervenients
Other entities where the subscriber delegated the management of its patrimony and the assumed commitments in the context of the specie management system.

NOTE: *Should be FMU intervenients, as an example, forest managers, contractors, employees.*

2.2.41. sites of cultural value
Considered as sites of cultural value real property constituting evidence of civilization or culture with historical, paleontological, archaeological, architectural, etnogragráfica, scientific, industrial or technical interest, reflecting memory values, antiquity, authenticity, originality, rarity, uniqueness or exemplary.

Examples of sites of cultural value are archaeological sites, special trees, sites with historical meaning or where traditional ceremonies take place, landscapes with particular beauty, etc.

2.2.42. continuous improvement
Process of perfecting the forest management system, so as to obtain improvement in overall forestry performance, in accordance with the forestry policy defined for the forest management unit.

NOTE: *The preceding definition is adapted from the definition of "continuous improvement", as expressed in NP EN ISO 14001.*

2.2.43. forestry goal
Detailed performance requirement, quantified when possible, applicable to the forest management unit or part of it, which arises from the objectives and which should be established and achieved in such a way as to meet those objectives.

NOTE: *The preceding definition is adapted from the definition of "environmental goal", as expressed in NP EN ISO 14001.*

2.2.44. monitoring
Outcome of the measurement and/or accompaniment of a given indicator.

2.2.45. non conformity
Non-fulfilment of a specified requirement.

NOTE: *The preceding definition is applied in the field of quality standards. The term is defined according to EN NP ISO 9000.*

2.2.46. forestry objective
General forestry goal, resulting from the forestry policy, which is defined and proposed specifically for the forest management unit and that, is quantified, whenever possible.

NOTE: *The preceding definition is adapted from the definition of"environmental objective", as expressed in NP EN ISO 14001.*

2.2.47. organization
Company, corporation, firm, enterprise, authority or institution, or part or combination thereof, of limited responsibility or other status, public or private, that has its own functional and administrative structure.

NOTE: *The preceding definition is applied in the field of quality standards. The term is defined according to ISO 9000.*

2.2.48. stakeholder
Individual or group with an interest or affected by the forestry performance of a forest management unit.

NOTE: *The preceding definition is adapted from the definition of "interested party", as expressed in NP EN ISO 14001.*

2.2.49. fire hazard (indicator 2.1)
Probability for forest fire occurrence, in a given time period, associated with territory restrictions for deflagration and/or progression. [17]

2.2.50. genetically modified plant (indicator 4.4)
Plant where the genetic material was modified in a way that is not possible to obtain naturally by means of crossings and/or by natural recombination.

NOTE: *adapted from Decree-law nº72/2003, of 10th April.*

2.2.51. forest plantation
Forest stand established through planting or seeding, mainly for production of wood or non-wood goods, may include areas of both introduced species or native species, that may have one or more of the following characteristics: few species, intensive forestry, straight tree lines and/or even-aged stands.

2.2.52. forestry policy
Declaration by the manager of the forest management unit, relative to the intentions and principles related with its general forestry performance, which provides a framework for action and for the definition of forestry objectives and goals.

NOTE: *The preceding definition is adapted from the definition of "environmental policy", as expressed in NP EN ISO 1400.*

2.2.53. forest stand
Land spanning with trees and a canopy cover of more than 10 percent and with trees higher than 5 metres (at adult stage); holding more than 0.5 hectares width and not less than 20 meters.

2.2.54. pest (indicator 2.3)
Phytophagous species when it becomes prejudicial to the growth of plants.

2.2.55. principle
Fundamental rule that serves as the basis for reasoning and for action. The principles are explicit elements of an objective, such as sustainable forest management.

2.2.56. non-wood forest product (indicator 3.1)
Non-wood material proceeding from forest areas.

2.2.57. wood forest product (indicator 3.1)
Wood proceeding from forest areas.

2.2.58. record
Document that provides objective evidence (proof) of activities realized or of the results obtained.

2.2.59. requirements for forest management planning
Normative disposals aiming at an adequate operational/practices planning at operational level and/or supervision of its execution.

2.2.60. manager of the forest management unit
Organization, individual owner or entity designated or authorised to represent the subscribers, with the oveall responsibility for ensuring the conformity of forest management in the certified area to the requirements of the present standard and other applicable requirements of the forest management system.

2.2.61. national system of classified areas (NSCA) (indicator 4.2)
It consists of the network of National Protected Areas, the classified areas integrated in Natura 2000, and all the other classified areas established under international commitments signed by Portugal.

NOTE1: *For the above definition see article 9 Decree-law 142/2008, 24th July*

NOTE2: *see also: Section I – National Network of Protected Areas – article 10th, Establishment; Section II – Natura 2000 Network – article 25th, Scope; and Section III – Other classified Areas – article 26th, Transboundary Protected Areas; Article 27th, Conservation areas covered by international definition.*

2.2.62. forest management system (FMS)
Part of a global management system of a forest management unit that includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the forestry policy.

NOTE: *The preceding definition is adapted from the definition of "environmental management system", as expressed in NP EN ISO 14001.*

2.2.63. vulnerable soils
Soils with a high degree of susceptibility to lixiviation, flooding and erosion, either for their physical and chemical characteristics or for their orographic characteristics, and circumstances resulting from forest activities (ex: bare ground) that may occur in a given period of time.

2.2.64. carbon storage in trees and shrubs (indicator 1.4)
The amount of carbon fixed by trees and bushes [11]

2.2.65. sink (indicator 1.4)
Role of the forests that consists of temporary accumulation of gases from the atmosphere responsible for the greenhouse effect in biomass.

2.2.66. forest management unit (FMU)
Defined geographical area, consisting of rural parcels of land belonging to one or more entities and which may or may not be continuous, subject to a single management plan.

2.2.67. standing volume (indicator 1.2)
Volume of the stem of living trees, with more than x cm diameter, measured at breast height (1.30m above the ground)

2.2.68. Buffer zone
A zone which is associated to a landscape discontinuity between different areas that works to avoid or minimize environmental or human adverse effects to areas that are intended to preserve, considering the importance or sensitivity of the values contained, in particular, natural values (biodiversity, the soil or water) or sociocultural heritage (archaeological sites, places with religious significance, etc.)

3. Requirements of the sustainable forest management system

The manager of the FMU shall establish and regularly update a management system, the requirements of which are described below.

3.1. Policy for the forest management unit

The manager of the FMU shall define, write in document and communicate the forestry policy for the FMU, including the following commitments:

a) compliance with the applicable legal regulations;

b) fulfilment of the standard applicable requirement and the pan-european criteria for sustainable forest management;

c) continuous improvement;

d) openness to receiving and responding to questions raised by stakeholders.

3.2. Planning

3.2.1. Impacts evaluation

The manager of the FMU shall collect relevant information to describe the aspects of the activities with significative environmental and socio-economic impact in the FMU, having as a reference the criteria for the sustainable forest management, including:

- characterization of the FMU dimension and complexity;
- predicted and carried out activities in the FMU;
- characterization of the reference situation using the criteria for sustainable forest management (Annex A) for the FMU, or from the monitoring outcome;
- points of view of the stakeholders.

The manager of the FMU shall proceed with the environmental and socio-economic impacts evaluation and shall document the results obtained and the appropriate preventive actions to minimize them. The methodology for impacts evaluation shall be documented, maintained and implemented.

3.2.2. Pan-European criteria for sustainable forest management

The manager of the FMU shall fulfil the following criteria:

Criterion 1: Maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles

Criterion 2: Maintenance of forest ecosystem health and vitality

Criterion 3: Maintenance and encouragement of productive functions of forests (wood and non-wood)

Criterion 4: Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems

Criterion 5: Maintenance and appropriate enhancement of protective functions in forest management (principally soil and water)

Criterion 6: Maintenance of other socio-economic functions and conditions

The fulfilment of these criteria is verified by their indicators (Annex A)

The manager of the FMU shall establish a methodology to collect information related to the indicators (Annex A), appropriated to the management objectives and to the information needs for FMU and the respective time period of evaluation.

Monitoring results shall be reflected in the forest management plan review.

3.2.3. Legal obligations

The manager of the FMU shall establish and maintain a procedure for the identification and updating of the applicable legislation and international treats and agreements to which the country is signatory, such as CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), Relevant ILO Conventions (International Labour Organisation), ITTA (International Tropic Timber Agreement), CBD (Convention on Biological Diversity), Kyoto Protocol and Carbon Sink (1997) and the Cartagena Protocol on Bio Security.

The manager of the FMU shall establish and maintain a procedure for provide for adequate protection of the forest from unauthorised activities such as illegal logging, illegal land use and other illegal activities.

The manager of the FMU shall ensure, at the FMU level, the fulfilment of legal obligations and obligations resulting from international treaties and agreements signed by Portugal.

The manager of the FMU activity shall also identify the potential conflicts between laws, regulations and treaties and international agreements and make evident measures to overcome such conflicts.

3.2.4. Forest management plan within the sustainable forest management system

The forest management plan is a document with relevant information that shall promote the continuous improvement of the sustainable forest management in the FMU and its operationalization, having in consideration the results obtained in the environmental and socio-economic impact assessment. Whenever relevant to the activities conducted at the FMU, forest management shall be based inter-lia on the results of scientific research.

The forest management plan shall fit in the FMU dimension and complexity, shall describe the objectives and goals in compliance with the requirements related with the indicators of Annex A (requirements for forest sustainable management planning), as well as to accomplish the normative disposals and reflect the recommendations for action for the FMU, in articulation with existing instruments for sectorial planning. The forest management plan shall comprise the cycle of inventory and planning, implementation, monitoring and evaluation and shall be kept up-to-date, within revision time periods settled in the present standard, incorporating all the changes that come up in its operationalization and monitoring or changes resulting from any situation of emergency or disaster, as well from changes to legal demands and regulations.

The manager of the FMU shall, by request, make available a summary covering the principal elements about the FMU management, respecting the confidentiality of the information.

3.3. Implementation

3.3.1. Structure and responsibilities

The functions, responsibilities and authority of the technical corps and the direction shall be defined by the manager of the FMU, then documented and communicated so as to guarantee effectiveness of the forest management.

The manager of the FMU shall make provisions for the resources necessary for the operationalization and control of the forest management system, including human, technological and financial resources.

The manager of the FMU shall name a specific representative who, independently of other responsibilities, ensures that the requirements of the sustainable forest management system are implemented and maintained in conformity with this Standard. This manager is the one who normally gathers information for the purpose of revision, including any suggestions for improvement.

3.3.2. Training

The manager of the FMU shall survey training needs, ensuring that all staff whose activities have an impact on the FMU have received, or receive, and adequate training.

Actions for raising awareness about social, economic and environmental impacts of the FMU forest activities to the FMU intervenients shall be considered.

3.3.3. Communication

The manager of the FMU shall provide for effective communication and consultation with local people and other stakeholders relating to sustainable forest management. Shall also establish a procedure for receiving, documenting and responding to questions raised by stakeholders, as well provide appropriate mechanisms for resolving complains and demonstrate a pro-active attitude in resolving disputes relating to forest management between forest operators and local people.

The results of the monitoring of the indicators in Annex A that are of a public nature should be available for consultation by stakeholders.

3.3.4. Documentation of the forest management system

A document shall be prepared that brings together all the elements of the forest management system, describing the relations between those elements as well as the principal characteristics of the FMU and its activity.

3.3.5. Documentary control

The manager of the FMU shall establish documented procedures for control of the documents foreseen in this Standard, ensuring that:

a) they are legible, dated and easily located and consulted;

b) they are periodically reviewed, approved by the internally designated person(s) responsible and constantly reflect the actual situation;

c) they have up-to-date editions, obsolete documents being promptly removed and archived in a specified place for a defined period.

3.3.6. Operational control

In correspondence with defined policy and objectives, the manager of the FMU shall:

a) define criteria for the execution of the operations foreseen in the forest management plan, and

b) prepare and maintain procedures for the utilization of goods and services that have an impact on forest management.

3.3.7. Emergency preparation and response

The manager of the FMU shall establish, implement and maintain procedures to identify potential emergency or calamity situations and the accidents that should have impact(s) in the FMU and how to act in these situations.

3.3.8. Sales of certified product

The organization shall have documentation describing the process of selling products, including its monitoring and recording.

Each sale of a product shall be supported by an invoice or equivalent accounting document that specifies:

a) the origin of the product (identification of the subscriber/FMU);

b) date or sales period;

c) quantity of selling products (i.e. volume or weight);

d) product specifications;

e) the formal claim of the certification system as applicable;

f) the certificate number.

3.4. Monitoring and preventive and corrective actions

3.4.1. Monitoring and evaluation

The manager of the FMU shall establish and maintain documented procedures for accompanying and evaluating compliance with the forest management plan, according to established objectives and goals.

3.4.2. Nonconformities and preventive and corrective actions

The manager of the FMU shall establish and maintain documented procedures that define responsibility and authority as regards:

a) detection and analysis of real or potential nonconformities;

b) start and conclusion of the corresponding corrective and preventive actions.

Corrective and/or preventive actions shall be put in motion to eliminate the real or potential causes, respectively, of the nonconformities, in a way that guarantees their effectiveness and respective record.

3.4.3. Records

The manager of the FMU shall establish and maintain documented procedures for the identification, maintenance and disposal of the records of the forest management system.

These records shall include, among others, training records, results of audits and reviews of the system, records of nonconformities, corrective actions and preventive actions, results of the actions of accompaniment and measurement for control of the indicators in Annex A, and records of communication with stakeholders.

3.4.4. Internal audits

The manager of the FMU shall establish and maintain a program and documented procedures for the realization of periodic audits to the forest management system, in order to:

a) determine if the forest management plan is organized according the requirements of this standard;

b) verify if the forest management system is being properly implemented and maintained.

The programme or the audit procedures to the forest management system shall define their realm of application, frequency and methodologies, as well as the responsibilities and requirements for their execution and the reporting of results.

The results of the audits to the forest management system shall be considered for the implementation of corrective and/or preventive measures and for the purpose of the system revision

3.4.5. Review of the forest management system

The manager of the FMU shall undertake a periodic review of the system, at pre-established time intervals and sufficient to ensure that it is adequate and effective.

The review shall take into account:

a) the need for alterations of the policy, the objectives and other elements of the forest management system;

b) changes of circumstances and the commitment to continuous improvement;

c) the results of the internal monitoring programme;

d) the results of the internal audits and those conducted by the certification body´s;

e) the corrective and preventive measures;

f) the evaluation of the effectiveness of corrective actions taken.

Annex A

(normative)

Criteria for the sustainable forest management

A.1 Criterion 1: Maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles

Table A.1.1 – Indicator: Forest area

Requirements for the sustainable forest management planning	Management planning shall aim at the appropriate use of the forest area, in conformity with principal functions (production, protection and conservation) and with the management objectives defined for the FMU, taking into account the occupation and the existing water and soil functions and enhance the quality of the economic, ecological, culture and social values of forest resources. Conversion of forests shall not occur unless in justified circumstances where the conversion: a) is in compliance with national and regional policy and legislation relevant for land use and forest management; and b) entails a small proportion of forest type; and c) does not have negative impacts on threatened forest ecosystems, culturally and socially significant areas, important habitats of threatened species or other protected areas; and d) makes a contribution to long-term conservation, economic, and social benefits. Conversion of abandoned agricultural and treeless land into forest land shall be taken into consideration, whenever it can add economic, ecological, social and/or cultural value. **Information shall be available about:** – Distribution by type of soil occupation and forest area functions (production, protection and conservation). – Forest area surface (ha) by main species.	**Justification** The description of the various' soil types occupation and of forest area in the forest management unit allows the manager to evaluate the potential of and actual distribution and representativity of each stratum in the FMU, as important basis for FMU planning.

(continue)

Table A.1.1 – Indicator: Forest area (conclusion)

	– Non forested forest area surface. – Area under conversion	
Sources of information at the regional level	– National Forest Inventory. – Regional Forest Management Plans and/or other sectorial plans. – Other relevant tools of territory planning. – Soil occupation maps.	
Sources of information at the group/individual level	– Inventories, air photography, ortophotomaps.	
Guidelines for forest plantations	In the case of forest plantations, were the requirements concerning to the enhance the quality of environmental, ecological, cultural and/or social functions, cannot be apllied to individual forest stands, this requirement shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas. In order to enhance landscape and biodiversity values, water and soil protection, the size and distribution of the buffer zones and conservation set-aside areas shall be identified at the preparatory stage of the forest plantation establishment, based on social, environmental and ecological assessment, as well as reviewed during the subsequent replanting stages. The requirement for forest conversion shall be applied to forest plantations established after 31 December 2010, date after which are not eligible for forest certification plantations estabiliched thourhg forest conversion in other than justified circumstances.	**Access to the information**: Public.

Table A.1.2 – Indicator: Standing volume

Requirements for the sustainable forest management planning	Management planning shall guarantee the quantity and the quality of the forest resources at medium and long term, with a balance between harvesting and growth rates. Management planning shall establich measures that ensure that appropriate forest management practives are conducted in such a way that minimize direct and indirect damages to the forest resources. Management planning shall maintain or lead the total volume of the resources at an economical, ecological or sociable desirable level. **Information shall be available about**: – Standing volume of main forest species. – Standing volume available for harvesting.	**Justification** The standing volume of forest stands and its change along time are important decisions making tools for forest manager. It defines, for the majority of forestry systems, the amount of raw material that exists, at a given moment, in the forest. **Access to the information**: Private.
Information sources at the regional level	– National Forest Inventory and/or Regional Forest Management Plans – Reference values (growth models, production tables, measurements tables, etc).	
Information sources at the group/individual level	– Forest inventories for the FMU and/or reference values (growth models, production tables, measurements tables, etc).	

Table A.1.3 – Indicator: Structure and composition

Requirements for the planning of sustainable forest management	Management planning shall aim at the maintenance or the enhancement of the structural diversity at FMU level, according to management objectives, except when it's necessary to defend the forest against biotic and e non-biotic factors. **Information shall be available about:** – Proportion of pure and mixed, regular and irregular, stands. – Stand distribution per species and diameter class and/or age class.	**Justification** The structural variability of forest stands has a great influence on forestry and on the characteristics of the forest ecosystem. Monocultural and regular stands optimize forest harvesting, while mixed and/or irregular stands provide more frequent supplies of goods and services, with a proper management and, generally, greater levels of biological diversity.

(continue)

Table A.1.3 – Indicator: Structure and composition (conclusion)

Information sources at the regional level	– National Forest Inventory. – Regional Forest Management Plans and/or others sectorial plans.	
Information sources at the group/individual level	– Forest Inventories for the FMU.	
Guidelines for forest plantations	In the case of forest plantations, were the requirements concerning to the maintenance maintenance or the enhancement of the structural diversity cannot be applied, to individual forest stands, this requirement shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas.	**Access to the information**: Private

Table A.1.4 – Indicator: Carbon Storage

Requirements for the sustainable forest management planning	Management planning shall aim at the maintenance or the enhancement of the carbon capture and storage, adopting the most adequate management plans. **Information shall be available about:** – Wood biomass per species, for the main forest species, – Other carbon sinks that the manager of the FMU may voluntarily include in carbon accounting at FMU (e.g. soils, roots, leaves, etc).	**Justification** One of the main functions associated with forest ecosystems has to do with their capacity to retain carbon and thereby the forests constitute a sink of that element. The stands volume increase has positive consequences for the performance of this indicator, although the effectiveness of this retention is largely constrained by the utilization of the forest products.
Information sources at the regional level	– National Forest Inventory. – Regional Forest Management Plans and/or others sectorial plans. – Information about research projects, specialised literature. – Biomass equations per species.	
Information sources at the group/individual level	– Forest Inventories for the FMU. – Information about research projects, specialised literature. – Biomass equations per species.	**Access to the information**: Public (for regional level) and Private (for individual and group)

A.2 Criterion 2: Maintenance of forest ecosystems health and vitality

Table A.2.1 – Indicator: Fire hazard

<table>
<tr><td>Requirements for the sustainable forest management planning</td><td>The manager of the FMU shall evaluate the risk for fire hazard in the FMU and take into account the existing and/or complentary preventive and protection mechanisms against forest fires.

Lighting of fires shall only be aplied for the achievement of the management goals for the FMU, and in strict line with the relevant legislation.

Information shall be available about:

– Mechanisms for prevention and protection against fires.

– Areas characterised according to with fire risk hazard (ha).</td><td rowspan="3">Justification

Decision-making in matters of protection of forest against fires should preferably be based on the fire hazard and not on combustibility. Which means should have in consideration the characteristics of the structure, composition, location, the involving land, the vigilance and the infra-structure of the stand, which can influence the vulnerability to fires.

Forest fires have induced disastrous impacts in the economic, ecological and social national forests sustainability. This was considered when compromises were agreed between risk management actions fire control and soil and water protection actions and biological diversity conservation maintaining soil vegetable cover.

The forest defence infra-structures to fight fires should promote the landscape diversification and structure of the stand, with beneficial effects in biological diversity.

Access to the information: Public.</td></tr>
<tr><td>Information sources at the regional level</td><td>– Municipal plan or inter-municipal plan of fires defence (probability and susceptibility cartography, infra-structure inventory: network of roads and trails, water sources, etc.).

– Regional/local operational plans (movable and fixed vigilance teems, first intervention and fight teems, etc.).

– Fires statistics (national /regional or of the FMU).</td></tr>
<tr><td>Information sources at the group/individual level</td><td>– Municipal plan or inter-municipal plan of fires defence (infra-structure inventory: network of roads and trails, water sources, etc.).

– Regional/local operational plans (movable and fixed vigilance teems, first intervention and fight teems, etc.).

– Statistics/verification of the fires in the FMU local where the fire occurs.</td></tr>
</table>

Table A.2.2 – Indicator: Nutritional deficiencies

Requirements for the sustainable forest management planning	The manager of the FMU shall promote the appropriate balance of the nutritional levels in the soil. Harvesting levels of both wood and non-wood forest products shall not exceed a rate that can be sustained in the long term, and optimum use shall be made of the harvested forest products, with due regard to nutrient off-take. If necessary, the use of fertilizers should be applied in a controlled way and with a minimum impact as possible. **Information shall be available about:** – Affected forest area by nutritional deficiencies. – Fertilization plans and records (dosages, composition, time of the year).	**Justification** The growth rate and the symptoms of known deficiencies are important indicators of site quality and important auxiliary tools for the maintenance, increased productivity and the good vegetative condition of the stands.
Information sources at the regional level	– National or regional statistic, soil and/or foliar analysis or observation of the vegetation.	
Information sources at the group/individual level	– National or regional statistic, soil and/or foliar analysis or observation of the vegetation.	
Guidelines for forest plantations	The requirement for due regard to nutrient off-take shall be considered with increased importance and shall be an important part of both the planning and management stages.	**Access to the information**: Public.

Table A.2.3 – Indicator: Biotic and abiotic factors

Requirements for the sustainable forest management planning	Forest management planning shall aim to maintain and increase the health and vitality of forest ecosystems and to rehabilitate degraded forest ecosystems, whenever this is possible by sivicultural means. Forest management practices shall make best use of natural structures and process and use preventive biological measures wherever and as far as economically feasible. The manager of the FMU shall monitor the health and vitality of the forest, for example, by the proportion of crowns showing signs of defoliation, identifying, whenever possible, the cause, specially the biotic and abiotic key factors, such as: pests, diseases, excessive pasture and cattle heads, damages caused by climatic factors or by forest management operations, hunting and tourism and inner waters fishing activities. Adequated genetic, species and structural diversity shall be encorouged and/or maintained to enhance the stability, vitality and resistance capacity of forest to adverse environmental factors and strengthen natural regulation mechanisms. The manager of the FMU shall establish proceedings to unleash appropriate actions, when damages in the stand are visible. The use of chemical products should be the minimum, taking in consideration the appropriate silviculture and other biological actions. The WHO Type 1A and 1B pesticides and other highly toxic pesticides shall be prohibited, except where no other viable alternative is available. Pesticides, such as chlorinated hydrocarbons whose derivates remain biologically active and accumulate in the food chain beyond their intended use, and any pesticides banned by international agreement, shall be prohibited. **Information shall be available about:** – affected forest area by biotic and abiotic agents and the recommendations for their control. – chemical products and other control actions applied in the affected area.	**Justification** Biotic agents causing damages in the different plant organs and tissues are the principal agents of forests degradation. A convenient pests and diseases control, using direct actions (biological control, phytosanitary cuttings, traps, biochemical control, etc.) or indirect actions (resistant plants, appropriate forest practices, etc.), with a vigilance attitude and frequent monitoring, is an indispensable element to maintain of an appropriate phytosanitary condition for a sustainable forest.

(continue)

Table A.2.3 – Indicator: Biotic and abiotic factors (conclusion)

Information sources at the regional level	– National or regional statistic, national monitoring networks of pests and diseases. – Bibliography about alternative methods of minimum environmental impact to control pests, diseases and bushes (for example, biological control).	
Information sources at the group/individual level	– National or regional statistic, national monitoring networks of pests and diseases. – Bibliography about alternative methods of minimum environmental impact to control pests, diseases and bushes (for example, biological control).	
Guidelines for forest plantations	In the case of forest plantations, were the requirements concerning concerning to: – maintain and increase the health and vitality of forest ecosystems and to rehabilitate degraded forest ecosystems – make best use of natural structures and process and preventive biological measures, and – genetic, species and structural diversity shall be encorouged and/or maintained the stability, vitality and resistance capacity of forest to adverse environmental factors and strengthen natural regulation mechanisms cannot be applied, to individual forest stands, these requirements shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas. In order to enhance landscape and biodiversity values, water and soil protection, the size and distribution of the buffer zones and conservation set-aside areas shall be identified at the preparatory stage of the forest plantation establishment, based on social, environmental and ecological assessment, as well as reviewed during the subsequent replanting stages.	**Access to the information**: Public.

A.3 Criterion 3: Maintenance and encouragement of productive functions of forests (wood and non-wood)

Table A.3.1 – Indicator: Wood and non-wood forest production

Requirements for the sustainable forest management planning	The management planning shall take into account the different uses or functions of the managed forest area and shall make use of policy instruments set up to support the production of forest goods and services (commercial and non-comercial) The management planning shall identify and promote the different types of wood and non-wood products attending the management objectives agreed for the FMU. Commercialised wood and non-wood productions in the FMU shall be quantified. In the case of non-wood products that are of the responsibility of the manager/owner and which are covered in management planning, its exploitation, including hunting and fishing shall be regulated, monitored and controlled. **Information shall be available about:** – Control and record of wood and non-wood productions output, commercialised, by type of wood and non-wood product (express in physical units of the market, m3/ha, ton/ha, @/ha, cattle/ha, among others).	**Justification** Forest areas should be oriented toward maximizing one or more wood and non-wood products. These products constitute the basis of the established management system and are the reason for most of the silviculture treatments applied. **Access to the information**: Private.
Information sources at the regional level	– National statistic information.	
Information sources at the group/individual level	– National statistic.	
Guidelines for forest plantations	In the case of forest plantations were the requirements concerning to the production of forest goods and services (commercial and non-comercial), cannot be applied, to individual forest stands, the requirements shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas. In order to enhance landscape and biodiversity values, water and soil protection, the size and distribution of the buffer zones and conservation set-aside areas shall be identified at the preparatory stage of the forest plantation establishment, based on social, environmental and ecological assessment, as well as reviewed during the subsequent replanting stages.	

Table A.3.2 – Indicator: Productivity of the wood and non-wood productions

Requirements for the sustainable forest management planning	The manager planning shall aim at maximizing the productivity of the products according to the management objectives defined to the FMU. The management planning should adjust the level of utilization with the site quality and the best moment for harvesting. **Information shall be available about:** – Evolution of production increments. – Periodic variation of the products per physic unit.	**Justification** The estimation made at the FMU for each production considered allows an evaluation of the FMU viability in a perspective of balancing wood and non-wood forest products production and their growth **Access to the information**: Private.
Information sources at the regional level	–National Statistic Information. – National Forest Inventory. – Regional Plans of the Forestry Planning, others.	
Information sources at the group/individual level	– Forest inventories for the FMU.	

A.4 Criterion 4: Maintenance, conservation and appropriate encouragement of biological diversity in forest ecosystems

Table A.4.1 – Indicator: Biological diversity

Requirements for the sustainable forest management planning	The manager planning shall aim at the maintenance of the biological diversity and its conservation. The management planning shall define objectives in agreement with the orientations of the policy instruments and the objectives established for biological diversity at a national and/or regional scale. Forest management planning, inventory and mapping of forest resources shall identify, protect and/or conserve importante forest áreas containing significat concentrations of: –protected, rare, sensitive or representative forest ecosystems such as riparian areas andwetland biotopes; – abundance of species (naturally occurring), whith globally, regionally and nationally significant; – endangered or protected genetic *in situ* resources; and taking into account –globally, regionally and nationally significant large landscape areas. **Information shall be available about:** – Biological diversity in terms of fauna and/or flora species.	**Justification** Biological diversity is fundamental for a global sustainable development. The conservation of the biological diversity has an important role in the sustainability, because its loss seriously affects the stock of natural resources in which is based our social and economic development. The loss and reduction of biological diversity is a generalized phenomenon resulting from human activities. The sustainable use of natural resources should take into account the maintenance of biological diversity, in the wider context of the conservation of the natural values and of the ecosystems, where fauna and flora species, the range of crops and the domestic animal races have developed their own specific characteristics.
Information sources at the regional level	– National statistic information. – NFI. – RFMP. –Sectorial Plan of Natura 2000. – Management Plan of Protected Areas - Report within the context art. 17º of the Directive Habitats. – Report within the context art. 12º of the Birds Directive. –Maps, literature, inventory (species and habitats, frequency).	
Information sources at the group/individual level	– Up to date national statistic information. – NFI. – RFMP – Sectorial Plan of Natura 2000. – Report within the context art. 17º of the Habitat Directive. – Report within the context art. 12º of the Birds Directive. – Maps, literature, inventory (species and habitats, frequency).	
Guidelines for forest plantations	In the case of forest plantations were the requirements concerning to the identification, protection and/or conservation of importante forest áreas containing significat concentrations large landscape areas with natural distribution and abundance of naturally occurring species, cannot be applied, to individual forest stands, the requirements shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas.	**Access to the information**: Public.

Table A.4.2 – Indicator: Protected and/or threatened species and habitats and endemic species

Requirements for the sustainable forest management planning	Forest management planning shall identify and take into account the species (fauna and flora), protected and/or threatened habitats and endemic species, defined in recognized reference lists. Protected and endaregered species (plant and animal) shall not be exploited for commercial purposes. Where necessary, measures shall be taken for their protection and, where relevant, to increase their population. Within the National System of Classified Areas (NSCA), forest management shall be led according with specific regulations and objectives (for example: Sectorial Plan of Natura 2000; Management Plans of Protected Areas). These regulations can provide guidance to the management of the identified values outside the NSCA. **Information shall be available about:** – List of the protected and/or threatened species (fauna and flora) and habitats, and endemic species existing in the FMU. – Maps of the protected and/or threatened species (fauna and flora) and habitats existing in the FMU.	**Justification** The rare and threatened species and habitats need special attention by the management of areas where they occur, due to its higher vulnerability to anthropogenic pressure. The same applies to endemic species circumscribed to a certain geographical area. When that area is particularly restricted, the level of fragility becomes higher, becoming also higher the species susceptible to changes in its habitat. Conservation of habitats is important not only as a guarantee for the composition of the vegetable species but also while habitats for fauna and flora. On has to note that some rare or threatened species are associated to non-forest habitats (for example wet zones) and, although not directly influenced by forest activities, these areas can be indirectly influenced due to proximity. The Habitats and Birds Directives identify species and habitats where the need for conservation, at European Union level is more urgent. Nevertheless, other values established at national level related to threatened status may occur and must also be taken into account.
Information sources at the regional level	– NSCA list and maps – Management Plans of the Protected Areas. – Report within the context of art. 17th of the Habitats Directive. – Report within the context of art. 12 of the Birds Directive. – Sectorial Plan of Natura 2000. – Red Book for Vertebrates and Bryophytes Red List. – IUNC Red List. – Lists of the protected species and habitats brought up within national and/or regional planning instruments (RFMP; Bops) and the existing legal conservation instruments in the country (Habitats Directive, Birds Directive, CITES, Bern and Bonn Directives). – Bibliography (for example: ATLAS of species distribution, Action Plans).	

(continue)

Table A.4.2 – Indicator: Protected and/or threatened species and habitats and endemic species (conclusion)

Information sources at the group/individual level	– NSCA list and maps. – Management Plans of Protected Areas. – Report within the context art. 17º of the Habitat Directive. – Report within the context of art. 12º of the Birds Directive. – Sectorial Plan of Natura 2000. – Red Book for Vertebrates and Bryophytes Red List. – IUNC Red List. – Lists of the protected species and habitats brought up within national and/or regional planning instruments (RFMP; Bops) and the existing legal conservation instruments in the country (Habitats Directive, Birds Directive, CITES, Bern and Bonn Directives). - Bibliography (for example: ATLAS of species distribution, Action Plans).	
Guidelines for forest plantations	In the case of forest plantations the identification, protection and/or conserve ecologically important forest areas shall be addressed at the stage of the establichement of forest plantations and those areas form a part of buffer zones and set-aside areas.	**Access to the information**: Public.

Table A.4.3 – Indicator: Long lived and cavernous trees and dead wood

Requirements for the sustainable forest management planning	The management planning shall aim at the conservation of long lived and cavernous trees and dead wood. The long lived and cavernous trees conservation and the existing dead wood (stand up and fallen) is important to preserve as a safeguard for biological diversity, if it doesn't constitute focus of phytosanitary problems, excess of fuel or to be a risk for people and its belongings. **Information shall be available about:** – Amount of long lived, cavernous trees – existence of dead wood.	**Justification** The majority of forestry systems determine the final cut of the trees at an age that is often under the natural longevity of the species. It is, normally, in trees with large diameters and advanced age that natural cavities are formed, fundamental as a shelter for an important group of animals, particularly birds and some mammal, as well as supporting epiphyte communities. These functions are also ensured by dead standing trees and fallen wood, which are also fundamental for xylophage invertebrates.

(continue)

Table A.4.3 – Indicator: Long lived and cavernous trees and dead wood (concusion)

Information sources at the regional level	– National or regional statistic information (NFI; RFMP).	However, the conservation of these trees should consider the maintenance of the phytosanitary conditions and fires prevention. **Access to the information**: Public.
Information sources at the group/individual level	– National or regional statistic information (NFI; RFMP). – Statistic information (Forest inventory) and/or FMU information.	
Guidelines for forest plantations	In the case of forest plantations the indicator do not usually apply to individual forest stands shall be understood to be primarily taking place in buffer zones and set-aside areas, which complement this plantations.	

Table A.4.4 – Indicator: Regeneration and forest breeding material

Requirements for the sustainable forest management planning	The management plan shall aim at the use of the most suitable regeneration type to the environment and to the forest species used within the objectives, ensuring a viable regeneration and a stand of good quality. Forest management planning shall ensure for reforestation and afforestation through natural regeneration or when not appropriate, by planting resorting to the most suitable breeding material so to ensure the quantity and quality of the resources. The use of forest breeding material shall take into account genetic diversity. For reforestation and afforestation, orignes of native species and local provenances that are well-adapted to site conditions shall be preferred, where appropriate. It´s considered appropriate only those introduced species, provenances or varieties whose impacts on the ecosystem and on genetic integrity of native species and local provanances have been evaluated, and if negative impacts can be avoided or minimized. Traditional management systems that have created valuable ecosystems, such as coppice, on appropriate sites shall be supported, when economically feasible. The use of modified genetic plants is not allowed. **Information shall be available about:** – Proportion of the areas with natural regeneration, plantation or sowing. –List of certificated plants and seeds and forest breeding material selected	**Justification** One of the variables with larger influence in the quality of a forest stand is the quality of the breeding stock used in that stand. Natural regeneration has some advantages: has a high degree of "naturalness", reduces installation costs, better adaptation of the seedlings to the management unit and an easy and natural mixture of species. On the other hand, the use of certificated plants and seeds from suitable provenances allow interfering, in a directed way, in the genetic quality of the stand and control plantation losses, the species composition and the initial stand development.

(continue)

Table A.4.4 – Indicator: Regeneration and forest breeding material (conclusion)

Information sources at the regional level	– National forest statistic/bibliography. – Regional Forest Management Plans.	
Information sources at the group/individual level	– Regional Forest Management Plans.	
Guidelines for forest plantations	In the case of forest plantations where the requirements concerning to the use of narive species and local provenances and traditionall systems, cannot be applied, to individual forest stands these requirements shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas. The evaluation of the impact of "introduced species, provenances and varieties" shall be understood as having increased importance for stands of fast growing trees and shall be an important part of both the planning and management stages of the production cycle. In forest plantations the requirement concerning to the genetic diversity does not applie to the individual forest stand and shall be considered on a larger scale (bioregional) where these areas are complemented by buffer zones and set-aside areas. In order to enhance landscape and biodiversity values, water and soil protection, the size and distribution of the buffer zones and conservation set-aside areas shall be identified at the preparatory stage of the forest plantation establishment, based on social, environmental and ecological assessment, as well as reviewed during the subsequent replanting stages.	**Access to the information**: Public.

A.5 Criterion 5: Maintenance and appropriate encouragement of protective functions in forest management (principally soil and water)

Table A.5.1 – Indicator: Soil and water protection

Requirements for the sustainable forest management planning	The forestry management planning shall aim at the soil and water protection, taking into account the guidelines of the national, regional or local policy instruments, for the management of these resources. The areas that have specific and recognized protective functions for soil and water, as well as the areas with vulnerable soils shall be registered and mapped. Special attention is to be given to FMU activities with potential impact in soil and water and the necessary management guidelines and mitigation measures shall be defined. In this context erosion and compactation phenomena must be stricted avoided. Organic and non-organic waste and litter and oil spill, as the result of forest management operations shall be avoided, collected, stored in designated areas and removed in an environmentally-responsible manner. The forestry management planning should also safeguard the protection of existent water resources namely watercourses, riparian corridors and others existing water systems in the FMU and all areas relevant to the sustainability of the terrestrial hydrologic cycle and natural hazards such as REN areas or other areas subject to restrictions on public utility. **Information shall be available about:** – Area managed under special requirements for water protection and its importance for watershed in which the FMU is located. – Area managed under special requirements for soil protection. – Map with the watercourses and riparian corridors and/or other water systems – Soil conservation status. – Watercourses and riparian corridors conservation status.	**Justification** Soil and water are the support of any land ecosystem. Some forest practices have an influence in the equilibrium and on chemical-physical properties of the water and pedological resources. The absence of planning and evaluation of the operations to be carried can compromise the sustainability of these resources in the forest management unit.
Information sources at the regional level	–Watershed Plans (WP) and the Framework Directive for Water. – RFMP and other regional documents. – Soils and terrain maps – mapping of easements and restrictions of public utility associated with protection of water resources and natural hazards	
Information sources at the group/individual level	– Watershed Plans (WP) and the Framework Directive for Water. – Soils and terrain maps. – mapping of easements and restrictions of public utility associated with protection of water resources and natural hazards	**Access to the information**: Public.

Table A.5.2 – Indicator: Network of roads and trails

Requirements for the sustainable forest management planning	The manager of the FMU shall plan, establish and maintain an appropriate network of roads and trails, fire-breaks or bridges to ensure an efficient distribution of goods and services in the FMU and improve the protection and accessibility against forest fires. The planning and the construction of this network should be done minimizing the soil exposure, avoiding watercourses siltation and preserving the natural level and functions of the watercourses and riverbeds and minimizing any damages to protected and/or threatened species and habitats and endemic species, taking into consideration their migration patterns, existing in the FMU**.** **Information shall be available about:** – Network of roads and trails distribution and density. –Conservation status of the network of roads and trails.	**Justification** The development of a network of infrastructures, roads and trails, will contribute to optimize the activities, as well as to minimize danger of fire in many forest areas and the extent of damages that may occur.
Information sources at the regional level	– Municipal Plans for Protection Against Forest Fires. – Network of roads and trails map for the FMU.	
Information sources at the group/individual level	– Municipal Plans for Protection Against Forest Fires. – Network of roads and trails map for the FMU.	**Access to the information**: Public.

A.6 Criterion 6: Maintenance of other socio-economic functions and conditions

Table A.6.1 – Indicator: Certified area, ownership and user rights

<table>
<tr><td>Requirements for the sustainable forest management planning</td><td>The manager of the FMU shall map the certified area boundaries. In the certified area, the property rights and the ownership land should be well defined, documented and established. Also the legal rights, consuetudinary, should be recognised and respected.
Information shall be available about:
– certified area;
– Ownership registers and land rights, e.g. register, rental contracts, utilization contracts, lending contract, etc.
– Adequate dispute setting mechanisms related to the ownership and use rights, including access to any legal process on the matter, if deemed necessary.</td><td rowspan="3">Justification
The certified area of the FMU should be well defined and identified.

The ownership over the land and respective forest resources should be well defined and documented preserving any dispute or conflicts about the management and ownership that may compromise the compliance of the FMU management

Access to the information: Private.</td></tr>
<tr><td>Information sources at the regional level</td><td>– Registration of subscribers’ identification (maps, ownership registers, rental contracts, utilization contracts, lending contracts, etc.).</td></tr>
<tr><td>Information sources at the group/individual level</td><td>– Registration of subscribers’ identification (maps, ownership registers, rental contracts, utilization contracts, lending contracts, etc.).</td></tr>
</table>

Table A.6.2 – Indicator: Economic profitability

<table>
<tr><td>Requirements for the sustainable forest management planning</td><td>Planning shall promote the economic viability considering the production costs and benefits, ensuring the needed investments to maintain forest productivity.
Information shall be available about:
– Economical results (costs and incomes).
– Provisional budget highlighting the expected income and costs for, at least, the certificate’s ruling period.
– Cost and incoming record, if possible, divided by major items.</td><td rowspan="3">Justification:
The characteristics of forest investment often make it unattractive in comparison with alternative capital uses. However, without a minimum investment, the probability of quality (and quantity) forest production is low.

The optimum timing for forest activities allows not only to maximise the effects of forestry operations but also to minimise their cost.

Diversification of the sources of income (multiple uses) and of the moments of their realization (continuous production) makes the income from forest areas more financially attractive.

Access to the information: Private.</td></tr>
<tr><td>Information sources at the regional level</td><td>– National and/or regional statistic and information obtained through regional economic agents.</td></tr>
<tr><td>Information sources at the group/individual level</td><td></td></tr>
</table>

Table A.6.3 – Indicator: Volume and qualification of employment

Requirements for the sustainable forest management planning	The forest management planning shall respect the different forestry functions for the society, taking into account the significance of forestry in rural development and also new employment opportunities relate to the socioeconomic functions of forests. Sufficient information and encouragement shall be supplied to the different intervenients of the FMU (forest managers, contractors, forest employees and owners), to implement continuous education and training about sustainable forestry. **Information shall be available about:** – The volume of employment and professional qualification. – Workers with specialized professional education or already with acquired professional education (for ex, education or training activities) should be used. – Records of the social and labour obligations, for all FMU workers. – Monitoring records of operations, time, involved staff and respective qualifications. – Records of the professional education activities and/or sensibilization activities (theoretical/practical trainings) or others mechanisms for competence compliance.	**Justification** Forestry has been indicated as an employment solution of high potential in rural areas. It is therefore worthwhile not only to clarify the contribution of the forest areas to rural employment, but also to promote the well-being of forest workers and promoting qualification, specialized training and equality between genders in forestry work. **Access to the information**: Public.
Information sources at the regional level	– Information collected from regional and national statistics. – Estimations of volume and annual value of workforce used in the FMU. Whenever possible, volume and value should be divided by qualification, gender and age.	
Information sources at the group/individual level	– Volume estimate and annual work used in the FMU. Whenever possible, the volume distribution and value in a qualification sex and age level.	

Table A.6.4 – Indicator: Healthy and safety in workplace

Requirements for the sustainable forest management planning	The manager of the FMU must ensure that forestry work shall be planned, organised and performed in a manner that enables the identification work-related dangers and work-related risk assessement (work accidents and professional health diseases) as well the application of all reasonable preventive and protection measures concerning the foretry work to be performed. Workers shall be informed and trained about the risks involved with their work and about the applicable preventive measures. **Information shall be available about:** – work safety and health care organization. – work-related risk assessement. – work accidents insurance. – informed and trained. – workers medical fitness certificate – work safety procedures for workers and contractors. – forestry accidents in workplace records (number and seriousness).	**Justification** Forestry, due to its intrinsic characteristics, involves a reasonably high degree of risk in comparison to other professions. There are, however, several codes of work safety that, when complied with by workers and contractors, allow reduction or even annulment of the number of accidents and particularly the number of serious accidents. **Access to the information**: Public.
Information sources at the regional level	– National and/or regional statistic.	
Information sources at the group/individual level	– Not applicable.	

Table A.6.5 – Indicator: Conservation of sites of cultural level and other functions

Requirements for the sustainable forest management planning	Forest management plan shall protect areas with special and recognized historical, cultural or spiritual importance. Must also have into account other socio-economic functions, especially the recreational funcion and te aesthetic values of forests. Taking into account the owner's and other stakeholders' rights, an adequate access of the public to the forests, should be permitted, if forest resources and ecosystems are safeguarded. Taking into account the maintenance of other socio-economic functions and conditions forest management shall promote the long-term health and well-being of comunities withhin or adjacente to the forest management área. Forest management practices shall make the best use of local forest-related experienve and knowledge, such as those of local communities, forest owners, NGOs and local people. It also shall contribute to research activities and data collection needed for sustainable forest management or support relevant research activities carried out by other organizations, as appropriate. **Information shall be available about**: – Sites of cultural, historical and/or spiritual value and their characterization. – Guidelines for the preservation of sites of cultural, historical and spiritual value – Records of protocols, letters or other evidence related activities including awareness, cultural, sports and leisure; - Results of the collaboration with R&D entities.	**Justification** Forest areas frequently contain archaeological and/or heritage values. Being a testimony of our past and history, it is extremely important that the forestry activities dedicate special care to these elements and the respective surroundings so as to avoid their degradation or disappearance.
Information sources at the regional level	– Identification of the patrimonial values, with national, regional and locally known records and local knowledge.	
Information sources at the group/individual level	– Identification of the patrimonial values, with national, regional and locally known records and local knowledge.	

(continue)

Table A.6.5 – Indicator: Conservation of sites of cultural level and other functions (conclusion)

Guidelines for forest plantations	In forest plantations wherethe requirements concerning to other socio-economic functions, especially the recreational funcion and te aesthetic values of forests, cannot be applied, to individual forest stands, these requirements shall be considered on a larger scale (bioregional) within the whole forest management unit where the stands of fast growing trees are complemented by buffer zones and set-aside areas. In order to enhance landscape and biodiversity values, water and soil protection, the size and distribution of the buffer zones and conservation set-aside areas shall be identified at the preparatory stage of the forest plantation establishment, based on social, environmental and ecological assessment, as well as reviewed during the subsequent replanting stages.	

Annex B

(normative)

Specifications for the application of this standard at the regional, group and at the individual level

B.1 Introduction

This Annex describes the specifications for the application of the requirements for sustainable forest management (section 4) at the regional, group and at the individual level.

B.2 Application of the standard at the regional level

B.2.1. Framework

A system for sustainable forest management may be established at the regional scale whenever there is cumulative verification of the following conditions:

a) forest management is done according section 4 requirements and these specifications;

b) FMU is defined by a geographic region previously identified;

c) The regional management organization is legally constituted;

d) The sustainable forest management plan includes the forest planing and modelling guidelines of the respective(s) PROF´s covered whithin the FMU bounderies;

e) participation of the subscribers in the forest management system is made through a written commitment, with the technical references and other documents to be adopted for the region and established for its scale of participation. This written commitment shall explicitly refers that the FMU manager covers the right to implement and enforce any corrective or preventive measures, and iniciate the exclusion of any subscriber from the scope of certification in the event of non-conformity with the present standard**.**

B.2.2. Specifications for definition of the policy for regional forest management unit

The definition of a policy for the regional FMU, shall take into account the principles of the national forest policy, the instruments of the sectorial planning, namely the PROF´s,as well as their public consultation processes.

The manager of the regional FMU shall also ensure that the contributions of all those who wish participate are taken into account. It is thereby guaranteed that the management is adequate to the regional interests.

It is under the competences of the manager of the regional FMU to elaborate the definition of the regional forest policy. He shall identify, on the basis of evaluation of the state of the forest region, the functional areas that need development, in light of forest management performance and the continuous improvement of the sustainable forest management in the region.

B.2.3. Specifications for evaluation of the criteria of the sustainable forest management

The evaluation of the criteria for sustainable forest management shall be made for the regional FMU. If necessary information for the evaluation is not available or does not exist, it is the responsibility of the FMU manager to ensure its production.

B.2.4. Specifications for the internal monitoring programme

The manager of the regional forest management unit shall establish and maintain a documented programme for internal monitoring at the level of the suscribers that provides sufficient confidence that all of them are in accordance with the requirements of this standard, established for this level, namely:

- monitor and verify the actions established in the subscribers individual forest management plans or other technical operational plan, where applicable;
- monitor and verify that the implementation of these actions occurs in compliance with the best practices set out in the regional technical reference

The internal monitoring program shall be based on a sampling methodology covering all subscribers. The size of sample shall be at least equal to the square root of the total number of subscribers who participate in the group forest management system (regional/group).

In planning the internal monitoring programme , 80 % of the sample shall be intended to monitor the implementation of forestry operations with the selection of properties/plots with interventions made that year performed randomly and 20 % should be selected based on the following sources of information:

a) results of previous audits (subscriber where nonconformities were identified / validation of the implementation of preventive and/or corrective) actions;

b) comments received;

c) geographical distribution;

The sampling scheme is established annually and shall be representative of the different types of forest stands and the structure / size of property plot for each subscriber.

The results of the internal monitoring program shall be considered in the application of preventive and/or corrective measures and for the revision of the system.

B.2.5.Territorial delimitation of the regions

The regional units for sustainable forest management correspond to the administrative division of NUT II. However, in a view of further evolution and to facilitate the certification processes, these initiatives may occur in smaller territorial units, corresponding to one or more administrative divisions of municipal level or NUT III. Whenever different initiatives coexist in a region reaching fifty percent of an administrative level, their certification must be done in a way that can evolve towards the certification of the immediate following level where they occur, Nut III or NUTII, as appropriate.

If there are several initiatives of the same level, its evolution towards the next level can only happen if it also corresponds to fifty percent of that level, NUTIII or NUTII, as appropriate.

B.2.6. Regional management organization

The regional management organization shall be an entity, legally constituted, shall have, as only scope, the promotion of the forest certification in the region. For this effect it must define its composition and terms of reference, within the principles of open processes, transparent and democratic, ensuring a volunteer access of stakeholders.

The regional management organization shall bring together all the interests involved in forest management at a regional scale and having as a base the interests of the forest producers in the region.

Where there is a requirement for convergence to the next administrative level of the forest management systems established in agreement with item B.2.5. only one entity responsible for the request of the established forest management system(s) certification at a region level will exist.

The regional management organization shall be responsible for the certification process, including in communications and relationships with the certification body, submission of an application for certification, and contractual relationship with the certification body. These and other responsibilities may be delegated to the manager of the regional forest management unit.

B.2.7. Manager of the regional forest management unit

Within the context of a regional certificate, is the manager of the FMU competence:

a) to establish a procedure for the control of each subscriber, including the record of the subscriber's forest areas included in the regional certificated, identifying the owner, the manager, the area and the contact details;

b) to establish a procedure that ensure, in the case of a subscriber participates in other forest management certification, that eventual non-conformities which are identified under those other forest managemet certifications, are addressed in the respective forest management certification.

c) to communicate eventual non-conformities at the level of the suscribers under the scoope of it´s own forest certificate to other(s) manager(s) of the FMU(s) where the subscriber participates;

d) to make available to the subscribers, a document confirming participation in forest certification, showing the inclusion of their properties in the regional forest certificate;

e) to establish a procedure to inform and maintain up to date the subscribers about their rights, duties and sanctions that can be attributable to him. This information should be available in a document;

f) to establish procedures to include and exclude subscribers, or about changes to the plan established, informing the certification body responsible for the emission of the certificate about inclusion and/or exclusion of subscribers;

g) to establish a procedure to monitor and control the sale system for the forestry based products of the subscribers.

h) to establish and implement an annual internal monitoring programme which can be achieved under the internal audit programmes. Such programme shall shall be review and taken the necessary corrective and preventive measures;

i) to maintain records concerning the the management organization wich as the SFM system implemented at the regional level and the subscribers conformity with the requirements of the forest certification system, as well, the records of all the subscribers (contact details, identification of their forest property and size) and the certified areas;

j) to maintain records of the implementation of the internal monitoring programme, including it´s review and any necessary corrective and preventive measures taken;

k) to evidence the commitment of the management organization for the compliance with the sustainable forest management standard and other applicable requirements of the forest certification scheme of the over whole subscribers;

l) to provide to all subscribers with information and guidance required for the effective implementation of the sustainable forest management standard and other applicable requirements of the forest certification scheme.

B.2.8. Subscribers

The subscribers participate voluntarily, assuming a written commitment with the management organization, to comply with the requirements for the regional certification and to the following conditions:

a) take part in the regional forest management system, assuming the complience with the requirements resulting from the application of the present standard and other applicable requirements of the forest certification scheme;

b) declare the forest management unit, on which they have management responsibilities, identifying and delineating it clearly. The subscribers of the forest management system should, preferably, submit all the forest area included in the region to be certificated, except if they give a valid justification to the manager of the FMU;

c) if participating in more than one forest management certification, the subscriber shall declare it and give a written consent to the respective(s) manager(s) of the FMU in which is participating to access to information relating to non-conformities that may be addressed in any other forest management certification. If non-conformities exists in one of any of the forest management certification, those shall be considered in the rest of the forest management certification(s) which the subscriber participates;

d) guarantee an effective management of their patrimony, communicating and justifying any changes to the delineated planning or other assumed commitments, to the entity responsible for the regional forest management unit;

e) guarantee the support to the manager of the regional forest management unit and the certification body, whether by its full collaboration, by making available relevant data, documentationata and other information, allowing access to the forest and other facilities, whether in conection with formal audits or reviews or otherwise;

f) maintain records of all forest operations performed, ensuring that they are carried out in accordance with the requirements defined for the respective forest area taking responsibility for custody. When forestry operations are performed by third parties, subscriber shall ensure that they are conducted in accordance with the requirements of the forest management system.

g) implement relevant corrective and preventive actions estabiliched by the manager of the FMU

Within the forest management system only the subscribers have recognized their rights, duties and sanctions.

Note: *the requirement for "written commitment" of the subscriber is also satisfied by the written agreement of the forest owner´s/managers association with the management organization, following the conditions:*

- the organization is legally mandate to represent the subscribers
- its commitment and terms and conditions of the written agreement are enforceable.

B.2.9. regional technical guidelines

The manager of the FMU shall establish, document and communicate regional technical guidelines.

The regional technical guidelines are the set of disposals and recommendations for action, adapted to the scale of the sustainable forest management system that has to be taken in consideration by the subscriber, considering its FMU dimensions and conditions.

The manager of the FMU must have mechanisms to ensure the accomplishment by the subscribers of the regional technical guidelines.

B.3 Application of the standard at group level

B.3.1. Framework

A system for sustainable forest management may be established for a group of FMUs whenever there is cumulative verification of the following conditions:

a) forest management is done according to the requirements of section 4 and these specifications;

b) a management organization designated by the group exists;

c) a forest management unit is established for the set of properties of the group;

d) participation of the subscribers in the forest management system is made through a written commitment, with the technical references and other documents to be adopted for the group and established for its scale of participation. This written commitment shall explicitly refers that the FMU manager covers the right to implement and enforce any corrective or preventive measures, and iniciate the exclusion of any subscriber from the scope of certification in the event of non-conformity with the present standard**.**

B.3.2. Specifications for the definition of the group forestry policy

In the definition of the group forestry policy the individual goals from the set of group participants shall be considered.

The group's forestry policy, its objectives and goals are defined by all its members and expressed in a document drawn up by the manager responsible for the group FMU, on the basis of an evaluation of the state of the forest for all the FMUs integrating in the group.

It is up to the responsible for the FMU to identify the functional areas that need further development in light of the performance of forest management and the continuous improvement of the group's sustainable forest management system, ensuring that the individual plans of each subscriber contribute to the objectives and goals of the forest management plan established for the group.

To that end, the manager responsible for the group FMU proceeds with formulation of technical reference guidelines for the group, based on code of best practices for sustainable forest management and other reference documents, in order to provide a technical framework for forest management and is adequate to the group's management plans, in agreement with the group's forest management systems and the nature of the participants.

B.3.3. Specifications for the evaluation of the criteria of sustainable forest management

The evaluation of the criteria of the sustainable forest management for the group is under the responsibility of the manager responsible for the group FMU, which should thus promote the gathering of all basic information and it's processing.

B.3.4. Specifications for the internal monitoring programme

The manager of the group forest management unit shall establish and maintain a documented programme for internal monitoring at the level of the suscribers that provides sufficient confidence that all of them are in accordance with the requirements of this standard, established for this level, namely:

– monitor and verify the actions established in the subscribers individual forest management plans or other technical operational plan, where applicable;

– monitor and verify that the implementation of these actions occurs in compliance with the best practices set out in the group technical reference

The internal monitoring program shall be based on a sampling methodology covering all subscribers. The size of sample shall be at least equal to the square root of the total number of subscribers who participate in the group forest management system (regional/group).

In planning the internal monitoring programme , 80 % of the sample shall be intended to monitor the implementation of forestry operations with the selection of properties/plots with interventions made that year performed randomly and 20 % should be selected based on the following sources of information:

d) results of previous audits (subscriber where nonconformities were identified / validation of the implementation of preventive and/or corrective) actions;

e) comments received;

f) geographical distribution;

The sampling scheme is established annually and shall be representative of the different types of forest stands and the structure / size of property plot for each subscriber.

The results of the internal monitoring program shall be considered in the application of preventive and/or corrective measures and for the revision of the system.

B.3.5 Territorial delimitation of the group

The group FMU consists by the total of forest areas declared by group elements.

B.3.6. Group management organization

The group management organization shall be an entity legally constituted, individual or collective, public or private nominated by consensus in the group, to take responsibility about the group sustainable forest management system.

The group management organization takes the responsibility of co-ordinating and maintaining operational the requirements of the sustainable forest management, with the exception of those that result from forest management in it, which will have to be taken on by the members of the group.

The group management organization shall be responsible for the certification process, including in communications and relationships with the certification body, submission of an application for certification, and contractual relationship with the certification body. These and other responsibilities may be delegated to the manager for the group forest management unit.

B.3.7. Manager for the group FMU

Within the context of a group forest certificate, is the manager for the FMU competence:

a) to establish a procedure for the control of each subscriber, including the register of the subscriber's forest areas included in the group certificated, identifying the owner, the manager, the area and the contact details;

b) to establish a procedure that ensure, in the case of a subscribers participates in other forest management certification, that eventual non-conformities identified under those other forest management certification(s) are addressed in the respective forest managemet certificate;

c) to communicate eventual non-conformities at the level of the suscribers under the scoope of it´s own forest certificate to other(s) manager(s) of the FMU(s) where the subscriber participates;

d) to make available to the subscribers, a document confirming participation in forest certification, showing the inclusion of their properties in the group forest certificate;

e) to establish a procedure to inform and maintain up to date, the subscribers about their rights, duties and sanctions that can be attributable to each. This information should be available in a document;

f) to establish procedures to include and exclude subscribers, or about changes to the plan established, informing the certification body responsible for the emission of the certificate about inclusion and/or exclusion of subscribers;

g) to establish a procedure to monitor and control the sale system for the forestry based products of the subscribers.

h) to establish and implement an annual internal monitoring programme which can be achieved under the internal audit programmes. Such programme shall shall be review and taken the necessary corrective and preventive measures;

i) to maintain records concerning the the management organization wich as the SFM system implemented at the group level and the subscribers conformity with the requirements of the forest certification system, as well, the records of all the subscribers (contact details, identification of their forest property and size) and the certified areas;

j) to maintain records of the implementation of the internal monitoring programme, including it´s review and any necessary corrective and preventive measures taken;

k) to evidence the commitment of the management organization for the compliance with the sustainable forest management standard and other applicable requirements of the forest certification scheme of the over whole subscribers;

l) to provide to all subscribers with information and guidance required for the effective implementation of the sustainable forest management standard and other applicable requirements of the forest certification scheme.

B.3.8. Subscribers to the group

Public or private entities, entitled or managers of forest management units may integrate a group sustainable forest management system, provided the fulfilment of the following conditions:

a) take part in the group forest management system, assuming a written commitment with the management organization, to comply with the requirements resulting from the application of the present standard and other applicable requirements of the forest certification scheme;

b) declare the forest management unit, on which they have management responsibilities, identifying and delineating it clearly.

c) if participating in more than one forest management certification, the subscriber shall declare it and give a written consent to the respective(s) manager(s) of the FMU in which is participating to access to information relating to non-conformities that may be addressed in any other forest management certification. If non-conformities exists in one of any of the forest certification systems, those shall be considered in the rest of the forest management certification(s) which the subscriber participates;

d) guarantee an effective management of their patrimony, communicating and justifying any changes to the delineated planning or other assumed commitments, to the entity responsible for the group forest management unit;

e) guarantee the support to the manager for the group forest management unit and the certification body, whether by its full collaboration, by making available relevant data, documentation and other

information, allowing access to the forest and other facilities, whether in conection with formal audits or revies or otherwise;

f) maintain records of all forest operations performed, ensuring that they are carried out in accordance with the requirements defined for the respective forest area taking responsibility for custody. When forestry operations are performed by third parties, subscriber shall ensure that they are conducted in accordance with the requirements of the forest management system.

g) implement relevant corrective and preventive actions estabiliched by the manager of the FMU

Within the forest management system only the subscribers have recognized their rights, duties and sanctions.

Note: the requirement for "written commitment" of the subscriber is also satisfied by the written agreement of the forest owner´s/managers association with the management organization, following the conditions:

- the organization is legally mandate to represent the subscribers

- its commitment and terms and conditions of the written agreement are enforceable.

B.3.9. Group technical reference guidelines

The responsible for the FMU shall establish, document and communicate the group technical reference.

The regional technical guidelines are the set of disposals and recommendations for action, adapted to the scale of the sustainable forest management system that has to be taken in consideration by the subscriber, applied taking into account its FMU dimensions and conditions.

The manager of the FMU must have mechanisms to ensure the accomplishment by the subscribers of the regional technical guidelines.

B.4 Application at the individual level

B.4.1 Framework

A system of sustainable forest management may be defined at an individual level when the following cumulative conditions are verified:

a) forest management is done according to the requirements of section 4;

b) the forest management unit is established for the set of forest areas or individual forest area within the responsibility of a single holder/manager.

Bibliography References

[1] ISO 9000: 2005 *Quality management and quality assurance – Vocabulary*

[2] ISO 9001: 2008 *Quality management system – Requirements*

[3] NP EN ISO 14001: 2004 *Sistemas de gestão ambiental – Requisitos e linhas de orientação para a sua utilização – (ISO 14001:2004)*

[4] *Decreto-Lei nº 72/2003, de 10 de abril*

[5] *Decreto-Lei nº 140/1999, de 24 de abril, com a redacção dada pelo Decreto-Lei nº 49/2005, de 24 de Fevereiro*

[6] *Decreto-Lei nº 142/2008, de 24 de julho, Regime jurídico da conservçáo da natureza e da biodiversidade*

[7] *FSC-POL-20-001 (1998) EN FSC POLICY, Group Certification – FSC Guidelines for Certification Bodies, 1998*

[8] *FSC-STD-01-001 (version 4-0) EN FSC Principles and Criteria for Forest Stewardship*

[9] *FSC-STD-30-005 (V1- 2-0) EN FSC, Standard for Group Entities in Frest Management Groups*

[10] *Improved Pan – European Indicators for Sustainable Forest Management, as adopted by the MCPFE Expert Level Meeting 7-8 October 2002, Vienna, Austria*

[11] *Intergovernmental Panel on Climate Chance, IPCC Meeting on Current Scientific Understanding of the Processes Affecting Terrestrial Carbon Stocks and Human Influences upon Them. 21-23 July 2003, Geneva, Switzerland*

[12] *Organização das Nações Unidas para a Agricultura e a Alimentação, FRA 2000 Termos e definições. Roma, novembro de 1998*

[13] *PEFC International Standard, ST 1002:2010 - Requirements for Certification Schemes (2010-11-26) Group Forest Management Certification – Requirements.*

[14] *PEFC International Standard, ST 1003:2010 - Requirements for Certification Schemes (2010-11-26) Sustainable Forest Management – Requirements.*

[15] *Resolução do Conselho de Ministros nº 114/2006 de 15/09/2006*

[16] *Terceira Conferência Ministerial para a Protecção das Florestas na Europa – Declaração geral e resoluções adotadas. Lisboa, junho de 1998*

[17] *Verde, J., & Zêzere, J.L., Avaliação da perigosidade de incêndio florestal, UNL, Lisboa, 2007*

[18] Resolução do Conselho de Ministros n.º 115-A/2008, de 21 de julho – Plano Sectorial da Rede Natura 2000

[19] Convenções da OIT

[20] 5.º Inventário Florestal Nacional, Portugal continental. IFN5, 2005-2006. Relatório Final. Autoridade Florestal Nacional, Lisboa. (ou a sua versão mais recente)

[21] *Cabral MJ, Almeida J, Almeida PR, Dellinger T, Ferrand de Almeida N, Oliveira ME, Palmeirim JM, Queiroz AI, Rogado L & Santos-Reis M (eds). Livro Vermelho dos Vertebrados de Portugal. Instituto da Conservação da Natureza. Lisboa.*

[22] *Sérgio C, Brugués M, Cros RM, Casas C & Garcia C (2007). The 2006 Red List and an updated checklist of bryophytes of the Iberian Peninsula (Portugal, Spain and Andorra). Lindbergia 31: 109-126.*

[23] *Sérgio C., Garcia C.A., Sim-Sim M., Vieira C., Hespanhol H. & Stow S. (2013). Atlas e Livro Vermelho dos Briófitos ameaçados de Portugal (Atlas and Red Data Book of Endangered Bryophytes of Portugal). MUHNAC. Lisboa. 464 pp.*