

Normative document

PEFC D 1002-1:2020

German PEFC standard

PEFC standards for sustainable forest management



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Introduction

Sustainable forest management (SFM) in Germany takes place in a way, that biological diversity, productivity, regeneration capability, vitality and the ability to meet in the present and in the future important ecological, economic and social functions on local and national basis, is secured and no other ecosystems are harmed (Definition of the second ministerial conference on the protection of forests in Europe).

Sustainable forestry is orientated to the criteria, which were established at the European Ministerial Conference on the Protection of Forests held in Helsinki in June 1993:

1. Maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles.
2. Maintenance of forest ecosystems health and vitality.
3. Maintenance and encouragement of productive functions of forests (wood and non-wood).
4. Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems.
5. Maintenance and appropriate enhancement of protective functions in forest management (notably soil and water).
6. Maintenance of other socio-economic functions and conditions.

Sustainable forest management conduces to climate protection.

Global climate change with its complexity and dynamics also affects the forests in Germany. In particular, rising average temperatures, less precipitation and more frequent extreme weather events are also putting a strain on forest ecosystems. This leads to changes in forest sites and species composition. Calamities are increasing and invasive species and pests that induce new disease processes are challenging forests and forest management. Even if the general direction of development is already discernible, the spatial and temporal developments to be expected are still unknown in detail

The PEFC Standard for Sustainable Forest Management aims to take this into account and can be a rudimentary orientation aid in this respect. Where possible or necessary, the standard text refers to the importance of climate stability in forest management.

Forest conservation as well as the diversity and scope of ecosystem services of the forest are primarily ensured through sustainable forest management. However, their financing from timber revenues is increasingly endangered in view of the frequent and sometimes prolonged calamities, which are regularly accompanied by dwindling timber yields. In the future, the individual ecosystem services should be properly rewarded by the direct beneficiaries and society in order to enable forest enterprises to re-establish and maintain stands as well as the urgently needed climate adaptation of forests. PEFC supports this development by providing evidence of active forest management in the course of audits and supplementary standard offers.

The diversity of owner objectives in relation to different ecosystem services is characteristic of German forestry. PEFC considers all forest areas that serve ecosystem services to be eligible for certification.

Forest owners, who direct their forest management to this common goal of a comprehensive sustainability, can participate in a PEFC certification. The documentation of SFM will be made on a regional basis depending on the list of indicators. The present standards specify the requirements for operational forest management derived from the Helsinki criteria at the operational level.

To improve the readability, the male form is used for all denominations of persons. It refers to both, males and females.

Responsibilities of the participants

Forest owners participating in PEFC certification shall, in addition to the requirements defined in this document, fulfil the requirements for participants in regional certification according to PEFC D 1001, in particular:

- a) provide full co-operation and assistance in responding effectively to all requests from the regional working group or a certification body for relevant data, documentation or other information; allowing access to his forests and other facilities, whether in connection with internal and external audits or other reviews;
- b) implement relevant corrective and preventive actions established by the regional working group and other measures in the scope of the action programmes, which are relevant for the participant;
- c) pay the fee for the participation in the regional certification as specified in PEFC D 4003;
- d) declare the products sold as "PEFC certified" in accordance with the requirements set out in PEFC D 1001, Annex 5 and fulfil the requirements for trademark usage (PEFC D ST 2001).

Scope

These standards refer exclusively to the sustainable management of forests (absolute forest area and unproductive area). Forest areas which are managed for special purposes can be excluded from the PEFC certified area upon request by the forest owner. New establishment of such areas within an already certified area is only permitted where it does not considerably impair sustainable forest management in the entire area and affect the forest functions on the special purpose areas due to their extent.

These special areas shall be documented and reported to the regional working group. Products from these areas must not be sold as PEFC certified or labelled with the PEFC logo. Exceptions: (1) Christmas trees stemming from regular forest tenure like thinning, and (2) products from Christmas tree and ornamental brush-wood plantations certified on an individual basis according to the PEFC standard for Christmas tree plantations.

- a) *Extensive special purpose areas are in particular Christmas tree and ornamental brush-wood plantations, short-rotation plantations on forest land, research plots and game reserves.*

0. Legal and other requirements

0.1 Legal and other requirements, the forest owner is obliged to obey, shall be followed. These requirements are for instance:

- legislation referring to international conventions (e.g. Convention on Biological Diversity, Kyoto Protocol and Carbon Sinks, Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES], Biosafety Protocol, Core ILO conventions [International Labour Organisation]),
- the relevant national and state legislation and
- all relevant contractual obligations of the forest owners as signatory (e.g. agreements on tariffs).

1. Forest resources

The aim is to manage the forest in a comprehensively sustainable way. Forest resources and their varied forest functions shall be maintained and where necessary improved; their contribution to global carbon cycles shall be enhanced. Measures to strengthen their carbon sink potential will be implemented where possible. Measures to increase the CO₂ binding in forests and wood products are implemented wherever possible. The substitution of non-renewable energy and material sources receives special attention.

- 1.1 Forest management plans adapted to the size and intensity of the enterprise shall be elaborated. They incorporate ecological, economic and social targets in terms of PEFC. Forest management is carried out according to the management plans and secures the strategic balancing of harvesting and growth rates on the long term (see guidance 1). For stands that are currently threatened by climate change, the management plans must be adapted accordingly.
- 1.2 A permanent forest cover shall be maintained. In cases of openings, i.e. a reduction of stock density beyond a critical level (0,4) without existing regeneration, the stand shall be rejuvenated with site-adapted tree species. The development of natural succession shall be integrated as far as it fits to the regeneration strategy.
- 1.3 Wood stemming from the conversion of forests (change of utilization) can only be declared „PEFC certified“, if the clearing is legally authorised according to nature conservation and forest law.

2. Health and vitality of forest ecosystems

The health and vitality of forest ecosystems are preconditions for SFM. The aim is therefore, especially in times of climate change, to preserve and protect forest ecosystems in the long term within the framework of silvicultural measures.

2.1 Methods of integrated plant protection shall be used.

- a) *Integrated plant protection: Combination of procedures giving priority to mechanical, biological, biotechnological, plant breeding as well as cultivation measures in order to minimize the use of chemicals for plant protection (§ 2 plant protection law).*

2.2 Application of plant protective agents is only used as last option, e.g. where the stand or the regrowth is gravely endangered according to the law on plant protection. Alternative organisational and/ or technical measures are to be preferred. With the exception of the treatment of wood piles and the usage of substances for wound treatment and game damage all cases of application of plant protective requires a written expert opinion (see guidance 2). The application of plant protective is carried out in any case by a person competent to do so according to the law on plant protection.

- a) *Plant protective agents for the purpose of this requirement are herbicides, insecticides, fungicides and rodenticides.*
- b) *A person is considered as competent according to the PEFC scheme if he holds a forest degree from university, technical college or is a forestry master craftsman.*

2.3 Liming for soil protection shall only be carried out on the basis of the results of a soil or forest nutrition expertise or when sound site surveys have been carried out and documented.

2.4 Fertilisation to increase the timber production shall be omitted.

- a) *Compensation measures in order to maintain or recover the original site quality, like liming for soil protection, are not considered as fertilisation.*
- b) *Planting site fertilisation for securing regeneration success is allowed.*

2.5 Extensive passing-over with machinery is to be avoided. A permanent system of skid tracks shall be built up, which makes it possible to use forest machinery in a soil sensitive way. The distance between skid tracks is at least 20 meters on principle. On soils sensitive to compression the distance shall be larger. In extraordinary topographical or site specific situations it will not be necessary to build up a strictly schematic system, if this helps to prevent damages on stand and soil.

Exceptional cases, which do allow for extensive passing-over with machinery include for instance: soil cultivation, mulching, planting, sowing. These operations are reduced to the absolutely necessary extent. On soils sensitive to compression, soil-sensitive measures are taken (low soil humidity, soil-sensitive machinery).

See Guidance 3.

2.6 The permanent operability of the skid track as bearing of vehicles shall be ensured. The formation of lanes shall be counteracted by following measures described in guidance 3

2.7 Felling and skidding damages on the remaining stand, seedlings and soil shall be avoided by careful forest operation.

Skidding damages are only permissible at the most on 10% of the trees of the remaining stand. A respective order of cutting to protect the regeneration has to be paid attention to.

2.8 Final crop trees respectively elite trees shall be identifiable and shall principally not be In order to protect the forest ecosystem from plastic residues, the use of products made of petroleum-based materials, such as growth covers, protection against rubbing the velvet/ browsing/peeling and marking tapes, is avoided as far as possible. As far as available on the market and economically reasonable, products should be used whose materials originate from renewable raw materials. Growth covers that are no longer functional and those that have fulfilled their purpose are removed from the forest and disposed of properly.

3. Productive function of forests

The maintenance of the productive function of the forests is an economic task. The local timber production guarantees the provision of timber as an ecologically valuable resource with short transport distances. The aim is, to enable the forest owner to guarantee a comprehensive SFM in the long term by an appropriate income out of the forest.

3.1 The forest owner shall work towards a high added value and economic success.

3.2 The encouragement of the productive function includes the production of high timber qualities and a varied product palette within the internal objectives. The forest owner shall manage his forests in a product-oriented way, also with respect to the marketing of non-wood-products and services.

3.3 An appropriate tending of stands adapted to the internal objectives shall be ensured.

3.4 The final felling / harvesting of non-mature stands is principally omitted.

- a) *Coniferous stands under the age of 50 years and broad-leaved tree stands under the age of 70 years are normally considered as non-mature stands.*
- b) *Exceptions are:*
 - *fast growing tree species (e.g. poplar, willow, common acacia)*
 - *coppice systems*
 - *measures to convert unproductive or not site adapted stands.*

3.5 The accessibility of the forests adapted to the demand is necessary. Herewith special care should be put on the environmental interests. Notably biotopes with high conservation value shall be treated with care. Soil sealing with concrete or tar roads are only permissible in the case of strong reasons.

- a) *A forest is accessible adapted to the demand if all stands (in which harvesting is reasonable with respect to economic, ecological and social criteria) can be reached by methods of timber harvest and hauling which represent the state-of-the-art and are locally available. In forests which are not or not regularly used a basic opening-up is necessary in order to guarantee accessibility for civil protection and in cases of emergency.*

3.6 Whole trees (utilisation and removal of all parts of the tree above and below the surface) shall not be harvested. On oligotrophic soils, the tree biomass above the surface (trunk and crown) shall not be removed completely on a regular operational basis (see guidance 4).

- a) *The use of minor forest products (e.g. wild seedlings) is not affected.*

4. Biological diversity in forest ecosystems

The aim is the maintenance, conservation and appropriate enhancement of biological diversity in consensus with national and international commitments (e.g. Natura2000 and Conservation of Wild Birds Directive). Forest management shall take into account scientific knowledge, especially from the research in natural forests, in order to make best use of natural structures and processes in terms of ecosystem services, to maintain biological diversity and to establish stands close to nature and adapted to climate change. Where the protection of biodiversity causes disproportionate economic disadvantages for the forest owner, it should be compensated with the help of support programmes or measures of contract-based nature conservation.

4.1 Apart from naturally pure stands, mixed stands with site adapted tree species shall be maintained and / or established.

Regeneration measures are used to increase the proportion of mixed species. Climate-tolerant native tree species are given special consideration.

If foreign tree species are admixed it shall be assured that they do not disturbed by their natural regeneration the regeneration ability of other tree species with the result of their suppression.

- a) *A stand will be considered as mixed stand if the proportion of mixed tree species is above 10 %.*
- b) *A tree species will be considered as site adapted if (1) it is competitive against other tree species, shrubs, grasses and herbs during the whole life cycle due to - physiological and morphological adaptations to the site conditions, (2) it is resistant against damages to a large extent and (3) it maintains or improves the quality of the site. The evaluation is based on the criteria competitiveness, security and impact on the residual stand. Consequently tree species which are supported by steering measures (e.g. oak in mixed stands with beech) can be site adapted, too.*

4.2 Rare tree and shrub species shall be promoted.

4.3 Structurally rich forest edges provide a habitat for a variety of plant and animal species, some of which are rare. They also have a positive effect on the internal forest climate and can reduce the risk of windthrow. The forest owner promotes structurally rich and diverse forest edges.

4.4 Forest management shall take special care of protected biotopes or areas as well as of endangered tree and plant species.

4.5 For the conservation of biological diversity an appropriate proportion of biotope wood, i.e. dead wood, snag and cave trees, shall be conserved and promoted. Road safety, forest protection as well as health and safety issues shall be given priority. The topic „Biotope Wood“ shall be incorporated in the management plans (see guidance 5).

4.6 The provenance recommendations for forest seed and plant material shall be followed.

4.7 Seed and plant material with verifiable origin shall be used, as far as it is available on the market for a specific provenance.

- a) *The verification of the origin shall be carried out according to a procedure which has been endorsed by PEFC Germany (e.g. ZÜF or FFV) or is guaranteed by control propagation for accounts of clients.*

The usage of wild seedlings and seed from the own forest enterprise is not affected by this requirement.

4.8 Genetically modified organisms are not used.

4.9 Regeneration methods adapted to the tree species which shall be regenerated shall be used.

Natural regeneration shall be preferred where the expected regeneration is site adapted and satisfactory with respect to quality and quantity and where planting is not necessary for the conversion into a site adapted stocking.

4.10 Clear cuttings shall be omitted on principle. Exceptions are permissible, if a conversion of an old stand in a site adapted stocking or the regeneration of a site adapted, shade intolerant tree species is impossible in any other way, if other methods are not sensible because of an enterprise structure of extreme small plots or out of compelling reasons of forest protection, of the economic situation of the forest owner, of road safety or due to official nature conservation planning.

- a) *Clear cuttings are utilisations of old stands without an established regeneration and of a size that leads to an open field climate.*
- b) *Small scale utilisations, which serve the development of a natural regeneration or the conversion into an improved vertical structure or the maintenance of historic silvicultural methods (coppice systems), are not regarded as clear cuttings.*
- c) *Compelling economic reasons for forest owners are economic predicaments, which have to be proved towards the certification body on request in an appropriate way.*

4.11 Adapted game stocks are the precondition for naturally sound forest management within the interest of biological diversity. The forest owner as owner of his own hunt or as member of a hunting cooperative works towards adapted game stocks within his respective personal and legal opportunities.

- a) *Game stocks are considered as adapted, when the regeneration of the principal tree species is possible without protective measures, the regeneration of the secondary tree species can, if necessary, be secured with a reasonable amount of effort and fresh peeling damages of principal tree species do not occur on a considerable area.*

5. Protective functions of forests (regulating ecosystem services)

Forest management aims at the maintenance and appropriate enhancement of regulating ecosystem services / protective functions. These services are of special importance for the society in a densely populated country.

5.1 All protective functions shall be taken into account in forest management in an appropriate way.

5.2 Water bodies in forests shall not be impaired by forest management. Special care shall be given to riparian zones and the quality of ground and surface water in water protection areas. Compensation measures according to water law are not affected.

5.3 New draining facilities shall not be installed.

Existing facilities may be maintained. Special care shall be given to the protection of valuable swamp and wetland sites.

- a) *Road ditches are not considered draining facilities in the sense of this regulation.*

- b) In special cases, like the restoration of formerly strip mining areas, the installation of drainage facilities is allowed.*

5.4 In order to protect the soil, soil cultivation scarifying the mineral soil on a considerable area as well as complete ploughing shall be omitted.

- a) A careful wounding of the soil and a soil cultivation limited to patches and striped will be permissible if strategic regeneration cannot be achieved otherwise*
- b) Complete ploughing for afforestations, for forest protection and for the establishment and maintenance of fire-break-lines is allowed.*

5.5 For water and soil protection reasons, readily bio-degradable chain oils and hydraulic liquids shall be used during forest operations. . An exception is the use of hydraulic liquids if technology is applied which has no separate hydraulic circuit or if the producer of the machine does not allow their use.

Emergency-kit for oil loss with a sufficient binding capacity shall be carried along on board of the machine

Private contract cutters provide evidence of the use of bio-degradable chain oils (self-declaration).

- a) The term „forest operations“ includes the following: wood harvest, hauling, tending and planting.*
- b) The use of readily bio-degradable chain oils and hydraulic liquids shall be documented by an invoice document or – in the case of new machines – by the instruction manual or other suitable proofs (e.g. oil analysis). The proof shall be carried along – together with the work order – on board of the machine.*
- c) Chain oils and hydraulic liquids are considered readily bio-degradable if they possess an eco-label (e.g. the „Blue Angel“, EU eco-label) or if evidence is provided that the criteria of the EU eco-label for lubricants (in case of hydraulic liquids: DIN ISO 15380 and OECD 301) are met. Exceptions apply to machines that were put into operation before 01 January 2022 and were filled with a PAO oil.*

6. Socio-economic functions of forests

It is the aim, that the forest owner bears his responsibility for society and especially for the employees in his forest in its entirety. Occupational safety and health protection are a priority in forest work. The varied socio-economic functions of the forest are guaranteed and promoted.

6.1 In case that own staff is employed, a number of staff specialised in forestry, which is appropriate to the operational situation of the forest enterprise, shall be maintained or added. Workers will be considered as specialised staff if they have finished the respective training for the job or have work experience of several years.

6.2 Private contract cutters shall provide evidence about their participation in a qualified chain-saw training.

- a) Evidence is given by the provision of a certificate of participation which specifies the contents of the training.*
- b) A chain-saw training is considered qualified if it enables the private cutter to harvest (standing trees) and cut (lying trees). (See guidance 7 including training requirements).*
- c) With a written commitment the private cutter confirms that the wood is acquired for private use and there is no commercial interest.*

6.3 Forest service enterprises and commercial contract cutters acting in the forest shall have the necessary qualification for their job (see guidance 8).

6.4 Only forest service enterprises and commercial contract cutters shall be appointed which can provide a certificate endorsed by PEFC Germany*.

- a) *The requirements listed in guidance 8 can be considered as fulfilled if the forest service enterprises and enterprises conducting contract cuttings hold a certificate endorsed by PEFC*
- b) *This regulation does not affect:*
 - *enterprises exempted from turnover tax according to § 19 of taxation of small enterprises (UStG „Besteuerung der Kleinunternehmer“).*
 - *cutting and hauling of proven calamity wood, if this is not fully or highly mechanised.*

Explanation: This refers to all timber harvesting methods in which mainly crane harvesters and forwarder tractors are used, if necessary with motor-manual felling/logging; it does not refer to special methods (e.g. cable crane, Laubauer method).

In this case, the forest owner ensures compliance with the PEFC standards (see Guideline 8) through his own inspections/checks and documents them.
- c) *The term „forest operations“ includes the following: wood harvest, hauling, tending and planting.*

* *The list of currently recognised certificates can be found at <https://pefc.de/fur-unternehmen/forstunternehmerzertifikate/>*

6.5 Health and safety regulations of the responsible insurance carrier and regulations for occupational safety shall be observed. The verification of the technical knowledge of the employees in the forestry operation is documented. Practical training courses are recorded. An efficient chain of survival shall be established.

6.6 For hand-held implements with combustion engine special fuels (benzol free) shall be used. Private contract cutters shall provide evidence about the use of special fuels (self-commitment).

6.7 All employees in the forest enterprise shall have access to an appropriate training as well as to advanced and further education. Such measures shall be documented. In addition to the courses offered by the training providers, the company's participation in non-binding practical training courses provided by the accident insurance institution is also recognised.

6.8 The employees in forestry shall be employed on the basis of valid agreements on tariffs. If an individual enterprise or employee is not bound to an agreement on tariffs, comparable terms and conditions which are regionally valid for forestry, e.g. the tariff for the respective sector of the forestry production stage or the tariff for forestry employees) are used. They shall become part of the work contracts.

6.9 The employees are given the opportunity to participate in the internal procedures by the legal regulations.

6.10 The public has free access to the forests for recreation purposes. Limitations are permissible especially for the protection of the ecosystem and for the reasons of forest and game management, for the protection of forest visitors, to avoid considerable damages or safeguarding important interests of the forest owner. Forest management shall respect the recreational function and the aesthetic value of the forest.

6.11 Sites with acknowledged extraordinary historic, cultural or religious importance shall be managed with special care.

Guidances

The following guidances represent supplementary explanations which shall support the participating forest owner in interpreting and implementing the PEFC standards.

Guidance 1

How should a management plan be designed?

Forest enterprises with an area bigger than 100 ha shall have a forest management plan or a written management concept which include the following items:

- a) Register of all wooded areas.
- b) Maps.
- c) Stand descriptions or enterprise description „forest“.
- d) Overview over the age classes (separately for the tree species), also the results of samplings are possible.
- e) Inventory of increment and stocking.
- f) Definition of targets (including a definition of ecological, economic and social targets according to PEFC).
- g) Medium-term planning.
- h) Climate adaptation strategy, e. g. target stocking planning
- i) Calculation of the allowable cut.

Expert plans for forest enterprises with an area smaller than 100 ha shall include at least items No. a), b), e) und i). Instead of the calculation of increment and stockage (No. 5) these items can be estimate by the means of yield tables.

All forest owners without written management plans shall present the certification body their targets and plan (cutting, tending, regeneration) in detail.

Guidance 2

How should the use of plant protective agents be documented?

An expert opinion for the use substances for wound treatment, game damage preservatives and protective agents for wood piles at the forest road is not required.

The expert opinion for the use of plant protective agents should cover the following items:

- a) Name and qualification of the expert.
- b) Identification of the place/site.
- c) Possibly map which shows the area of application.
- d) Documentation that a grave danger for the stand or the regeneration existed.
- e) Possibly photo documentation of the original situation.
- f) Description that alternative measures (e.g. biological-technical protection, ...) would not have been effective.
- g) Documentation of the substance and its application rate.
- h) Time and type of application.
- i) Result of the control of success.

Guidance 3

How can forest owners achieve effective soil protection in forest management?

(1) Systematic skidding track systems should be designed as follows:

- a) Skidding tracks should be laid out as straight as possible and parallel to each other.
- b) If possible, the edge trees should be marked in such a way that the course of the track is always easily recognisable.
- c) In sloping terrain, skidding tracks always run in a fall line; the cross slope should not exceed 5%.
- d) The skidding track should be of sufficient width to prevent damage to the remaining stand.

(The skidding track distance is measured from centre to centre. The minimum distance mentioned refers to skidding tracks actually in use. Tracks from old, no longer used systems do not count).

(2) In order to protect the forest soil, the contact surface pressure should be as low as possible when driving over it. This can be achieved by the following measures:

- a) By the size of the contact area between forestry machine and forest soil, whereby for wheeled machines this depends not only on the tyre width and tyre diameter but also on the tyre inflation pressure. The contact area of wheeled machines can be additionally increased by the use of belts. A brushwood layer in skidding tracks can improve the load-bearing capacity of the forest soil.
- b) Through low wheel loads, whereby these depend primarily on the dead weight of the machine and the amount of wood transported, but also on the number of wheels and the individual weight distribution.
- c) A low contact surface pressure can also be achieved by using forestry machines with caterpillar tracks.

(3) Track formation in skid trails can also be counteracted by the following measures:

- a) The use of machinery should be planned as far in advance as possible and, ideally, alternative stands with soils that are less sensitive to traffic should be kept in reserve in order to be able to interrupt work on sensitive areas without having to stop the logging operation on principle due to weather conditions.
- b) The limits of soil bearing capacity must be recognised in good time. The machine operator must be aware of these individual limits. Only in this way can the work be interrupted in time, if necessary, before track formation occurs.
- c) On slopes, auxiliary traction winches and belts or the use of rope cranes can help to reduce track formation.

Guidance 4

Up to which nutrient content of a soil the usage of trunk and crown may still be acceptable?

With view on the growing significance of wood as source of renewable energy and as a consequence the corresponding demand for wood chips, the usage of crown material in addition to the standard assortments is considered as a profitable way of utilisation by a lot of forest enterprises. Due to the fact that the nutrient export rate grows disproportionate to the harvesting rates, this usage must not become regularity within the scope of sustainable forest management. Nevertheless, under certain circumstances such utilisation can be considered as acceptable with respect to the PEFC requirements. Particular aspects need special regard:

- a) The utilisation of crowns should not be considered in the course of extensive cuttings (exception: e.g. utilisation of material from forest protection operations) and only in stands which have reached an age that allows the usage of standard assortment be-

cause the nutrient removal rate in relation to the volume is significantly higher in younger stands.

- b) The material should – where possible – only be removed from the stand after needles, leaves and fine brush has fallen off.
- c) The subsequent supply of nutrients takes place by rock decay and depositions from the air (the latter factor could be of greater significance). The results of the national forest soil analysis and the Level-II-Programme should be taken into account if a forest enterprise has to decide whether the utilisation of crowns can be considered as acceptable or not.
- d) Depending on the nutrient supply situation of the stand and the tree species, crowns should not be used more often than 2 to 4 times during one rotation period. The operations should be documented in a scientifically sound way.
- e) Where available, the forest owner should gear the utilisation of crowns to the guidelines of the States (e.g. Bavaria, Brandenburg, Hesse, Lower Saxony).

Guidance 5

What does „appropriate proportion“ in terms of biotope wood mean and what should be taken into account when the topic „Biotope Wood“ is incorporated in a management plan?

Biotope wood, comprising of snag and cave trees, dead wood and particular old trees, are of extraordinary significance for the protection of several species. However these structures appear with the growing age of a stand and can fulfil their functions here better. In stands which are shaped by high forest systems the phases of old age and decay nearly do not exist. It is important that a sufficient proportion of dead and biotope wood are included in the management and are permanently excluded from harvesting.

The following can particularly be considered as biotope wood:

- a) Trees older than 70 years, especially deciduous trees.
- b) Trees which will not create an unacceptable risk for working and road safety or for forest protection if they are maintained. For safety reasons it could be necessary that biotope wood is maintained as lying and not as standing dead wood.
- c) Nesting trees.
- d) Cave trees as far as they do not occur cumulative (more than ten trees per hectare) and they are not of high economic value.
- e) Trees with big diameters (> 50 cm or > 30 cm dbh for pioneer deciduous tree species) and bad quality.
- f) Individual broken, wind-thrown or already dead trees

„Appropriate proportion“ means:

- a) Sufficient quality (see above).
- b) Reasonable distribution.
- c) Regarding the adequate volume, the targets set in the Regional PEFC Forest Reports can give useful hints.

The biotope wood management shall be integrated into the written job orders. A marking of biotope trees is desirable ahead of harvesting measures and before the logging debris is sold.

Guidance 6

How could a forest owner work towards adapted game stocks?

Adapted game populations can be achieved above all if forest owners and hunters work together in partnership. The forest owner works towards adapted game stocks on the basis of the geobotanical browsing surveys (as far as one exists) and by the means of forest inspections. Forest inspections should be carried out at least once a year and documented in a comprehensible manner.

Parallel to a continuously necessary hunting practice oriented to the local silvicultural conditions and requirements, preventive measures can be taken in order to exert a positive influence on the development of the natural grazing offer in the long term through forestry measures for habitat design (e. g. forest edge design, consideration of succession areas).

Hunting properties directed by the forest owner

By design of their shooting plans and respective fulfilment, the forest owners can influence the game stocks to the greatest possible extent. If there is no success despite of appropriate efforts due to the circumstances (island position of the property, high game stocks in the neighbouring hunting districts), the forest owner shall describe this situation to the certifier in a credible way. The risk of game damage can be reduced by suitable hunting methods.

Hunting properties under lease

In the context of PEFC-compliant hunting management, the design of hunting lease contracts is of particular importance in leased hunting districts, as these form the contractual basis for hunting management and regulate the partnership cooperation between lessee and lessor. When drawing up hunting leases, which are primarily aimed at avoiding damage caused by game, the following aspects should be given special consideration:

- a) Annual forest inspection including evaluation.
- b) Definition of the principal tree species and regulations to fulfil the PEFC requirements.
- c) Description of the basic silvicultural targets.
- d) Agreement on the duration of the contract in accordance with the minimum duration stipulated by law.
- e) Agreement on an option for physical verification.
- f) Agreement on the option to set up a system of monitoring fences as a possible forest ecological evaluation method.
- g) Appropriate design and implementation of the shooting plan.
- h) Contractual penalty if the numbers of hunted animals are below a certain threshold (e.g. 80 % of the shooting plan) depending on the degree of exposure which is described in the geobotanical browsing survey.
- i) Right of midterm cancellation in case of non-fulfilment of the shooting plan or unsatisfactory forest condition (e. g. excessive browsing / excessive peeling damage according to browsing survey).
- j) Assignment of a regular inspection obligation of fenced areas with information of the forest owner regarding the need for repair.
- k) Agreement on an option to agree on specific minimum shooting numbers for roe deer with the forest owner, if they are not subject to the official shooting plan.

An alternative to leasing hunting districts is the practice of hunting for own account by employed hunters according to § 10 para. 2 BJagdG in GJB or by awarding hunting permit contracts in EJB.

Cooperative hunting districts under lease

Members of cooperative hunting societies, which own PEFC-certified forests, shall document their efforts to achieve adapted game stocks. They shall make suitable efforts (in written form or orally at assemblies of the hunting society) to influence the fixation of shooting numbers and the arrangement of lease contracts in conformity with the requirements listed above, to charge compensation of game damages if possible and to work towards an annual forest inspection.

Guidance 7

What should be the contents of a qualified chain-saw training for a private cutter?

In Germany, there is a variety of offers for chain-saw training. A chain-saw training according to PEFC requirements 6.2, completed after 2014 (conservation of the status quo for certifications issued in 2015) is considered by the forest owner as qualified, when the following knowledge and skills (theory and practice) are imparted:

- a) Personal work safety equipment (e.g. helmet with ear and face protection, safety boots equipped with cutting protection, cutting protective trousers, gloves and safety jacket);
- b) Felling equipment (e.g. standard tools);

- c) Safe handling of the chain-saw (e.g. safety applications of a chain-saw including their maintenance, simple cutting and felling techniques);
- d) Cutting patterns with the chain-saw (e.g. separation cuts of lying wood, tension relief cuts, tension appraisal);
- e) Felling of small to medium sized trees (e.g. felling with felling lever);
- f) Dealing with half-fallen trees (e.g. risks caused by half-fallen trees, moving of half-fallen trees).

If solely lying wood is sold to private cutters, points e) and f) need not be regarded.

Occupational qualifications that include theoretical and practical knowledge of chain-saw handling can be acknowledged.

Guidance 8

What should contracts with forest service enterprises or enterprises conducting contract cuttings contain?

		Contract cutter		Service provider
		Private	commercial	
1.	Proof of participation in a qualified chainsaw training course (according to 6.2 and guidance 7)	X	X	X
2.	Qualified personnel (machine operators/lumberjack training or documented professional suitability proven by risk assessment)		X	X
3.	Observance of accident prevention regulations, especially <ul style="list-style-type: none"> a) competent operation of the chainsaw, b) suitable personal protective equipment (helmet with ear protector and visor, security shoes, security trousers, gloves), c) never working alone with chain saw or winch or climbing on trees, d) cross-banding the felling sites (nobody in the danger zone), e) carrying along first-aid supplies. 	X	X	X
4.	Forest machines only on marked skid tracks, prevention of felling damages (see PEFC threshold values at 2.7)	X	X	X
5.	Re-logging only trees/crowns that have been allocated (importance of dead wood and snags)	X	X	X
6.	Suitable tools and machines with fully functional safety engineering (possibly with KWF certificate (FPA))	X	X	X
7.	Usage of readily bio-degradable chain oils, special fuels and hydraulic liquids, obligatory for private contract cutters	X	X	X
8.	Carrying along emergency-kit for oil loss		X	X
9.	Observance of occupational health and safety regulations		X	X
10.	Registration of a business, document of compliance with business tax regulations, membership in a employers' liability insurance association, proof of insurance (social and liability insurance), residence and work permit for employees from Non-EU countries		X	X
11.	Compliance with tariff requirements		X	X

Where no written contracts with contract cutters or service providers exist, the items listed above shall be described in a bulletin which is signed by the entrepreneur. All accompanying persons have to be informed about the requirements listed above. In the case of sub-contractors they have to confirm to observe these contract requirements.

In case of non-conformities with these requirements the harvesting shall be stopped immediately and a contractual penalty may be announced.

A detailed emergency plan shall be added to the contract. The entrepreneurs shall be informed about the nearest rescue location in case of emergency.