



PEFC Switzerland

NORMATIVE DOCUMENT

ND 003

STANDARDS FOR FOREST MANAGEMENT

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1. Introduction

Sustainable forest management in Switzerland takes place in a way and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil now and in the future, relevant ecological, economic and social functions, at local, national and global levels and does not cause damage to other ecosystems (Definition of the Ministerial Conference on the Protection of Forests in Europe).

For the re-endorsement, which is due every five years, PEFC Switzerland has revised the “National Standards” that were based upon criteria and indicators defined within the project “National Forest Standards”, in 2008. These “National Standards^I” for forest management in Switzerland served as mandatory basis for the certification of forest management practice in Switzerland according to both, PEFC and FSC. The “Principles and Criteria” were defined by FSC International as global framework and could not be modified. Indicators^{II} had to be defined for each principle and criterion to be implemented on national level, unless the principle/criterion is clearly not applicable.

The revision 2020 served for alignment of the Swiss National Forest Standards with the requirements of PEFC International defined in the document PEFC SZ 1003:2018 “Sustainable Forest Management – Requirements”.

Revision 2020

The main objectives of the revision of the National Standards were:

- Alignment of the National Forest Standards with requirements of PEFC International
- Adaptation of the National Standards to the conditions and practices in Switzerland
- Improvement of the transparency and clarity of the documents to facilitate their practical use
- Avoidance of redundancies and streamlining of the National Standards

Forest owners, who direct their forest management to this common goal of a comprehensive sustainability, can participate in a PEFC certification. The documentation of sustainable forest management will be made on a regional level and be based on the list of indicators. The present National Standards specify the requirements for forest management operations derived from the Helsinki criteria at enterprise level.

2. Scope

The National Standards refer exclusively to the sustainable management of forests. The use of minor forest products on forest land is not affected by these requirements.

The standards are applicable to forest management at unit level and to the forest owner/ manager who is responsible for the forest management. The forest owner/ manager is responsible for ensuring that the activities and operations of all contractors meet the respective criteria of these National Standards.

3. References

Status	No.	Title
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Normative Documents

ND	001	Requirements for group certification
ND	002	Requirements for the certification of individual enterprises
ND	003	Standards for forest management
ND	004	Chain of Custody requirements
ND	005	Logo rules

Mandatory Guidelines

VL	001	Principles of the certification scheme PEFC Switzerland
VL	002-1	Requirements for certification bodies - FM
VL	002-2	Requirements for certification bodies - CoC
VL	004	Standard revision procedures
VL	005	Notification of Certification Bodies Issuance of Logo Usage Licenses

Other documents

SD	001	Terms and definitions
SD	002	Scale of fees
SD	003	Statutes

4. Standards^{III} for forest management

Basic Principles

1. Introduction

Sustainable forest management (SFM) is based upon the criteria formulated on the Ministerial Conference on Protection of Forests in Europe, which was held in Helsinki 1993:

1. Maintenance and appropriate increase of the forest resources and their contribution to global carbon cycles
2. Maintenance of the stability and vitality of the forest ecosystem
3. Maintenance and promotion of the productive function of the forests
4. Conservation, protection and appropriate enhancement of biodiversity in forest ecosystems
5. Maintenance and appropriate enhancement of the forest's protective function in forest management (particularly soil and water)
6. Preservation of other socio-economic functions and conditions.

Furthermore, Switzerland is signatory state of the following international agreements: The Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES), the agreements of the International Labour Organisation (ILO), the International Tropical Timber Agreement (ITTA) and the Convention on Biological Diversity (1993 in Rio).

Provisions of these agreements are respected in forest management. The forest owner

commits himself to manage the forest according to these National Standards of PEFC.

2. Compliance with laws

Forest management respects all applicable laws of Switzerland as well as international treaties and agreements to which the country is a signatory, and complies with all requirements of PEFC Switzerland.

The forest manager complies with all national and local legislation and official regulations. He pays all applicable and legally prescribed fees, contributions, taxes and other public royalties. Laws of particular relevance are the Forest Act as well as the Nature and Cultural Heritage Protection Act (Natur- und Heimatschutzgesetz) and the Environmental Protection Act and the respective regulations (see Annex 1, G1: List of relevant legislation).

The forest manager commits himself to manage the forest according to these National Standards.

Long-term tenure and use rights to the land and forest resources are defined by an entry in the land register according to the civil code. The forest manager is aware of them and respects them.

The standards

Standard 1 Local communities and employees

Objective: Forest management operations maintain or enhance the social and economic well-being of forest workers and local communities.

- 1.1 Employment opportunities are offered to the local population and preference is given to local enterprises and competitors in case of comparable tenders. All employees are provided with sufficient information regarding working technique, protective equipment, sustainable forest management etc. They are supported in further education.
- 1.2 Forest management operations are carried out in accordance with or exceeding relevant legislation and regulations regarding health, safety and rights (including the ILO conventions) of all employees. Relevant experience and knowledge of local forest owners and residents is used most effectively.
- 1.3 The forest personnel and other forest workers are adequately trained and instructed in order to guarantee a professional implementation of planned measures.
- 1.4 Findings on potential social impact of forest management are integrated in forest management planning and in the formulation of the respective measures. Consensus-based solutions are developed with individuals or groups who are directly affected by management operations. This way, disputes can be avoided from the outset. In case of conflicts, appropriate dispute settlement procedures are employed.

Standard 2 Forest ecosystem

Objective: Forest management conserves biological diversity and its associated values like water resources, soil fertility and unique and fragile ecosystems and landscapes. That way, it maintains the ecological functions and the integrity of the forest.

- 2.1 The environmental impact of forest management operations is evaluated prior to commencement. The operations are adjusted based on the evaluation of their effect on the respective natural resource. Evaluations include landscape conservation considerations as well as facilities for on-site processing.
- 2.2 The ecological functions and values of the forest are either maintained intact or enhanced, or restored. This includes:
 - forest regeneration and succession,
 - genetic, species and ecosystem diversity,
 - natural cycles that influence the productivity of the forest ecosystem.
- 2.3 In order to avoid soil erosion and damage to the remaining stand by harvesting operations, forest road construction and other mechanical interventions, adequate regulations are elaborated, documented and implemented. The protection of water resources is guaranteed. The construction of roads, bridges and other infrastructure (excluding strip roads (skid trails, etc.)) 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.
- 2.4 Safeguards exist which protect rare, threatened and endangered species and their habitats. Conservation zones and protection areas are established on a scale appropriate to the extent and intensity of forest management and to the uniqueness of the affected resources (e.g. nesting and feeding habitats).
- 2.5 Forests of high conservation value (forests disclosed with the priority functions “protection against natural hazards” or “nature and landscape”) are registered in the required WEP (forest development plan) lists and inventories.
- 2.6 The management plan contains practical precautional measures to maintain or achieve the objectives of the protective function. Annual internal audits are carried out to check and evaluate the effectiveness of the applied measures.
- 2.7 The planting of exotic species is in line with the recommendations of site maps and is carefully monitored to avoid adverse ecological impacts.

Standard 3 Management

Part A Benefits from the forest

Objective: Forest management encourages the sustainable and efficient use of the forest's multiple products and services to ensure economic viability and provide a wide range of environmental and social benefits.

- 3.1 The quantity of harvested forest products is in accordance with permanently sustainable levels. The forest manager compiles a list of the certified forest products.
- 3.2 The forest manager strives towards economic profitability. He takes into account all environmental, social, and operational costs of production, and maintains the full productivity of the ecosystems by ensuring the necessary investments.
- 3.3 The forest manager minimizes waste and avoids damage to other forest resources.

Part B Operational planning

Objective: The forest enterprise develops an appropriate management plan¹, keeps it up-to-date and applies it. The long-term objectives of management and the means for achieving them are clearly stated.

- 3.4 The management plan and the associated documents contain details regarding:
 - a) Management objectives;
 - b) Description of the managed forests, ownership status and rights of use, limiting environmental factors, socio-economic conditions, and adjacent lands
 - c) Description of the silvicultural system based on inventory data and the ecological situation;
 - d) Justification of the annual cut and the tree species selection (harvesting techniques, increment, tariffs, assessment of annual yield, site maps containing recommendations for species selection etc.).
- 3.5 Enterprises of 400 ha and more must provide a comprehensive management plan in writing. It is up-dated on a regular basis (every 15 to 25 years) in order to incorporate the results of observations or new scientific and technical findings and to take into account changing ecological, social or economic conditions. Enterprises of less than 400 ha must include in their plan the specifications defined in 3.4 b) and d) in writing.
- 3.6 The forest owner makes a summary of the key sections of the management plan (defined at criterion 3.4) available to the public on request. Confidential business information need not be disclosed.

Part C Operational management

Objective: The forest condition, the yields of forest products, the chain of custody as well as the operational measures and their social and ecological impact are monitored and documented.

- 3.7 Operational audits are carried out in a way and at a frequency appropriate to the extent and the intensity of management operations and on the complexity and sensitivity of the particular ecosystem. The audits are conducted regularly and in a transparent manner to ensure that periodic reviews of the results show possible changes.
- 3.8 The forest enterprise (if larger than 400 ha: obligatorily) assesses and documents all relevant data for controlling purposes. These comprise at least:

¹ In the original text, the term „Planungswerk“ is used here. It encompasses a wide variety of requirements and conditions of superior level and internal planning. In many cases, this equals the management plan.

- Yield of all harvested forest products
- Increment, regeneration, and condition of the forest
- Environmental impact of forest management such as changes in flora and fauna (by means of reference to inventories, maps, Red Lists, list of neophytes)
- Social effects of harvesting or other forest operations (health effects, reports to the SUVA accident insurance)
- Costs, productivity and efficiency of forest management.

3.9 The chain of custody is consistent, documents (invoices, felling reports etc.) are available that enable traceability of each certified forest product to its origin.

3.10 The results of the operational audit are regarded when the management plan is implemented and revised.

3.11 Non-conformities referring to the standards which are detected during the audit shall be documented in an audit protocol which has to be signed by the forest owner or his representative. It will be distinguished between major and minor non-conformities.

A non-conformity is considered as major, if

- a standard was infringed over a long period of time, regularly or systematically.
- there is an impact on a significant area.
- the effects are not reversible.
- the forest owner and / or the forest manager knew about the non-conformities but did not take any prompt and appropriate corrective actions.
- the non-conformity was undertaken intentionally and knowingly by the forest owner and / or the forest manager.

A non-conformity is considered as minor, if

- a standard was infringed over a short period of time, unintentionally or non-systematically.
- a standard was infringed only marginally.

Room for improvements exists if no standard was infringed but the degree of compliance could be (further) optimized.

3.12 The applicant respectively the forest owner will be simply informed about room for improvements. This information will have no further consequences.

In the case of minor non-conformities the applicant respectively the forest owner is obliged to take or initiate measures, which will produce relief if possible and / or will preclude a continuation or repetition. Major non-conformities have to be corrected within a fixed time limit or will result in the initiation of a withdrawal procedure.

The auditor decides,

- whether a re-audit is necessary and about its point in time.
- about time limits which have to be observed.
- about the recommendation to intermit or withdraw a conformation of participation.

If systematic non-conformities challenge the efficiency of the whole system, corrective actions will have to be agreed upon with the applicant for the entire spatial unit. The applicant informs the certification body about the implementation of the corrective measures within the fixed time limit.

3.13 The records according to Ch. 3.8 to 3.12 will be kept for at least 5 years.

Annex

A. Checklists

The following checklists provide further explanation and facilitation for the implementation of the requirements of the national standards in practice. They help to interpret the indicators of the different standards and list the necessary evidence (documents, maps) and checks.

A.1 Checklist on laws

The forest owner must observe the law and the necessary documents must exist. However, they need not be checked by the certifying bodies during the audit.

Indicator	Implementation	Information
G 1	<p>Forest owner and forest manager are aware of the sources of information, in order to access all relevant legal regulations.</p> <p>List of relevant legislation:</p> <ul style="list-style-type: none"> • Forest Act (WaG) • Nature and Cultural Heritage Protection Act (NHG), • Environmental Protection Act (USG), • Water Protection Act (GSchG), • Spatial Planning Act (RPG), • Labour Protection Act (ArG), • Hunting Act (JSG), • Civil Code (ZBG, particularly because of landregister), • Others such as ChemG, KVG, UVG, BBG. <p>Access to up-to-date legislation is guaranteed at any time.² (www.admin.ch/ch)</p>	<p>Updates and information are provided by the group management or the cantonal forest service.</p>
G 2	<p>The legal and customary fees currently in force (taxes, social insurance contributions, association contributions etc.) are paid.</p>	<p>Payment orders for value-added tax, AHV, SHF etc.</p>
G 3	<p>Convention on Biodiversity: Planning³ (operational plan, regional forest plan, forest development plan - WEP) specifies the priorities for the protection of habitats and species diversity.</p>	<p>Maps, inventories of the WEP, annual planning, nature conservation planning.</p>
G 4	<p>In case of unauthorized forest utilization or illegal activities (disposal of waste, vandalism etc.) by third parties the forest owner informs the appropriate authorities.</p>	<p>Operations manager, forest owner etc. report incidences to the local community.</p>
G 5	<p>Burning undried wood and logging residues (fresh branches, parts of the crown, bark etc.) is prohibited except on official order.</p>	<p>Fire in the forest, particulate matter, Ordinance on Air Pollution Control.</p>
G 6	<p>The forest owner informs its staff, managers and external stakeholders about the successful certification according to these National Standards.</p>	<p>Information of staff, managers, stakeholders, press etc.</p>
G 7	<p>The forest owner holds documents and plans that indicate property and ownership.</p>	<p>Land register entries, maps, plans exist.</p>
G 8	<p>Documents specifying current rights of use exist (e.g. hunting rights, exploitation rights for mineral resources) if they are not</p>	<p>Lease contracts, exploitation rights etc.</p>

² This can be ensured through one employee of the enterprise or of the association (for group certification) or through representatives of the cantonal forest service.

³ "Planning" used here in its general meaning, i.e. the anticipatory formulation of objectives and specification of activities to be implemented in the future. This explicitly encompasses superior planning such as forest development plans (WEP).

	fixed in the land register.	
G 9	If the forest owner confers forest management or parts of it to a third party (forest manager, forest contractor, etc.), binding commitments are made to ensure the absolute compliance with the National Standards.	Adapt forest management agreements to certification.
G 10	Duty of declaration: All products must be declared correctly: <ul style="list-style-type: none"> • Towards the end customer: wood species and origin (e.g. for fire wood). • Generally: amount, seller, purchaser. 	Declaration on invoices etc.
G 11	The labour rights according to the ILO Conventions No 87, 98 and 154 (organizing trade unions, protection against dismissal) are prescribed by law. Forest enterprises are all under the authority of SUVA, who supervises work safety.	Rights must be ensured (interview with employees).
G 12	Forest management promotes the development and adaptation of environmentally friendly methods of pest control without chemicals. The areal use of pesticides is forbidden, especially the use of chemicals which are belonging to WHO types 1A or 1B. The only exceptions are on the one hand the punctual treatment of log piles outside groundwater protection zones if other economically reasonable measures are not possible, and on the other hand measures on official order. In this case, the user must possess a licence for use. Pesticides that are used must have permission by the Federal Office for the Environment (BAFU).	Pesticides permitted by BAFU, licence for use must exist.
G 13	Pesticides used by the enterprise are documented on an up-to-date list that specifies trade name and active agent. The specific instruction manual must be followed. If the instructions do not specify the area of application, the method and amount of use, these details are documented on the same list. The quantity of used agent is documented.	List of applied pesticides, details of use: quantity (liters, cubic meters).
G 14	Supplies of fuel and pesticides are stored in leakproof rooms that are sufficiently ventilated and explosion-proof. The containment equipment (e.g. oil retention pans) must hold at least the same quantity as the stored agents.	Depot and repository are equipped accordingly.
G 15	The disposal of chemicals, containers, liquid and solid anorganic wastes including residues of fuel and oil is carried out in an environmentally sound way and outside the forest.	Interview, receipts.
G 16	The conversion of forest to plantations or non-forest use is not permitted except in cases where a clear felling has been officially evaluated and authorized.	Authorization of clear felling.

A.2 Checklist on standard 1 - 3

Ref. standard 1 Local communities and employees

Indicator	Implementation	Evidence, checks
1.1.1	Tenders are organised as a transparent process based on clear award criteria. The award criteria take into account ecologically, economically and socially sound harvesting techniques. The reasons are given for the decision made. The forest owner considers proposals from local workers and contractors when giving out contracts.	Tender documents, calls for tender, contracts.
1.1.2	The forest can be used by local schools and educational establishments for the purpose of environmental education.	Conducted tours, etc.
1.1.3	The forest enterprise ^{IV} offers training positions and internships	Job advertisements, an-

Indicator	Implementation	Evidence, checks
	for local applicants where feasible. Staff is contracted year-round and for the long-term, if possible.	swering of requests, contracts of employment.
1.1.4	The forest enterprise provides information to forest owners who manage their forests themselves, regarding forest-related education and training possibilities, e.g. on the occasion of a consultation.	Show examples (training course, MOBI, etc.)
1.2.1	The forest enterprise has laid down defined safety arrangements (standard solution FORST or individual solution) ⁴ and fully implements them in order to meet the requirements of the Federal Coordination Commission for Occupational Work Safety (EKAS). Documentation of safety audits and accidents is available.	Manuals of the standard solution, audit reports etc.
1.2.2	All persons working in the forest ⁵ , which do not come under the Regulations for Worker's Safety of the Accident Insurance Law (UVG), can prove an education and training on job safety and first aid. The training courses must be proven by appropriate attestations and / or confirmations.	Private forest owners must attend a training course on job safety and first aid.
1.2.3	The operations manager supervises the compliance with safety regulations. Especially the use of personal safety equipment and its condition is regularly checked.	Regular checks in the depot, in the forest (during harvest) etc.
1.3.1	A scheme exists showing the organisation of the enterprise (organisation chart) and its human resources (personal files containing information on full-time, part-time or temporary contracts, education and training levels [basic education and training, higher vocational education, further education]).	Organisation chart, personal files (obligatory for enterprises of 400 ha or larger).
1.3.2	Employees on all functional levels are educated and trained in the work they are assigned to do.	Document educational level, further education, trainings etc.
1.3.3	Annual appraisal interviews are conducted to agree on objectives and measures (e.g. on further education).	Protocols of appraisal interviews.
1.3.4	Employees can regularly ⁶ take part in further education and training courses.	Programmes for courses and further trainings available.
1.4.1	Results of studies on health effects of forest work are taken into account when the management plan and the resulting measures are developed.	Interview with employees, purchasing receipts of environmentally friendly operation material etc.
1.4.2	In a participatory process the public gets the possibility to place their interests in the superior level planning. The participatory process is documented.	WEP protocols.
1.4.3	In case of significant ⁷ regenerative felling of stands, where the functions of "nature and landscape" and "recreation" are given priority, the public is informed in advance. The forest manager has to grant access to the forest planning ⁸ while confidentiality	Information board, newspaper articles.

⁴ If a standard solution is not available, the requirements of the ASA questionnaires 1 and 3 must be fulfilled.

⁵ All persons working in the forest: except for all employees of forest enterprises and contractors. This requirement mainly refers to private forest owners, who conduct tending and harvesting in the broadest sense.

⁶ Regularly: Each member of staff is entitled to two to five working days of further training per year (also accumulated over several years). The training corresponds with the strategic objectives of the enterprise. Employees are entitled to educational leave paid by the employer.

⁷ "significant" in this context means: an operation that obviously alters the local appearance of the forest.

⁸ In cases of group certifications the regular exchange with stakeholders is institutionalised and documented.

Indicator	Implementation	Evidence, checks
	of sensitive data is guaranteed at any time.	
1.4.4	Negative impact, room for improvement and areas for potential conflicts, which were identified during the consultations, are considered during the planning process.	WEP requirements, WEP protocols.
1.4.5	The forest owner publishes his forest road construction plans which comply with the cantonal regulations.	Publication is prescribed by law.
1.4.6	Mechanisms for dispute settlement are clearly defined and all relevant incidents are documented. In cases of conflict any involved party has the possibility to take legal action.	Dispute settlement procedures are known.

Ref. standard 2 Forest ecosystem

Indicator	Implementation	Evidence, checks
2.1.1	For operations that may cause inevitable environmental impairments ^V the concrete potential effects are identified, protective measures are defined and implemented (e.g. soil protection).	E.g. logging with machines, road constructions, checkdamming of water.
2.1.2	Measures that are not part of forest management but are undertaken by the forest enterprise or a third party in the forest have to be officially licensed ⁹ .	Building permits, OL-Bewilligungen, public events etc.
2.2.1.	The forest manager has access to latest information of the forest enterprise about: <ul style="list-style-type: none"> • regeneration and development, • structure of the stands, • dynamics and structure of natural forest populations. 	Maps of the stand, harvest planning, site maps containing recommendations on tree species, possibly monitoring plots, soil maps.
2.2.2	Clear felling is prohibited. Clear felling is defined as: <ul style="list-style-type: none"> • Clearing without provision for regeneration over the whole of an area of more than 1.0 ha, • Clearing of verges without provision for regeneration over the whole of an area wider than 50 m or longer than 200 m, • Clearing of connected forest areas of over 10 ha containing young growth and thickets resulting from regeneration. Under consideration of site specifics and structural conditions, like e.g. sites for rope-way extraction or open areas resulting from natural calamities, these size limits can be exceeded in exceptional cases. The forest manager is obliged to justify and document such exceptions.	Special authorisation is required for clear fellings.
2.2.3	Forest regeneration ^{VI} proceeds naturally. Possible exceptions from this basic principle are: <ul style="list-style-type: none"> • Artificial regeneration for the conversion of stands not adapted to the site including the avoidance of natural regeneration of species/provenances that are not site adapted • Promotion of rare autochthonous tree species, for the establishment of stands under difficult conditions • Maintenance of protective functions 	When plantings are carried out: Provide purchase lists, provenances etc.

⁹ Examples are afforestations, road construction, opening of a quarry for the extraction of construction material, erection of wind mills and radio installations, interferences with nature or the landscape according to the Nature and Cultural Heritage Protection Act, public events in the forest.

Indicator	Implementation	Evidence, checks
	<ul style="list-style-type: none"> • Restoration of degraded forest stands • Supplementary plantings to reach economic goals, unless contrary to the requirements 2.2.4 • Where planting is inevitable, only plant and seed material from known and adapted provenances will be used. <p>Genetically modified organisms are not used.</p>	
2.2.4	The larger part of the stand contains tree species indigenous to the site ² .	Site maps, recommendation of the project "Sustainability and performance check of protection forests" (NAiS-Empfehlung).
2.2.5	As long as the protective function is guaranteed, the forest owner commits himself to tolerate the natural dynamics occurring in his forest, not to introduce drainage systems and not to maintain existing drainage networks.	Show examples.
2.2.6	If even-aged, pure stands alien to the site ^{vii} are likely to develop due to natural dynamics, appropriate measures will be taken to ensure a viable proportion of tree species of the natural forest community.	Regard cantonal site maps and recommendations.
2.2.7	The forest owner leaves dead and hollow trees (biotope trees) standing, provided they do not represent a serious safety risk. Lying deadwood (except from wind throw) is principally left lying in the stand.	Target values: 5-10 biotope trees ^{viii} and 15 m ³ (Mittelland 10 m ³) deadwood per hectare in timber and mature stands.
2.2.8	Old forest patches are identified during the planning in order to promote and support special habitats and to enable natural dynamics in the forest. Old forest patches remain in the stand longer than the normal rotation period possibly up to the dead wood phase or are substituted within another stand reaching this stage of age.	Show examples, no quantitative proof is necessary.
2.2.9	At all altitudes the structural diversity is enhanced and the potential for natural regeneration is maintained.	Show hands-on examples during field audit.
2.3.1	Driving is restricted to forest roads and skid trails. There is no extensive driving ^{ix} allowed on forest floor. Skid trail systems are established adapted to the terrain in a way that driving on the forest floor is minimized. The minimum distance between skid trails is 20 metres. The network of skid trails is documented in maps (at least sketched).	Detailed skid trail design on maps or sketches or as marks in the forest. Wet sites are not driven in.
2.3.2	Tire marks on skid trails, which destroy the structure and fertility of the soil near and under the surface in the long term, must be prevented (tire mark type III according to the guidelines of the Swiss Federal Institute for Forest, Snow and Landscape Research - WSL), or at least minimised (tire mark type II according to the WSL guidelines). The prohibition of extensive driving also applies to calamity areas.	Pass on the manuals of the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) to contractors or fix relating measures in the contract and monitor them (registration of felled timber).
2.3.3	Harvesting and wood storage are carried out under consideration of ground water and spring water protection zones. In zones S2 and S3 pesticides for stored round wood must not be applied. Furthermore motor vehicles must not be fuelled or parked in these zones.	Map of ground water protection zones must exist.

² If existent, the recommendations of site mapping are taken as basis. If site maps are missing, the forest manager shall get advice about the indigenous tree species.

Indicator	Implementation	Evidence, checks
2.3.4	Bio-degradable chain oils and hydraulic liquids as well as bio fuel are used for machines and equipment as far as they are available and, according to the specifications of the machine producers, are permitted and compatible with the machines.	Provide documents of purchasing and delivery notes.
2.3.5	Forest staff and all persons working in the forest are familiar with emergency measures to control and eliminate leakage of oil and chemicals. They are demonstrably able to apply these measures. Oil absorbing agents and absorbent mats are available at the felling site.	Trainings, manuals.
2.3.6	Forest roads and trails must be closed for the use of motor vehicles outside the forest sector ¹¹ . For this purpose appropriate sign posts are installed. In case of non-compliance the forest owner informs the relevant authorities.	Put up missing sign posts if necessary (by the local authority).
2.4.1	<p>The forest owner participates in the efforts of the canton to designate forest reserves. The contribution of the forest owners depends on the following options:</p> <p>a) An approved concept for forest reserves exists in the canton with a target value of 10 % of the forest area designated for forest reserves.</p> <ul style="list-style-type: none"> • At least 3,5% within these areas are designated as special forest reserve, another 3,5% or more are designated as nature forest reserve. • The remaining 3% can be designated either as special forest reserve or as nature forest reserve as long as cantonal regulations are observed. <p>The most frequent forest plant associations are appropriately represented. The implementation plan demonstrates how the target will be achieved within 25 years from initial certification. •</p> <p>b) An approved concept for forest reserves does not exist in the canton, or this concept does not fulfil the conditions mentioned above. In this case the forest owner is obliged, within the certification unit, to set aside at least 10 % of the forest area as priority area for nature in the scope of the forest planning.</p> <ul style="list-style-type: none"> • At least 3,5% within these areas are designated as special forest reserve, another 3,5% or more are designated as nature forest reserve. • The remaining 3% can be designated either as special forest reserve or as nature forest reserve as long as cantonal regulations are observed. <p>The most frequent forest plant associations are appropriately represented. The implementation plan demonstrates how the target will be achieved within 25 years from initial certification.</p>	The progress of the designation of forest reserves is investigated during the annual control audit.
2.4.2	The minimum size of the individual nature reserve is normally 20 hectares for enterprises having more than 400 hectares of forest.	Plans.

¹¹ Exemptions: Access and supply rights to mountain farms and meadows, etc.

Indicator	Implementation	Evidence, checks
2.4.3	Known populations of endangered species and responsibility species ^x and their habitats, as well as legally protected areas (e.g. nature reserves) are described in the planning and depicted on maps. The forest manager periodically up-dates the data (e.g. inventories) on endangered species and their biotopes.	Red Lists, provisions on species protection, maps of nature reserves.
2.4.4	The forest manager documents (e.g. by the means of a tending and management plan) that between April and mid of July tending and harvesting operations are carried out on maximum 5% of the certification unit. Exemptions apply in cases of calamities etc. and available evidence, that due to this measure the staff cannot be employed during this period.	Need not be documented; certification body checks in the field on whether the prescribed quantity is exceeded.
2.4.5	On sites with rare natural forest associations ¹² a pure stand of species indigenous to the site ^{xi} is aimed at (100% indigenous species). The respective areas are known and documented.	See site maps with land register and tree species recommendations.
2.4.6	Pioneer species and shrubs are maintained and enhanced at an appropriate rate during tending of young stands and thinning.	Certification body checks in the field whether maintenance and enhancement are carried out.
2.4.7	The forest owner aims for a wildlife density which is tolerable for the ecosystem and which allows all main tree species to regenerate naturally. To achieve this, he cooperates with hunters and hunting authorities.	Browsing damage is monitored, sites are inspected together with hunters. It must be proven that any available measures have been taken.
2.5.1	After consultation with experts and stakeholders the forest manager notes, surveys, and depicts High Conservation Value Forests on maps. They comprise: <ul style="list-style-type: none"> • Forests with priority function "protection against natural hazards" (protection of settlements and infrastructure) • Naturally historically valuable forests with priorityfunction "nature and landscape" (protection of habitats of rare and sensitive animal and plant species, genetic reserves and nationally or regionally representative landscape structures). 	Decision-making process and documentation, part of the WEP
2.5.2	The specific requirements for High Conservation Value Forests are recorded in the planning. Their biological and / or social characteristics are described in the management plan.	Part of the WEP.
2.6.1	The forest owner has defined management rules for High Conservation Value Forests and stresses the special management of these forests in case of consultations with stakeholders.	Documentation on consultations (protocols, media reports etc.)
2.6.2	The management plan indicates the specific measures for improving the characteristics identified.	Plan of measures.
2.6.3	All measures are described in the public summary of the planning.	Plan of measures.
2.6.4	If plantings are carried out in High Conservation Value Forests the specifications of the project "Sustainability and performance check of protection forests" (NAiS) are observed ¹³ .	Plan of measures, WEP, "Sustainability and performance check of protection forests" (NAiS).

¹² Rare natural forest associations are the ones that make up less than 1% of the total area.

¹³ See: www.bafu.admin.ch/naturgefahren/01920/01963/index.html?lang=de

Indicator	Implementation	Evidence, checks
2.6.5	Tree monuments, exceptional individual trees, and culturally and historically important sites in the forest are preserved.	Examples available.
2.6.6	The requirements for the annual control audits of the specific measures and procedures are explicitly stated in the plan.	Planning documents.
2.6.7	In the course of the annual control audit, the efficiency of the implemented (protective) measures is assessed and evaluated (monitoring and review carried out by acknowledged experts).	Review reports.
2.7.1	Tree species not adapted to the site are allowed on a small scale (individual trees or small groups of them) that does not compromise the long-term development to a natural forest association.	Not site-adapted tree species according to site maps.

Ref. standard 3 Management

Part A: Benefits from the forest

Indicator	Implementation	Evidence, checks
3.1.1	The planning shows which products and services the forest enterprise intends to produce and where. This includes wood and non-wood products as well as environmental and other services. In doing so, the productivity of ecosystems is to be maintained.	List of certified products site maps, logging planning, prescribed cut etc.
3.2.1	Forest enterprises are managed according to economic principles and hold the necessary management tools. The financial plan/ the balance of accounts show the allocation of resources for the implementation of the plan.	Efficient allocation of financial resources and structures. Financial planning, balance of accounts obligatory for enterprises of 400 ha or more.
3.2.2	The local processors have access to the available forest products on regular market conditions.	E.g. regional saw mills must be regarded.
3.2.3	The services supplied by the forest manager and income from public ecological services as well as income from the marketing of nature conservation services and secondary forest products are documented.	Cost accountings, annual report etc.
3.3.1	Appropriate measures for the protection of the remaining stand, natural regeneration, soil and water quality and wildlife are undertaken.	Skid-trail design, progression of fellings, registration of felled timber.
3.3.2	Logging practices are selected in a way to avoid stem breaks, timber devaluation and damages to the remaining stand.	Organisation of felling, harvesting techniques, training.
3.3.3	Harvest residues must remain in the stand, in order not to compromise nutrient supply in the long term.	Examples in the forest

Part B: Operational Planning

Indicator	Implementation	Evidence, checks
3.4.1	<p>The plans and supporting documents contain the following details/ maps:</p> <ul style="list-style-type: none"> • Forest area and forest map (public, private, certified), • Ownership situation and usage rights, • Mapping of biotopes, • Site conditions (with reference to site maps and recommendations available in the canton), • Information concerning habitats worthy of protection and of national, cantonal and regional importance, • game reserves, no-hunting zones, • Groundwater protection zones^{XII}, • Recreation and tourism areas, • Protective forests, • Natural and special forest reserves, • WEP of priority functions and objects of special function, mapping of forest functions, • Forest opening-up/ skid-trail design. 	<p>Operational plans including management objectives, forest map including plots and plot numbers, site maps, nature reserves, superior level planning (WEP, inventories of the Federal Inventory of Landscapes and Natural Monuments, BLN)</p>
3.4.2	<p>The silvicultural planning measures are described with respect to stand types and objectives.</p>	<p>Map of measures.</p>
3.4.3	<p>The desired species composition is determined using site parameters for each stand with reference to natural forest associations. See also indicators 2.2.3 and 2.2.4.</p>	<p>Planning in accordance with site conditions and phytosociological maps.</p>
3.4.4	<p>Sustainable annual harvesting levels (annual allowable cut) are determined, justified and documented.</p>	<p>Operational planning tool.</p>
3.4.5	<p>Forest conditions and development trends are monitored according to procedures used in the respective canton (e.g. data of the Swiss National Forest Inventory, LFI).</p>	<p>E.g. cantonal interpretation of the LIF data available.</p>
3.4.6	<p>The selection of harvesting techniques and equipment (skid-trail design, cable lines) can be justified according to defined criteria (relief, forest condition, soil condition etc.).</p>	<p>Design of skid-trails and cable lines.</p>
3.5.1	<p>Plan revision: Responsibilities for the collection and updating of data for the revision of the planning are defined. Principally, the plan must be revised after 25 years the latest (or on a frequency required by the canton).</p>	<p>Check the state of updating, plan revisions.</p>
3.5.2	<p>New scientific findings and technical innovations must be regarded during plan revision.</p>	
3.5.3	<p>Changes in the framework of superior level planning (WEP) are considered in the scope of the plan revision on the level of the enterprise or owners.</p>	<p>Seek information from WEP</p>
3.5.4	<p>In case of extraordinary incidences (e.g. storms affecting large areas, calamities that prevent from fulfilling the harvesting plans) the planning is reassessed and – if necessary – adapted to the new situation.</p>	<p>E.g. reduction of the allowable cut after storm damage.</p>
3.6.1	<p>The content and at least a summary of the forest planning on operational level is made publicly available in an appropriate way.</p>	<p>Obligatory for enterprises of 400 ha and more.</p>

Part C: Operational management

Indicator	Implementation	Evidence, checks
3.7.1	Monitoring frequency and intensity are defined for all operations requiring regular monitoring, adapted to the structure of the enterprise. The results of the monitoring and measures derived from them are documented.	Monitoring plan, document monitoring.
3.8.1	After the business year the operations manager or the representative of the forest owner prepares an annual report (under the terms of forest statistics).	Forest statistics, annual report.
3.8.2	After harvesting (carried out by the owner or through a third party) a monitoring of soil and stand damages is implemented. In case of damages exceeding the figures defined in the annual planning or in the contracts, suitable corrective actions are taken. Such excessive damages are documented and corrective actions defined.	E.g. registration of timber felled by third party: write a protocol on the necessary measures and their implementation.
3.8.3	Where third parties are involved and hired for operations the assigned persons are checked whether they fulfil the required criteria (e.g. safety equipment, environmentally friendly fuel, bio degradable lubricants, emergency plan).	Formulate contracts accordingly.
3.8.4	Invasive neophytes ^{xiii} listed in the Black List are monitored in the forest as well and possibly suppressed (with the exception of common black locust). The concerned forest owners are to be informed.	Regard announcements of the service for plant health: see annex for the link to the most important neophytes.
3.9.1	The traceability of the forest products back to its place of origin is warranted. The invoices, credit notes or delivery receipts referring to certified products must contain the type of product, the quantity, the name of the purchaser and the vendor as well as the evidence of certification (certificate number, PEFC).	According to COC requirements obligation of declaration on invoices etc.
3.9.2	All sales of certified products are listed and clearly arranged to enable the certification body to clearly retrace the chain of custody in the scope of an audit.	List of certified wood sales.
3.10.1	The findings of the monitoring activities are used for the revision of the plans, for the operational policy and for general process instruction in terms of improving the forest management.	Show concrete examples during plan revisions.
3.10.2	A summary of the results of 3.8 is made publicly available at the end of each planning period (annual report, updated management plan).	Obligatory for enterprises of 400 ha or more.

B. Orientation guide (sorted by former numbers of indicators)

Former No.	New No.	Standard	Former No.	New No.	Standard
1.1.1/2/4	G 1/G 11	Laws	6.3.9	2.2.8	Standard 2
1.2.1	G 2	Laws	6.3.10	2.2.9	Standard 2
1.3.1	G 1	Laws	6.4.1	2.4.1	Standard 2
1.3.2	G 3	Laws	6.4.2	2.4.2	Standard 2
1.4.1	G 1	Laws	6.5.1/2	2.3.1	Standard 2
1.5.1	G 4	Laws	6.5.3/4	2.3.2	Standard 2
1.6.1/2	G 6	Laws	6.5.5	2.3.3	Standard 2
2.1.1	G 7	Laws	6.5.6	2.3.4	Standard 2
2.1.2	G 8	Laws	6.5.7	2.3.5	Standard 2
2.1.3	G 9	Laws	6.5.8	2.3.6	Standard 2
2.2.1/2/3	G 1	Laws	6.6.1	G 13	Laws
2.3.1/2	G 1	Laws	6.6.2	G 12	Laws
4.1.1/2	1.1.1	Standard 1	6.6.3	2.6.8	Standard 2
4.1.3	1.1.2	Standard 1	6.7.1	G 14	Laws
4.1.4	1.1.3	Standard 1	6.7.2	G 15	Laws
4.1.5	1.1.4	Standard 1	6.7.3/4	G 15	Laws
4.1.6/7/8	G 1	Laws	6.8.1/2	G 12	Laws
4.2.1/2	1.2.1	Standard 1	6.8.3	2.2.3	Standard 2
4.2.3/4	1.2.2	Standard 1	6.9.1	2.7.1	Standard 2
4.2.5/6	1.2.3	Standard 1	6.9.2/3	3.8.4	Standard 3 Part C
4.2.7	1.2.1	Standard 1	6.10.1	G 16	Laws
4.2.8/9/10	G 1/G 11	Laws	7.1.a1/b1	3.4.1	Standard 3 Part B
4.3	G 11	Laws	7.1.c1	3.4.2	Standard 3 Part B
4.4.1	1.4.1	Standard 1	7.1.d1/d2	3.4.3	Standard 3 Part B
4.4.2	1.4.2	Standard 1	7.1.e1	3.4.4	Standard 3 Part B
4.4.3	1.4.3	Standard 1	7.1.f1/f2	3.4.5	Standard 3 Part B
4.4.4	1.4.4	Standard 1	7.1.g1/h1/i1	3.4.6	Standard 3 Part B
4.4.5	1.4.5	Standard 1	7.2.1	3.5.1	Standard 3 Part B
4.4.6	2.6.5	Standard 2	7.2.2	3.5.2	Standard 3 Part B
4.5.1	1.4.6	Standard 1	7.2.3/4	3.5.3	Standard 3 Part B
5.1.1	3.1.1	Standard 3 Part A	7.2.5	3.5.4	Standard 3 Part B
5.1.2	3.2.1	Standard 3 Part A	7.3.1	1.3.1	Standard 1
5.1.3	3.2.1	Standard 3 Part A	7.3.2	G 11	Laws
5.2.1	3.2.2	Standard 3 Part A	7.3.3	1.3.2	Standard 1
5.2.2	3.2.3	Standard 3 Part A	7.3.4/5/6	1.3.3	Standard 1
5.3.1	3.3.1	Standard 3 Part A	7.3.7	1.3.4	Standard 1
5.3.2	3.3.2	Standard 3 Part A	7.4.1	3.6.1	Standard 3 Part B
5.3.3	3.3.3	Standard 3 Part A	8.1.1/2	3.7.1	Standard 3 Part C
5.3.4	G 5	Laws	8.2.1	3.8.1	Standard 3 Part C
5.4.1	3.1.1	Standard 3 Part A	8.2.2	3.10.2	Standard 3 Part C
5.5.1	3.1.1	Standard 3 Part A	8.2.3	3.8.2	Standard 3 Part C
5.5.2/3	G1	Laws	8.2.4	3.8.3	Standard 3 Part C
5.6.1/2	3.4.4	Standard 3 Part B	8.2.5	3.8.2	Standard 3 Part C
6.1.1	2.1.1	Standard 2	8.3.1	3.9.1	Standard 3 Part C
6.1.2	2.1.2	Standard 2	8.3.2/3	G 10	Laws
6.2.1	2.4.3	Standard 2	8.3.4	3.9.2	Standard 3 Part C
6.2.2	2.4.4	Standard 2	8.4.1	3.10.1	Standard 3 Part C
6.2.3	2.4.5	Standard 2	8.5.1	3.10.2	Standard 3 Part C
6.2.4	2.4.6	Standard 2	9.1.1	2.5.1	Standard 2
6.2.5	2.4.7	Standard 2	9.1.2	2.5.2	Standard 2
6.3.1	2.2.1	Standard 2	9.1.3	2.5.2	Standard 2
6.3.2	2.2.2	Standard 2	9.2.1	2.6.1	Standard 2
6.3.3	2.2.3	Standard 2	9.3.1	2.6.2	Standard 2
6.3.4	2.2.4	Standard 2	9.3.2	2.6.3	Standard 2
6.3.5	2.4.5	Standard 2	9.3.3	2.6.4	Standard 2
6.3.6	2.2.5	Standard 2	9.3.4/5	2.6.5	Standard 2
6.3.7	2.2.6	Standard 2	9.4.1	2.6.6	Standard 2
6.3.8	2.2.7	Standard 2	9.4.2	2.6.7	Standard 2

Principles 3 and 10 and the related indicators have been removed.

C Glossary:

The following list interprets the terms above:

I National Standard:

A National Standard is the basis for certifying the quality of forest management within a defined area. In the case of FSC and PEFC, certifications are based on a global framework of standards which are interpreted nationally by indicators. The National Standard 2008 for forest certification in Switzerland is a norm according to which the management is audited on the basis of ecological, economic and social requirements by an independent institution.

II Indicator:

Numbers or number-combinations created according to a specific norm which characterize the condition of the unit to be described or which makes it comparable to other units. With respect to the National Forest Standard an indicator is a unit of measurement for judging whether a Criterion has been met.

III Standard:

A fundamental norm or a fundamental element of a whole, in this case of forest management.

IV Forest enterprise:

Business unit which belongs to a natural and juristic person and which is targeted on producing and utilizing economically wood and other wood products respectively infrastructural benefits of the forest in the framework of the forest law. (*Multilingual Forest Terminology Database - IUFRO*)

V Environmental impairment:

The effects of the following forest operations:

- Building of a new roads or significant route diversion of existing roads, as well as any kind of land development;
- Any kind of interferences into creeks and rivers;
- Afforestations;
- Introduction of exotic species;
- Leisure activities and the corresponding infrastructure;
- Wires above and below the surface (electricity, water, gas, etc.) and the corresponding infrastructure;
- Conversion of natural vegetation for commercial or other purposes;
- Erection of fences;
- Harvesting operations (especially using machines);
- Utilization of natural areas or resources for commercial purposes;
- Existing and new landfill sites;
- Admission of organic waste sites (with respect to invasive species).

Application of new or modified processes and products which could have a significant impact on the environment; shall be examined with respect to the following aspects:

- Flora, fauna, biodiversity;
- Physical and chemical soil conditions;
- Quality and quantity of water resources;
- Usage and disposal of chemicals;
- Utilization of inorganic waste;
- Landscape aspects.

VI Regeneration:

The natural or artificial process of re-establishing tree cover on forest land.

VII Alien / not site-adapted:

- Alien: Tree species which would naturally not exist at a respective site but potentially suitable,
 - Not site-adapted: Not suitable to the site.
- VIII Deadwood and biotope trees:
- Deadwood: Standing and lying dead trees have a high biological and ecological value, especially for the protection of species and the genesis of ecosystems.
 - Biotope trees: Trees which serve a special function as cavity or nesting trees, or supply a microhabitat for epiphytes, insects, fungi, and other groups of old wood-dwelling organisms which deserve special protection.
- IX Extensive driving:
- Extensive driving includes all driving outside the developed logistic system (lorry tolerant roads, machine trails and skid trails).
Requirements with reference to Indicator 2.3.1: The ban on extensive driving is documented in writing and in case of externally assigned operations part of the contract. Controlling and sanctions in case of non-compliance are defined. Internal work instructions and contracts with entrepreneurs explicitly regulate the termination of work in case of bad weather conditions.
- X Responsibility species:
- Responsibility species are species for which Switzerland bears a significant responsibility for the preservation of its European and global population.
- XI Indigenous to the site / site adapted:
- Species indigenous to the site are species which naturally exist at the respective site.
 - Species adapted to the site are suitable for a defined site, but need not appear naturally at this respective site.
- XII Ground water and spring water protection zones:
- Detailed regulation regarding protection zones S2 and S3 to be found in the directive on water as from October 28, 1998 GSchV, paragraphs 221 and 222 (http://www.admin.ch/ch/d/sr/c814_201.html), sowie directive on the reduction of risks from chemicals, ChemRRV (http://www.admin.ch/ch/d/sr/c814_81.html).
- XIII Invasive neophytes:
- Neophytes are introduced plants that are alien to the flora and have established themselves successfully in the native flora (about 300 species in Switzerland). Such species are termed "invasive", that spread strongly due to a lack of competition and thanks to an easy dissemination strategy (about 20 species in Switzerland); see Grey or Black List: *List of the Swiss Commission for Wild Plant Conservation SKEW* (www.cps-skew.ch).