



PEFCTM
PEFC/01-00-01

PEFC ST 1003:2018

Sustainable Forest Management – Requirements



**PEFC
BENCHMARK
STANDARD**

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The official version of the document is in English. Translations of the document can be obtained from the PEFC Council or PEFC National Governing Bodies. When there is doubt in regard to language interpretation, the English version is the reference.

Document name: Sustainable Forest Management – Requirements

Document title: PEFC ST 1003:2018

Approved by: PEFC General Assembly **Date:** 2018-11-14

Issue date: 2018-11-28

Date of entry into force: 2018-11-28

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Foreword

PEFC, the Programme for the Endorsement of Forest Certification, is a worldwide organisation promoting sustainable forest management through forest certification and labelling of forest-based products. Products with a PEFC claim and/or label offer assurances that the raw materials that have been used in their manufacture originate from sustainably managed forests and Trees outside Forests (TOF) areas, recycled and controlled sources.

The PEFC Council endorses national and regional forest certification systems that comply with PEFC Council requirements. Systems are subject to regular evaluations.

This document has been developed using an open, transparent, consultative and consensus-based process and including a broad range of stakeholders.

This document cancels and replaces the 2010 version of PEFC's Sustainable Forest Management requirements (PEFC ST 1003:2010).

Introduction

The Programme for the Endorsement of Forest Certification (PEFC)

PEFC is a leading global alliance of regional and national forest certification systems. As an independent, international, non-profit and non-governmental organisation, we are dedicated to promoting sustainable forest management through independent third-party certification.

PEFC works throughout the entire forest supply chain to promote responsible practices in the forest and to ensure that wood and non-wood forest products are produced with respect for the highest ecological, social and ethical standards. Forest-based solutions offer much promise to achieve a more sustainable world.

At the core of our work is forest certification. With over 300 million hectares¹ of certified forest, PEFC is the largest forest certification system in the world. We are also the certification system of choice for smallholders. PEFC was founded by small- and family forest owners based on intergovernmental processes (Ministerial Conference for the Protection of Forest in Europe, the Montreal Process and the ATO/ITTO process). Ensuring smallholder access to forest certification has always been at the heart of our work. Owners of relatively small estates face specific challenges and our certification system provides solutions to tackle these challenges.

It is PEFC's fundamental belief that forest certification needs to be local; this is why we choose to work with national organisations to advance responsible forestry. As an umbrella organisation, PEFC endorses regional or national forest certification systems that have been developed through multi-stakeholder processes and tailored to local priorities and conditions.

While regional and national systems are developed locally, they need to be recognized internationally. To ensure consistency with international requirements, all regional and national forest certification systems undergo rigorous third-party assessment against PEFC's unique Sustainability Benchmarks before they can achieve endorsement.

PEFC Sustainability Benchmarks – Setting global standards

The development of international standards and guides is at the core of what PEFC does. We call these the PEFC Sustainability Benchmarks. These standards form the basis for nearly all PEFC's other activities; from providing certification solutions to assessing compliance with standard requirements and endorsing national systems.

Every standard goes through a detailed and rigorous development process and is reviewed after five years at the latest, and revised if necessary. When developing or revising a standard, we make sure that stakeholders are invited to participate. This means that there is a representation of diverse stakeholders, so no single interest can dominate, and that the process is consensus-driven, open and transparent.

PEFC offers a wide variety of opportunities and channels to ensure that everyone interested can be involved and stay up-to-date. These may include:

- Participation in a standard setting working group. Working groups are the most powerful institution in the process as participants are responsible for the core of the revision work;
- Expert Forums, open to the public, to inform the working group;
- Regular updates, published on the PEFC website and disseminated through our newsletter and social media channels, keep everyone informed;
- Stakeholder conferences and dialogues may offer further opportunities to contribute to the process;
- The enquiry draft is subject to a 60 day global public consultation.

¹ As of September 2018

As a membership association, all technical documentation requires formal approval by the PEFC Board of Directors and the association's members, the General Assembly. Neither of these two bodies has the ability to modify the final draft submitted by the working group; they can only approve or reject it as a whole. Approved PEFC standards are published on the PEFC website together with a standard development report, which provides comprehensive information about the development process.

Regional and national forest certification systems - Adapting standards to local conditions

Local adaptation of global standards is accomplished through regional and national forest certification systems. These forest certification systems outline the rules, procedures and management criteria for carrying out forest certification at regional, national or sub-national level. They include a range of standards and guides, such as the requirements for sustainable forest management, group certification, standard setting and many more.

Through its regional and national systems, PEFC can ensure that the sustainable forest management requirements of each country are tailored to the specific forest ecosystems, the legal and administrative framework, the socio-cultural context and other relevant factors.

This also ensures that all stakeholders are represented in the process; that they participate in determining what sustainable forest management means in the context of their country and how it can best be implemented locally. Issues that are relevant at the local level, but not captured in PEFC's Sustainability Benchmarks, are also naturally incorporated into these standards. This is key to the success of PEFC, as it empowers those managing forests to do so in compliance with the standards that they themselves have participated in developing.

Just like standard setting processes at international level, regional, national or sub-national standards are developed through multi-stakeholder working groups with balanced representation, ideally as defined in Agenda 21 of the United Nations. These processes need to be consensus driven, open and transparent, with no single interest dominating – and provide ample opportunity for involvement.

PEFC's endorsement process - Ensuring alignment of regional, national and sub-national standards with PEFC's Sustainability Benchmarks

To ensure that our requirements are consistently applied at regional, national and sub-national level, all forest certification systems applying for PEFC endorsement go through a comprehensive and thorough independent assessment and quality assurance process. This process takes on average nine months to complete, and includes the following elements:

1. An independent assessment that evaluates compliance of the system with PEFC requirements and includes a global public consultation;
2. A quality assurance process;
3. After a system has successfully passed the assessment and quality assurance process, the PEFC General Assembly votes on its endorsement.

Documentation concerning all endorsed systems, including the full assessment report, is publicly available on the PEFC website.

Through this process, PEFC can ensure that the standards meet our globally accepted PEFC Sustainability Benchmarks. In practical terms, this means that wood- or non-wood forest products certified to a forest certification system are considered PEFC-certified anywhere in the world and when sold via a certified chain of custody they are eligible to carry our PEFC label. It means also, that forests not managed for wood production can be recognised as being managed sustainably.

Certification – Demonstrating compliance with standard requirements

Certification is the actual process of validating that individuals or organisations wishing to obtain PEFC forest management or chain of custody certification are in compliance with our requirements.

Credible certification requires certification decisions to be impartial, independent and competent. This means that standard setting, certification and accreditation must be completely separate in order to eliminate the risk of conflicts of interest and ensure the highest level of competency:

- Standard setting, the process of defining certification requirements in collaboration with stakeholders, is undertaken by PEFC or regional and national forest certification systems.
- Certification, the process of checking whether a forest manager or company fulfils the certification requirements, is carried out by a certification body.
- Accreditation, the process of assessing the competence of the certification body, is carried out by an accreditation body with membership within the International Accreditation Forum (IAF) or an IAF regional accreditation group.

Entities wishing to obtain PEFC certification are required to demonstrate their conformity with PEFC endorsed standards. If compliance is demonstrated, the certification body issues a certificate valid up to five years, after which operators must become re-certified.

Additional checks are done through annual surveillance audits to proactively verify on-going compliance with our requirements. Only if practices and operations continually meet the requirements of PEFC endorsed standards do entities earn the right to make “PEFC-certified” claims and use the PEFC label.

PEFC is aware that, as with any programme or activity, there may be issues of nonconformity or non-compliance from time to time.

Complaints against certified entities are dealt with by the respective complaints and appeals procedures put in place by certification bodies. Issues that remain unresolved at this level should be raised with the respective complaints and appeals mechanisms of national accreditation bodies and thereafter - as a third level of appeal - with the IAF.

If a certified entity does not comply with PEFC's requirements its certificate can be suspended or withdrawn. If the certification body, or indeed an accreditation body, is judged to not have dealt with a complaint appropriately, it risks losing its licence to operate.

1. Scope

This document constitutes PEFC International's Sustainability Benchmark for PEFC endorsed regional, national or sub-national standards for the sustainable management of forests and Trees outside Forests, covering all their products and services. Through PEFC endorsed standards, which are developed in a balanced multi-stakeholder process following PEFC International's Sustainability Benchmark for standard setting, the requirements outlined in this document apply to owners and managers, as well as contractors and other operators operating in PEFC-certified areas. They cover all necessary processes of a management system that aims at sustainable forest management.

Interpretations for forest plantations are outlined in Appendix 1 to this document.

Interpretations for TOF are outlined in Appendix 2 to this document. All requirements within the standard referring to “forest” are also applicable to TOF unless otherwise indicated in Appendix 2.

2. Normative references

ILO No. 87, *Freedom of Association and Protection of the Right to Organise Convention*, 1948

ILO No. 29, *Forced Labour Convention*, 1930

ILO No. 98, *Right to Organise and Collective Bargaining Convention*, 1949

ILO No. 100, *Equal Remuneration Convention*, 1951

ILO No. 105, *Abolition of Forced Labour Convention*, 1957

ILO No. 111, *Discrimination (Employment and Occupation) Convention*, 1958

ILO No. 138, *Minimum Age Convention*, 1973

ILO No. 169, *Indigenous and Tribal Peoples Convention*, 1989

ILO No. 182, *Worst Forms of Child Labour Convention*, 1999

ISO/IEC 17021-1, *Conformity assessment — Requirements for bodies providing audit and certification of management systems — Part 1: Requirements*

United Nations, *United Nations Declaration on the Rights of Indigenous Peoples*, 2007

United Nations, *Universal Declaration of Human Rights*, 1948

Stockholm Convention on Persistent Organic Pollutants, 1998

PEFC ST 1001, *Standard Setting – Requirements*

PEFC ST 1002, *Group Forest Management Certification – Requirements*

PEFC GD 1007, *Endorsement and Mutual Recognition of National Systems and their Revision*

PEFC ST 2002, *Chain of Custody of Forest Based Products – Requirements*

ISO Guide 2, *Standardization and related activities — General vocabulary*

3. Terms and Definitions

For the purposes of this document the terms and definitions given in ISO/IEC Guide 2 apply together with the following definitions.

3.1 Affected stakeholder

A **stakeholder** who might experience a direct change in living and/or working conditions caused by implementation of a standard, or a **stakeholder** who might be a user of a standard and therefore is subject to the requirements of the standard.

Note 1: Affected stakeholders include neighbouring communities, indigenous people, workers, etc. However, having an interest in the subject matter of the standard (e.g. NGOs, scientific community, civil society) is not equal to being affected.

Note 2: A stakeholder who might be a user of the standard is likely to become a certified entity, e.g. a forest manager in the case of a forest management standard, or a wood processing enterprise in the case of a chain of custody standard.

3.2 Afforestation

Establishment of forest through planting and/or deliberate seeding on land that, until then, was under a different land use, implies a transformation of land use from non-forest to forest (source: FAO 2018).

3.3 Certified area

The forest area covered by a sustainable forest management system according to the PEFC Sustainable Forest Management Standard (PEFC ST 1003).

3.4 Degraded forest

Land with long-term significant reduction of the overall potential to supply benefits from the forest, which includes carbon storage, wood, biodiversity and other goods and services (definition based on FAO 2003).

3.5 Ecologically important forest areas

Forest areas

- a) Containing protected, rare, sensitive or representative forest ecosystems;
- b) Containing significant concentrations of endemic species and habitats of threatened species, as defined in recognised reference lists;
- c) Containing endangered or protected genetic in situ resources;
- d) Contributing to globally, regionally and nationally significant large landscapes with natural distribution and abundance of naturally occurring species.

3.6 Ecosystem services

Benefits obtained from ecosystems. These include provisioning services such as food, water, timber, and fibre; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling (based on Millennium Ecosystem Assessment, 2005).

3.7 Forest

Minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ. A forest may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground or open forest. Young natural stands and all plantations which have yet to reach a crown density of 10-30 per cent or tree height of 2-5 metres are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest (source: United Nations 2002).

Note: Each regional, national or subnational standard has to include the specific values for the criteria in the definition. If such specifications for a country are not yet available, the **standardising body** is responsible to set the values according to the national framework.

3.8 Forest conversion

Direct human-induced change of **forest** to non-forest land or **forest plantation**.

Note: Regeneration by planting or direct seeding and/or the human-induced promotion of natural seed sources, to the same dominant species as was harvested or other species that were present in the historical species mix is not considered a conversion.

3.9 Forest plantation

Forest of introduced species, and in some cases native species, established through planting or seeding, mainly for production of wood or non-wood goods and services.

Note 1: Includes all stands of introduced species established for production of wood or non-wood goods and services.

Note 2: May include areas of native species characterised by few species, intensive land preparation (e.g. cultivation), straight tree lines and/or even-aged stands.

Note 3: Application of the definition requires consideration of national forestry terminology and legal requirements.

3.10 Fundamental ILO conventions

Eight conventions (ILO 29, 87, 98, 100, 105, 111, 138 and 182) identified by the ILO's Governing Body as "fundamental" in terms of principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.

3.11 Genetically modified trees

Trees in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination, taking into account applicable legislation providing a specific definition of genetically modified organisms.

Note 1: The following techniques are considered as genetic modification resulting in genetically modified trees (EU Directive 2001/18/EC):

- 1) recombinant nucleic acid techniques involving the formation of new combinations of genetic material by the insertion of nucleic acid molecules produced by whatever means outside an organism, into any virus, bacterial plasmid or other vector system and their incorporation into a host organism in which they do not naturally occur, but in which they are capable of continued propagation;

- 2) techniques involving the direct introduction into an organism of heritable material prepared outside the organism including micro-injection, macro-injection, and micro-encapsulation;
- 3) cell fusion (including protoplast fusion) or hybridisation techniques where live cells with new combinations of heritable genetic material are formed through the fusion of two or more cells by means of methods that do not occur naturally.

Note 2: The following techniques are not considered as genetic modification resulting in genetically modified trees (EU Directive 2001/18/EC):

- 1) in vitro fertilisation;
- 2) natural processes such as: conjugation, transduction, transformation;
- 3) polyploidy induction.

3.12 Integrated Pest Management (IPM)

The careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment (source: FAO 2018).

3.13 Landscape

A socio-ecological system that consists of a mosaic of natural and/or human-modified ecosystems, with a characteristic configuration of topography, vegetation, land use, and settlements that is influenced by the ecological, historical, economic and cultural processes and activities of the area (source: Scherr et al. 2013).

3.14 Management plan

Documented information specifying objectives, actions and control arrangements concerning the management of ecosystem resources and services for a set period of time.

Note: Depending on local conditions an equivalent documented information or tools can comply with this function.

3.15 Management system

Set of interrelated or interacting elements of an **organisation** to establish policies and objectives and processes to achieve those objectives.

3.16 Manager

Person who directs and controls an **organisation**.

Note: A manager may also be a person executing her or his ownership rights or traditional or customary tenure rights.

3.17 Non-forest ecosystem

Land not meeting the definition of **forest**.

3.18 Non-wood forest products

Products consisting of goods of biological origin other than wood, derived from **forests** and **Trees outside Forests** (source: following FAO 2017).

3.19 Organisation

Person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives.

Note 1: An organisation applies for PEFC certification and is responsible for the compliance with PEFC sustainable forest management requirements and can be responsible for several forest management units.

Note 2: A manager or owner can also take the role of an organisation.

3.20 Reforestation

Re-establishment of **forest** through planting and/or deliberate seeding on land classified as forest (source: FAO 2018).

3.21 Stakeholder

A person, group, community or **organisation** with an interest in the subject of the standard.

3.22 Standardising body

Body that has recognised activities in standardisation.

Note: A standardising body for a forest management certification system/standard is a body which is responsible for the development and maintenance of standards for the forest certification system. The standardising body can be a PEFC national governing body or the standardising body can be separate from the governance of the forest certification system.

3.23 Trees outside Forests (TOF)

Trees growing outside areas of nationally designated **forest** land. Such areas will normally be classified as "agriculture" or "settlement".

4. Context of the national standard and the organisations applying a PEFC endorsed standard

4.1 General

The requirements for sustainable forest management defined by regional, national or sub-national forest management standards shall:

- a) include management and performance requirements that are applicable at the forest management unit level, or at another level as appropriate, to ensure that the intent of all requirements is achieved at the forest management unit level;

Note: An example of a situation where a requirement can be defined as being at another level (e.g. group/regional) is monitoring of forest health. Through monitoring of forest health at regional level, and communicating of results at the FMU level, the objective of the requirement is met without the necessity to carry out the individual monitoring of each forest management unit.

- b) be clear, performance based and auditable;
- c) apply to activities of all forest operators in the defined **forest** area who have an impact on achieving compliance with the requirements;
- d) require record-keeping that provides evidence of compliance with the requirements of the forest management standards;
- e) specify "100% PEFC certified", or another system specific claim, as claim to be used to communicate the origin of products in an area covered by the standard to customers with a PEFC chain of custody;

Note: System specific claims of PEFC endorsed standards and PEFC Council approved abbreviations of such claims and the claim "100% PEFC certified", and their translations into languages other than English, are published online on the PEFC website www.pefc.org.

- f) require that where owners/managers of **forests** are selling products from areas other than covered by the standard, only products from areas covered by the standard are sold with the claim "100% PEFC-certified" or a system specific claim;
- g) require that claims on the origin of products in an area covered by the standard are only made by forest owners/managers covered by a PEFC recognised certificate issued against the standard;
- h) specify requirements concerning the information which need to be provided to a PEFC chain of custody certified customer;
- i) include an overview of applicable legislation, if requirements of this benchmark are not reflected in the regional, national or sub-national standard, because they are already addressed through the legislation.

4.2 Understanding the needs and expectations of affected stakeholders

The standard requires that the organisation shall determine:

- a) the affected stakeholders that are relevant to the sustainable forest management;
- b) the relevant needs and expectations of these stakeholders.

4.3 Determining the scope of the management system

4.3.1 The standard requires that the **organisation** shall determine the boundaries and applicability of the **management system** to establish its scope.

4.3.2 The standard requires that forest management shall comprise the cycle of inventory and planning, implementation, monitoring and evaluation, and shall include an appropriate assessment of the social, environmental and economic impacts of forest management practices. This shall form a basis for a cycle of continuous improvement.

5. Leadership

5.1 The standard requires that the **organisation** shall provide a commitment:

- a) to comply with the sustainable forest management standard and other applicable requirements of the certification system;
- b) to continuously improve the sustainable forest **management system**.

5.2 The standard requires that this commitment shall be publicly available.

5.3 The standard requires that responsibilities for sustainable forest management shall be clearly defined and assigned.

6. Planning

6.1 Actions to address risks and opportunities

6.1.1 The standard requires that the **organisation** shall consider risks and opportunities concerning compliance with the requirements for sustainable forest management. Size and scale of the operations of the **organisation** shall be considered.

6.1.2 The standard requires that inventory and mapping of forest resources shall be established and maintained, adequate to local and national conditions and in correspondence with the requirements described in this international benchmark standard.

6.2 Management plan

6.2.1 The standard requires that **management plans** shall be:

- a) elaborated and periodically updated or continually adjusted;
- b) appropriate to the size and use of the **forest** area;
- c) based on applicable local, national and international legislation as well as existing land-use or other official plans; and
- d) adequately covering forest resources.

6.2.2 The standard requires that **management plans** shall take into account the different uses or functions of the managed **forest** area.

6.2.3 The standard requires that **management plans** shall include at least a description of the current forest management unit, long-term objectives, and the average annual allowable cut, including its justification.

6.2.4 The standard requires that the annually allowable use of **non-wood forest products** shall be included in the **management plan** where forest management covers commercial use of **non-wood forest products** at a level which can have an impact on their long-term sustainability.

- 6.2.5** The standard requires that **management plans** specify ways and means to minimise the risk of degradation and damage to **forest** ecosystems.
- 6.2.6** The standard requires that **management plans** shall take into account the results of scientific research.
- 6.2.7** The standard requires that a summary of the **management plan**, appropriate to the scope and scale of forest management, shall be publicly available and shall include information on the general objectives and forest management principles.
- 6.2.8** The standard requires that the publicly available summary of the **management plan** may exclude confidential business and personal information and other information made confidential by applicable legislation or for the protection of cultural sites or sensitive natural resource features.

6.3 Compliance requirements

6.3.1 Legal compliance

- 6.3.1.1** The standard requires that the **organisation** shall identify and have access to the legislation applicable to its forest management and determine how these compliance obligations apply to the **organisation**.

Note: For a country which has signed a FLEGT Voluntary Partnership Agreement (VPA) between the European Union and the producing country, the “legislation applicable to forest management” is defined by the VPA agreement.

- 6.3.1.2** The standard requires that the **organisation** shall comply with applicable local, national and international legislation on forest management, including but not limited to forest management practices; nature and environmental protection; protected and endangered species; property, tenure and land-use rights for indigenous peoples, local communities or other **affected stakeholders**; health, labour and safety issues; anti-corruption and the payment of applicable royalties and taxes.

- 6.3.1.3** The standard requires that where no anti-corruption legislation exists, the **organisation** must take alternative anti-corruption measures appropriate to the risk of corruption.

- 6.3.1.4** The standard requires that measures shall be implemented to address protection of the **forest** from unauthorised activities such as illegal logging, illegal land use, illegally initiated fires, and other illegal activities.

6.3.2 Legal, customary and traditional rights related to the forest land

- 6.3.2.1** The standard requires that property rights, tree ownership and land tenure arrangements shall be clearly defined, documented and established for the relevant management unit. Likewise, legal, customary and traditional rights related to the forest land shall be clarified, recognised and respected.

Note: Guidance for the handling of tenure arrangements can be obtained from the FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security.

- 6.3.2.2** The standard requires that **forest** practices and operations shall be conducted in recognition of the established framework of legal, customary and traditional rights such as outlined in ILO 169 and the UN Declaration on the Rights of Indigenous Peoples, which shall not be infringed upon without the free, prior and informed consent of the holders of the rights, including the provision

of compensation where applicable. Where the extent of rights is not yet resolved, or is in dispute, there are processes for just and fair resolution. In such cases forest managers shall, in the interim, provide meaningful opportunities for parties to be engaged in forest management decisions whilst respecting the processes and roles and responsibilities laid out in the policies and laws where the certification takes place.

6.3.2.3 The standard requires that forest practices and operations shall respect human rights as defined by the Universal Declaration on Human Rights.

6.3.3 Fundamental ILO conventions

6.3.3.1 The standard requires that forest practices and operations shall comply with fundamental ILO conventions.

Note: In countries where the fundamental ILO conventions have been ratified, the requirements of 6.3.3.1 apply. In countries where a fundamental convention has not been ratified and its content is not covered by applicable legislation, specific requirements shall be included in the forest management standard.

6.3.4 Health, safety and working conditions

6.3.4.1 The standard requires that forest operations shall be planned, organised and performed in a manner that enables health and accident risks to be identified and all reasonable measures to be applied to protect workers from work-related risks. Workers shall be informed about the risks involved with their work and about preventive measures.

6.3.4.2 The standard requires that working conditions shall be safe, and guidance and training in safe working practices shall be provided to all those assigned to a task in forest operations. Working hours and leave shall comply with national laws or applicable collective agreements.

Note: Guidance for specifying national standards can be obtained from the ILO Code of Good Practice: Safety and Health in Forestry Work.

6.3.4.3 The standard requires that wages of local and migrant forest workers as well as of contractors and other operators operating in PEFC-**certified areas** shall meet or exceed at least legal, industry minimum standards or, where applicable, collective bargaining agreements.

Note: Where wages are below the living wage of a country, steps should be taken to attain increased wages towards a living wage level over time in addition to increases for inflation.

6.3.4.4 The standard requires that the **organisation** is committed to equal opportunities, non-discrimination and freedom from workplace harassment. Gender equality shall be promoted.

7. Support

7.1 Resources

7.1.1 The standard requires that the **organisation** shall determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the sustainable forest **management system**.

7.2 Competence

7.2.1 The standard requires that forest managers, contractors, employees and forest owners shall be provided with sufficient information and kept up-to-date through continuous training in relation to sustainable forest management, as a precondition for all management planning and practices described in this benchmark.

7.3 Communication

7.3.1 The standard requires that effective communication and consultation with local communities, indigenous peoples and other **stakeholders** relating to sustainable forest management shall be provided.

7.4 Complaints

7.4.1 The standard requires that appropriate mechanisms are in place for resolving complaints and disputes relating to forest management operations, land use rights and work conditions.

7.5 Documented Information

7.5.1 The standard requires that the **organisation's management system** shall include documented information required by the standard and determined by the **organisation** as being necessary for the effectiveness of the sustainable forest **management system**.

7.5.2 The standard requires that the documented information is relevant, and updated as appropriate, to the activities of the **organisation**.

8. Operation

8.1 Criterion 1: Maintenance or appropriate enhancement of forest resources and their contribution to the global carbon cycle

8.1.1 The standard requires that management shall aim to maintain or increase **forests** and their **ecosystem services** and maintain or enhance the economic, ecological, cultural and social values of forest resources.

8.1.2 The standard requires that the quantity and quality of the forest resources and the capacity of the **forest** to store and sequester carbon shall be safeguarded in the medium and long term by balancing harvesting and growth rates, using appropriate silvicultural measures and preferring techniques that minimise adverse impacts on forest resources.

8.1.3 The standard requires that climate positive practices in management operations, such as greenhouse gas emission reductions and efficient use of resources shall be encouraged.

8.1.4 The standard requires that **forest conversion** shall not occur unless in justified circumstances where the conversion:

- a) is in compliance with national and regional policy and legislation applicable for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority including consultation with **affected stakeholders**; and
- b) entails a small proportion (no greater than 5 %) of **forest** type within the **certified area**; and
- c) does not have negative impacts on **ecologically important forest areas**, culturally and socially significant areas, or other protected areas; and
- d) does not destroy areas of significantly high carbon stock; and
- e) makes a contribution to long-term conservation, economic, and social benefits.

8.1.5 The standard requires that **afforestation** of ecologically important **non-forest ecosystems** shall not occur unless in justified circumstances where the conversion:

- a) is in compliance with national and regional policy and legislation applicable for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority; and
- b) is established based on a decision-making basis where **affected stakeholders** have opportunities to contribute to the decision-making on conversion through transparent and participatory consultation processes; and
- c) does not have negative impacts on threatened (including vulnerable, rare or endangered) **non-forest ecosystems**, culturally and socially significant areas, important habitats of threatened species or other protected areas; and
- d) entails a small proportion of the ecologically important **non-forest ecosystem** managed by an **organisation**; and
- e) does not destroy areas of significantly high carbon stock; and
- f) makes a contribution to long-term conservation, economic, and social benefits.

8.1.6 The standard requires that if conversion of severely **degraded forests** to **forest plantations** is being considered, it must add economic, ecological, social and/or cultural value. Precondition of adding such value are circumstances where the conversion:

- a) is in compliance with national and regional policy and legislation applicable for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority; and
- b) is established based on a decision-making basis where **affected stakeholders** have opportunities to contribute to the decision-making on conversion through transparent and participatory consultation processes; and
- c) has a positive impact on long-term carbon sequestration capacity of **forest** vegetation; and
- d) does not have negative impacts on **ecologically important forest areas**, culturally and socially significant areas, or other protected areas; and
- e) safeguards protective functions of **forests** for society and other regulating or supporting **ecosystem services**; and
- f) safeguards socio-economic functions of **forests**, including the recreational function and aesthetic values of **forests** and other cultural services; and
- g) has a land history providing evidence that the degradation is not the consequence of deliberate poor forest management practices; and
- h) is based on credible evidence demonstrating that the area is neither recovered nor in the process of recovery.

8.2 Criterion 2: Maintenance of forest ecosystem health and vitality

- 8.2.1** The standard requires that health and vitality of **forest** ecosystems shall be maintained or enhanced and **degraded forest** ecosystems shall be rehabilitated wherever and as far as economically feasible, by making best use of natural structures and processes and using preventive biological measures.
- 8.2.2** The standard requires that adequate genetic, species and structural diversity shall be encouraged or maintained to enhance the stability, vitality and resilience of the **forests** to adverse environmental factors and strengthen natural regulation mechanisms.
- 8.2.3** The standard requires that use of fire shall be limited to regions where fire is an essential tool in forest management for regeneration, wildfire protection and habitat management or a recognized practice of indigenous peoples. In these cases adequate management and control measures shall be taken.
- 8.2.4** The standard requires that appropriate forest management practices such as **reforestation** and **afforestation** with tree species and provenances that are suited to the site conditions or the use of tending, harvesting and transport techniques that minimise tree and/or soil damages shall be applied.
- 8.2.5** The standard requires that the indiscriminate disposal of waste on **forest** land shall be strictly avoided. Non-organic waste and litter shall be collected, stored in designated areas and removed in an environmentally-responsible manner. The spillage of oil or fuel during forest management operations shall be prevented. Emergency procedures for the minimisation of risk of environmental harm arising from the accidental spillage shall be in place.
- 8.2.6** The standard requires that **integrated pest management**, appropriate silviculture alternatives and other biological measures shall be preferred to minimise the use of pesticides.
- 8.2.7** The standard requires that any use of pesticides is documented.
- 8.2.8** The standard requires that the WHO Class 1A and 1B pesticides and other highly toxic pesticides shall be prohibited, except where no other viable alternative is available. Any exception to the usage of WHO Class 1A and 1B pesticides shall be defined in the national/regional standard.
- 8.2.9** The standard requires that pesticides, such as chlorinated hydrocarbons whose derivatives remain biologically active and accumulate in the food chain beyond their intended use, and any pesticides banned by international agreement, shall be prohibited.
- Note:** "Pesticides banned by international agreements" are defined in the Stockholm Convention on Persistent Organic Pollutants.
- 8.2.10** The standard requires that the use of pesticides shall follow the instructions given by the pesticide producer and be implemented with proper equipment by trained personnel.
- 8.2.11** The standard requires that where fertilisers are used, they shall be applied in a controlled manner and with due consideration for the environment. Fertilizer use shall not be an alternative to appropriate soil nutrient management.

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

- 8.3.1** The standard requires that the capability of **forests** to produce a range of wood and **non-wood forest products** and services on a sustainable basis shall be maintained.
- 8.3.2** The standard requires that sound economic performance shall be pursued, taking into account possibilities for new markets and economic activities in connection with all relevant goods and services of **forests**.
- 8.3.3** The standard requires that management, harvesting and regeneration operations shall be carried out at a time, and in a way, that does not reduce the productive capacity of the site, for example by avoiding damage to soil and retained stands and trees.
- 8.3.4** The standard requires that 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 products.
- 8.3.5** The standard requires that adequate infrastructure such as roads, skid tracks or bridges shall be planned, established and maintained to ensure efficient delivery of goods and services while minimising negative impacts on the environment.

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

- 8.4.1** The standard requires that management planning shall aim to maintain, conserve or enhance biodiversity on **landscape**, ecosystem, species and genetic levels.
- 8.4.2** The standard requires that inventory, mapping and planning of forest resources shall identify, protect, conserve or set aside **ecologically important forest areas**.
Note: This does not prohibit forest management activities that do not damage the important ecologic values of those biotopes.
- 8.4.3** The standard requires that protected, threatened and endangered plant and animal species shall not be exploited for commercial purposes. Where necessary, measures shall be taken for their protection and, where relevant, to increase their population.
Note: The requirement does not preclude trade according to CITES requirements.
- 8.4.4** The standard requires that successful regeneration shall be ensured through natural regeneration or planting that is adequate to ensure the quantity and quality of the forest resources.
- 8.4.5** The standard requires that for **reforestation** and **afforestation** origins of native species that are well-adapted to site conditions shall be preferred. Only those introduced species, provenances or varieties shall be used whose impacts on the ecosystem and on the genetic integrity of native species and local provenances have been scientifically evaluated, and if negative impacts can be avoided or minimised.
Note: CBD (Convention on Biological Diversity) Guiding Principles for the Prevention, Introduction, and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species are recognised as guidance for avoidance of invasive species.
- 8.4.6** The standard requires that **afforestation, reforestation** and other tree planting activities that contribute to the improvement and restoration of ecological connectivity shall be promoted.

- 8.4.7** The standard requires that genetically-modified trees shall not be used.
- Note:** The restriction on the usage of genetically-modified trees has been adopted by the PEFC General Assembly based on the Precautionary Principle. Until enough scientific data on genetically-modified trees indicates that impacts on human and animal health and the environment are equivalent to, or more positive than, those presented by trees genetically improved by traditional methods, no genetically-modified trees will be used.
- 8.4.8** The standard requires that a diversity of both horizontal and vertical structures and the diversity of species such as mixed stands shall be promoted, where appropriate. The practices shall also aim to maintain or restore **landscape** diversity.
- 8.4.9** The standard requires that traditional management practices that create valuable ecosystems on appropriate sites shall be supported, where appropriate.
- 8.4.10** The standard requires that tending and harvesting operations shall be conducted in a way that does not cause lasting damage to ecosystems. Wherever possible, practical measures shall be taken to maintain or improve biological diversity.
- 8.4.11** The standard requires that infrastructure shall be planned and constructed in a way that minimises damage to ecosystems, especially to rare, sensitive or representative ecosystems and genetic reserves, and that takes threatened or other key species – in particular their migration patterns – into consideration.
- 8.4.12** The standard requires that, with due regard to management objectives, measures shall be taken to control the pressure of animal populations on **forest** regeneration and growth as well as on biodiversity.
- 8.4.13** The standard requires that standing and fallen dead wood, hollow trees, old groves and rare tree species shall be left in quantities and distribution necessary to safeguard biological diversity, taking into account the potential effect on the health and stability of **forests** and on surrounding ecosystems.
- 8.5** **Criterion 5: Maintenance or appropriate enhancement of protective functions in forest management (notably soil and water)**
- 8.5.1** The standard requires that protective functions of **forests** for society, such as their potential role in erosion control, flood prevention, water purification, climate regulation, carbon sequestration and other regulating or supporting **ecosystem services** shall be maintained or enhanced.
- 8.5.2** The standard requires that areas that fulfil specific and recognised protective functions for society shall be mapped, and forest **management plans** and operations shall ensure the maintenance or enhancement of these functions.
- 8.5.3** The standard requires that special care shall be given to forestry operations on sensitive soils and erosion-prone areas as well as in areas where operations might lead to excessive erosion of soil into watercourses. Techniques applied and the machinery used shall be suitable for such areas. Special measures shall be taken to minimise the pressure of animal populations on these areas.
- 8.5.4** The standard requires that special care shall be given to forestry operations in **forest** areas with water protection functions to avoid adverse effects on the quality and quantity of water resources. Inappropriate use of chemicals or other harmful substances or inappropriate silvicultural practices influencing water quality in a harmful way shall be avoided. Downstream water balance and water quality shall not be significantly affected by the operations.

8.5.5 The standard requires that construction of roads, bridges and other infrastructure shall be carried out in a manner that minimises bare soil exposure, avoids the introduction of soil into watercourses and preserves the natural level and function of water courses and river beds. Proper road drainage facilities shall be installed and maintained.

8.6 Criterion 6: Maintenance or appropriate enhancement of socio-economic functions and conditions

8.6.1 The standard requires that forest management planning shall aim to respect all socio-economic functions of **forests**.

8.6.2 The standard requires that adequate public access to **forests** for the purpose of recreation shall be provided, taking into account respect for ownership rights, safety and the rights of others, the effects on forest resources and ecosystems, as well as compatibility with other functions of the **forest**.

8.6.3 The standard requires that sites with recognised specific historical, cultural or spiritual significance and areas fundamental to meeting the needs of indigenous peoples and local communities (e.g. health, subsistence) shall be protected or managed in a way that takes due regard of the significance of the site.

8.6.4 The standard requires that management shall promote the long-term health and well-being of communities within or adjacent to the forest management area, where appropriate supported by engagement with local communities and indigenous peoples.

8.6.5 The standard requires that the best use shall be made of **forest**-related experience and traditional knowledge, innovations and practices such as those of forest owners, NGOs, local communities, and indigenous peoples. Equitable sharing of the benefits arising from the utilization of such knowledge shall be encouraged.

8.6.6 The standard requires that management shall give due regard to the role of forestry in local economies. Special consideration shall be given to new opportunities for training and employment of local people, including indigenous peoples.

8.6.7 The standard requires that forest management shall contribute to research activities and data collection needed for sustainable forest management or support relevant research activities carried out by other **organisations**, as appropriate.

9. Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

- 9.1.1** The standard requires that monitoring of forest resources and evaluation of their management, including ecological, social and economic effects, shall be periodically performed, and results fed back into the planning process.
- 9.1.2** The standard requires that health and vitality of **forests** shall be periodically monitored, especially key biotic and abiotic factors that potentially affect health and vitality of **forest** ecosystems, such as pests, diseases, overgrazing and overstocking, fire, and damage caused by climatic factors, air pollutants or by forest management operations.
- 9.1.3** The standard requires that where it is the responsibility of the forest owner/manager and included in forest management, the use of **non-wood forest products**, including hunting and fishing, shall be regulated, monitored and controlled.
- 9.1.4** The standard requires that working conditions shall be regularly monitored and adapted as necessary.

9.2 Internal audit

9.2.1 Objectives

The standard requires that an internal audit programme at planned intervals shall provide information on whether the **management system**

- a) conforms to
 - the **organisation's** requirements for its **management system**;
 - the requirements of the national sustainable forest management standard
- b) is effectively implemented and maintained.

9.2.2 Organisation

The standard requires that the organisation shall:

- a) plan, establish, implement and maintain an audit programme(s) including the frequency, methods, responsibilities, planning requirements and reporting, which shall take into consideration the importance of the processes concerned and the results of previous audits;
- b) define the audit criteria and scope for each audit;
- c) select the auditors and conduct audits to ensure objectivity and the impartiality of the audit process;
- d) ensure that the results of the audits are reported to relevant management;
- e) retain documented information as evidence of the implementation of the audit programme and the audit results.

9.3 Management review

9.3.1 The standard requires that an annual management review shall at least include

- a) the status of actions from previous management reviews;
- b) changes in external and internal issues that are relevant to the management system;
- c) information on the **organisation's** performance, including trends in:
 - nonconformities and corrective actions;
 - monitoring and measurement results;
 - audit results;
- d) opportunities for continual improvement.

9.3.2 The standard requires that the outputs of the management review shall include decisions related to continual improvement opportunities and any need for changes to the **management system**.

9.3.3 The standard requires that documented information as evidence of the results of management reviews shall be retained.

10. Improvement

10.1 Nonconformity and corrective action

10.1.1 The standard requires that when a nonconformity occurs, the **organisation** shall:

- a) react to the nonconformity and, as applicable:
 - i. take action to control and correct it;
 - ii. deal with the consequences;
- b) evaluate the need for action to eliminate the causes of the nonconformity, in order that it does not recur or occur elsewhere, by:
 - i. reviewing the nonconformity;
 - ii. determining the causes of the nonconformity;
 - iii. determining if similar nonconformities exist, or could potentially occur;
- c) implement any action needed;
- d) review the effectiveness of any corrective action taken;
- e) make changes to the **management system**, if necessary.

10.1.2 The standard requires that corrective actions shall be appropriate to the effects of the nonconformities encountered.

10.1.3 The standard requires that the organisation shall retain documented information as evidence of:

- a) the nature of the nonconformities and any subsequent actions taken;
- b) the results of any corrective action.

10.2 Continual improvement

The standard requires that the suitability, adequacy and effectiveness of the sustainable forest **management system** and the sustainable management of the **forest** shall be continuously improved.

Appendix 1: Guidelines for the interpretation of requirements in the case of forest plantations

Requirement	Interpretation for forest plantations
<p>6.2.2 The standard requires that forest management plans shall take into account the different uses or functions of the managed forest area.</p> <p>8.1.1 The standard requires that management shall aim to maintain or increase forests and their ecosystem services and maintain or enhance the economic, ecological, cultural and social values of forest resources.</p> <p>8.2.1 The standard requires that health and vitality of forest ecosystems shall be maintained or enhanced and degraded forest ecosystems shall be rehabilitated wherever and as far as economically feasible, by making best use of natural structures and processes and using preventive biological measures.</p> <p>8.2.2 The standard requires that adequate genetic, species and structural diversity shall be encouraged or maintained to enhance the stability, vitality and resistance capacity of the forests to adverse environmental factors and strengthen natural regulation mechanisms.</p> <p>8.4.1 The standard requires that management planning shall aim to maintain, conserve and enhance biodiversity on landscape, ecosystem, species and genetic levels.</p> <p>8.6.1 The standard requires that forest management planning shall aim to respect all socio-economic functions of forests and local economies.</p>	<p>The requirements 6.2.2, 8.1.1, 8.2.1, 8.2.2, 8.4.1 and 8.6.1 cannot be applied to individual forest stands and 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 dedicated to environmental, ecological, cultural and social functions.</p> <p>In order to enhance landscape and biodiversity values, and 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.</p>
<p>8.1.4 The standard requires that forest conversion shall not occur unless in justified circumstances where the conversion (...)</p>	<p>The requirement that “forest conversion shall not occur” means that forest plantations established by a forest conversion after 31 December 2010 in other than “justified circumstances” do not meet the requirement and are not eligible for certification.</p>
<p>8.1.5 The standard requires that reforestation and afforestation of ecologically important non-forest ecosystems shall not occur unless in justified circumstances where the conversion (...)</p>	<p>The requirement for the “reforestation and afforestation of ecologically important non-forest ecosystems” means that ecologically important non-forest ecosystems reforested or afforested after 31 December 2010 in other than “justified circumstances” do not meet the requirement and are not eligible for certification.</p>

Requirement	Interpretation for forest plantations
<p>8.1.6 The standard requires that conversion of severely degraded forests to forest plantations shall be considered, whenever it can add economic, ecological, social and/or cultural value. Precondition of adding such value are circumstances where the conversion (...)</p>	<p>The interpretation in this appendix on 8.1.4 is not applicable to 8.1.6.</p>
<p>8.4.2 The standard requires that inventory, mapping and planning, of forest resources shall identify, protect, conserve or set aside ecologically important forest areas.</p> <p>Note: This does not necessarily exclude forest management activities that do not damage biodiversity values of those biotopes.</p>	<p>The requirement laid out in 8.4.2 shall primarily be addressed at the stage of the establishment of forest plantations and those areas shall form part of the buffer zones and set-aside areas that are dedicated to environmental, ecological, cultural and social functions.</p>
<p>8.4.8 The standard requires that a diversity of both horizontal and vertical structures, and the diversity of species such as mixed stands, shall be promoted, where appropriate. The practices shall also aim to maintain or restore landscape diversity.</p> <p>8.4.9 The standard requires that traditional management practices that create valuable ecosystems on appropriate sites shall be supported, where appropriate.</p> <p>8.4.13 The standard requires that standing and fallen dead wood, hollow trees, old groves and special rare tree species shall be left in quantities and distribution necessary to safeguard biological diversity, taking into account the potential effect on the health and stability of forests and on surrounding ecosystems.</p>	<p>The requirements 8.4.8, 8.4.9 and 8.4.13 do not usually apply to forest plantations and shall be understood to be primarily taking place in buffer zones and set-aside areas, which complement forest plantations, and which are dedicated to environmental, ecological, cultural and social functions.</p>
<p>8.4.5 The standard requires that for reforestation and afforestation, origins of native species that are well-adapted to site conditions shall be preferred. Only those introduced species, provenances or varieties shall be used whose impacts on the ecosystem and on the genetic integrity of native species and local provenances have been evaluated, and if negative impacts can be avoided or minimised.</p>	<p>The evaluation of the impact of “introduced species, provenances or varieties” shall be understood as having increased importance for forest plantations and shall be an important part of both the planning and management stages of the production cycle.</p>

Appendix 2: Guidelines for the interpretation of requirements for Trees outside Forests (TOF)

A. Introduction

This Appendix provides interpretation for developing regional, national and sub-national requirements and standards applicable for **Trees outside Forests (TOF)**. As stated in PEFC ST 1003:2018, all requirements referring to '**forest**' are also applicable to 'TOF' unless otherwise indicated in this Appendix.

There exists a rich global diversity of TOF systems. Some are natural or semi-natural ecosystems with ecological complexity and **ecosystem services** equivalent to natural forests. At the other end of the spectrum are individual trees in fields or linear tree formations.

In cases where the PEFC ST 1003:2018 requirements deserve specific interpretation to improve or establish relevancy for TOF, interpretations are provided in Section B.

Specific PEFC ST 1003:2018 requirements which may not be applicable to certain TOF systems are outlined in Section D. To identify such exceptions, PEFC defines four categories to objectively distinguish between different TOF systems. The categories are based on land classification and management intensity: TOF-agriculture (intensive and extensive) and TOF-settlement (intensive and extensive). It is within TOF-agriculture extensive and TOF-settlement extensive that select PEFC ST 1003:2018 requirements may not be applicable.

During the national standard setting process, the typical TOF systems of national relevance will be identified and the appropriate threshold between intensive and extensive discussed and agreed. Criteria to support this discussion are proposed in Section E. With this threshold articulated, it should be clear to which category particular TOF systems belong and if any flexibility exists when applying the PEFC ST 1003:2018 requirements into regional, national and sub-national standard(s).

B. Interpretation of Requirements for Trees outside Forests

Requirement	Interpretation for TOF
<p>4.3.2 The standard requires that forest management shall comprise the cycle of inventory and planning, implementation, monitoring and evaluation, and shall include an appropriate assessment of the social, environmental and economic impacts of forest management practices. This shall form a basis for a cycle of continuous improvement.</p>	<p>4.3.2 The standard requires that TOF management shall comprise the cycle of inventory and planning, implementation, monitoring and evaluation and shall include an appropriate assessment of the social, environmental and economic impacts of TOF management practices. This shall form a basis for a cycle of continuous improvement.</p>
<p>6.2.5 The standard requires that forest management plans specify ways and means to minimise the risk of degradation of and damages to forest ecosystems.</p>	<p>6.2.5 The standard requires that management plans specify ways and means to minimise the risk of degradation of and damages to natural ecosystems.</p>
<p>6.3.1.1 The standard requires that the organisation shall identify and have access to the legislation applicable to its forest management and determine how these compliance obligations apply to the organisation.</p> <p>Note: For a country which has signed a FLEGT Voluntary Partnership Agreement (VPA) between the European Union and the producing country, the “legislation applicable to forest management” is defined by the VPA agreement.</p>	<p>6.3.1.1 The standard requires that the organisation shall identify and have access to the legislation applicable to its TOF management and determine how these compliance obligations apply to the organisation.</p> <p>Note: Only where TOF is within the scope of a Country’s FLEGT Voluntary Partnership Agreement (VPA) between the European Union and the producing country, is the “legislation applicable to TOF area” defined by the VPA agreement.</p>
<p>6.3.1.2 The standard requires that the organisation shall comply with applicable local, national and/ or international legislation on forest management, including but not limited to forest management practices; nature and environmental protection; protected and endangered species; property, tenure and land-use rights for indigenous peoples, local communities or other affected stakeholders; health, labour and safety issues; anti-corruption and the payment of applicable royalties and taxes.</p>	<p>6.3.1.2 The standard requires that the organisation shall comply with applicable local, national or international legislation applicable to TOF area including but not limited to: agriculture and agroforestry; nature and environmental protection; protected and endangered species; property, tenure and land-use rights for indigenous peoples, local communities or other affected stakeholders; health, labour and safety issues; crop damage compensation; anti-corruption and the payment of royalties and taxes.</p>
<p>7.2.1 The standard requires that forest managers, contractors, employees and forest owners shall be provided with sufficient information and required to keep up-to-date through continuous training in relation to sustainable forest management as a precondition for all management planning and practices described in this benchmark.</p>	<p>7.2.1 The standard requires that land managers, contractors, employees and land owners shall be provided with sufficient information and required to keep up-to-date through continuous training in relation to agroforestry, good agriculture practices and forestry techniques as a precondition for all management planning and practices described in this benchmark.</p>

Requirement	Interpretation for TOF
<p>8.1.1 The standard requires that management shall aim to maintain or increase forests and their ecosystem services and maintain or enhance the economic, ecological, cultural and social values of forest resources.</p>	<p>8.1.1 The standard requires that management shall aim to maintain or increase the cover, value and/or diversity of trees in the landscape and their related ecosystem services in ways that enhance the economic, ecological, cultural and social values and are aligned with existing land-use regimes.</p> <p><i>Note:</i> When the requirement is not achievable within individual, TOF-extensive areas, it can be considered at landscape level.</p>
<p>8.1.2 The standard requires that the quantity and quality of the forest resources and the capacity of the forest to capture and store carbon shall be safeguarded in the medium and long term by balancing harvesting and growth rates, using appropriate silvicultural measures and preferring techniques that minimise adverse impacts on forest resources.</p>	<p>8.1.2 The standard requires that management shall maintain or enhance TOF resources and their capacity to capture and store carbon in the medium and long term by balancing harvesting and growth rates, and by minimising direct or indirect damage to ecosystem resources.</p> <p><i>Note:</i> When the requirement is not achievable within individual, TOF-extensive areas, it can be considered at landscape level.</p>
<p>8.1.4 The standard requires that forest conversion shall not occur unless in justified circumstances (...)</p>	<p>8.1.4 The standard requires that conversion to TOF shall not occur unless in justified circumstances (...)</p> <p>TOF areas established by a forest conversion after 31 December 2010 in other than "justified circumstances" do not meet the requirement and are not eligible for certification.</p>
<p>8.1.5 The standard requires that afforestation of ecologically important non-forest ecosystems shall not occur unless in justified circumstances (...)</p>	<p>8.1.5 The standard requires that conversion of ecologically important non-forest ecosystems to TOF areas shall not occur unless in justified circumstances (...)</p> <p>TOF areas established by a conversion after 31 December 2010 in other than "justified circumstances" do not meet the requirement and are not eligible for certification.</p>
<p>8.1.6 The standard requires that if conversion of severely degraded forests to forest plantations is being considered, it must add economic, ecological, social and/or cultural value. Precondition of adding such value are circumstances where the conversion (...)</p>	<p>Not applicable.</p>

Requirement	Interpretation for TOF
<p>8.2.1 The standard requires that health and vitality of forest ecosystems shall be maintained or enhanced and degraded forest ecosystems shall be rehabilitated wherever and as far as economically feasible, by making best use of natural structures and processes and using preventive biological measures.</p>	<p>8.2.1 The standard requires that health and vitality of TOF areas shall be maintained or enhanced and degraded lands shall be rehabilitated whenever this is feasible, by making best use of landscape features, natural processes and using preventive biological measures.</p>
<p>8.2.2 The standard requires that adequate genetic, species and structural diversity shall be encouraged or maintained to enhance the stability, vitality and resilience of the forests to adverse environmental factors and strengthen natural regulation mechanisms.</p>	<p>8.2.2 The standard requires that adequate genetic, species and structural diversity shall be encouraged or maintained to enhance the stability, vitality and resilience of the TOF area.</p>
<p>8.2.4 The standard requires that appropriate forest management practices such as reforestation and afforestation with tree species and provenances that are suited to the site conditions or the use of tending, harvesting and transport techniques that minimise tree and/or soil damages shall be applied.</p>	<p>8.2.4 The standard requires that appropriate TOF management practices shall use tree, crop and animal species and provenances that are suited to the site conditions and the use of tending, harvesting and transport techniques that minimise tree and/or soil damage shall be applied.</p>
<p>8.3.1 The standard requires that the capability of forests to produce a range of wood and non-wood forest products and services on a sustainable basis shall be maintained.</p>	<p>8.3.1 The standard requires that the capability of the TOF area to provide wood products, non-wood forest products and/or services from trees on a sustainable basis shall be maintained.</p>
<p>8.4.1 The standard requires that management planning shall aim to maintain, conserve or enhance biodiversity on landscape, ecosystem, species and genetic levels.</p>	<p>8.4.1 The standard requires that management planning shall aim to maintain, conserve or enhance biodiversity on landscape, ecosystem, species and genetic levels.</p> <p>Note: When the requirement is not achievable within individual, TOF-extensive areas, it can be considered at landscape level or through group certification.</p>
<p>8.4.12 The standard requires that, with due regard to management objectives, measures shall be taken to control the pressure of animal populations on forest regeneration and growth as well as on biodiversity.</p>	<p>8.4.12 The standard requires that, with due regard to management objectives, measures shall be taken to balance the effect of domesticated and wild animals on the regeneration and growth of trees, as well as on biodiversity and the control of fire.</p>
<p>8.5.1 The standard requires that protective functions of forests for society, such as their potential role in erosion control, flood prevention, water purification, climate regulation, carbon sequestration and other regulating or supporting ecosystem services shall be maintained or enhanced.</p>	<p>8.5.1 The standard requires that the protective functions of trees within the agriculture and settlement landscape shall be maintained or enhanced.</p>

Requirement	Interpretation for TOF
8.6.5 The standard requires that the best use shall be made of forest -related experience and traditional knowledge, innovations and practices such as those of forest owners, NGOs, local communities, and indigenous peoples. Equitable sharing of the benefits arising from the utilization of such knowledge shall be encouraged.	8.6.5 The standard requires that traditional knowledge and recognized best practice for agroforestry & TOF management be utilized. Equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices shall be encouraged.

C. Additional requirement for Trees outside Forests

Requirement	Interpretation for TOF
–	The standard requires that management of the agricultural components within a TOF system shall follow good agricultural practice and available guidelines.

D. Requirements potentially not applicable to Trees outside Forests

The following requirements are considered potentially not applicable to TOF-agriculture extensive and TOF-settlement extensive unless considered otherwise during the regional, national standards setting process.

Requirements	Status	Rationale
6.2.2; 6.2.6; 6.2.7; 7.1; 7.2,1; 7.3.1; 7.4.1; 8.3.5; 8.4.8; 8.5.5; 9.1.1; 9.1.3	Not applicable to: <ul style="list-style-type: none"> TOF-agriculture extensive TOF-settlement extensive. 	TOF management is of a sufficiently low intensity, scale and/or investment level that requirements cannot be realistically incorporated
8.2.1; 8.4.2; 8.6.2; 8.6.6	Not applicable to: <ul style="list-style-type: none"> TOF-agriculture extensive TOF-settlement extensive. 	The requirement(s) are related to an issue which is not a risk or issue within a TOF extensive context.
8.2.2; 8.3.2; 8.4.11; 8.4.12	Not applicable to: <ul style="list-style-type: none"> TOF-settlement extensive. 	The requirements do not relate well to context where trees are planted and managed primarily for aesthetics and environmental health.

E. Establishing the threshold for intensive and extensive TOF systems at the National level

If the national standard-setting process agrees to develop specific requirements and/or standard(s) for TOF, all PEFC ST 1003:2018 requirements are applicable with the potential exception of some requirements in the case of TOF-agriculture extensive and/or TOF-settlement extensive system. In this case, the standard-setting process must build agreement around the appropriate threshold between “intensive” or “extensive” TOF systems, based on clear rationale. The eligibility of a particular TOF system must be clearly communicated within standard(s).

When establishing the threshold between the intensive and extensive categorisation of TOF systems, the national standard-setting process should consider at least:

- a) size of management unit
- b) tree cover/hectare
- c) economic value of production
- d) intensity of management
- e) scale of cultural, ecological and conservation value

Bibliography

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