



Supply Base Report: claus rodenberg waldkontor gmbh

Scope Change Audit

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For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

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2 Description of the Supply Base

2.1 General description

Feedstock types: Primary, Secondary

Includes Supply Base evaluation (SBE): Yes

Feedstock origin (countries): Germany, Poland, Sweden

2.2 Description of countries included in the Supply Base

Country: Germany

Area/Region: Germany

Exclusions: No

Forest Cover, Land Use, Economics and Forest Based Policy

In Germany the forest area is 11.4 million hectares, which corresponds to about 1/3 of the total land area of 35.7 million hectares. Since 2002, the forest area has increased by 0.4 % or 50,000 hectares.

Of the 11.4 million hectares of forest in Germany, 48 % is private woodland. 29 % of the woodland is owned by the Federal States, 19 % by corporations and 4 % by the Federal Government.

Private woodland in Germany is predominantly small in structure and fragmented. About half of the private woodland area is divided into businesses of less than 20 hectares.

The German forest is diverse and offers habitat for many animal and plant species. Spruce, pine, beech and oak are the most important tree species in Germany. The forest contains around 224 million m³ of deadwood. In the German forest, there is an average of 20.6 m³ deadwood per hectare, which means that the deadwood stock has reached 6 % of the living timber stock. There are specially protected biotopes over some 593,000 hectares, i.e. 5 % of the forest area. These are in most cases (77 %) forest mire, marsh woods or floodplain forests, as well as other wetland biotopes.

Spruce, pine, beech and oak cover 73 % of the forest floor. At present deciduous trees make up a proportion of 43 % of the forest floor, and coniferous trees accordingly 57 %.

The tree species have different regional focuses. The spruce is found especially from the foothills of the Alps to the highlands of the south and south-west of Germany and the central German uplands of north-east Bavaria to the Thuringian Forest and the Erzgebirge, as well as in Hunsrück, Eifel, Taunus, Westerwald, Rothaargebirge and Harz. The pine is found mainly in the north-east German lowlands from Lower Saxony to Brandenburg and Saxony.

The forest is on average 77 years old today. On average, the oldest trees are oaks at 102, beeches at 100 and firs at 96. The Douglas fir is the "youngest" tree species at an average of 45 years old.

Almost a quarter of the forest (24 %) is older than 100 years, and 14 % is even older than 120 years.

The age structure of the forest in Germany is characterized by the extensive reforestation after the Second World War. Never had reforestation been needed in so many woodland areas in Germany than in the

1950s and 1960s.

Mixed forests dominate the German forest, with a 76 % share of the total area.

Natural regeneration is the predominant type of rejuvenation in the German forest with an 85 % share of young stock. Planting accounts for only 13 %.

About 17 % of the German forest therefore consists of protected areas according to the European Directive 92/43 / EEC Fauna Flora Habitat (FFH Directive), thus forming part of the European protected area network "Natura 2000".

Timber use in Germany's forests is sustainable. In woodland under all types of ownership, less wood was used than grown. Timber stocks amount to 3.7 billion m³ in total or 336 m³ per hectare.

The increase in timber is an average of 11.2 m³ per hectare and year or 121.6 million m³ per year.

By contrast, an average of 69 million m³ of raw timber (cubic meters of timber harvested not including bark) were used per year in Germany in 2019. 16% of this was used as energy wood (see also 2.3). In particular, private woodland owners were able to increase their logging and utilized the forest on average at the same intensity as state forestry enterprises used the state forests. Timber use and natural dying of trees total 87 % of growth. The remaining 13 % goes into the building up of stocks.

Especially in the small private forests up to a size of 20 hectares, which at all events make up at least half of the private forest area in Germany, use was less intensive than in the other size classes. The other private forests are used more intensively than the state forests.

Increasing the use of timber and thus increasing the benefits of the renewable raw material timber and saving fossil resources is in line with the objective of the "Charter for Wood" initiated by the Federal Government in 2004.

This target is also important against the socio-economic background, as Germany employs more than 1.1 million people in the forestry and wood cluster. [1]

According to the results of the third Federal Forest Inventory 2011/2012, some 36 % of the forest area is classified as very natural (14.5 %) or as natural (21.3 %). The proportion of natural forest areas in state woodland, at 40 %, is significantly higher than the percentage of natural forest areas in private woodland (30.5 %).

Carbon storage

1,169 million tonnes of carbon are at present bound in living trees and in deadwood. This is about 105 tonnes of carbon per hectare in the above-ground and underground biomass (without litter layer and mineral soil). The forest soil condition survey in the woodland gives a further 850 million tonnes of carbon for the litter layer and mineral soil. The forest in Germany is currently acting as a sink and relieves the atmosphere of around 52 million tonnes of carbon dioxide annually.[2] It reduces emissions by approximately 6 %.

Forest management system

State forests cultivated for timber harvesting are generally certified according to the requirements of the PEFC or FSC certification systems and are managed accordingly.

A total of about 67 % of the German forest area is certified in accordance with PEFC and about 10.5 % in accordance with FSC.[3] The Federal Government's objective of certifying 80 % of the forest area by 2010 in accordance with a sustainability certificate has not been achieved.

Protected Areas

The 16 German National Parks comprise approximately 2145 km², not including the North Sea and Baltic areas. This is 0.6 % of the German land area.

In Germany there are currently 102 nature reserves, covering in total about 25 % of the land area and which are set up in accordance with paragraph 27 of the Federal Nature Conservation Act (BNatSchG) (see

figure).

CITES species are present in Germany but do not include softwood or deciduous (broadleaf species) trees which are threatened[4][5]

Germany has formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature (IUCN). Land Use Change and agricultural intensification and their consequences are reported to be the biggest harm to red list species. Forest management is aiming on restoring biodiversity and habitats for endangered species.[6]

[1] Seintsch, B. (2013): Forestry and wood cluster according to new industrial sector classification, Thünen Working Paper 5

[2] Dunger, K. et al. (2014): Forests. Chapter 7.2 in the German National Inventory Report 2014. Federal Environment Agency, No. 24/2014.

[3] <http://www.umweltbundesamt.de/daten/land-forstwirtschaft/forstwirtschaft/nachhaltige-waldwirtschaft#textpart-5>

[4] <https://cites.org/eng/cms/index.php/component/cp/country/DE>

[5] <https://www.protectedplanet.net/country/DE>

[6] https://www.nabu.de/imperia/md/content/nabude/vogelschutz/150603-redlist_-_birdlife_publication_web.pdf

Country:Poland

Area/Region: Stettin, Gdynia

Exclusions: No

Overview

The polish Supply Base for input materials is geographically located in the Region around the port town of Gdynia, north of Gdansk. An average radius of 150km determines roughly the supply base.

The biomass is sourced as logging residues from state forests and is FSC 100% certified.

Waldkontor has 1-5 suppliers in Poland.

Forest Cover, Land Use, Economics and Forest Based Policy

According to data of the Polish Statistical Office, 9.3 million hectares were covered with forests in 2013, equivalent to 29.4 % of the land area. The State forests are not only a major employer, but also constitute an important economic sector.

In 2017, 45,4 million solid cubic meters were harvested. 5,25 million solid cubic meters of that (11,7%) were used for energetic purposes.

The forest management system implemented by the Polish Ministry of the Environment with planning periods of 10 years has ensured that timber stocks have been growing steadily since 1990, with an average of 254 cubic metres per hectare in 2011. Poland thus takes a leading position in a European comparison. In addition to the pure timber stock, the planted areas also increased steadily during the same period.

The Polish forests are predominantly characterised by conifers, which occupy about 73 % of the area. The pine is the predominant species of tree, followed by spruce, birch and oak with only 6% proportion.

This leads to an age structure with most of the trees being between 30-50 years of age.

The change in the political system in 1989 led to efforts to privatise the forest sector, but this resulted in only 18 – 20 % of the area being privatised. 80 % is still in state hands. Private woodlands have a surface area of just over one hectare on average. Most of the machinery and mobile assets were privatised and bought by former forest workers, who are now working as contractors for the state-owned forest administration (Lasy Panstwowe), that was founded in 1992. 95% of forest works are outsourced to those

private companies.

The Forestry Act, which was adopted in 1991, reinforced the ecological and socio-economic significance of the forest in comparison with the purely economic approach. In 1997 the law was further modified to further anchor nature conservation in the forest management system.

The Polish reforestation programme provides for a growth in Poland's forested area to 30 % of the land area by 2020 and 33 % by 2050. [1]

Protected Areas

No Polish, domestic tree species are on the CITES list.

Spruce and Pine, that account for 100% of all harvested biomass in Poland, are classified as "least concern (LC)" according to the IUCN red list

In Poland only 60% of the forest area are economically used forests, while the rest is dominated by protective and recreational usage.

Currently, there are 23 National Parks in Poland, which together cover about 1 % of the Poland's land area. In addition, there are 120 landscape conservation parks and over 250 protected landscapes, which together form a network of protected areas.

[1] <https://www.iucn.org/regions/europe?12794>

Country:Sweden

Area/Region: Sweden

Exclusions: No

Overview

The Swedish sourcing area of Waldkontor is the east and south of Sweden. Biomass is sourced from low grade round wood that is not used in the industry. Biomass from round wood is chipped in the port areas. All biomass in Sweden is sourced with either a PEFC or an FSC claim.

The typical transport distance for biomass is < 150km to the loading ports.

Waldkontor has 1-5 suppliers in Sweden.

Forest Cover, Land Use, Economics and Forest Based Policy

Sweden is mainly covered by boreal forests. Of the total land area of 40,7 mio ha, 28,1 mio ha are forest area of which about 84% are production forest. After long ongoing decline of the forest area until the beginning of the 20th century due to agricultural use, infrastructural measures and fuel consumption for heavy industries, the first forest law was issued and the forest area doubled since then, the standing stock volume even tripled.

The annual growth is about 120 million cubic meters, while the annual permitted harvested volume is 85 million cubic meters. Total standing stock in Swedish forests is about 3 billion cubic meters.

The predominant species is Norway Spruce (*Picea abies*) which is nearly 50% of the standing stock, followed by Scots Pine (*Pinus sylvestris*) with roughly 30% share. Birch, with a 10% share is the only significantly occurring broadleaf species.[1]

The wood based economy plays an important role in Sweden. More than 250.000 people work directly or indirectly in forest and wood related companies. 45% of the harvest are consumed by sawmills and the board industries. Another 45% are consumed by the pulp industry and about 10% are used as biofuel in the private and public sector.

In 2020, 85 million solid cubic meters were harvested in 2020. About 8,5 million solid cubic meters (10%) were used for energetic purposes.

In practice, the extraction of forest fuel entails branches that have been delimited and tops that have been cut being collected when felling takes place, as well as complete smaller-diameter trees in thinning (wood damaged by rot and split wood, as well as stumps, may also be used for forest fuel). The forest fuel is then

stacked in piles for drying can then be transported whole or chipped to power and district heating plants. The use of forest fuel has increased steadily in Sweden since the 1990s. At that time carbon dioxide tax on fossil fuels was introduced, and bioenergy was granted exemption from energy tax. This made it more financially worthwhile to utilise fuel from the forests.

Today this use has really taken off, and the equivalent of 20 TWh (terawatt-hours) of forest fuel a year is supplied for heating and energy.

Roughly 75% of Swedish forests are private owned, of which 25% is owned by private companies. The average private forest area is about 50 ha in size. A majority of private Swedish forest owners is organized in forest cooperatives to have a more significant impact in forest policy as well in terms of market leverages. The state owned forest company Sveaskog holds 14% of all Swedish forestland.

The Swedish Forestry Act aims at promoting high long-term wood production as well as environmental protection during forestry activities. Forest certification plays an important role in Swedish forestry, as the following figures indicate. 16.425.463 ha of Swedish forest area are PEFC certified (71%), 18.970.902 ha are FSC certified (82%) in December 2020. So many forest areas are engaged in both major certification schemes.[2]

More than 70 % of the yearly wood volume procured in Sweden originates from final felling, with the rest coming from thinning operations. Felling is done to a large extent mechanized by harvesters. Therefore the forest rotation period is typically < 100 years. Usually 2-3 thinning cycles are done.

Regeneration of forest is predominantly done by planting of seedlings.

Protected Areas

Altogether just over 2 million hectares in Sweden are protected area. Half is protected by law, for example forests in national parks and nature reserves. Likewise forest where there are woodland key habitats and red-listed species, areas that are particularly important for nature conservation and environmental reasons. The other half is what is known as voluntary set-aside. These are areas that individual forest owners of their own accord and without financial compensation have chosen to exempt from forestry, often for environmental reasons such as a wish to conserve valuable natural amenities.

Nature Reserves

Sweden's nature reserves account for about 85 percent of all protected lands in total, supported by the Environmental Code. There are 5111 nature reserves in Sweden. These nature reserves form the largest proportion of protected nature in Sweden. The majority of nature reserves in Sweden, almost 85% by surface area, lie in the northern counties of Jämtland, Västerbotten and Norrbotten. Most of the alpine and sub-alpine nature reserves lie within these counties.

The initiative to protect an area in Sweden frequently comes from the county administrative board but can also come from municipalities, non-profit organisations, the public or landowners. The county administrative board consults with landowners and puts forward a proposal for decision about the nature reserve, which sets out aims, stipulations and a management plan. The state then hires an independent surveyor who calculates the market value depreciation which will result from converting the land into a reserve.

National Parks

More than 81 per cent of the total area of national parks in Sweden, is situated within the alpine region in Norrbotten County or sub-alpine region in the same county. 15 per cent of Sweden's area (including inland waters) is permanently protected as nature conservation areas and 13 per cent of this area consists of national parks. There are 30 national parks in Sweden

Biotope Protection Areas

The purpose is to provide long-term protection and improvement of natural settings that are especially valuable for animal and plant species. Biotope protection areas are normally not larger than 20 hectares. This kind of protection contributes to Swedish fulfilment of the United Nations Convention on Biological Diversity, as well as the national environmental quality objectives adopted by the Swedish Parliament.

General protection

There are two forms of biotope protection areas. The Government has decided on permanent protection of seven biotopes because they are important habitats, places of refuge and passage routes for plant and animal species, but have decreased sharply due to more rational land use.

They are:

- Lines of trees
- Springs with surrounding wetlands in agricultural areas
- Stone piles in agricultural areas
- Willow banks
- Small watercourses and wetlands in agricultural areas
- Stone fences in agricultural areas
- Small stands of trees, bushes or rocks in the midst of a field
- Protection on a case-to-case basis

Some authorities can decide on biotope protection for special areas. Municipalities and county administrations can decide on protection for natural rapids, steep rocky slopes and 14 other biotopes. The Swedish Forest Agency can decide on 19 other biotopes.[3]

[4]

No Swedish domestic tree species are on the CITES list.

Spruce, Pine and Birch, that account for 90% of all trees, are classified as “least concern (LC)” according to the IUCN red list. See for full list:

<https://www.iucnredlist.org/search/list?landRegions=SE&searchType=species>

[1] https://www.slu.se/globalassets/ew/org/centrb/rt/dokument/skogsdata/skogsdata_2018_webb.pdf

[2] FSC International and PEFC International Websites

[3] <http://www.swedishepa.se/>

[4] <https://www.eea.europa.eu/>

2.3 Actions taken to promote certification amongst feedstock supplier

Customer side requests all delivered feedstock either PEFC, FSC or SBP certified. Not certified suppliers are encouraged to get certified and support from waldkontors side is offered.

2.4 Quantification of the Supply Base

Supply Base

- Total Supply Base area (million ha):** 48,10
- Tenure by type (million ha):**30.00 (Privately owned), 20.00 (Public)
- Forest by type (million ha):**25.60 (Temperate), 22.50 (Boreal)
- Forest by management type (million ha):**48.10 (Managed natural)
- Certified forest by scheme (million ha):**27.28 (FSC), 31.16 (PEFC)

Describe the harvesting type which best describes how your material is sourced: Other

Explanation: Unspecifiable mix of final harvest, thinnings, forest residues from different measures and landscaping harvests.

Was the forest in the Supply Base managed for a purpose other than for energy markets? Yes - Majority

Explanation: Biomass as a side product of high quality round wood production and landscaping. Use of diseased and low grad wood with no other possibility to use. Also residues from harvests and forest based measures.

For the forests in the Supply Base, is there an intention to retain, restock or encourage natural regeneration within 5 years of felling? Yes - Majority

Explanation: N/A

Was the feedstock used in the biomass removed from a forest as part of a pest/disease control measure or a salvage operation? Yes - Majority

Explanation: Measures to prevent bark beetle spreading and prepare calamity areas for replanting, lead to significant volumes of low grad stem wood. Amount is decreasing after peak in 2020.

Feedstock

Reporting period from: 2019-06-30

Reporting period to: 2020-06-30

- a. **Total volume of Feedstock:** 1-200,000 tonnes
- b. **Volume of primary feedstock:** 1-200,000 tonnes
- c. **List percentage of primary feedstock, by the following categories.**
 - Certified to an SBP-approved Forest Management Scheme: 80% - 100%
 - Not certified to an SBP-approved Forest Management Scheme: 40% - 59%
- d. **List of all the species in primary feedstock, including scientific name:** Pinus sylvestris (Pine); Picea abies (Spruce); Quercus robur (Oak); Larix decidua (Larch); Fagus sylvatica (Beech); Alnus glutinosa (Alder); Fraxinus excelsior (Ash); Populus tremula (Poplar);
- e. **Is any of the feedstock used likely to have come from protected or threatened species?** No
 - Name of species: N/A
 - Biomass proportion, by weight, that is likely to be composed of that species (%): N/A
- f. **Hardwood (i.e. broadleaf trees): specify proportion of biomass from (%):** 5,00
- g. **Softwood (i.e. coniferous trees): specify proportion of biomass from (%):** 95,00
- h. **Proportion of biomass composed of or derived from saw logs (%):** 0,00
- i. **Specify the local regulations or industry standards that define saw logs:** N/A
- j. **Roundwood from final fellings from forests with > 40 yr rotation times - Average % volume of fellings delivered to BP (%):** N/A
- k. **Volume of primary feedstock from primary forest:** 0 N/A
- l. **List percentage of primary feedstock from primary forest, by the following categories. Subdivide by SBP-approved Forest Management Schemes:**
 - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme: N/A
 - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme: N/A
- m. **Volume of secondary feedstock:** 1-200,000 tonnes
 - Physical form of the feedstock: Chips, Offcuts
- n. **Volume of tertiary feedstock:** 0 N/A
 - Physical form of the feedstock: N/A

Proportion of feedstock sourced per type of claim during the reporting period

Feedstock type	Sourced by using Supply Base Evaluation (SBE) %	FSC %	PEFC %	SFI %
Primary	30,00	25,00	45,00	0,00
Secondary	50,00	0,00	50,00	0,00
Tertiary	0,00	0,00	0,00	0,00
Other	0,00	0,00	0,00	0,00

3 Requirement for a Supply Base Evaluation

Is Supply Base Evaluation (SBE) is completed? Yes

To be able to source uncertified biomass inside german boundaries from flexible and various sources. Otherwise SBP gives not enough flexibility to deal with necessities regarding short term changes and descisions.

4 Supply Base Evaluation

4.1 Scope

Feedstock types included in SBE: Primary, Secondary

SBP-endorsed Regional Risk Assessments used: Not applicable

List of countries and regions included in the SBE:

Country: N/A

Indicator with specified risk in the risk assessment used:

N/A

Specific risk description:

4.2 Justification

All used input material, that is not purchased 100% PEFC-certified or FSC 100%, is bought as FSC Controlled Wood or at least according to the regulations of FSC Controlled Wood. To match the sustainability and legality criteria of SBP, the supply base is defined as Germany in total and a risk assessment according SBP Standard 1: Feedstock Compliance Standard is issued.

Waldkontors risk assessment is widely based on or closely associated with the "FSC National Risk Assessment For Germany"

4.3 Results of risk assessment and Supplier Verification Programme

The Risk Assessment for the, as Germany defined, Supply Base is concluded to rate low risk for all indicators (see Appendix I).

No Supplier Verification Program will be undertaken, as all indicators of the final risk assessment are rated "low risk". During annual reviews of the risk assessment, the necessity for a Supplier Verification Program is evaluated.

4.4 Conclusion

Waldkontor has established several procedures to meet the requirements of the supply base evaluation and come to an overall "low risk" conclusion for biomass from within Germany.

- Supply base is well known and operations within are daily business
- Operations consequently follow work instructions developed of the years, which are updated to the SBP requirements
- PEFC and FSC certification is widely known internally, established and staff is regularly educated,

from now on, also regarding SBP

- The vast majority of biomass is produced by waldkontor internally with having control over the whole supply chain.
 - Suppliers and contractors that are used are long term business relations with a broad understanding of necessary documentation and information.
 - Understanding and realization of sustainability is a key element in waldkontors work and reputation
- The risk assessment showed for all indicators a “low risk”, based on the findings of the risk assessment in the scope of this supply base evaluation. Therefore a “low risk” rating overall is concluded for the defined supply base and all material sourced by waldkontor from within Germany considered SBP- compliant. This risk assessment, as all parts of the supply base report and supply base evaluation are constantly updated and regularly reviewed.

5 Supply Base Evaluation process

The risk assessment for the defined supply base in the Supply Base Evaluation Process, according to the SBP Standard 1: Feedstock Compliance Standard, is partially based on the FSC National Risk Assessment for Germany. Different sources from governmental and non-governmental institutions in form of statistical data, legislative sources and various databases were used as well. The findings, means of verification and the reviewed evidence are stated in the Supply Base Report Template for Biomass Producers: Annex 1. The risk assessment for this Supply Base Evaluation with the political boundaries of Germany was done by waldkontors own staff inhouse. The responsibility for the initial and the annual evaluation process of the SBE is held by Holger Schwarz, employee of waldkontor and working in the biomass department. He studied Forestry at the University of Göttingen and worked for a pellet mill where he established the SBP certification. Now with waldkontor in the biomass department, he is closely linked with the biomass production in form of wood chips. To provide the necessary knowledge, the whole team of involved personal in the biomass production from purchase, logistics, chipping- and port operations to sales and accounting is interviewed and part of the evaluation process. The evaluation process was done by research of relevant legislation, regulations, status quo situation as well as interviews of intern experts listed below and external experts.

Responsible personal regarding their field of relevance:

SBP- Responsible:	Holger Schwarz
SBP-Proxy:	Dr. Niko Wischnewski
Purchase:	Jan Bergeest, Matthias Band, Matthias Sagebiel
Logistics:	Annett Schulte, Ugur Islamoglu
Port operations:	Erik Lefold
Accounting:	Constanze Behm
Team Assistance:	Iga Javoreck

Inside each department a team of highly skilled and constantly trained staff is working in accordance to the communicated SBP-regulations. A constantly updated certification manual is in addition provided and available to every waldkontor employee.

6 Stakeholder consultation

The stakeholder consultation was executed in two steps.

General email with attached documents (SBR incl. SBE, Annex I and a letter explaining the request for comments from stakeholders). Also weblinks to our homepage were provided where those documents could be downloaded. This was sent on 23rd December 2019 to a stakeholder list consisting of governmental and non-governmental organisations, federal state forest owners etc. The time frame to which date comments were asked to receive, was the 22nd of January 2020

In this step 4 selected stakeholders were directly and individually addressed and asked, in addition to the first stakeholder consultation, for the chance of an interview to discuss the SBR and the risk assessment. These 4 stakeholders were FSC- Germany, the federal state forest authority of lower Saxony, WWF- Germany and the regional branch of the union for forest workers – IG Bau.

This selection was intended to highlight the different aspects (ecological, economical, social-economical and the view from a certification scheme) of this supply base evaluation and the associated documents. The time frame was from 18.02.2020 until 17.03.2020.

6.1 Response to stakeholder comments

Description: FSC

Comment: There was no response from any contacted stakeholder during the dedicated time frame. NEPCon separately tried several times to contact individual stakeholder to get a feedback. After waldkontors SBP-certificate was issued, a chairman of FSC contacted Ondrej Tarabus from NEPCon to discuss the waldkontor risk assessment. Following 4 points were later addressed by Mr. Tarabus to waldkontor as a result of the discussion. - Natura 2000 situation in Germany. Weak management and lack of proper implementation. - Reforestation of forests destroyed by the recent bark beetle calamity. Introduction of neophytes and replanted monocultures were specifically addressed. - The use of pesticides in regards to the recent calamity situation. Possible application by aircrafts was addressed. - The high game density was addressed and the relevance towards natural regeneration.

Response: Those points have been incorporated and dealt with in the reviewed risk assessment in Annex I

7 Mitigation measures

7.1 Mitigation measures

Country: Germany

Specified risk indicator: 1.1.1 The BP Supply Base is defined and mapped.

Specific risk description: The supply base is defined as the political German boundaries. Maps are available in scale up to small forest roads, provided by appropriate computer programmes. Waldkontor is using NavLog maps. On forest level maps are originated due several actions in combination with forest management planning like "Bundeswaldinventur" a national forest inventory or the "Forsteinrichtung" as an instrument for the mid- and longterm planning.

As it plays an important role in forest management and will be regularly referred to later in this risk assessment, this indicator will give a brief overview of the forest management planning in Germany.

On state level §41a of the "Bundeswaldgesetz" determines the execution of a large scale forest inventory. This comprises all German forest areas. Surveyed categories are for example:

- Forest area and changes since last inventory
- Stock and changes since last inventory
- Species distributions and changes
- Growth rates, harvest volume, planted volumes
- Forest structure and age distribution
- Biotopes, protected areas, dead wood,
- Animal density and damages due to this
- Owner structure
- Forest situation and health
- Carbon stock and changes
- ...

This data is available to the public and is the basis for long term planning and political decisions. Also it acts as basis for carbon-reporting in the scope of the Kyoto-Protocol.

The results of the National Forest Inventory (Bundeswaldinventur) 2012 have demonstrated that the average timber stocks in German forests rose compared to earlier inventories, which is an indicator of sustainable forestry and proper planning.

Also on state level and in cooperation with the federal states, as part of the environmental monitoring of forests, the "Bodenzustandserhebung" (BZE) is executed. The following map shows the sites where the survey was sampled.

Among many other indicators, carbon stock and development, acidity, soil

types, nutrient situation, nitrogen situation and else where determined and measured. Therefore 1.900 sample holes were digged and more than 50.000 samples were taken

Also on state level the "Kohlenstoffinventur" is executed to cover the time between "Bundeswaldinventuren" and gain additional data also in the scope of the steady environmental monitoring and for reporting of national greenhouse gas balances.

The last Kohlenstoffinventur was executed in 2017. The focus was on bound carbon in the standing stock, in dead wood and in the floor layer. Regarding stock information, the "Kohlenstoffinventur" is quite similar to the "Bundeswaldinventur" and helps to have an up to date overview of the inventory.

All data is publicly available and part of forest management planning information basis.

On federal state level a so called "Waldbiotopkartierung" (WBK) a mapping of all biotopes is mandatory and executed regularly. This data will also be used in the later mentioned "Forsteinrichtung". The WBK is part of the process of mapping forest functions and catalogues all biotops inside and outside existing protected areas. Those maps and data are available from the forest authorities as an instrument for forest management planning.

Contents of this WBK are for example:

- Local climate
- Soil situation
- Immissions of any kind
- Form of usage and the intensity
- Flora and Fauna inventory
- Special structural elements
- ...

On forest level, defined by federal state forest laws, the "Forsteinrichtung" is executed by forest owners. A strategic planning is made every ten years. Based on this, a detailed plan for the organization is prepared every year. Therein, harvesting measures and volumes are calculated based on a sustainable use. The planning is checked and monitored by the relevant authority (which is different in the federal states due to varying administrative structures). Also private forests of a minimum size are required to undertake planning activities (the particular size is stipulated by each federal state, with the minimum size of about 30 ha). For small private forests, this type of planning is recommended but not mandatory. Based on this planning, forest authorities have measures to control and monitor forest use. These authorities vary from federal state to federal state

The process of "Forsteinrichtung" leads to a data collection the so called "Forsteinrichtungswerk". This is the basis for the annual planning and the practical work in the forests. It consist essentially of following points and takes data and maps from inventories and also mentioned above into consideration:

- Betriebsbuch: Description of forest, inventory, planning of measures, analysis tables
- Flächenwerk: catalogue of forest boundaries, districts, subdistricts,

departments

- Kartenwerk: maps of forests including infrastructure and above mentioned categories

On local level so called "Horstschutzzonen" (eyrie protection zones) are identified and mapped in maps included in the "Forsteinrichtung". These are protected zones around breeding trees of large birds. They are usually identified by foresters, but also by forest workers. The regular education includes identifying such trees. Those zones are protected by individual federal state law (e.g. 25 BbgNatSchG). Size and form of protection is individually regulated and includes measures like prohibition of forest works and hunting in a specified radius.

The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability.

For private forests, different regulations do exist; which are described in the Federal Forest Acts, varying between the different federal states.

When planning occurs in relation to public or private forests, reports have to be sent to the corresponding forest authorities for evaluation and control. Private organizations that are not obliged to do planning are subjected to a control mechanism by the tax assessment. The preparation of mid-term framework reports is done by officials or freelancing consultants.

Municipal public forests in most federal states are managed and thus supervised by state authority foresters, so that control mechanisms exist. Private forest organizations, which are bound only to ten-year planning, are thus controlled by forest authorities every ten years and, if the forests are not sustainably managed, the organizations are sentenced. For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. We are not aware of relevant cases in which sustainability was seriously compromised by small forest organizations. The legal background for monitoring and planning is clearly regulated and enforced. Due to the good governance and law enforcement indicators, it can be concluded that there are no enforcement deficits. Management plans are publically available and it is common practise to use the data of the "Forsteinrichtung" to plan forest work by determining borders, protected areas, forest structure, water situation, soil situation etc.

In private and state forests the forest planning ("Forsteinrichtung") is the basic description of the supply base. The timeframe is typically a planning period of 10 years. The preparation of mid-term framework reports is done by officials or freelancing consultants. The validation of those plans is done by the responsible forest authority (Forstbehörde) or by publicly appointed and sworn assessor.

Germany is ranked 165 out of 178 countries on the Fragile States Index 2015. (nr 1 being the most fragile state). This ranks Germany in the category Sustainable with only Finland being in the highest category very Sustainable.

For this indicator the area under assessment is determined to be 'low risk'.

Mitigation measure:

As all indicators were rated "low risk", no mitigation measures are taken. Nevertheless, the risk assessment will be reviewed annually. If, during daily operations, a risk or a potential risk is identified, mitigation measures will be taken into account and documented to regain a "low risk" rating of the regarding indicator.

All wood and woody biomass purchased in Germany is at least handled according to the requirements of the FSC Controlled Wood Standard. The staff in the whole chain from the forest to the customer is used to this process and annually trained to be able to handle FSC, FSC- CW, PEFC and SBP claims properly.

Country:

N/A

Specified risk indicator:

N/A

Specific risk description:

Mitigation measure:

Country:

Germany

Specified risk indicator:

1.1.3 The feedstock input profile is described and categorised by the mix of inputs.

Specific risk description:

Waldkontor tracks purchased material by assortments. Roundwood in different qualities, wood chips , saw by products etc. Species are defined if possible, otherwise a separation between softwood and hardwood is realised. Data is digitally available.

Mitigation measure:

Country:

Germany

Specified risk indicator:

1.2.1 The BP has implemented appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Supply Base.

Specific risk description:

Waldkontor has a Risk Assessment system in place to meet the requirements of FSC Controlled Wood within the difined supply base. Tenure rights are determined through the German Constitution and the Bürgerliches Gesetzbuch ("Civil Code"). Ownership of estates is documented in the Land Charge Register ("Grundbuch"). The legal owner of an estate also owns the management rights of the estate, as long as no other laws are violated. Ownership of land is not legally valid, until the owner is registered in the Land Charge Register. Purchase of land requires a formal agreement by both parties. If there is no entry in the Land Charge Register or if the ownership of the land tenure is not yet registered in the Land Charge Register (e.g. in the event of new structuring and merging of plots), the

organization has to prove with appropriate documentation, that it owns the forest and therefore has the right to manage it. To establish a more efficient management, some small private forest owners are incorporated in Forstbetriebsgemeinschaften ('forest enterprises associations'). Here, organizations keep the land ownership and the right to manage, but the management of several small forests is centralized. All owners have to agree to the management and harvesting plans of the association. (When considering the different ownership relationships, the types of ownership have been designated as Habitats sites by varying parts: 5% state forest, 46% federal forest, 21% municipal, communal forest and 28% private forest (with different shares in the federal states). Therefore, the criterion is considered as 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 1.3.1 The BP has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.

Specific risk description: Waldkontor has a Risk Assessment system in place to meet the requirements of FSC Controlled Wood within the defined supply base. The European Union directive No. 995/2010 (EUTR) was transposed into German Law through the Timber Trading Security Act (Holzhandels-Sicherungs-Gesetz or HolzSiG) in 2011, and was reviewed in 2013. WWF Germany rates Germany as "a consistently high performer since 2007" in implementation of the EUTR. The authority for enforcing the law is the Federal Office for Agriculture and Food (BLE). Legally required documents or records for legal harvesting in clarified ownership relations are the entry in the land book ("Grundbucheintrag"), contracts of farm leasing ("Pachtverträge") and tax assessments ("Steuerbescheide"). The harvest is documented previously by the strategic planning ("Forsteinrichtung") and documented in the midterm framework ("Forsteinrichtungswerk"), annual planning of forest organizations, annual business planning of organizations and in private forests by the planning reports, tax returns and notice of tax assessment. Every legal company has to be registered in the business register ("Unternehmensregister"). Planning and sustainable management is described in the statute books: Mid-term management planning ("Forsteinrichtung") and annual planning ("Forstbetriebsgutachten") are required in most cases. When plans are submitted to and approved by forest departments, harvesting measures are assumed, based on this planning. There is no special approval for each harvesting activity, but there are prescribed laws and regulations providing a framework in which a forest owner can execute his activities. Central foreign-trade documents for the import of goods are the certificate of origin and the import permit. Reports are controlled by the Federal Customs Authority ("Bundeszollverwaltung"). Traders need to follow the procedures. Otherwise they have to face penalties in form of fines or even trials. Germany scores 78 points on the Corruption Perceptions Index 2013 on a scale from 0 (highly corrupt) to 100 (very clean). Germany ranks 12th out

of 177 with rank nr.1 being the cleanest country. Risks can arise when ownership is shifted between generations and the Land Charge Register entry takes time due to lengthy administrative processes. A few problematic cases are known, involving heritage issues and difficulties with the identification of heirs.

Identified laws are upheld. Cases, where law/regulations are violated, are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities. There were no reports from international organizations such as FAO, Transparency International, The Royal Institute for International Affairs or others stating that logging without harvesting permits is a problem in Germany

Therefore, the criterion is considered as 'low risk'.

Mitigation measure:

Country: N/A

Specified risk indicator: 1.4.1 The BP has implemented appropriate control systems and procedures to verify that payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting, are complete and up to date.

Specific risk description: The forest legislation does not include the payment of royalties and harvesting fees.
Tax related issues are controlled by finance authorities.
Every company must state its financial turnover in a tax return and, in addition, must demonstrate certain accounting practices (§§140, 141 AO, respectively §6, 1 HGB for incorporated enterprises).
Companies have two kinds of tax-paying systems: Imputed taxation and the Actual taxation.
All documents are sent to the finance authorities for verification – also irrespective of size, turnover quantity and form of organization. All cash flows have to be documented to verify and to avoid illegal and black market profits. Not mentioning income is seen as tax evasion which attracts several fines (§§369, 370 AO). Tax evasion also occurs in Germany, but legal requirements for documentation and control measures by finance authorities are very strict.
Germany has value-added taxes (VAT), described in the Value Added Tax Act. All domestic deliveries and benefits for which a company is paid are affected by the VAT (§1 UStG). Companies can levy VAT with sales and have to discharge VAT when buying (§§ 13, 15 UStG).
Germany has a Corruption Perceptions Index 2018 of 80 (above the threshold of 50) and is ranked worldwide as 11th in CPI ranking.
Tax fraud investigation is carried out intensively in Germany by finance authorities.
Therefore, the criterion is considered as 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 1.5.1 The BP has implemented appropriate control systems and procedures to verify that feedstock is supplied in compliance with the requirements of CITES.

Specific risk description: Germany is signatory to numerous international and European agreements and regulations on the protection of biodiversity, such as the Habitats Directive, the Convention on Biological Diversity and CITES. Waldkontor has an FSC/PEFC Controlled Wood Risk Assessment that addresses the requirements of CITES (FRF-DP-05).
Export: No woody species produced in Germany are included on the CITES lists and the risk is therefore considered Low.
Import: Importing CITES species is only possible with permission (see also 1.19) and due to the good rank on the CPI the risk is 'low'.

Mitigation measure:

Country: Germany

Specified risk indicator: 1.6.1 The BP has implemented appropriate control systems and procedures to ensure that feedstock is not sourced from areas where there are violations of traditional or civil rights.

Specific risk description: In 2014 (latest available year) Germany scores 79.1 on the dimension Political Stability and Absence of Violence/Terrorism. The scores range from 0 (lowest) to 100 (highest rank) with higher values corresponding to better outcomes.
"As far as FSC Germany is aware, Germany is not deemed to be a source of conflict wood (STD40 005; Anh. 2B; 2.2)."
Civil rights are ensured by law in the German Civil Code (BGB). Civil- and human rights in Germany enjoy a high level of protection, both in theory and in practice, and are enshrined in the Grundgesetz. The country has ratified most international human rights treaties. Reports from independent organizations such as Amnesty International certify a high level of compliance with human rights. The 2008 Freedom in the World report by US-funded Freedom House gives Germany a score of "1" (the best possible) for both political rights and civil liberties. As a consequence of the Nazi Regime, the constitution now in place provides a strict separation of powers. Law enforcement is strictly in the hands of the federal states and the respective agencies and institutions.
In general the level of law enforcement in Germany could be described as high. In comparison to many other states, police, courts and law enforcing infrastructure are quite well funded.
Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND the FSC controlled wood risk assessment confirms enforcement of applicable legislation.
Transparency International ranks Germany in 2019 on 9th place worldwide of the corruption perception index.
There are no indigenous people and no traditional people in Germany. There is no evidence leading to a conclusion of presence of

indigenous and/or traditional people in the area under assessment and other available evidence do not challenge 'low risk' designation.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.1.1 The BP has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped.

Specific risk description: At federal state level, particularly high quality biotope structures located in forest areas are mapped. Profound data is collected within the scope of forest biotope mapping to enable an integral balancing of aspects of biotope and species protection as well as the diverse planning goals in the field of forestry and out of this range and for the management planning of Natura 2000 sites on the other hand (FVA Baden-Württemberg 2005). The data is digitally accessible and allows determining which areas and area percentages are subject to certain laws or regulations, without additional on-site surveys.

Forest management measures and tending strategies are recorded in national park plans and elsewhere (Nationalparkverwaltung Bayerischer Wald 2010). There is an ongoing monitoring of HCVs and mapping of new species and areas, as well as the identification of new HCVs. It is intended to implement conservation measures as well as measures for further improvement of the biological diversity of forests in Germany with the help of the National Biodiversity Strategy and the Forest Strategy 2020, i.e. to set aside up to 5% of the German forest area (BMEL 2017), what has not yet been reached.

Germany possesses 8,676 nature protection areas (BfN, 2016; Adler, 2014). The combined area of nature protection areas in Germany is 1,378,410 ha. This corresponds to 3.9 % of the national territory. Reports and maps detailing the designated areas do exist on federal state level according to the various protection categories

Monitoring of the whole German forest area is prescribed by law in the National Forest Act Article 41a. The monitoring must be repeated every ten years.

Each category has regulations in terms of timber harvesting activities, access rights and management of endangered species and their habitats, partially statutory. The different types/categories are classified by the Federal Nature Conservation Act (BNatSchG) Articles 20–36 (including Natura 2000 or N2000) and vary by size, protection purpose and by the restrictions on land use. Protected sites that are covered by European Law are sites that are under the regime of the Habitats Directive and Birds Directive.

The combined area of nature protection areas in Germany is 1,378,410 ha. This corresponds to 3.9 % of the national territory. Reports and maps detailing the designated areas do exist on federal state level according to the various protection categories.

For some strictly protected areas, harvesting, access and management are highly restricted (national parks, nature conservation areas, biosphere

reserves). Whether managing and harvesting is allowed, is regulated by management plans based on the Federal Nature Conservation Act.

According to the German Federal Agency for Nature Conservation (BfN) 1,8 Mio ha of the German forests have been designated as FFH-/Natura2000 sites in 2012.

At federal state level, particularly high quality biotope structures located in forest areas are mapped.

Profound data is collected within the scope of forest biotope mapping to enable an integral balancing of aspects of biotope and species protection as well as the diverse planning goals in the field of forestry and out of this range and for the management planning of Natura 2000 sites on the other hand (FVA Baden-Württemberg 2005). The data is digitally accessible and allows determining which areas and area percentages are subject to certain laws or regulations, without additional on-site surveys.

Legally records are Forest function mappings (mapping of forest functions like water, soil, air).

The status of protected sites is documented and monitored in the midterm planning ("Forsteinrichtung") and is therefore respected when planning management measures. Controls are carried out by forest control ("Forstaufsicht"), employees of the Nature Conservation Federal Agency or by the police.

Various types of protected sites in Germany are legally defined and mapped at international, national and federal state level.

For this indicator the area under assessment is determined to be 'low risk'.

Mitigation measure:

Country:

Germany

Specified risk indicator:

2.1.2 The BP has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.

Specific risk description:

High conservation values (HCVs) refer to biological, ecological, social or cultural values of exceptional or key significance. There are six HCV categories that are taken into consideration.

HCVs are forests that are of special importance due to the occurrence of rare species or unusually high occurrence of rare plant species. Similarly, the importance of a forest can be important for the local population of a forest because the forest provides them with food, water or income, or because it is a place of spiritual significance. There are six HCV categories that are taken into-consideration. To date there is no official definition, interpretation or formal anchoring of the HCVRN's six categories of high conservation value forests (Brown et al. 2014) for Germany. An expert group developed a definition during the process revising the German FSC Forest Standard taking into consideration the political, legal, social and ecological framework conditions in Germany. This permits an approximate assessment of the individual HCV categories.

This conceptual diagram shows the relationship between the intensity of management required to protect or maintain conservation values. The P&C require all HCVs to be maintained,

enhanced and/or restored. As the threat increases to conservation values from management activities, the level of protection on these values must also increase. This level and type of protection can move from limiting human activities to excluding human activities in reserves. The outcome must always be the protection, maintenance and / or restoration of HCVs.

HCV 1 Species diversity. Concentration of biological diversity including endemic, rare and endangered species of significance on a global, regional or national level.

Risk: Habitat removal, Habitat fragmentation, Introduction of invasive species.

Definition for Germany: Occurrence of strictly protected species.

These are stated in the "Rote Liste" provided by the Bundesministerium für Naturschutz. Red Lists are lists of extinct, lost and endangered animal, plant and fungal species, plant communities, biotope types and biotope complexes.

They are scientific expert opinions in which the threat status for a specific reference area is presented. They assess the risk on the basis of the population size and population development

Red Lists serve to inform the public about the endangered situation of species and biotopes

are, as a permanently available expert opinion, argumentation aids for spatial and environmental planning show need for action in nature conservation increase the political significance of nature conservation are data source for legislative measures and international Red Lists serve to coordinate international nature conservation

serve to review the degree of fulfilment of the National Biodiversity Strategy and

show further need for research Red Lists are usually compiled or published by the nature conservation authorities. In Germany, the Red Lists of the Federal Government and the Federal States are of particular importance. Germany's Red List of endangered animals, plants and fungi covers the plant groups of terrestrial, limnic and marine habitats (with the exception of marine macroalgae, which were already published in Volume 2 under marine organisms). This concludes the risk analysis of the plants in this series.

According to a forest report (BMEL 2017) the Red List of endangered biotope types in Germany shows that the development of many forest biotopes has stabilized.

The most important legal basis for nature conservation in Germany is the Federal Nature Conservation Act (BNatSchG), which transposes European nature conservation directives, in particular the Flora-Fauna-Habitat Directive (RL 92/43/EEC) and the Birds Directive (RL 2009/147/EC), into national law. In contrast, European regulations such as the EC Species Protection Regulation (Regulation 338/97/EC) have a direct effect on citizens without requiring further implementation by the national legislator. The Federal Nature Conservation Act was comprehensively amended with effect from 01.03.2010. In addition to provisions on species and area

protection, it contains, among other things, regulations on landscape planning, compensation for interventions in nature and the landscape, biotope networks and interlinking, marine nature conservation, recreation in nature and the landscape and the participation of recognised nature conservation associations in certain decision-making procedures. It is supplemented by regulations under the laws of the 16 federal states, although deviations may occur. In practice, it is therefore essential that the relevant state nature conservation legislation is also taken as a basis. According to the division of competences in the Basic Law (GG), the enforcement of nature conservation law is, with few exceptions, the exclusive responsibility of the Länder. According to Article 83 of the Basic Law, this applies even when federal laws such as the Federal Nature Conservation Act are enforced. This is based not least on practical considerations, as the Land authorities are best placed to assess the special circumstances on the ground. In contrast, the Federal Agency for Nature Conservation (BfN) itself can only enforce laws in a few exceptional cases and is not an authority superior to the Land authorities.

The contact persons for practical questions concerning the application of nature conservation law are therefore generally the lower nature conservation authorities (in the administrative districts or independent towns). In the case of questions of national importance or of principle, the highest nature conservation authorities of the Länder are also available for further inquiries.

Germany imposes strong penalties for the violation of the Animal Protection Act, especially with regard to endangered species. Such violations can be punished with imprisonment of up to 5 years. This is regulated in the catalogue of fines of the Federal Republic of Germany (see link below).

The German federal states take different approaches to the management of Natura 2000 sites. Some federal states are initially developing concepts for uniform procedures in drawing up management plans, while others are starting directly to draw up test or sample management plans for selected sites. In some cases, the initial recording of habitat types and species within the FFH areas is still in the foreground as a basis for management planning.

Despite considerable differences in the preparation and implementation of management plans in the various German federal states, the following generalizations can be made about management planning in Germany:

- Management planning is usually independent nature conservation planning.
- Habitat types (Annex I Habitats Directive) and species (Annex II Habitats Directive) and birds (Annex I Birds Directive) are the subject of management planning in all federal states.
- Annex IV species and migratory bird species have not yet been (sufficiently) taken into account in most federal states.
- In many federal states, area-wide planning takes place in Natura 2000 sites.
- Half of the federal states plan on a parcel-by-parcel basis.

A cost estimate is part of the management planning in about half of all federal states.

- Implementation is preferably carried out through contractual nature conservation, further through compensation measures, own funds, sponsoring or EU co-financing (financing).
- The regular participation of public bodies and the public is provided for in

management planning in almost all federal states. The type and extent of participation varies greatly and ranges from information events to round tables and planning advisory boards.

HCV 2 Landscape ecosystems and mosaics. Large landscape ecosystems and ecosystem mosaics of significance on a global, regional or national level and which contain viable populations of the large majority of the naturally occurring species in their natural composition with respect to distribution and frequency.

Risk: Fragmentation, including access (roading)

Definition for Germany: In Germany these are all forests subject to a protection status under German nature conservation law and that are of national significance. These are designated national parks, biosphere reserves, SACs areas (Special Areas of Conservation, meaning areas protected under the Habitat Directive and Birds Directive), SPAs (Special Protection Areas). (Note: excluded are natural monuments, protected landscape components, landscape protection areas)

Whereas the status reports, and the nature conservation assessment of the SAC status reports, paint a largely positive picture of the conservation status of forest habitat types in Germany, a mix of silvicultural concepts on the ground would appear to be of fundamental importance to the maintenance of conservation values in SACs and to counter fragmentation (cf. HCV 1). Apart from the issue of the primary conservation objective of these areas, the difficulties experienced in the implementation of these areas, and so their effectiveness, would appear to reside chiefly on an administrative level. The greatest adjustment and/or challenge in connection with the conservation of species and habitats would appear to concern stipulations of the habitats directive with respect to the designation and management of SACs in private forest. Private forest accounts for a smaller proportion of the SACs, however, and so the impacts are limited to only a limited proportion of the overall area. Potential threats to SACs in private forest ownership can be specified, and may be minimized by means of investment, advisory services and efforts at promotion at national and European level. Fragmentation as a consequence of clear fell is legally regulated.

Reports such as the forest report published by BUND reveal local shortcomings. At the same time, however, positive examples of good cooperation between nature conservation interests and forestry enterprises are also described.

According to the national definition, however, this HCV category includes all forests in Germany with a designated protection status under nature conservation law and that are of national significance. These are national parks, biosphere reserves, SACs and SPAs. According to the Federal Agency for Nature Conservation, these areas – distinguished by protected area category – are: 16 national parks (terrestrial area: 214,588 ha) 16

biosphere reserves (1,914,446 ha) 104 nature parks (9.8 million ha)

As there are no intact forest landscapes in Germany according to the definition provided by Global Forest Watch, the main threat to this HCV category is further fragmentation.

Possible threats related to fragmentation in forest habitats by forest management could be:

- clear-felling that need permission because of their extent
- construction of roads, forest roads
- conversion
- large-scale planting of foreign species
- deer overpopulation

The FSC National Risk Assessment specifically deals with this concerns in detail and concludes a low risk designations for Germany. The point “deer overpopulations” is also additionally discussed in indicator 2.3.1.

Important large-scale landscape ecosystems have been identified and placed under protection in the form, for example, of national parks. Management for forestry purposes is either prohibited or partially regulated. Although representatives of nature conservation interests may wish to see specific improvements in relation to the management of HCVs, essentially the risk based on the foreseeable threat of further fragmentation of the overall area of the landscape ecosystem and mosaics, especially the SACs, is considered low.

HCV 3 Ecosystems and habitats. Rare, threatened or endangered ecosystems, habitats and refuges.

Risk: Lack of effective protection of HCV3

Definition for Germany: In Germany these are nature protection areas, mapped SAC habitat types (with the exception of the beech habitat types 9110 and

9130), biotopes protected under the German federal nature conservation act (BNatSchG, §30) and the state nature conservation laws, and the protection

forests designated under the state forest laws insofar as they serve the protection or the promotion of certain species, forest associations or forest biotopes.

Silvicultural use is permitted in Natura 2000 sites provided the silvicultural measures employed do not contribute to a deterioration of the conservation status of FFH -habitat types or of habitats home to species protected under the Habitats and Birds Directives.

An important basis for identifying landscapes in Germany worthy of protection is a Germany-wide landscape classification, typification and evaluation.

Cultural landscapes can be understood as the result of the interactions between land nature and land use. Conceptually, the landscape differs from the natural area (in the sense of MEYNEN & SCHMITHÜSEN 1953-62) above all in that in the former, the actual use that takes place is included as a significant formative factor.

The criteria used for delimiting the landscapes are natural boundaries,

current land use based on satellite image evaluations (CORINE Land Cover) and other landscape delimitations applicable to sub-areas. The landscape types are defined in such a way that the characteristic and landscape-forming elements easily recognisable in the terrain are in the foreground. Landscape qualities that are not obviously recognisable are not used for typification. A total of 858 individual landscapes, including 59 densely populated areas, can be delimited in this way in Germany. The individual landscapes are each assigned to one of 24 landscape types due to similar characteristics of certain features. In addition, each landscape is assigned to one of the three major regions "lowland/plain", "low mountain range" and "Alps and Alpine foreland" (GHARADJEDAGHI et al. 2004).

The assignment to the landscape types in 2004 was based on the land use data of the Corine Land Cover data with the reference year 2000 (figure above). In the meantime, satellite data on land use with the reference year 2006 (CLC 2006) are available (figure below).

In some landscapes (approx. 11%) the land uses have changed so significantly between these two reference years that a new classification of the landscape type has been made. Particularly striking is the decline in landscapes characterised by grassland in Schleswig-Holstein and west of Berlin.

Landscape type assignment 2011

A two-stage assessment procedure is used to identify landscapes of importance for nature conservation. Only data and information that is available for the whole of Germany in a comparable density of information and up-to-dateness is used for the assessment.

Each landscape is first assigned a "type value" on the basis of its affiliation to a landscape type. This basic value of each individual landscape is then further specified on the basis of the individual characteristics of the individual landscapes within the scope of a second evaluation step, the "object evaluation".

In 2006, the undissected nature of the landscape, the significance for biotope and species protection on the basis of the proportion of protected areas (national parks, nature reserves, Natura 2000 areas, core areas of biosphere reserves) and the proportion of historically old forest sites were included in the object valuation. Type and object value are then combined into an overall valuation in five value levels (see table).

The landscape valuation was updated in 2011. On the one hand, updated data on landscape fragmentation were used. On the other hand, the data available at that time on the proportions of protected areas (status 2010) were included in the assessment. In addition, the proportion of areas of national importance for the biotope network in the respective landscapes was integrated into the assessment. The areas of national importance for the biotope network were determined on the basis of the biotope mapping of the federal states.

The result of this evaluation procedure in 2006 showed that 402 individual landscapes (approx. 49% of the federal territory) could be designated as worthy of protection. Of these, 91 landscapes (12.3% of the federal territory) were classified as "landscapes particularly worthy of protection", 90 landscapes (9.6% of the federal territory) as "landscapes worthy of protection" and 221 landscapes (26.8% of the federal territory) as

"landscapes with deficits worthy of protection" (see figure).

When the landscape evaluation was updated in 2011, 89 landscapes were classified as "particularly worthy of protection" (approx. 12.3% of the federal land area), 99 landscapes as "worthy of protection" (10.8% of the federal land area) and 273 landscapes as "worthy of protection with deficits" (31.6% of the federal land area) (see figure below). As a result of the new evaluation procedure, which takes into account not only the protected areas but also the other mapped valuable biotopes in each landscape, the area share of landscapes in the highest three evaluation levels has risen to just under 55 % of the federal land area.

Landscape assessment 2006 Landscape assessment 2011

There are claims that the requirements of Natura 2000 implementations in regards to the habitat directive are not met in concerns of the time schedule. This is also reason for infringement proceedings from the EU commission against Germany.

Nevertheless waldkontor comes to the conclusion of a "low risk" designation for the risk of HCV 3 areas being threatened by non-identification and negative impacts by forest management activities. This assumption is mainly based on the FSC national risk assessment for Germany and its argumentation.

Where the SACs and SPAs are implemented in Germany, the protection and monitoring is on a high level with a high and trustworthy level of enforcement.

Silvicultural use is permitted in Natura 2000 sites, provided the silvicultural measures employed do not contribute to a deterioration of the conservation status of FFH -habitat types or of habitats home to species protected under the Habitats and Birds Directives. Measures of forest restructuring and to increase the share of deciduous forests are taking place on the whole German forest area since several years and are a consequence of long term forest management planning towards more diverse and stable forests, which pay tribute to local and regional preconditions. It is assumed that the current efforts to observe the prohibition on deterioration and to implement management plans have a positive effect.

A slightly different risk with regard to private forest arises from existing deficits with respect to knowledge and information concerning natural, economic and legal impacts stemming from the designation of SACs. It may be assumed that this is slightly higher than in federally-owned forests, where the regulations are binding. The approach to address private forests owners includes other instruments such as contract nature protection.

Many small private forest owners are supervised by the public forest authorities. The share of SACs in public forests is predominant, so regulations are binding on the bigger share of SACs.

The differences in implementation the Habitat Directive in public and private forests do not lead to a divergent risk determination for the different types of ownership.

Germany ranks on place 4 of the so-called Environmental Performance Indicators (EPI) for the aspect of biodiversity / habitats in 1st place as compared to international standards

HCV 4 Special ecosystem services. Fundamental, endangered ecosystem services including the protection of water catchment areas and protection

against
the erosion of endangered soils and slopes.

Definition for Germany: In Germany these are forests bearing a legally binding protection status and which fulfil the following functions (in accordance with the federal forest act, §12): protection against damaging environmental influences sensu the German federal emissions protection act (Bundes-Immissionsschutzgesetz, BImSchG) of 15 March 1974 (Bundesgesetzblatt I, p. 721), erosion by water and wind, desiccation, damaging run-off of precipitation and avalanches.

In the case of fertilisation in forests, nutrients that are lacking are specifically added to the soil. This is intended to stimulate the nutrient cycle. Together with an adapted use, damaged soils are thus to be restored to a condition that enables ecologically sustainable wood use without further fertilisation. Soil acidification can also be counteracted by means of liming. The pH value is increased, soil organisms become more active and the organic layer decomposes more quickly, mobilising nutrients. Plant ash has a similar effect to lime due to its high calcium and magnesium content. The different methods of soil improvement are controversially discussed. Improper and excessive use can have serious consequences. For example, some plants react very sensitively to direct contact with the substances applied. Roots and soil organisms are also very susceptible to abrupt changes in pH. Naturally acidic or lean sites must also be taken into account. Here, measures for "soil improvement" would destroy the naturally occurring, rare plant communities. Soil erosion can be reduced by permanent growth. The plants reduce the wind speed on the soil surface and strengthen the soil with their roots. In this way, a plant stocking can also reduce erosion on steep slopes. Furthermore, more water can be absorbed by the soil through rooting. This also reduces water-induced erosion.

In addition to preventing soil erosion and improving soil quality, it is also necessary for the ecosystem to give special protection to water bodies and alluvial areas. Here, too, Germany is constantly implementing measures to stabilise the ecosystem.

Watercourse and floodplain development serves to restore ecologically functional riverine landscapes. This makes an important contribution to sustainable flood protection, to the self-purification of water bodies, to the creation of attractive leisure and recreational areas and to the improvement of living conditions for plants and animals. Since the early 1980s, increased efforts have been made to restore water bodies and floodplains to a near-natural state. The possibilities for implementation are manifold and range from the dismantling of transverse structures, bank revetments and dikes, the reconnection of artificially cut-off oxbow lakes, the promotion of extensive forms of use, the re-establishment of floodplain forests to the renaturation of entire river landscapes.

Within the framework of federal funding programmes, the department "Inland Waters, Floodplain Ecosystems and Water Balance" is responsible for large-scale nature conservation projects as well as testing and development projects that serve to protect, develop and permanently safeguard running waters and floodplains.

Risk: Reduction of water quality/quantity – negative impact on humans health (e.g. poisoning water etc.)

HCV 5 Needs of the resident communities. Sites and resources satisfying the basic needs of resident communities and indigenous populations (for their basis

of existence, health, nutrition, water, etc.); identified with the participation of the local communities/indigenous population.

Risk: Compromising (impacting) fundamental needs of local communities by management activities

Definition for Germany: Official recreation forest and forests with a level 1 recreation function according to the national map of forest function.

Recreational use frequently occurs in sensitive areas as these locations often possess an especially high nature experience value. Often these are large protected areas such as biosphere reserves, national parks and forests in metropolitan catchment areas. The latter is not a category of protection forests but represents a conglomerate of nature and landscape protection areas (e.g., SACs) and forest sites subject to normal forest use. The recreational use by local recreation seekers is of huge significance in densely populated areas. A fifth of the German forest area is situated in the catchment areas of metropolitan areas (Zundel & Völksen, 2002) Forest management of these forests is often perceived as a disturbance by the population. Most public forest owners take this into account

HCV 6 Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance and/or or key cultural,

ecological, economic or religious significance for the traditional cultures of the resident communities or indigenous population; identified with the participation

of the resident communities and indigenous population.

Risk: Destruction and/or disturbance of rights/values determining HCV6 presence

Definition for Germany: In Germany these include woodland cemeteries, relicts of historical forms of land use worthy of conservation (coppice and coppicewith-standards forests, forest pasture) and monuments of built and archaeological heritage identified by regulatory agencies.

Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves. E.g. the Federal Forest Authority of Baden-Württemberg has extended the forest function mapping, soil and culture heritages need to be mapped as well. Forest management activities have to be adapted to avoid damages to those sites.

Designated cultural monuments in the forest are considered in the midterm planning (Forsteinrichtung) and respected accordingly during the execution of forest management activities.

Where new conservation values worthy of a heritage designation are discovered, the necessity for protection is assessed by the responsible authorities. Woodland cemeteries are a relatively new form of forest use and are only found at a small number of selected locations at present, currently around 400 woodland cemeteries do exist in Germany (Aeternitas 2017).

Direct threats or impairments to the recreational use of forests posed by forest management activities may stem from, among other things, machine traffic and timber harvesting. These activities involve the installation of extraction trails, the use of heavy machinery and corresponding effects on the aesthetics of trails in the forest and on the appearance of the forest as a whole. The right to access may be restricted temporarily and locally for the purposes of harvesting and other operations.

Protection forests are covered by additional protection designations that apply tighter restrictions to forest management activities.

When planning harvesting measures or other forest management activities (e.g. road construction), attention to environmental values and protected sites is required. In mid-term management planning ("Forsteinrichtung", see above) protected sites and protective functions of forests are addressed.

Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types.

On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.

Forest management measures are subjected to the Federal Forest Act (BWaldG) (BMEL 2015) and the State Forest Acts (LWaldG), which fulfill the requirements of the BWaldG and require management and site planning. The occurrence of special conservation values is also considered, i.e. in forest management plans. §11 of the BWaldG requires on principle to consider the forest function "ecosystem" (BMEL 2015) in forest management activities.

In addition to the BNatschG, the Federal Environmental Ministry and the BfN as a subordinate authority the threats from forest managements are identified and forests effectively protected against.

The significance of § 39 BNatSchG is that since 1 March 2010, a uniform nationwide regulation will apply with regard to logging and cutting bans, and the laws of the respective country may extend these, but may under no circumstances restrict them.

This applies to especially for the protection period, which has so far been in the different national laws was regulated differently. In the future the period of protection shall in principle be the Period between 1 March and 30 September. Since 1 March 2010, the following rules apply to this Protection period nationally uniform felling and felling Pruning bans for all trees that outside the forest or horticultural of the land used by the company.

The Federal Nature Conservation Act regulates now nationwide uniform in § 39 BNatSchG certain felling and cutting bans for closer designated trees and for hedges, live fences, bushes and other woodland in a basically fixed Period from 1 March to 30 September. The legally provided Exceptions are very far-reaching and have no significant Tightening of the felling and cutting bans compared with the previous arrangements guided. However, roadside trees, alleys...on roads and trees in the open countryside now specially protected. The following applies to them since 1 March 2010 the cutting bans and felling prohibitions of § 39 BNatSchG, so that during the protection period, the Caps for example on Street trees as an administrative offence fined up to € 10 000 if they are not, for reasons the traffic safety from the nature conservation authority have been approved. All trees in gardens, i.e. house and allotments, in green spaces, grass sports facilities and cemeteries do not have under the temporary felling and Cutting prohibitions of § 39 BNatSchG. You can also between 1 March and 30. September without permission and be cut back if no Habitats of wildlife species and if there are no other nature conservation regulations (e.g. tree protection statutes). All hedges, live fences, bushes and other woody plants are subject to the felling and cutting bans of § 39 BNatSchG, even if they are, for example, in gardens and green spaces. Necessary measures for production of road safety are of the felling and cutting bans of § 39 BNatSchG, but can be due to other nature conservation prohibitions must be subject to approval. Tree and wood care measures according to the ZTV tree care and comply with the relevant regulations the exemption under § 39 NatSchG. These measures have been implemented at all trees and other woody plants during of the whole year, unless, that habitats of protected animal species are in it or other nature conservation law Prohibitions exist. Protected trees that pose a traffic hazard may only be used for concrete and imminent Danger even without the approval of the nature conservation authorities which are then must be informed immediately. At every felling and each felling application are the defects and diseases found on the tree, which requires felling and to provide reasons and sufficient information to document. Sites falling under HCV6 definition are even more than regular forest a site of interest by the public and therefore more often visited. As argued before, the public is a strong control mechanism. This applies for private forest as well as for public ownership. It could be assumed, that private forests could be evaluated with the same risk as public forests regarding HCV6 protection.

Waldkontor is strictly working according to the requirements of the FSC Controlled Wood Standard (FSC-STD-40-005). The waldkontor staff is at least annually educated regarding the requirements. Also annually an internal and external audit is performed to survey the handling of mentioned procedures.

The FSC-CW Standard in combination with the national risk assessment FSC-NRA-DE V1-1 provided by the FSC as guidance, the HCV forests and areas are reliable to be identified.

The FSC National Risk Assessment states for all HCV Categories in Germany a low risk for being threatened by forest management activities. Waldkontor follows this evaluation. There are undisputedly improvemets necessary to implement the designated protection status for some areas

and Germany is behind that determined schedule. On the other hand there is significant progress and effort made in catching up to specified biodiversity aims, that Germany committed itself to with the Nagoya Protocol. The tendency towards more diverse forests, more area under protection status, and environmental protection in general, is clearly to see in legislative and regulatory frameworks. With most of the areas under protection and/or of high conservation value located in forests with obligatory forest management and in combination with the mentioned high level of enforcement, the overall risk for this indicator and the area under assessment, is determined to be "low risk"

Mitigation measure:

Country: Germany

Specified risk indicator: 2.1.3 The BP has implemented appropriate control systems and procedures for verifying that feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008.

Specific risk description: Official national forest inventories ("Bundeswaldinventur") do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. Conversion of natural forests to plantations or non-forest use in the area under assessment is less than 0.02% or 5000 hectares average net annual loss for the past 5 years. According to the third Federal Forest Inventory ("3. Bundeswaldinventur") from 2012 the forest area only showed slight changes between 2002 and 2012. A forest loss of 58,000 hectares is compensated by 108,000 hectares of forest growth. In total, the forest area has increased by 0.4% or 50,000 hectares. The average annual gain of 5.000 hectares is far below the threshold of 5.000 hectares net annual loss ('low' risk). There is a Programme for long-term forest development called LÖWE Programm. § 2 of the National Forest Act excludes areas that are used for short rotation coppice or short rotation forestry, these areas are not defined as forests and are subjected to other legislation than forest legislation. Article 9 (1) of the National Forest Act states that conversion of forests to any other land use is allowed only with the permission of the corresponding federal state authority. If necessary, the Environmental Impact Assessment Act is applied to assess potential environmental impacts and develop mitigation or compensation measures, if a conversion of land use shall take place. By making the decision as to whether conversion will be permitted, the rights, duties and economic interests of the forest owner as well as public interests have to be evaluated. The request to permit conversion will be declined, if conservation of the forest is of public interest –particularly if the forest is considered highly significant due to characteristics of its ecosystem, its silvicultural production level or its use for public recreation. In addition, due to the National Forest Act §9 (3), Federal states can determine whether an approval for another type of land use is necessary for a particular forest area e.g. for infrastructure. In this case permits are granted under the planning law and compensation (e.g. afforestation,

compensation payments) must take place as required by legal regulations. This is regulated through the Building Code (BBauGB) §§1a, 35 and Federal Nature Conservation Act (BNatschG) §§14, 15. The procedure of intervention into nature is regulated in §17 (BNatschG) and in the Environmental Impact Assessment Act.

However, in any case of conversion in Germany, compensation measures have to be undertaken, it is legally binding to create such measures, several court decisions offer guidelines and describe requirements (e.g., afforestation, payment) for the extent (e.g., area size, at least the same area that has been converted) and quality this measures need to be implemented. The type (e.g., afforestation, payment) and quantity (e.g., area size) of the compensation varies by the federal states.

Penalties exist for conversions occurring without permission and are defined by the forest acts of the federal states (usually afforestation is required, or a heavy fine imposed). In protected areas as defined by the Federal Nature Conservation Act (§§ 23, 24, 25, 26, 27, 28, 29, 30, 31), by the National Forest Act (§§12, 13), by Federal Forest Acts or in Habitat Directive areas, stricter rules apply in relation to conversions and levels of compensation. Without an extraordinary reason, permissions are normally not granted for any conversion in these areas.

Due to the complex and non-uniform system in the federal states, enforcement and monitoring are executed by different authorities. Depending on administrative structures, these authorities can be lower forest authorities, higher forest authorities, municipal forest authorities, Federal Ministry of Food and Agriculture, Federal Agency for Nature Conservation, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.

In 2016 in Germany only 5.700 ha were stocked with short rotation plantation. Waldkontor is not using material from those areas. Those materials are also excluded in the delivery contracts with the customers so far for several reasons.

In Reference to indicator 1.1.2 the risk for material from plantations becoming part of the biomass is low as the origin and forest type are always known by waldkontor.

According to the "Bundeswaldgesetz" plantations are not defined as forest area.

For this criterion, the area under assessment is considered as 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.2.1 The BP has implemented appropriate control systems and procedures to verify that feedstock is sourced from forests where there is appropriate assessment of impacts, and planning, implementation and monitoring to minimise them.

Specific risk description: Both public forests and private forests have to execute a strategic planning ("Forsteinrichtung"). Official national forest inventories ("Bundeswaldinventur") do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. The main goals of

management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability. To take account of long-term developments in forestry, every ten to 20 years, public organizations establish a mid-term framework report ("Forsteinrichtung"), for which responsibility occurs at sovereign level. Furthermore, state forests organizations establish an annual forest plan including actual and predicted stock, harvesting measures, establishment measures, silvicultural and management measures, conservation, welfare etc. Public municipal forests of medium size (normally 50 or 100 ha or larger) are bound by law to execute annual planning. In addition to these statutes and requirements, some federal states have binding guidelines for silviculture, which define silvicultural best practices for public forests (also recommended for private forests).

For private forests, different regulations do exist; which are described in the Federal Forest Acts, varying between the different federal states. Basically private forestry organizations of mid-size (normally 100 ha) and upwards have to produce an annual plan and a mid-term framework report every ten years. Small private organizations under 100 ha have to prepare an annual report, which is not included in the annual planning, to provide evidence for its management ("Forstbetriebsgutachten"). Below 30 ha, organizations are exempt from planning works, but are bound to the German Forest Act and to supervision by authorities. For small private forests, this type of planning is recommended but not mandatory.

Based on this planning, forest authorities have measures to control and monitor forest use. As described above, these authorities vary from federal state to federal state.

When planning occurs in relation to public or private forests, reports have to be sent to the corresponding forest authorities for evaluation and control. Private organizations that are not obliged to do planning are subjected to a control mechanism by the tax assessment.

For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. The preparation of mid-term framework reports is done by officials or freelancing consultants. The results of the National Forest Inventory (Bundeswaldinventur) 2012 have demonstrated that the average timber stocks in German forests rose compared to earlier inventories, which is an indicator of sustainable forestry and proper planning. Risks can arise when small forest organizations – which are not bound to planning due to their size – manage their forest unsustainably OR – if they are bound only to ten-year planning – use the ten-year gap to harvest beyond the sustainability level. However, in any case, monitoring does exist: Municipal public forests in most federal states are managed and thus supervised by state authority foresters, so that control mechanisms exist. Private forest organizations, which are bound only to ten-year planning, are thus controlled every ten years and, if the forests are not sustainably managed, the organizations are sentenced. For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. A control mechanism, not to be underestimated, is the public. Forest visitors are, according to an interview with staff from the lower environmental protection agency in lower saxony, the group that reports the most (suspected) violations of laws and regulations.

The absolute minority of small private forest owners is not engaged in any form of association when it comes to silvicultural land use with economic

intentions. Numerous interviews with forest owners, foresters and forest working companies revealed and underlined this assumption. Only a properly managed forest is economically stable and sustainable. Costs for management, harvesting, wood marketing and so forth, are disproportionate for small, unassociated forests. Therefore the vast majority of above mentioned forest owners are associated in "Forstbetriebsgemeinschaften" (FBG), "Forstbetriebsverbänden" (FBV) or "Waldwirtschafts-genossenschaften" (WWG). Those associations act as a single forest owner and is bound to legislation and forest management with regards to the accumulated forest area of all members, which is in terms of economics, large enough to be professionally managed. The remaining small private forests are often owned by farmers and people generating firewood for their own purposes. The chance of significant amounts of biomass from such origins to enter the national or even international biomass market is negligible. Those owners normally would need to mandate a company to harvest, move and chip biomass and it could be assumed, that professional biomass companies are up to date with applicable legislation and regulations and advise the forestowner accordingly.

The legal background for monitoring and planning is clearly regulated and enforced. Due to the good governance and law enforcement indicators, it can be concluded that there are no enforcement deficits. Management plans are publically available ("Forsteinrichtungswerk"; updated every 10-20 years).

Planning and sustainable management is described in the statute books: Mid-term management planning ("Forsteinrichtung") and annual planning ("Forstbetriebsgutachten") are required in most cases. When plans are submitted to and approved by forest departments, harvesting measures are assumed, based on this planning. Therefore, the owner of the area or the harvesting rights does not need to ask for permission to carry out harvesting activities.

The status of protected sites is documented and monitored in the midterm planning ("Forsteinrichtung") and is therefore respected when planning management measures. Controls are carried out by forest control ("Forstaufsicht"), employees of the Nature Conservation Federal Agency or by the police.

In mid-term management planning ("Forsteinrichtung") protected sites and protective functions of forest are addressed.

Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. Designated cultural monuments in the forest are considered in the midterm planning ("Forsteinrichtung") and respected accordingly during the execution of forest management activities.

Woodland cemeteries have to be included as designated areas in the midterm planning ("Forsteinrichtung") and mapping.

In the *Verwaltungsverfahrensgesetz* (VwVfG) – the central Act that defines administrative procedures for federal authorities in Germany -, the 2016 approved new § 25 (3) is to introduce a general rule for an "early public participation" in large projects with a corresponding so-called "obligation to act" of the administration. The broad and early participation of the public comprises the early notification of the general objectives of the project, the

means of implementation and the likely impact.

Forests in Germany are designated with a legal protection status and fulfil the following functions (sensu Federal Law Gazette, §12): protection against damaging environmental impacts in the sense of the Federal Emissions Protection Act.

If necessary, the Environmental Impact Assessment Act is applied to assess potential environmental impacts and develop mitigation or compensation measures, if a conversion of land use shall take place.

The legislator demands that primarily avoidable impairments of nature and landscape should be avoided. Unavoidable adverse effects must be compensated by measures of nature conservation and landscape management (compensation and replacement measures) (Ausgleichs- und Ersatzmaßnahmen). If the impairments cannot be avoided or compensated for, the interests of nature conservation and landscape management must be weighed against other public concerns/interests and justifications must be provided (BfN 2002/2007). In particular, ecosystem functions should not be impaired and biodiversity should be preserved.

Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types. There are no statistics available relating to regular on-site visits by relevant authorities focusing on environmental requirements; however on-site visits are a known measure of control and planning.

The authors of the FSC National Risk Assessment for Germany come to the conclusion, that identified laws are upheld. Cases where law/regulations are violated are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities. For this indicator the area under assessment is determined to be 'low risk'. This conclusion is endorsed by the lack of relevant cases in which sustainability was seriously compromised by small forest organizations.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.2.2 The BP has implemented appropriate control systems and procedures for verifying that feedstock is sourced from forests where management maintains or improves soil quality (CPET S5b)

Specific risk description: Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. Because of that the site-adapted selection of species a persistent soil fertility for long-term usability must be ensured, the natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield, fertilizers and pesticides must only be used in accordance with the provisions of the agricultural and

forest legislation and in accordance with the German legislation fertilization in a conventional sense is excluded to a major extent for forest management.

This applies to all federal states in Germany.

More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g.

Bodenschutzgesetz: Soil Protection Act).

Every federal state has the authority to monitor the implementation of the law by the forest supervision ("Forstaufsicht"). Since state forest organizations are supervised by the federal forest department, forest activities are monitored in both private forest and public forest. The forest supervision ("Forstaufsicht") is the implementing authority of the federal state, whereby the state secures legal implementation. Forest supervision overall is executed by officials of the corresponding low-level forest department with help of the police.

Permanent soil monitoring

On almost 800 permanent soil observation plots under arable land, grassland, forest and special use (e.g. settlements, viticulture), the soil in Germany is monitored on a long-term basis. The aim of the monitoring programme is to record the current condition of the soils, to monitor their changes over the long term and to map development trends. The federal states are responsible for long-term soil monitoring. The permanent soil monitoring data are collected and used in the federal states and by the Federal Environment Agency for a wide range of soil protection issues. The accuracy of the series of measurements will increase with each further investigation. The Federal Environment Agency collates the data in a specialist information system and has the possibility of carrying out cross-state evaluations.

Long-term soil monitoring is a central instrument of environmental monitoring

Source: S. Marahrens / Federal Environment Agency

Soil condition survey in forests

BZE Forest and ICP Forest (Level I and II)

The BZE Forest and ICP Forest projects assess and monitor forest condition and the condition of forest soils. The data can be used, for example, to make statements on the carbon cycle, the nutrient and water balance and diffuse material loads in the soil. The Federal and State Working Group on Soil Condition Surveys (BZE) coordinates and regulates the establishment and operation of the monitoring sites, the minimum set of parameters and the investigation methods. The programme is the responsibility of the Federal Ministry of Food, Agriculture and Consumer Protection. The Thuenen Institute, Institute of Forest Ecology and Forest Inventories keeps the data in a central database and is responsible for the coordination and analysis of the data.

The result of the last BZE showed that actions taken regarding air

immissions, soil protection and forest restructuring to more mixed forests in the past, were making impacts. The key results are:

- Soil acidity decreased
- Status of humus and bases saturation increased
- Carbon stock up to 30cm and also 90cm depth increased
- Heavy metals depositions and content in humus layer decreased
- Nutritional conditions of trees are predominantly good
- Sample points of critical loads of eutrophication nitrogen decreasing

The litter layer of forest soils requires special sampling.

Source: Federal Environment Agency

The Federal Nature Conservation Act (“Bundesnaturschutzgesetz”) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries). In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners (e.g. Bundes-Bodenschutzgesetz (BBodSchG): Soil Protection Act; Düngemittelgesetz (DüV): Fertilizer legislation; Düngemittelverordnung (DüMV): Fertilizer ordinance; Wasserhaushaltsgesetz (WHG): Water Resources Act; Europäische – Wasserrahmenrichtlinie: European Water Framework Directive).

On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.

Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves. E.g. the Federal Forest Authority of Baden-Württemberg has extended the forest function mapping, soil and culture heritages need to be mapped as well. Forest management activities have to be adapted to avoid damages to those sites.

Between 2006 and 2008, the government performed the second, nationwide “Bodenzustandserhebung” to determine the soil situation in German forests and to monitor impacts of forest management activities. There are several non governmental organisations like the “Kuratorium für Waldarbeit und Forsttechnik e.V. (kwf)” that research harvesting activities and their impact on, among other terms, the soil quality and present technical and process orientated recommendations to protect the impacts on the soil.

The following statistic shows the number of cases nationwide of violations against soil protection laws. It is to be mentioned, that there is no statistical data for specifically forests, so a legitimate assumption is, that most of the cases happened outside forest areas.

For this indicator the area under assessment is determined to be ‘low risk’.

Mitigation measure:

Country:	Germany
Specified risk indicator:	2.2.3 The BP has implemented appropriate control systems and procedures to ensure that key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b).
Specific risk description:	<p>Forest management measures are subjected to the Federal Forest Act (BWaldG) (BMEL 2015) and the State Forest Acts (LWaldG), which fulfill the requirements of the BWaldG and require management and site planning. The occurrence of special conservation values is also considered, i.e. in forest management plans. §11 of the BWaldG requires on principle to consider the forest function “ecosystem” (BMEL 2015) in forest management activities.</p> <p>Important large-scale landscape ecosystems have been identified and placed under protection in the form, for example, of national parks. Management for forestry purposes is either prohibited or partially regulated.</p> <p>Large landscape ecosystems and ecosystem mosaics are identified. The protection of forests as habitat types, landscape ecosystems and mosaics plays an important role.</p> <p>Clear cuttings, which could lead to fragmentation on the size of landscape ecosystems, are in any case subject to approval and may require compensation.</p> <p>Most important representative forest habitats and landscape ecosystems with forests are under protection and often set aside from forest management activities or managed with low intensity forest management. The European habitats directive was transposed in national law in 1998 (Sipped, 2007) and is anchored in §§32 to 38 of the federal nature conservation act.</p> <p>There are Natura 2000/habitat types of the Habitats directive and sites protected under the Federal Nature Conservation Act as landscape-level ecosystems and small habitats.</p> <p>Sites subjected to the Habitats Directive, combined with Bird Protection Areas (EGV), form the Natura 2000 sites. They need to be managed either in compliance with the Habitats Directive or the Birds Directive, partially there are overlaps. According to Art. 6 para 1 of the Habitats Directive mandatory management plans need to be elaborated. Management plans have to maintain or restore a favorable conservation status. According to Art. 6 para 2 member states are in bond to avoid damaging activities that could significantly disturb these species or damage or deteriorate habitats or habitats of protected species.</p> <p>In Germany there are nature protection areas, mapped SAC habitat types (with the exception of the beech habitat types 9110 and 9130), biotopes protected under the German federal nature conservation act (BNatSchG, §30) and the state nature conservation laws, and the protection forests designated under the state forest laws insofar as they serve the protection or the promotion of certain species, forest associations or forest biotopes. The Red List, published by the “Bundesamt für Naturschutz”, catalogizes plants, animals and fungi according to their recent endangerment level. It also provides a short- and longterm tendency. As this list includes nearly 22.000 species overall, a link to the download section is provided in the evidence reviewed, instead a complete list.</p> <p>The Red List is regularly reviewed and acts as a scientific basis for strategic</p>

and legislative decisions. According to interviewed staff from federal state forests, the Red List is an essential tool to be used when forest management planning is done in any form.

The following statistic provided by the Umweltbundesamt shows that there are only a few cases nationwide of violation of protected areas and most of the cases were solved by governmental authorities. Also the tendency is pointing downwards.

Concerning non-forest biomass, there is a variety of scenarios of biomass origin in the non-forest sector. Therefore focus is on the most likely ones with regards to waldkontors main supply area and companies to work with. Waldkontors own sister company "claus rodenberg forst- und landschaftspflege gmbh" for example is only working for the public sector. This leads to very detailed tenders with exactly defined tasks. Those tenders have been prepared from client side in accordance to applicable laws and in cooperation with responsible authorities. Regarding ecosystems and habitats, the "untere Naturschutzbehörde" has checked with own resources how the ecological situation of each individual site is and what measures are possible.

In the private sector, the contracted company is responsible for knowing and complying with existing laws. Waldkontor uses partner with not only a flawless reputation, but with known experience in this field. Interviews showed, that in the majority of cases, feedback from authorities is asked and a proper documentation is provided.

Depending on federal state or even smaller administrative districts, the clients handling differs vastly. In Mecklenburg-Vorpommern it is common practise, that every measure is reconciled in advance with authorities and given definite instructions, often combined with on site visits. Background checks for legal, sustainable and ecological matters have been done by authorities. Also on site inspections after completion are common.

In other federal states, the control mechanisms are not as tight, but nevertheless random visits are happening. According to interviewed companies, the public is the attentive control institution and has a quite good knowledge of laws and regulations concerning executed measures. Allegations from the public are prosecuted by local authorities like "untere Naturschutzbehörde" and act as a wide spread and continuous control instrument.

As this indicator is in major parts redundant to indicators 2.1.1 and 2.1.2, this indicator for the area under assessment is determined to be 'low risk' as well.

Mitigation measure:

Country:

Germany

Specified risk indicator:

2.2.4 The BP has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).

Specific risk description:

In Germany, there are both nongovernmental (like the NABU or WWF) and governmental organizations around to ensure and protect the biodiversity. Nature conservation and species protection as well as biodiversity conservation are already incorporated in the German legislation both at federal and state level. The precautionary principle (risk prevention and resource provision) is the guideline of environmental policy and legislation in Germany (UBA website 2015). The precautionary principle and, if applicable, associated interventions and conversions in the landscape, also outside protected areas, are generally covered by the Intervention Compensation Scheme (Eingriffs- und Ausgleichs-Regelung) (§13, 15, 17 BNatschG) with the basic idea of a general prohibition of deterioration for the state of nature and landscape in Germany. The legislator demands that primarily avoidable impairments of nature and landscape should be avoided. Unavoidable adverse effects must be compensated by measures of nature conservation and landscape management (compensation and replacement measures) (Ausgleichs- und Ersatzmaßnahmen). If the impairments cannot be avoided or compensated for, the interests of nature conservation and landscape management must be weighed against other public concerns/interests and justifications must be provided (BfN 2002/2007). In particular, ecosystem functions should not be impaired and biodiversity should be preserved.

For example, the German Federal Nature Conservation Act (BNatSchG) regulates the general protection of nature and landscape, the protection of certain parts of nature and landscape as well as of wild animal and plant species. Species and area protection, recreational use, provision for fines and penalties are addressed as well (BfN 2009). But also an adapted forest management compatible and connected with nature conservation aspects is reflected. Each federal state has its own land conservation law, which is linked to the Federal Nature Conservation Act according to Art. 72 GG.

In 2011 the European commission adopted the “Biodiversity Strategy for the European Union” with the aim to stop the loss of biodiversity and to restore the biodiverse situation as far as possible. An assessment showed success in some aims, but EU- wide more measures and more funding is necessary.

In 2007 the German government put in place the National Strategy for Biodiversity (NBS) with 330 objectives and 430 measures to improve biodiversity on national and regional level. The strategy is implemented, coordinated and monitored by the Federal Environmental Ministry. In 2014 a survey of the NBS revealed, that the measures so far are not sufficient to obtain the aims of the Strategy. As a consequence the Federal Environmental Ministry implemented in 2015 an ambitious Program called “Naturschutz- Offensive 2020” in which 10 top priority domains are named with 40 specific determined measures. Domain IV is specifically assigned to forests and forest management in order to improve biodiversity. Domain VI is assigned to protected areas, Natura 2000 and high conservation value areas.

An assessment in 2017 showed that overall successes of the program have become apparent.

On federal state level are additional programs and strategies implemented

or planned. An overview is provided in the “ Biologische Vielfalt in Deutschland – Rechenschaftsbericht 2017“.

In those are in addition to the national strategy and independently as well measures described to maintain and improve biodiversity.

Forest management measures are subject to the Federal Forest Act (BWaldG) (BMEL 2015) and the State Forest Acts (LWaldG), which fulfill the requirements of the BWaldG and require management and site planning. The occurrence of special conservation values is also considered, i.e. in forest management plans. §11 of the BWaldG requires on principle to consider the forest function “ecosystem” (BMEL 2015) in forest management activities.

In addition to monitoring individual species, habitats in Germany are also protected through Natura 2000 management plans. Natura 2000 intends to conserve biodiversity and combine it with the sustainable development of land and natural resources.

The multifunctional approach to forest management tries to take biodiversity protection into account, among other things by Forest conversion of coniferous and deciduous wood or increasing portions of dead wood to protect biodiversity. As described in indicator 1.1.1, the Forsteinrichtung is providing inventories of several categories, Natural habitats, biotopes, Natura 2000 areas and a lot more are identified, described and mapped. One part is the Waldbiotopkartierung (WBK) as integral part of the mapping of forest functions (Waldfunktionskartierung). In the later planning process, care measures are defined and put into long-term and annual planning. One aspect among many is the inventory of carbon stocks in forests. Here is the standing biomass and the soil carbon to mention and binding regulations for the proportion of dead wood (Microhabitats) per ha. The specific handling is regulated on federal state level in individual laws and regulations.

As there is no established procedure to measure biodiversity, one approach is to determine the forest development phases in seven categories and monitoring the biodiversity in each phase. With mapping as shown below and the data from monitoring, a biodiversity indication could be derived. This is established common practice in several federal states in Germany and executed within the scope of regular forest inventories.

Germany ranks on place 6 of the so-called Environmental Performance Indicators (EPI) for the aspect of biodiversity / habitats in 1st place as compared to international standards.

Germany has developed a national Biodiversity Strategy that integrates the targets and which have been integrated i.e. in the BNatschG and progress is documented.

On non-governmental side there is significant scientific research going on focusing on biodiversity, not at least as this topic gains more and more attention in the public awareness.

The risk designation is ‘low risk’.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.2.5 The BP has implemented appropriate control systems and procedures for verifying that the process of residue removal minimises harm to ecosystems.

Specific risk description: The German Forest Act states that the intention of the Forest Act is to maintain and protect forests of Germany and increase the forest area. An additional intention is to promote the sustainable management of the forests, including an explicitly stated objective of maintaining and increasing the biological diversity of the forests.

Residues are removed in connection with thinnings, selective logging and clear cuts, carried out as an integrated part of the logging operations in forests. It is common practice to remove residues after felling operations, either for the production of biomass feedstock or for firewood.

Removal of residues occur in connection with removal of wood vegetation from protected open habitats like heaths and bogs where the aim is to regulate the wood vegetation in order to maintain the characteristic of these open habitats. As these habitats are generally protected by law the removal of wooden vegetation shall be carried out without negative impact on the ecosystem and consequently it would be illegal if residues are removed in a way that causes harm to these ecosystem.

As mentioned in 2.2.3 there are appropriate control systems and procedures to ensure that ecosystems are protected.

Unavoidable interventions and removal of high conservation value forests or habitats require a prior environmental impact assessment or a separate authorization from superior forest authorities.

Water and soil are protected. Because of that, the damage by processes of residue removal is excluded or of minimised harm to ecosystems.

Sustainable conservation of soil fertility is predefined by (federal) law (e.g. §4 & §5 Landeswaldgesetz Rheinland Pfalz).

§7 of the Federal Soil Protection Law obliges (forest) owner to protect soils against threats to soil quality.

The demand for energy wood has also made weaker assortments and crown material profitable and led to increased use. In the environmental policy debate, too, the use of energy wood plays an increasingly important role in reducing CO₂ emissions. Forestry products are a considerable carbon sink both in conventional use and in the form of energy wood, or at least have a positive effect on the CO₂ balance by substituting fossil fuels. In the general euphoria, it is often overlooked that there are also restrictions on different legislative level (e.g. §7 Bodenschutzgesetz; §4 & §5 Landeswaldgesetz Rheinland Pfalz; other federal state legislation) on the use of energy wood, which result from the functioning of forest ecosystems and their nutrient balance. Also as significant parts of the German forests are PFC and/or FSC certified, the respective regulations apply for the use of biomass.

In the long term and sustainably, forest ecosystems only function according to the principle of closed nutrient cycles, as a "closed loop

economy" (Fig. 2, left). In the unaffected primeval forest all absorbed nutrients are sooner or later returned to the soil via litterfall and deadwood. The nutrient losses here are very low and are in balance with the additional supply from the weathering of minerals and the input with precipitation. The situation is different when humans intervene: When forests are heavily polluted by pollutant inputs, the originally closed material cycles break down and nutrient losses occur with the seepage water (Fig. 2, right). Pollutants are introduced, nutrients leave the forest soil in exchange with the leachate. The material balance is disturbed and the soil acidifies. A similar situation occurs when nutrients are removed from the forest together with the biomass during use. The orange arrow in figure 2 symbolizes this withdrawal. The material inputs from the atmosphere also contain nutrients which, together with the weathering of minerals in the soil, can at least partially compensate for the nutrient losses caused by leachate discharge and use withdrawal. However, through intensified biomass use, forests can quickly experience greater losses than are covered by the revenues. This situation must be avoided in order to maintain the fertility of the soil as working capital undiminished. In practice the forest owner, beside being bound by law, is interested to preserve soil quality as one cornerstone of sustainable forest management and therefore future yields and profits from growth of the forest. As the majority of nutrients are accumulated in needles and leaves, this prevents a significant loss of nutrients. If the nutrients supply is decreasing, expensive countermeasures have to be taken to restore the supply by fertilizing. This is widely known and respected by forest owners, so the preservation of soil fertility and quality is in their own interest. As a consequence the soil situation is considered in common practice by the forest owners to which extend biomass is removed. For instance in spruce or pine forests most of the harvest residues are left in the forests and when broadleaf trees are harvested, the biomass is significantly later than the harvest removed to retain the leaves in the forest. If the forest is certified, the respective regulations have to be met anyway. As mentioned in indicator 2.2.2, the BZE ranked the nutritional conditions of trees in general as good. This indicator helps monitoring the soil conditions and gives indications on the necessary remain of biomass in the forests.

Since 2009 there is data from the second Bodenzustandserhebung (BZE 2), to categorize forest soils according to their nutrients supply. (see also 2.2.2)

The development of growth in forests with biomass use in form of forest residues is partially monitored by federal state forest authorities and by several research institutes to develop a documentation system and to give recommendations for future use of forest residues. (See also 1.1.1)

There is no available evidence challenging a 'low risk' designation.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.2.6 The BP has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised (CPET S5b).

Specific risk description: In Germany, the forests are bearing a legally binding protection status and which fulfil the following functions (in accordance with the federal forest act, §12): protection against damaging environmental influences sensu the German federal emissions protection act (Bundes-Immissionsschutzgesetz, BImSchG) of 15 March 1974 (Bundesgesetzblatt I, p. 721), erosion by water and wind, desiccation, damaging run-off of precipitation and avalanches.

Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves.

Forest function maps using the example of Lower Saxony. Here the individual protection zones including water protection areas are marked. Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. The natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield.

This applies to all federal states in Germany. More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. The specific measure (harvesting under various conditions, forest road maintenance or building, pest or calamity management,...) provides specific risks to the environment. Not only regarding water protection, these guidelines request an individual risk potential analysis when planning the operations. Basis are for instance data from the Forsteinrichtung and all accompanying data like the mentioned Waldfunktionskarten etc. Result of the planning must be, that the risk to harm ecosystems, habitats or applicable is negligible. The use of such guidelines is mandatory to consider and implemented in common practice.

In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).

Every federal state has the authority to monitor the implementation of the law by the forest supervision ("Forstaufsicht").

In general there are two kinds of negative impacts on water by biomass generation.

1. Contamination with substances

Certified forests and companies (PEFC and FSC) are obliged to use bio oils in machinery that are biodegradable. As contractors with own machinery work on order of the forest owners and the majority of forest

areas is PEFC or FSC or both certified (see graphic below) the vast majority works with applicable certification standards and use biodegradable fluids. From time to time, federal state forest authorities take fluid samples and test for biodegradability.

Therefore most contractors work in private forests as if in certified forests, as they do not change back to mineral oil or switch to tires that are not soil protecting, for works in private forests.

2. consequences of biomass harvest concerning changed waterflow, erosion protection, etc.

Prevention of such consequences is a matter of following best practise, certification requirements and not least applicable law.

Biomass is typically a by-product of round wood harvest which has more economic value and therefore such harvesting operations are usually accompanied and controlled by the ordering forester to. Those controls then include the biomass harvest as well, so to say as a side-effect of roundwood- harvest. According to waldkontors own harvesting company, more than 90% of the operations are at least once visited by the responsible forester or client. Maintaining the forests productivity is a crucial aim for future incomes and water protection, protection from erosion etc. is a key factor to achieve this aim. So beside laws and regulations, an intrinsic motivation of forest owners results in respective control mechanisms.

Forestry is a land use that is particularly beneficial to water protection. In this context, compliance with the legal framework, such as forest and water laws, is a basic requirement for water-protective forestry. The aim of sustainable and near-natural forestry, to preserve forest ecosystems adapted to the location, is generally in line with the requirements of effective water protection. The water-protecting effect of forests can be impaired by external factors, e.g. germination by wildlife, acidification and nutrient surpluses due to the combing effects of trees in the presence of air pollution.

Non-forest biomass is harvested under the same preconditions as biomass from forests. Applicable laws and regulations are to be known and followed by executing companies. Depending on the federal state, the legislation predefines measures and behavior when working near or next to open water or with regards to ground water.

As described in indicator 2.2.3, planned operations are often, sometimes mandatorily discussed with relevant authorities and detailed work instructions to ensure environmental protection in general, are given to the contractors.

Also in contrast to forest works, the non-forest biomass is harvested under the eye of the public, what leads to an enhanced sensitivity with the contractors, as they must expect every violation against laws and regulations will be reported to police or authorities,

According to interviews, the public opinion on allowed measures is usually more strict than applicable legislation.

The Federal Nature Conservation Act (“Bundesnaturschutzgesetz”) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries). In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These

are equally binding for all forest owners.

On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.

The following statistic shows the cases of violation against water protection laws nationwide. The cases refer to pollution of surface water, ground water and sea water in general. No specific data for forests is available.

The case 'water' is also discussed in indicator 2.5.2.

The risk designation is 'low risk'

Mitigation measure:

Country:

Germany

Specified risk indicator:

2.2.7 The BP has implemented appropriate control systems and procedures for verifying that air quality is not adversely affected by forest management activities.

Specific risk description:

Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types. On sites visits by authorities for water protection and nature conservation are done on a regular basis.

The aim of the German Air pollution Prevention and climate Protection Policy is to reduce air pollution and climate emissions in the long term. The exact knowledge of the emission situation is fundamental for the necessary strategies and measures.

For this purpose, a reporting system has been set up with which the proportionate emission quantities are determined and published annually. This information and data are collected and calculated on the basis of national, European and international conventions and agreements. Emissions are reported in uniform structures, on specified dates and accompanied by comprehensive documentation and quality assurance and control regulations.

In the national trend tables, the contributions of the individual source groups to the total emissions of greenhouse gases are shown. Other emissions are the absolute dominance of energy related emissions. Overall, emissions of greenhouse gases and other air pollutants have fallen significantly since 1990. Considerations of the individual components prove this trend to a different degree.

In addition it needs to be mentioned, that the vast majority of the emissions referred to in the following statistic is emitted by the transport sector, the energy sector, industry, and the agricultural sector.

There is no available evidence challenging a 'low risk' designation.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.2.8 The BP has implemented appropriate control systems and procedures for verifying that there is controlled and appropriate use of chemicals, and that Integrated pest management (IPM) is implemented wherever possible in forest management activities (CPET S5c).

Specific risk description: Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types.

There are no statistics available relating to regular on-site visits by relevant authorities focusing on environmental requirements; however on-site visits are a known measure of control and planning. On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act. In cases of violations penalties are in place and are implemented. Environmental NGOs function as watchdogs, also the public is present in most of the forests and natural sites for recreational purposes. According to forest authorities, most of the reported pollutions and violations of laws and restrictions, are reported by the public. For private forests, the silvicultural guidelines are only recommendations, but of course private forests are also bound to national and federal law. Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. Fertilizers and pesticides must only be used in accordance with the provisions of the agricultural and forest legislation. In accordance with the German legislation fertilization in a conventional sense is excluded to a major extent for forest management.

Pesticides may only be applied in Natura 2000 areas if their use has been carefully tested for compatibility in a nature conservation approval procedure under EU nature conservation law. The Federal Agency for Nature Conservation (BfN) and the Federal Environment Agency (UBA) have now developed a guideline for the competent state authorities on how to carry out this assessment.

Natura 2000 sites, i.e. fauna, flora, habitat and bird sanctuaries, together form the EU network of protected areas Natura 2000, which was established to protect particularly endangered animal and plant species and habitat types. New scientific findings now show that the use of pesticides is particularly problematic in nature conservation terms. This is especially true when the agents are to be applied by helicopter, because such an application from the air does not allow the targeted treatment of individual trees, but inevitably affects larger areas.

If impairments of a Natura 2000 area and its protected assets cannot be reliably excluded by the use of pesticides, an FFH compatibility assessment must be carried out in any case. A permit may only be granted after a thorough investigation. BfN and UBA explain in their updated information paper "Plant protection with aircraft" which exact nature conservation regulations must be observed in the approval procedure for such applications

Common practise and communicated aim of all federal state forests and most of private forests is to keep the use of chemicals as low as possible. For cost reasons and not at least because of the (public) awareness. A core principle of integrated pest management in german forests is, that the use of pesticides is only to be considered as an ultima ratio, when all organisatory and technical countermeasures have proven insufficient. In recent times hot and dry summers and mild winters lead to a wide spread of bark beetles in the central European regions. The mitigation measures are mostly harvesting of infected trees and areas. Those logs are commonly transported as fast as possible out of the forests to prevent further spreading. In parts this is not possible and the use of approved chemicals come to use on the log piles. This is regulated by applicable laws mentioned in the means of verification. Also it is common practise, that this work is closely monitored by foresters. In praxis, the use of chemicals in large scale is not efficiently to handle, as the piles to treat should not exceed 2m height and 20 scbm in volume. Otherwise only the top layer of logs is treated. Due to the very high volumes of bark beetle infested logs that are harvested, the piles usually exceed hundreds of scbm. The method of choice of several federal state forest administrations for the moment is, to sell the beetle logs for very low prices under the condition to remove all volume shortly after the sale. Therefore the use of chemicals in german forests is according to interviews with forestowners and foresters only an exemption in the scope of pest management.

Federal states have different legislation and regulation regarding the integrated pest management, the common practice does also differ due to different forest types, but laws like the "Bundesnaturschutzgesetz", "Bundeswaldgesetz" and more on state level, are forming the framework for chemical use, as state legislation is superior to federal state legislation. If chemicals are used in forests, there is the obligation to have documentation of the details what chemical was used, how much, where it was used, who was involved. However, the use of chemicals on forest management unit is not reported to any entities, so there is no statistical data available. Interviews with forest management in federal state forests confirmed, that the extreme bark beetle outbreak lead to increased chemical usage in the hope to slow down or even prevent new infestation. One reported observation is, that the chemical pest control had only a negligible effect on the spreading. So the cost-benefit equation seems to be negative. Also working staff is rare and needed in other fields of pest control. According to interview partners, the use of chemicals in large scale, like treatment of log piles etc. is predicted to decrease. A selective use on small scale areas with regards to the individual situation with higher chance of success, will increase instead.

The following picture gives an overview of the information given on the approved chemicals within a database with all approved chemicals by the

“Bundesamt für Verbraucherschutz und Lebensmittelsicherheit”.

The chemicals law (“ChemG”) function as a protection of dangerous substances.

Germany ranks high on the worldwide governance indicator with rule of law and control of corruption, therefore it can be concluded that the existing legislation is effectively enforced.

Chemicals could only be bought with a “Sachkundenachweis”, a proof of competence according to §23 PflSchG.

At the moment 4 insecticides are approved by the “Bundesamt für Verbraucherschutz und Lebensmittelsicherheit“ for use against bark beetles.

According to the IRAC classification, all are category 3A chemicals. The closest distance to use next to surface water is 40 meters. When applied correctly in the intended purpose, all are rated not dangerous for bees. The active agents are instable in water and adhere to soil particles, where a degradation to non-toxic metabolites happens. According to research, no significant eluviation into ground water occurs.

PEFC takes all above into consideration and allows the uses of pesticides in cases of substantial dangers for the forest, under consideration of applicable plant- and environmental protection laws.

FSC does not allow the use of pesticides. If wood was treated, a period of 6 months need to pass, before it could be sold with a valid FSC claim.

As the form of application for products mentioned above, is direct and thick spraying on logs, an application by spraying from planes or helicopters would have almost none effect. The agent would deposit on branches and needles and not reach infested stem parts.

In general, the application by aircraft is forbidden in Germany and needs to be individually permitted by authorities.

There is on the other hand reported pest management by helicopter, against oak processionary. This caterpillar is benefiting from consequences of climate change as well and occurs in larger numbers as in the past. Not only is it a danger for oak forests, but also a significant danger to human health if getting in contact. Therefore an enforced fight against the spread is intended, especially in urban and non-rural areas. Forest areas are hardly target for this attention.

The application via aircraft is only approved, when other ground based methods are inadequate. As the oak processionary mainly lives in tree crowns, the tree height is one factor and helicopters come to use for heights above 20m. Also in contrast to bark beetle pest control, a deposition of active agents in the crown will be highly effective.

There are 4 products approved for application via aircraft. The most commonly used agent against oak processionary is “Bacillus turengiensis”. The mode of action works by degradation of larva intestinals. Technically it is not a chemical pest control, but biologically and strictly speaking not part of this indicator. For this indicator the area under assessment is determined to be ‘low risk’.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.2.9 The BP has implemented appropriate control systems and procedures for verifying that methods of waste disposal minimise negative impacts on forest ecosystems (CPET S5d).

Specific risk description: There are no significant impacts – from forest management activities or other forest owner-mandated activities – due to waste disposal in forests under any type of ownership in Germany. Interviews with foresters did not show that harvesting or any other forest works lead to waste disposal in the forests, put aside single cases that were reported and pursued. The majority of waste disposal originates from forest visitors. Littering and illegal waste disposal in German forests do occur along roads, parking spaces and recreational facilities, especially where these occur near cities and recreational sites that are often visited by forest guests. Whenever possible, the source of the waste is identified and authorities notified.

The purpose of the circular economy and waste disposal law (KrW-/AbfG) promotes the circular economy to conserve natural resources and ensure the environmentally sound disposal of waste. This law applies naturally to forest works as well.

In reference to the aspect of sustainability (2.4.2), forest management in Germany ensures the preservation of health, vitality and ecosystem services of the forests.

The risk of negative impacts from waste disposal in forest is assessed to be 'low'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.3.1 Analysis shows that feedstock harvesting does not exceed the long-term production capacity of the forest, avoids significant negative impacts on forest productivity and ensures long-term economic viability. Harvest levels are justified by inventory and growth data.

Specific risk description: Harvesting permits do not exist in Germany. The legal owner of the forest is allowed to harvest or to sell harvesting rights, without additional permits. Related to activities in private to the purchase tenancy of claims the legislation shall not be violated (concerning taxes protection).

Official national forest inventories ("Bundeswaldinventur") do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. The main goals of management planning are to plan and evaluate the sustainable use of

forest resources, to control felling activities and to comply with sustainability. To take account of long-term developments in forestry, every ten to 20 years, public organizations establish a mid-term framework report (“Forsteinrichtung”), for which responsibility occurs at sovereign level.

The following chart shows the stock of standing wood and how it developed between 2002 and 2012.

In general it could be stated, that continuously the forest area and the growing stock (see below) is increasing.

When planning occurs in relation to public or private forests, reports have to be sent to the corresponding forest authorities for evaluation and control. Private organizations that are not obliged to do planning are subjected to a control mechanism by the tax assessment. The preparation of mid-term framework reports is done by officials or freelancing consultants. The results of the National Forest Inventory (“Bundeswaldinventur”) 2012 have demonstrated that the average timber stocks in German forests rose compared to earlier inventories, which is an indicator of sustainable forestry and proper planning.

The legal background for monitoring and planning is clearly regulated and enforced. Due to the good governance and law enforcement indicators described in the introduction, it can be concluded that there are no enforcement deficits. Management plans are publically available.

Planning and sustainable management is described in the statute books: Mid-term management planning (“Forsteinrichtung”) and annual planning (“Forstbetriebsgutachten”) are required in most cases. When plans are submitted to and approved by forest departments, harvesting measures are assumed, based on this planning. Therefore, the owner of the area or the harvesting rights does not need to ask for permission to carry out harvesting activities.

Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. A site-adapted selection of species and a persistent soil fertility for long-term usability must be ensured, the natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield.

Regarding the use of woodlands for forestry purposes, the aim must be to establish seminatural forests and to manage these sustainably without clear-cuts; with an adequate proportion of native woodland plants retained. Clear-cutting is prohibited, unless afforestation is completed in a reasonable time. Conversion of forests into any other form of land use is only allowed with a permission of a Federal State authority (“Forstbehörde”), when appropriate compensation measures take place.

This applies to all federal states in Germany. More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).

Forestry in Germany adheres to the concept of the multifunctionality of

forests, as is reflected among other things in the legal intent of the Federal Forest Act. This means that the forest area shall be preserved, increased and sustainably managed not only for its economic utility but also for its environmental values (e.g., the hydrological cycle, climate, landscape aesthetics, recreation) (BMEL, 2015).

Municipal public forests in most federal states are managed and thus supervised by state authority foresters, so that control mechanisms exist. Private forest organizations, which are bound only to ten-year planning, are thus controlled every ten years and, if the forests are not sustainably managed, the organizations are sentenced. For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. We are not aware of relevant cases in which sustainability was seriously compromised by small forest organizations.

As a consequence of storms, extreme dry years and a following bark beetle calamity, the volumes of calamity roundwood grew since 2017 from 12 mio scbm to 70 mio scbm in 2019. The predicted figures for 2020 in the following graph are most likely to be even higher than 2019.

Mainly affected by bark beetles is spruce in mid Germany and in the southern regions. Also eastern France, Czech Republic and Poland report bark beetle outbreaks and significant volumes of damaged wood. Those monoculturelike areas are often historically planted spruce forests on sites, where Spruce normally would not be dominant. One example is the Harz Region in the middle of Germany, where Spruce was planted in past centuries to meet the demand of fast growing wood for the mining industrie, to smelt ore and stabilize mine shafts.

After the second worldwar, reparations claims of victorious powers lead to clear cuts in many forests. Replanting Spruce was a common way to aim for a quick reforestation.

Exponential growth of bark beetles in the extreme years 2018 and 2019 lead to high volumes of infested trees. A high population pressure among the beetles lead to quick infestation and death of healthy trees, even beyond pure spruce.

Those infested trees and harvested logs, are to be removed from the forests as quickly as possible to prevent surrounding trees to be infested as well. As a result, some beetle stricken areas were clear cut.

The "Bundesministerium für Landwirtschaft und Ernährung" stated in June 2020, that 285.000 ha are to be replanted as the forest is a key factor for climate protection, biodiversity and rawmaterial source.

In 2019 a key issue paper was published to address the most important topics to deal with this crisis and open discussion for the announced Forest Strategy 2050. One result of the discussion, are financial aids of about 800 mio € until 2024. This includes beside replanting, the removal of infested trees, slowing down/preventing further infestation...

To cope with the changing conditions due to the climate change, scientific projects have been started on many levels, as several challenges are to be met.

è Selection of species to plant. The specific impacts of changing climate is only based on modulation. Diversification should be a key element. Also following an approach of the LWF Bavaria, to generate maps with regional risk based planting recommendations.

- è Establishing high supplies of seeds and nursed trees. In addition an infrastructure to be able to replant such areas in adequate time.
- è Transfer the knowledge to private forests. Strongly specified financial aids could act as incentives to restock forests in sustainable ways, instead of financially focused.

At this moment, there is no definite strategy what to plant and how to do it. Undoubtedly the areas are planned to be restocked with trees that cope with upcoming challenges of the ongoing climate change and lead to an ongoing, emotional debate, how to achieve this. One approach is to decrease the game density massively in afflicted regions to maximize natural regeneration. This debate started in the 80's in the last century and are now more up to date than ever

Until now, there is no governmental descission made, but a legaslativ draft was issued to amend the "Bundesjagdgesetz" in 2020.

Interviews showed that foresters are pleading for an amendment toward lower game density, as traditional hunters care for higher numbers to pursue their hobby.

The approach of lower density is also favoured by forest scientists.

Even though non-forest biomass is not assessed in this indicator, it is worth mentioning, that, where applicable, the long term viability and productivity is taken care of. As mentioned in 2.2.3 and 2.2.6, there is often a close cooperation with authorities in advance, when it is not a standard measure. This results in quite specific work regulations and instructions. Non-forest biomass is mainly generated while areas are (completely) cleared for construction projects like industrial site or infrastructure projects. In those cases, there is always an official approval from one or more authorities with regards to binding laws. This ensures appropriate compensatory measures and guarantees that the whole process was revised by governmental officials, regarding legal, social and ecological aspects.

Another source is road, rail, canal, etc. maintenance and securing the traffic safety. Top priority here is the avoidance of harm to human health, which ranks higher than ecological concerns. Nevertheless those measures are carefully planned and underlie defined regulations, depending on the state and responsible authority. As the correct execution of commissioned works is relevant to safety, the control mechanisms are quite strong.

The public sector is the biggest contracting entity for landscaping companies in Germany. From interviews and reviewed evidence, it is fair to contend, that biomass from those measures is bound by laws, closely controlled and often in cooperation with competent authorities. Therefore legality and sustainability for this biomass category are determined "low risk"

For this indicator the area under assessment is determined to be 'low risk'. As the descission process on measures is still ongoing, this indicator will be surveyed regularly.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.3.2 Adequate training is provided for all personnel, including employees and contractors (CPET S6d).

Specific risk description: Generally, forest managers and workers in Germany have a high level of education.

Basic training for skilled forest worker lasts three years and includes both practical placement and classroom education. The curriculum includes forest mechanization, ergonomics, health and safety, forestry techniques, biology and economics.

The ministry of education approves the curriculum.

Shorter and more specific courses are also available and even unskilled forest workers and contractors typically attend one or more trainings every year.

Foresters in Germany receive mandatory training in accordance with safety procedures and accident prevention.

Waldkontor is education forest workers annually in cooperation with different partners. For instance the regional forest worker school or with the local fire brigade to train the rescue chain. Those trainings are partially without preparation to simulate real conditions. New techniques from forest research or non-governmental institutions like the Kuratorium für Wald- und Forstwirtschaft (KWF) are adapted and new equipment is tested if it supports work safety. Also first aid and first response is trained regularly by every waldkontor forstworker. Every 2 years a medical examination by a designated occupational physician is mandatory. This covers beginning or existing conditions as well as preventative measures regard methods of working.

Personal protective equipment for foresters, or PPE forestry for short, is intended to help reduce the risk of injury when working in the forest, particularly when using a chain saw.

The following five items of equipment are part of a complete protective equipment:

The protective helmet for forestry work must be equipped with face and ear protection and comply with DIN EN 397, 352 and 1731. It should protect against falling branches. The wire mesh visor shows as much as possible, but protects eyes and face from whipping branches, splinters or sawdust. The helmet also indicates the location of the worker in a warning colour.

Hearing protection is essential to prevent permanent damage to hearing due to the noise of the chain saw.

A work jacket with sections in signal colours should indicate the location of the forest worker.

Protective gloves according to DIN EN 420 and 388. A cut protection insert in the gloves is only mandatory when working in work baskets.

The cut protection trousers should protect against injuries when working with a chain saw. On contact with the running saw chain, larger bundles of the long plastic fibres incorporated in the trousers (cut protection insert) are pulled out, wrap themselves around the chain saw drive wheel and block it in a fraction of a second. The cut protection trousers must comply with DIN EN 381 Parts 2 and 5.

Safety shoes or boots must have an upper length of at least 19.5

centimetres and be equipped with a non-slip sole, toe cap, ankle protection and cut protection in accordance with DIN EN 345 and 344 Part 2.

claus rodenberg waldkontor gmbh implemented regular safety educations for forest workers. Regular contractors are invited to be educated together with own personel. Those trainings "in the field" are commonly held together with institutions like local fire rescue or the "Lehranstalt für Forstwirtschaft" to simulate different kinds of accidents and train aspects of the rescue chain.

Within the scope of existing certifications like PEFC, FSC, RAL, annual educational measures are performed. This includes the mentioned safety trainings and education concerning work instructions regarding indicators mentioned in this template.

Measures and trainings are defined in waldkontors manual and constantly advanced.

Annual audits are performed by independent surveyors to check if the requirements of the mentioned certification schemes are met.

The risk for this indicator has been assessed as 'low'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.3.3 Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.

Specific risk description:

Nearly 500.000 people where employed in the wide range of the forest-, wood- and paperindustry in Germany in 2017. The vast majority of forest areas in Germany are privately owned, although the regional distribution of ownership types varies greatly. For example, the proportion of private forest varies between 24% in Hesse and up to 67% in North Rhine-Westphalia. The majority of those private forests consist of forest areas < 2ha and the majority of the forest working companies are one-man companies or smaller 5 employees. As those companies work on a very regional level, the local economy is benefiting.

Depending on the used source, up to 1.2 million people work in the wide frame of the wood cluster, what makes it the cluster with the most employees in Germany,

Accordingly, for this indicator the area under assessment is determined to be 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.4.1 The BP has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).

Specific risk description: Important large-scale landscape ecosystems have been identified and placed under protection in the form, for example, of national parks.

Management for forestry purposes is either prohibited or partially regulated. Although representatives of nature conservation interests may wish to see specific improvements in relation to the management of HCVs, essentially the risk based on the foreseeable threat of further fragmentation of the overall area of the landscape ecosystem and mosaics. The size of clear-cutting is regulated by law in Germany. Clear cuttings, which could lead to fragmentation on the size of landscape ecosystems, are in any case subject to approval and may require compensation and compensation. The licensing requirement also applies to the conversion of forest areas.

To protect landscape ecosystems and mosaics from fragmentation, different approaches are pursued in Germany.

Forest habitats and landscape ecosystems with forests are under protection and often set aside from forest management activities or managed with low intensity forest management.

The conservation value is present in the form of Natura 2000/habitat types of the Habitats directive (with exception of beech forest habitat types 9110 and 9130) and in the form of sites protected under the Federal Nature Conservation Act as landscape-level ecosystems and small habitats. Germany possesses 8,676 nature protection areas (BfN, 2016; Adler, 2014).

In addition, the Federal Nature Conservation Act (§30), the Federal State Nature Conservation Laws (e.g., LNatSchG BaWü, §24a) and the State Forest Laws specify special biotopes. Relevant forest biotopes in this context are fen woods, swamp forest, riparian forest, ravine forest, forest on stone runs, talus forest and subalpine larch and larch/Swiss pine forests (BfN, 2016). According to the national forest inventory (BWI) (BMEL, 2015), especially protected biotopes occupy ca. 593,000 ha, or 5 % of the forest area. In most cases (77 %) these are fen woods, swamp forest or riparian forests and other wet biotopes.

Certificates of exemption that give priority to timber production over other ecosystem services are issued only after an official impact assessment in individual cases. The threat assessment is, therefore, classified as 'low risk.'

As mentioned in criterion 2.4.2 the natural processes in forests are managed responsibly.

The forest management does not endanger food or water supply as carved out in criterion 2.5.2.

In reference to the aspect of sustainability (2.4.2), forest management in Germany ensures the preservation of health, vitality and ecosystem services of the forests.

The status of protected sites is documented and monitored in the midterm

planning (Forsteinrichtung) and is therefore respected when planning management measures. Controls are carried out by forest control (Forstaufsicht), employees of the Nature Conservation Federal Agency or by the police.

Environmental values in relation to timber harvesting activities are covered by Articles 8, 9 and 11 in the National Forest Act which contains effective regulations, but also the regulative framework for federal state laws. Further environmental requirements are also defined by each federal state in their guidelines for silviculture which are binding for municipal forests and state forests.

The Federal Nature Conservation Act (Bundesnaturschutzgesetz) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries). In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners (e.g. Bundes-Bodenschutzgesetz (BBodSchG): Soil Protection Act; Düngemittelgesetz (DüV): Fertilizer legislation; Düngemittelverordnung (DüMV): Fertilizer ordinance; Wasserhaushaltsgesetz (WHG): Water Resources Act; Europäische – Wasserrahmenrichtlinie: European Water Framework Directive).

Germany signed the Convention on Biological Diversity in 1992. In cases of violations penalties are in place and are implemented.

The risk designation is 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.4.2 The BP has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately (CPET S7b).

Specific risk description: Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types. There are no statistics available relating to regular on-site visits by relevant authorities focusing on environmental requirements; however on-site visits are a known measure of control and planning. On sites visits by authorities for water protection and nature conservation are done on a regular basis. Environmental NGOs function as watchdogs (see also CW Category 3) and bring up cases of non-compliances, which might lead to law cases and/or penalties respectively correction measures. For example, the German Federal Nature Conservation Act (BNatSchG) regulates the general protection of nature and landscape, the protection of certain parts of nature and landscape as well as of wild animal and plant species. Species and area protection, recreational use, provision for fines and penalties are addressed as well (BfN 2009). But also an adapted forest management compatible and connected with nature conservation

aspects is reflected. Each federal state has its own land conservation law, which is linked to the Federal Nature Conservation Act according to Art. 72 GG.

. Due to a very good structure of fire brigades in Germany, forest fires are effectively dealt with. In case of bigger fires, within the scope of administrative assistance, the German armed forces could be installed as support.

The forest act requires that forest owners maintain forest cover on forest land, as well as establishing resistant and resilient forests towards calamities such as pests, wind and climate change.

The main natural process that has negative impact on forests are storm calamities. Since 2017 exceptional growth in bark beetle populations, due to already weakened by storm, in forest areas, lead to a new form of calamity. It is the responsibility of the forest owners and/or managers to apply silvicultural methods that improve the stability of forest stands. As a response to this thread, the government decided in 2019 to provide financial aids of 800 mio € for the next 4 years to protect forest resources and replant infected areas.

In addition the forest structure at least in federal state forests is going to be changed from partially monoculture to a wider mix of species to help the forest dealing with calamities by natural resistance. Those measures are included in the strategic forest management planning.

Official national forest inventories (BWI) do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability. That ensures the development of sustainable and stable forests to resist calamities. As a countermeasure the salvage loggings overall and specifically due to bark beetle infection were increased. The following statistic, provided by the Federal Statistical Office, shows the regional effects on federal state level.

The following statistics show a trend of wood harvest due to calamities until 2013. This shows no specific trend. In the second statistic focusing on 2017 and 2018, a short term trend is observed due to 2 years of very hot and dry summers after a storm event in 2017, that gave a kick off for exponential bark beetle growth. As weather statistics show, the average temperatures increased of the last decades continuously what is attributal to the climate change and its impacts.

Representative areas of natural forest habitats and valuable ecosystems are identified and some of these have been given a protection status. Nature conservation and species protection as well as biodiversity conservation are already incorporated in the German legislation both at federal and state level.

The Federal nature conservation act regulates the conferral of protection status on monuments of natural heritage and natural monuments. Protection measures are effective and sufficient, as several laws do exist

(such as BWaldG, BNatschG, DSchG) and intensive mapping takes place.

The risk designation is 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.4.3 The BP has implemented appropriate control systems and procedures for verifying that there is adequate protection of the forest from unauthorised activities, such as illegal logging, mining and encroachment (CPET S7c).

Specific risk description: Germany enjoys well established forest legislation across all of the federal states. The legislation is applied reliably with respect to the legality of forest wood harvesting measures.

Germany scores 80 points on the Corruption Perceptions Index (CPI) 2019 on a scale from 0 (highly corrupt) to 100 (very clean). Germany ranks 9th out of 198 with rank nr.1 being the cleanest country.

Legal authority is given by the Federal Ministry of Finance and wood trading is recorded

Germany is not reported as a source for illegal timber.

As far as FSC Germany is aware, Germany is not deemed to be a source of conflict wood.

There is a high level of law enforcement in Germany.

Trading within Germany is regulated as described in the Handelsgesetzbuch or HGB (Commercial Code), which is also binding for forestry companies (HGB §§2, 3). Forestry companies must follow the trading laws described in the Commercial Code. A special case exists for companies that harvest timber in primary forests (HGB § 341), but this has no practical relevance in Germany. All documents are sent to the finance authorities for verification – also irrespective of size, turnover quantity and form of organization. All cash flows have to be documented to verify and to avoid illegal and black market profits.

There are only occasional reports on timber thefts, what is backed up by the following statistic that shows the estimated illegal logging volume in Germany is 0.

According to staff interviews and discussions with federal state foresters, illegal logging in Germany is, if any, happening due to unclear property boundaries, misread maps or comparable reasons. Waldkontor implemented control mechanisms like detailed mapping and work instructions combined with on site visits of responsible personal, to avoid the risk of accidental illegal harvest. Also annual internal trainings are performed to educate responsible staff concerning the requirements to prevent illegal harvesting according to PEFC and FSC-certification including the regulations of FSC Controlled Wood.

As already mentioned, Germany ranks high on the worldwide governance indicator with rule of law as well as above the Corruption Perception Index, which states the effectiveness of law enforcement.

Legal authority is the Federal Ministry of Finance and wood trading is recorded with the aid of bills or purchase agreements.

It is assessed that the risk from unauthorised activities in German forests is 'low'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.5.1 The BP has implemented appropriate control systems and procedures for verifying that legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest, are identified, documented and respected (CPET S9).

Specific risk description: Tenure rights are determined through the German Constitution and the Civil Code ("Bürgerliches Gesetzbuch"). Ownership of estates is documented in the Land Charge Register ("Grundbuch"). Customary rights to forest products do not legally exist; but there are traditions that are respected. These, however, refer to a small scale and small amount of use (e.g. traditional collection of non-merchantable wood by local citizens). In some cases, customary rights are registered via entries in the land register.

Based on United Nations and ILO definitions, no indigenous people exist in Germany.

Also, there is no Act in the German Constitution concerning indigenous people. Therefore, this indicator is not really applicable.

In 2013 the Federal Cabinet has adopted a draft Law for the Improvement of Public Participation and Standardization of Planning Procedures (PIVereinHG). With this Act, the Federal Government ensures that greater public participation is achieved in large projects. The law also serves to harmonize special regulations from different technical laws. Overall, plan approval procedures are in principle simplified and accelerated.

The Law for Freedom of Information (IFG) provides a precondition for access to official information of federal authorities. The entitlement to information or access to the files in the authority: Everyone is entitled to claim (Jedermannsrecht); There is no need to be concerned about the matter, either legally or actually. The information claim can be restricted, in particular by public and private interests of §§ 3 to 6 IFG (exceptions possible).

These acts allow citizen to receive information, participate in consultation and make statements.

As mentioned in indicators before, the majority of non-forest biomass originates from public orders and therefore underlies dense control mechanisms.

Orders from the private sector need more attentiveness from contractor's side. Interviews revealed, that a common practise is, to check new clients. For example if trees should be felled, one check could be if the client is the legal land owner or tenant. This could be done by tenancy agreements or via land office (Grundbuchamt) or land registry office (Katasteramt).

Identified laws are upheld. Cases where law/regulations are violated are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities.

Recognized and fair processes regulating conflicts surrounding traditional rights, including land use, are anchored in the German legislation. Some such conflicts arose in the federal states formerly belonging to East Germany (German Democratic Republic) following German reunification in 1990. The German authorities systematically pursued and processed these cases according to due legal process (STD40 005; Anh. 2B; 2.4). There are no indigenous populations in the Federal Republic of Germany, as defined by the United Nations (see also German FSC Standard, Principle 3) (STD40 005; Anh. 2B; 2.5).

There is no evidence leading to a conclusion of presence of indigenous and/or traditional peoples in the area under assessment; AND Other available evidence do not challenge 'low risk' designation.

Mitigation measure:

Country:

Germany

Specified risk indicator:

2.5.2 The BP has implemented appropriate control systems and procedures for verifying that production of feedstock does not endanger food, water supply or subsistence means of communities, where the use of this specific feedstock or water is essential for the fulfillment of basic needs.

Specific risk description:

Access to forests is generally permitted by law and is respected. Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest.

the natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield.

This applies to all federal states in Germany. More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).

The Federal Nature Conservation Act (Bundesnaturschutzgesetz) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries).

In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners (e.g. Bundes-Bodenschutzgesetz (BBodSchG): Soil

Protection Act; Düngemittelgesetz (DüV): Fertilizer legislation;
Düngemittelverordnung (DüMV): Fertilizer ordinance;
Wasserhaushaltsgesetz (WHG): Water Resources Act; Europäische –
Wasserrahmenrichtlinie: European Water Framework Directive).
On sites visits by authorities for water protection and nature conservation
are done on a regular basis. It is obligatory to notify/register water and soil
damages, e.g. as mentioned in the Soil Protection Act, the Water
Resources Act.

Mapping of forest functions for the individual forest areas, presents an
overview and valuation basis concerning utility, protection and recreation
functions. In addition to forest areas with particular importance for
individual forest functions, the forest function map also includes
topography and protected areas such as natural forest reserves, water
protection areas, soil monuments or nature reserves.

There is low/negligible threat to Special ecosystem services caused by
management activities in the area under assessment.
Fundamental, endangered ecosystem services including the protection of
water catchment areas and protection against the erosion of endangered
soils and slopes.

In Germany these are forests bearing a legally binding protection status
and which fulfil the following functions (in accordance with the federal
forest act, §12): protection against damaging environmental influences
sensu the German federal emissions protection act
(Bundesimmissionsschutzgesetz, BImSchG) of 15 March 1974
(Bundesgesetzblatt I, p. 721), erosion by water and wind, desiccation,
damaging run-off of precipitation and avalanches.

There is no compromising of fundamental needs by forest management
activities in Germany. Access to forests is legally regulated and the
provision of recreation forest is a part of the multifunctional approach to
forest management.

Local restrictions may arise in isolated cases, for example, during
harvesting operations, but these are provided for legally.

In Germany the regular biomass in form of wood chips is produced from
stem wood, forest residues, thinnings or from landscaping measures.
These production areas are not competing against agricultural areas, as
they are clearly separated by law and the land use form is not allowed to
be changed without permissions by responsible authorities.
Biomass production from short rotation plantation is also regulated by
authorities and does not play a significant role in Germany.

Based on the above, it is concluded that there is low risk of non-
compliance with the requirement.

Other available evidence does not challenge a 'low risk' designation.
Therefore the risk designation for this indicator is 'low risk'.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.6.1 The BP has implemented appropriate control systems and procedures for verifying that appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions.

Specific risk description: Tenure rights are determined through the German Constitution and the Civil Code (“Bürgerliches Gesetzbuch”). Ownership of estates is documented in the Land Charge Register (“Grundbuch”). The legal owner of an estate also owns the management rights of the estate, as long as no other laws are violated. Ownership of land is not legally valid, until the owner is registered in the Land Charge Register.

To establish a more efficient management, some small private forest owners are incorporated in Forstbetriebsgemeinschaften (‘forest enterprises associations’). Here, organizations keep the land ownership and the right to manage, but the management of several small forests is centralized. All owners have to agree to the management and harvesting plans of the association. So every single member is part of the decision making.

Fair working conditions are guaranteed by the ILO Fundamental Principles and Rights at work. Detailed description in indicator 2.7.5.

Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.

In addition, fair working conditions are ensured by the Allgemeines Gleichbehandlungsgesetz (AGG), Jugendarbeitsschutzgesetz (JArbSchG), Kinderarbeitsschutzverordnung (KindArbSchV),

Schwarzarbeitsbekämpfungsgesetz

(SchwarzArbG), Arbeitsgenehmigungsverordnung (ArGV), Das Fünfte Buch Sozialgesetzbuch (SGB V), Das Sechste Buch Sozialgesetzbuch (SGB VI), Das Siebte Buch Sozialgesetzbuch (SGB

VII), Arbeitszeitgesetz (ArbZG), Bundeselterngeld- und Elternzeitgesetz (BEEG), Bundesurlaubsgesetz (BUrlG), Kündigungsschutzgesetz (KSchG) and Mutterschutzgesetz (MuSchG).

Legislation and control mechanisms are in place and are constantly adapted.

The legal framework conditions were assessed previously as part of the legality assessment of the centralized national risk assessment and were classified as ‘low risk.’

There are no known conflicts relating to compulsory labor or child labor in Germany.

No information was found about Germany as being a source of conflict timber and the forest sector is not associated with any violent armed conflict.

Germany scores positive on all indicators reviewed in this context section. It is ranked relatively high on all relevant aspects such as a stable country, with good governance, absence of conflicts of any magnitude and it is a free country for all its citizens with a good justice system. Human rights issues are around migrants and asylum seekers, mostly, and are, in global context, minor

Recognized and fair processes regulating conflicts surrounding traditional rights, including land use, are anchored in the German legislation.

Some such conflicts arose in the federal states formerly belonging to East Germany (German Democratic Republic) following German reunification in 1990. The German authorities systematically pursued and processed these cases according to due legal process (STD40 005; Anh. 2B; 2.4). There are no indigenous populations in the Federal Republic of Germany, as defined by the United Nations (see also German FSC Standard, Principle 3) (STD40 005; Anh. 2B; 2.5).

There are identified core conflicts between nature conservation and various land uses (e.g. agriculture, forestry). However nature conservation requirements are widely applied within forestry concepts and forestry planning, e. g. in the form of mapping of the occurrences of strictly protected species, old and dead wood concepts for habitat conservation, selection of ecological forest management concepts and environmentally friendly harvesting methods, identification of FFH areas and habitat types in the forest as well as development of monitoring concepts by the state governments.

Disputes concerning forest management are prevented by the federal forest management plans. Each federal state drafts guidelines for silviculture which are obligatory for the forest management in municipal forests and state forests.

For private forests, those guidelines are only recommendations, but of course they are also bound to national and federal law. Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest.

Other available evidence do not challenge 'low risk' designation.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.7.1 The BP has implemented appropriate control systems and procedures for verifying that Freedom of Association and the effective recognition of the right to collective bargaining are respected.

Specific risk description: No information was found that proved that labour rights as well as the ILO Fundamental Principles and Rights at work are at risk.

Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND other available evidence does not challenge a 'low risk' designation.

The Observation (CEACR) document contains no information that leads to a 'specified risk' designation in Germany regarding ILO Convention C87.

Since 1972 exists the “Betriebsverfassungsgesetz” that guarantees the right to form an employee organization in every company. It is by this law prohibited to prevent such forms of organizations and the existing level of enforcement is high in Germany.

According to the Government’s report, employees in the public service (“Arbeitnehmer des öffentlichen Dienstes”), e.g. teachers employed under collective agreements in the education services of the Länder, do enjoy the right to bargain collectively, whereas civil servants (“Beamte”) do not have the right to bargain collectively because the legislative regulation of the civil service is a constitutionally endowed traditional principle of the civil service under article 33(5) of the Basic Law and because civil servants (“Beamte”) have the duty to exercise their functions lawfully, impartially and altruistically. The Government stressed that, even for particular groups of civil servants (“Beamte”), collective bargaining which is aimed at concluding collective agreements is incompatible with the principle of the legislative regulation of the civil service, and that this remains valid regardless of the outcome of wage negotiations by employees in the public service (“Arbeitnehmer des öffentlichen Dienstes”).

So there is a pecified risk of exclusion of the right to collective bargaining for foresters who are civil servants (Beamte) (see additional information for low risk indication).

In the forest sector in Germany, the number of employees employed by collective bargaining and the number of employees who are employed have declined for more than 10 years.

The different status groups "tariff workers" and "civil servants" are not considered by the BDF as a core problem with regard to the risk assessment of "controlled wood"!

The issue is of low relevance for IG BAU.

Rights like freedom of association and collective bargaining are upheld, except for foresters who are civil servants (Beamte). Experts of the Federation of German Foresters don´t consider this to be a core problem, but as negligible risk.

Other available evidence does not challenge a ‘low risk’ designation. Therefore the risk designation for this indicator is ‘low risk’.

Mitigation measure:

Country: Germany

Specified risk indicator: 2.7.2 The BP has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using any form of compulsory labour.

Specific risk description: Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.

There are no known conflicts relating to compulsory labor or child labor in Germany.

Germany signed the eight Fundamental ILO (International Labor Organization) Conventions (29, 87, 98, 105, 100, 111, 138, 182) which

represent principal rules on labor law.
Labor rights are respected including rights as specified in ILO Fundamental Principles and Rights at work.

No information was found that proved that labour rights as well as the ILO Fundamental Principles and Rights at work are at risk.
Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND other available evidence does not challenge a 'low risk' designation.

Regulations relating to illegal employment are described in Schwarzarbeitsbekämpfungsgesetz – SchwarzArbG (Act Against Illegal Employment).

In public forests, illegal work is not an issue due to the legal framework and requirements. Contractors working in public forests are required to include details of legal employment in their terms and conditions. In private forests, there are no known cases of illegally employed employers or contractors. Risk can arise in cases where workers (especially overseas workers) are hired as temporary assistant forest workers, e.g. after wind catastrophes. Since this is illegal, random inspections are carried out by the employers' liability insurance association.

There are no known significant cases of illegal employment in Germany in the forestry sector. The existing associations for subcontractors in the forestry sector are very active to set up certifications for subcontractors to guarantee a standard for quality management including wages, e.g. DFSZ or RAL Certificate GZ 244.

There is evidence confirming absence of compulsory and/or forced labor. Other available evidence does not challenge a 'low risk' designation. Therefore the risk designation for this indicator is 'low risk'.

Mitigation measure:

Country:

Germany

Specified risk indicator:

2.7.3 The BP has implemented appropriate control systems and procedures to verify that feedstock is not supplied using child labour.

Specific risk description:

There are no known conflicts relating to compulsory labor or child labor in Germany.

Germany signed the eight Fundamental ILO (International Labor Organization) Conventions (29, 87, 98, 105, 100, 111, 138, 182) which represent principal rules on labor law.

Further national laws covering minimum age, working hours and working conditions of children are based on two legal foundations, namely Kinderarbeitsschutzverordnung (KindArbSchV or Child Labor Protection Ordinance) and Jugendarbeitsschutzgesetz (JArbSchG) or Youth Employment Protection Act).

No information was found that proved that labour rights as well as the ILO Fundamental Principles and Rights at work are at risk.

Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law. The status on the ILO website for all 8 Conventions is 'in force' Further national laws covering minimum age, working hours and working conditions of children are based on two legal foundations, namely Kinderarbeitsschutzverordnung (KindArbSchV or Child Labor Protection Ordinance) and Jugendarbeitsschutzgesetz (JArbSchG) or Youth Employment Protection Act).

There are no known conflicts relating to compulsory labor or child labor in Germany.

Germany does not feature in the Child Labor Country Dashboard. No references to Germany regarding child labor or child trafficking.

Germany has ratified the Convention on the rights of the child. Most Länder have explicitly recognized children's rights in their constitutions.

Germany scores 'low risk' on the Child Labor Index.

"FSC Germany is not aware of any instances of child labor or of any violations of fundamental principles and rights of the International Labor Organization (ILO) occurring at work places in the forestry sector in Germany (STD40 005; Anh. 2B; 2.3)."

Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND the risk assessment confirms enforcement of applicable legislation.

Other available evidence does not challenge a 'low risk' designation.

The risk designation for this indicator is 'low risk'.

Mitigation measure:

Country:

Germany

Specified risk indicator:

2.7.4 The BP has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using labour which is discriminated against in respect of employment and occupation.

Specific risk description:

Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.

There is no information that leads to a 'specified risk' designation neither with relation to the forestry sector nor on any other specified risks in Germany regarding ILO Convention C111.

There are activities to reduce the payment gap as well as the issue of gender inequality or discrimination gains recognition in special support programs for women, girls to get involved in technical, scientific jobs. A special representation of women's interests in the forestry sector has been established in form of the association "Forstfrauen".

<http://forstfrauen.de/der-verein/>

It is estimated that 1.5 million workers a day in Germany are victims of on-the-job bullying.

Germany is watching the suit closely as it struggles with integration and discrimination.

Discrimination and racism are problems that immigrant groups have faced in Germany for many years.

There is also a specific risk for discrimination because of foreign names. In 2006 Germany has implemented a "Law for Equal Treatment" (Allgemeines Gleichbehandlungsgesetz (AGG)). Its object is to prevent or eliminate discrimination because of racial or ethnic origin, gender, religion or belief, disability, age or sexual identity.

The rights of handicapped people are protected via the AGG as well as "Schwerbehindertengesetz" (SchwbG) in Germany.

The gender pay gap is no specific risk because of the opportunities for women in Germany to express themselves freely for their rights and because of existing legislation to protect women's rights to close this gap and because of support programs for women in technical professions or management positions, there is no danger of serious discrimination.

There is evidence of structural socio-cultural discrimination at the workplace. Germany tackles this issue via different instruments, e.g. studies have been undertaken in context with the National Integration Action plan and there are measures to improve transparency. There is no special reference to people working in the forestry sector describing a higher imbalance.

Germany is in the process of implementing European legislation and strengthening civil society measures to address these problems. The fact that the German government and non-governmental organizations are active in the field of combating discrimination, carry out surveys, offer access to advice and legal instruments and that these findings and legal cases are public, shows the existing / increasing sensitivity. With regard to this issue, freedom of expression, freedom of information and legal recognition, there is no clear evidence of high risk in the forestry sector or that this risk is comparatively high. There are indications that confirm for a low incidence of forms of discrimination in relation to employment and/or occupation and/or gender and indications of occurrence. Instances of reported discrimination in the workplace are not widespread and no specific cases have been found in forestry. This is also confirmed by an expert survey. While taking the precautionary approach into consideration, the evidence found does not challenge a 'low risk' designation.

Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND the risk assessment for relevant indicators of Category 1 confirms enforcement of applicable legislation ('low risk').

Other available evidence does not challenge a 'low risk' designation. The risk designation for this indicator is 'low risk'.

Mitigation measure:

7.2 Monitoring and outcomes

n/a

8 Detailed findings for indicators

Detailed findings for each Indicator are given in Annex 1 in case the Regional Risk Assessment (RRA) is not used.

Is RRA used? No

9 Review of report

9.1 Peer review

Reviewed by Sebastian Johanning on 16.11.2020. Bachelor degree in forestry at the Büsgen- Institute at the University Göttingen in 2009. Master studies in the field of biodiversity, ecology and evolution at the Georg-August-University Göttingen. Graduation 2011 with the final grade very good. Since then worked as a freelancer biologist for the University Göttingen and the lower nature conservation authority. Since 2017 engaged as research assistant at Büsgen- Institut Göttingen. Sebastian Johanning assumes no responsibility or liability for accuracy of information contained in this report.

9.2 Public or additional reviews

n/a

10 Approval of report

Approval of Supply Base Report by senior management			
Report Prepared by:	Holger Schwarz	Biomass Manager	2020-12-07
	Name	Title	Date
The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.			
Report approved by:	Claus Rodenberg	Managing Director	2020-12-07
	Name	Title	Date
Report approved by:	Dr. Niko Wischnewski	Head of Biomass	2020-12-07
	Name	Title	Date

Annex 1: Detailed findings for Supply Base Evaluation indicators

	Indicator
1.1.1	The BP Supply Base is defined and mapped.
Finding	<p>The supply base is defined as the political German boundaries. Maps are available in scale up to small forest roads, provided by appropriate computer programs. Waldkontor is using NavLog maps.</p> <p>On forest level maps are originated due several actions in combination with forest management planning like “Bundeswaldinventur” a national forest inventory or the “Forsteinrichtung” as an instrument for the mid- and longterm planning.</p> <p>As it plays an important role in forest management and will be regularly referred to later in this risk assessment, this indicator will give a brief overview of the forest management planning in Germany.</p> <p>On state level §41a of the “Bundeswaldgesetz” determines the execution of a large scale forest inventory. This comprises all German forest areas. Surveyed categories are for example:</p> <ul style="list-style-type: none"> - Forest area and changes since last inventory - Stock and changes since last inventory - Species distributions and changes - Growth rates, harvest volume, planted volumes - Forest structure and age distribution - Biotopes, protected areas, dead wood, - Animal density and damages due to this - Owner structure - Forest situation and health - Carbon stock and changes - ... <p>This data is available to the public and is the basis for long term planning and political decisions. Also it acts as basis for carbon-reporting in the scope of the Kyoto-Protocol. The results of the National Forest Inventory (Bundeswaldinventur) 2012 have demonstrated that the average timber stocks in German forests rose compared to earlier inventories, which is an indicator of sustainable forestry and proper planning.</p> <p>Also on state level and in cooperation with the federal states, as part of the environmental monitoring of forests, the “Bodenzustandserhebung” (BZE) is executed. The following map shows the sites where the survey was sampled.</p> <p>Among many other indicators, carbon stock and development, acidity, soil types, nutrient situation, nitrogen situation and else where determined and measured. Therefore 1.900 sample holes were digged and more than 50.000 samples were taken</p> <p>Also on state level the “Kohlenstoffinventur” is executed to cover the time between</p>

“Bundeswaldinventuren” and gain additional data also in the scope of the steady environmental monitoring and for reporting of national greenhouse gas balances.

The last Kohlenstoffinventur was executed in 2017. The focus was on bound carbon in the standing stock, in dead wood and in the floor layer.

Regarding stock information, the “Kohlenstoffinventur” is quite similar to the “Bundeswaldinventur” and helps to have an up to date overview of the inventory.

All data is publicly available and part of forest management planning information basis.

On federal state level a so called “Waldbiotopkartierung” (WBK) a mapping of all biotopes is mandatory and executed regularly. This data will also be used in the later mentioned “Forsteinrichtung”. The WBK is part of the process of mapping forest functions and catalogues all biotops inside and outside existing protected areas. Those maps and data are available from the forest authorities as an instrument for forest management planning.

Contents of this WBK are for example:

- Local climate
- Soil situation
- Immissions of any kind
- Form of usage and the intensity
- Flora and Fauna inventory
- Special structural elements
- ...

On forest level, defined by federal state forest laws, the “Forsteinrichtung” is executed by forest owners. A strategic planning is made every ten years. Based on this, a detailed plan for the organization is prepared every year. Therein, harvesting measures and volumes are calculated based on a sustainable use. The planning is checked and monitored by the relevant authority (which is different in the federal states due to varying administrative structures). Also private forests of a minimum size are required to undertake planning activities (the particular size is stipulated by each federal state, with the minimum size of about 30 ha). For small private forests, this type of planning is recommended but not mandatory. Based on this planning, forest authorities have measures to control and monitor forest use. These authorities vary from federal state to federal state

The process of “Forsteinrichtung” leads to a data collection the so called “Forsteinrichtungswerk”. This is the basis for the annual planning and the practical work in the forests. It consist essentially of following points and takes data and maps from inventories and also mentioned above into consideration:

- Betriebsbuch: Description of forest, inventory, planning of measures, analysis tables
- Flächenwerk: catalogue of forest boundaries, districts, subdistricts, departments
- Kartenwerk: maps of forests including infrastructure and above mentioned categories

On local level so called “Horstschutzzonen” (eyrie protection zones) are identified and mapped in maps included in the “Forsteinrichtung”. These are protected zones around breeding trees of large birds. They are usually identified by foresters, but also by forest workers. The regular education includes identifying such trees. Those zones are protected by individual federal state law (e.g. 25 BbgNatSchG). Size and form of protection is individually regulated and includes measures like prohibition of forest works and hunting in a specified radius.

The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability.

	<p>For private forests, different regulations do exist; which are described in the Federal Forest Acts, varying between the different federal states.</p> <p>When planning occurs in relation to public or private forests, reports have to be sent to the corresponding forest authorities for evaluation and control. Private organizations that are not obliged to do planning are subjected to a control mechanism by the tax assessment. The preparation of mid-term framework reports is done by officials or freelancing consultants.</p> <p>Municipal public forests in most federal states are managed and thus supervised by state authority foresters, so that control mechanisms exist. Private forest organizations, which are bound only to ten-year planning, are thus controlled by forest authorities every ten years and, if the forests are not sustainably managed, the organizations are sentenced. For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. We are not aware of relevant cases in which sustainability was seriously compromised by small forest organizations.</p> <p>The legal background for monitoring and planning is clearly regulated and enforced. Due to the good governance and law enforcement indicators, it can be concluded that there are no enforcement deficits. Management plans are publically available and it is common practise to use the data of the "Forsteinrichtung" to plan forest work by determining borders, protected areas, forest structure, water situation, soil situation etc.</p> <p>In private and state forests the forest planning ("Forsteinrichtung") is the basic description of the supply base. The timeframe is typically a planning period of 10 years. The preparation of mid-term framework reports is done by officials or freelancing consultants. The validation of those plans is done by the responsible forest authority (Forstbehörde) or by publicly appointed and sworn assessor.</p> <p>Germany is ranked 165 out of 178 countries on the Fragile States Index 2015. (nr 1 being the most fragile state). This ranks Germany in the category Sustainable with only Finland being in the highest category very Sustainable.</p> <p>For this indicator the area under assessment is determined to be 'low risk'.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Maps to the appropriate scale are available - Key personel demonstrate an understanding of the supply base - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" - Federal Forest Acts <p>Results of Bundeswaldinventur ("national inventory 2012"). "Stock rose again"</p>
<p>Evidence Reviewed</p>	<p>https://www.bundeswaldinventur.de/index.php?id=543&L=3 http://www.gesetze-im-internet.de/index.html https://www.bmel.de/DE/Wald-Fischerei/Waelder/_texte/Bodenzustandserhebung.html http://www.landesrecht-mv.de/jportal/portal/page/bsmvprod.psm1?nid=f&showdoccase=1&doc.id=jlr-WaldGMV2011pP11&st=lr https://www.fva-bw.de/daten-und-tools/geodaten/waldbiotopkartierung?tx_gdfvascripts_scriptwrapper%5Bscript_file%5D=wbk_daerst.html&cHash=45eb1b8d3c906eab229847a3b7e6b60f https://www.bundeswaldinventur.de/kohlenstoffinventur-2017/ https://www.bmel.de/SharedDocs/Downloads/Broschueren/Waldboden-Bodenzustandserhebung.pdf?__blob=publicationFile https://www.bundeswaldinventur.de/service/publikationen/artikel-und-verordnungen/artikel-aus-der-fachzeitschrift-afz-derwald-142019/?L=0</p>

	https://www.bundeswaldinventur.de/fileadmin/SITE_MASTER/content/Downloads/CI2017/AFZ_14_19_Kohlenstoff_Artikel_8_Schmitz.pdf
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
1.1.2	Feedstock can be traced back to the defined Supply Base.
Finding	<p>The supply chain is usually completely in hands of waldkontor. The biomass is purchased either free forest road or even as standing trees. Waldkontors purchase personell marks the origin in digital form with GPS coordinates and relevant information like origin, seller, volume, certification, species etc. so every load can be traced back to an individual forest due to steady documentation throughout the whole supply chain.</p> <p>In the following transport chain, those information are always traceble in digital form. Trading within Germany is regulated as described in the Handelsgesetzbuch or HGB (Commercial Code), which is also binding for forestry companies (HGB §§2, 3). Forestry companies must follow the trading laws described in the Commercial Code. A special case exists for companies that harvest timber in primary forests (HGB § 341), but this has no practical relevance in Germany.</p> <p>There are occasional reports on timber thefts.</p> <p>Central foreign-trade documents for the import of goods are the certificate of origin and the import permit. Reports are controlled by the Federal Customs Authority ("Bundeszollverwaltung").</p> <p>Traders need to follow the procedures. Otherwise they have to face penalties in form of fines or even trials.</p> <p>FSC Germany is not aware of any cases of corruption in relation to the granting or assignation of felling licenses or in other areas of law enforcement in relation to wood harvesting in Germany or in the trade of German wood.</p> <p>Waldkontor is using onwn delivery notes to trace back the material and to document origin, species, certification, volumes, purchasing and transportation dates, seller as mentioned above. If buying already chipped material, the same information are asked from the supplier to be provided to waldkontor. In irregular intervals suppliers are visited on site to survey the process and valididate the given information along the supply chain. Such visits are to be documented and commented to evaluate the suppliers risk. This applies to forest and non-forest areas and regards legality, sustainability and work safety as well.</p> <p>Therefore, the criterion is considered as 'low risk'.</p>
Means of	<ul style="list-style-type: none"> - Contracts with the selling party define the origin to a specified harvesting area - Invoices, transport documents

Verification	<ul style="list-style-type: none"> - Strong national legal framework - Handelsgesetzbuch (HGB) 1897 (BGBl. I S. 1474) - "German Commercial Code" 1. Article 2 <p>FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)</p>
Evidence Reviewed	Waldkontor certification manual, operating procedures http://www.gesetze-im-internet.de/index.html
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
1.1.3	The feedstock input profile is described and categorised by the mix of inputs.
Finding	Waldkontor tracks purchased material by assortments. Roundwood in different qualities, wood chips , saw by products etc. Species are defined if possible, otherwise a separation between softwood and hardwood is realised. Data is digitally available
Means of Verification	<ul style="list-style-type: none"> - Harvesting records - Transport documents - Invoices from seller <p>Contracts with selling party</p>
Evidence Reviewed	Waldkontor certification manual, operating procedures
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
1.2.1	The BP has implemented appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Supply Base.
Finding	Waldkontor has a Risk Assessment system in place to meet the requirements of FSC Controlled Wood within the difined supply base.

	<p>Tenure rights are determined through the German Constitution and the Bürgerliches Gesetzbuch (“Civil Code”).</p> <p>Ownership of estates is documented in the Land Charge Register (“Grundbuch”). The legal owner of an estate also owns the management rights of the estate, as long as no other laws are violated.</p> <p>Ownership of land is not legally valid, until the owner is registered in the Land Charge Register. Purchase of land requires a formal agreement by both parties. If there is no entry in the Land Charge Register or if the ownership of the land tenure is not yet registered in the Land Charge Register (e.g. in the event of new structuring and merging of plots), the organization has to prove with appropriate documentation, that it owns the forest and therefore has the right to manage it. To establish a more efficient management, some small private forest owners are incorporated in Forstbetriebsgemeinschaften (‘forest enterprises associations’). Here, organizations keep the land ownership and the right to manage, but the management of several small forests is centralized. All owners have to agree to the management and harvesting plans of the association.</p> <p>(When considering the different ownership relationships, the types of ownership have been designated as Habitats sites by varying parts: 5% state forest, 46% federal forest, 21% municipal, communal forest and 28% private forest (with different shares in the federal states).</p> <p>Therefore, the criterion is considered as ‘low risk’.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Strong national legal framework - FSC National Risk Assessment - Grundbucheintrag (entry in the Land Book) - Pachtverträge (“Contracts of farm leasing”) - Steuerbescheid (“tax assessment”) - Bürgerliches Gesetzbuch (BGB) in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738) "German Civil Code" - § 873 (1): Acquisition by agreement and registration - Grundbuchordnung in der Fassung der Bekanntmachung vom 26. Mai 1994 (BGBl. I S. 1114) GBO - "Landbook Rule". - Grundgesetz für die Bundesrepublik Deutschland vom 23. Mai 1949 (BGBl. I S. 2438) “German Constitution” - Article 14 - Bürgerliches Gesetzbuch (BGB) in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738) - § 585 (Declaration and Definition of Farm Leasing) <p>Bürgerliches Gesetzbuch (BGB) in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738) - § 581: Vertragstypische Pflichten beim Pachtvertrag ("contracts and duties concerning farm leasing")</p>
<p>Evidence Reviewed</p>	<p>https://www.bundestag.de/blob/4147_74/826f537e22a405a15f495700b37a_b15b/wd-7-018-16-pdf-data.pdf</p> <p>http://www.gesetze-im-internet.de/index.html</p>
<p>Risk Rating</p>	<p>Low Risk</p>
<p>Comment or Mitigation Measure</p>	

	Indicator
1.3.1	<p>The BP has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.</p>
Finding	<p>Waldkontor has a Risk Assessment system in place to meet the requirements of FSC Controlled Wood within the defined supply base.</p> <p>The European Union directive No. 995/2010 (EUTR) was transposed into German Law through the Timber Trading Security Act (Holzhandels-Sicherungs-Gesetz or HolzSiG) in 2011, and was reviewed in 2013.</p> <p>WWF Germany rates Germany as “a consistently high performer since 2007” in implementation of the EUTR. The authority for enforcing the law is the Federal Office for Agriculture and Food (BLE).</p> <p>Legally required documents or records for legal harvesting in clarified ownership relations are the entry in the land book (“Grundbucheintrag”), contracts of farm leasing (“Pachtverträge”) and tax assessments (“Steuerbescheide”). The harvest is documented previously by the strategic planning (“Forsteinrichtung”) and documented in the midterm framework (“Forsteinrichtungswerk”), annual planning of forest organizations, annual business planning of organizations and in private forests by the planning reports, tax returns and notice of tax assessment.</p> <p>Every legal company has to be registered in the business register (“Unternehmensregister”). Planning and sustainable management is described in the statute books: Mid-term management planning (“Forsteinrichtung”) and annual planning (“Forstbetriebsgutachten”) are required in most cases. When plans are submitted to and approved by forest departments, harvesting measures are assumed, based on this planning. There is no special approval for each harvesting activity, but there are prescribed laws and regulations providing a framework in which a forest owner can execute his activities.</p> <p>Central foreign-trade documents for the import of goods are the certificate of origin and the import permit. Reports are controlled by the Federal Customs Authority (“Bundeszollverwaltung”).</p> <p>Traders need to follow the procedures. Otherwise they have to face penalties in form of fines or even trials.</p> <p>Germany scores 78 points on the Corruption Perceptions Index 2013 on a scale from 0 (highly corrupt) to 100 (very clean). Germany ranks 12th out of 177 with rank nr.1 being the cleanest country. Risks can arise when ownership is shifted between generations and the Land Charge Register entry takes time due to lengthy administrative processes. A few problematic cases are known, involving heritage issues and difficulties with the identification of heirs.</p> <p>Identified laws are upheld. Cases, where law/regulations are violated, are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities. There were no reports from international organizations such as FAO, Transparency International, The Royal Institute for International Affairs or others stating that logging without harvesting permits is a problem in Germany</p> <p>Therefore, the criterion is considered as ‘low risk’.</p>
Means of Verification	<ul style="list-style-type: none"> - Existing legislation - Inhouse risk assessment according to EUTR requirements - Overview of EUTR - Corruption Perception Index of 80 (2018) - Federal Customs Authority (“Bundeszollverwaltung”) - Results of Bundeswaldinventur (“national inventory 2012”). “Stock rose again”

	<ul style="list-style-type: none"> - WWF report: Failing the Forests; Europe's illegal timber trade. - 1. Holzhandels-Sicherungs-Gesetz (HolzSiG) vom 11. Juli 2011 (BGBl. I S. 1345) - "Timbertrading security act" <p>FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)</p>
Evidence Reviewed	<p>http://ec.europa.eu/environment/forests/timber_regulation.htm https://www.transparency.de/cpi/ https://www.bundeswaldinventur.de/index.php?id=543&L=3 http://www.zoll.de/DE/Fachthemen/AussenwirtschaftBargeldverkehr/Wareneinfuhr/wareneinfuhr_node.htm I; http://www.zoll.de/DE/Unternehmen/Warenverkehr/Einfuhr-aus-einem-Nicht-EU-Staat/Zoll-undSteuern/Normalfall-der-Verzollung/normalfall-derverzollung_node.html http://d2ouvy59p0dg6k.cloudfront.net/downloads/failingforests.pdf</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
1.4.1	The BP has implemented appropriate control systems and procedures to verify that payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting, are complete and up to date.
Finding	<p>The forest legislation does not include the payment of royalties and harvesting fees. Tax related issues are controlled by finance authorities.</p> <p>Every company must state its financial turnover in a tax return and, in addition, must demonstrate certain accounting practices (§§140, 141 AO, respectively §6, 1 HGB for incorporated enterprises).</p> <p>Companies have two kinds of tax-paying systems: Imputed taxation and the Actual taxation.</p> <p>All documents are sent to the finance authorities for verification – also irrespective of size, turnover quantity and form of organization. All cash flows have to be documented to verify and to avoid illegal and black market profits. Not mentioning income is seen as tax evasion which attracts several fines (§§369, 370 AO). Tax evasion also occurs in Germany, but legal requirements for documentation and control measures by finance authorities are very strict.</p> <p>Germany has value-added taxes (VAT), described in the Value Added Tax Act. All domestic deliveries and benefits for which a company is paid are affected by the VAT (§1 UStG). Companies can levy VAT with sales and have to discharge VAT when buying (§§ 13, 15 UStG).</p> <p>Germany has a Corruption Perceptions Index 2018 of 80 (above the threshold of 50) and is ranked worldwide as 11th in CPI ranking.</p>

	Tax fraud investigation is carried out intensively in Germany by finance authorities. Therefore, the criterion is considered as 'low risk'.
Means of Verification	<ul style="list-style-type: none"> - strong national legislation and adequate level of enforcement - Transparency International Corruption Perception Index - Inhouse procedures in accounting, constantly reviewed - Bills, trading documents - Handelsgesetzbuch (HGB) 1897 (BGBl. I S. 1474) - "German Commercial Code" 1. Article 2 - Umsatzsteuergesetz (UStG) in der Fassung der Bekanntmachung vom 21. Februar 2005 (BGBl. I S. 386) -"Value Added Tax Act": 1. §1 Taxable sales <p>FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)</p>
Evidence Reviewed	<p>http://www.gesetze-im-internet.de/index.html http://www.transparency.org/policy_research/surveys_indices/cpi https://www.transparency.org/country/#DEU</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
1.5.1	The BP has implemented appropriate control systems and procedures to verify that feedstock is supplied in compliance with the requirements of CITES.
Finding	<p>Germany is signatory to numerous international and European agreements and regulations on the protection of biodiversity, such as the Habitats Directive, the Convention on Biological Diversity and CITES.</p> <p>Waldkontor has an FSC/PEFC Controlled Wood Risk Assessment that addresses the requirements of CITES (FRF-DP-05).</p> <p>Export: No woody species produced in Germany are included on the CITES lists and the risk is therefore considered Low.</p> <p>Import: Importing CITES species is only possible with permission (see also 1.19) and due to the good rank on the CPI the risk is 'low'.</p>
Means of Verification	<ul style="list-style-type: none"> - Checklist of CITES Species in Germany - Transparency International Corruption Perception Index - Federal Agency for Nature Conservation ("Bundesamt für Naturschutz") - Import permit of wood from tree species in appendices A and B of the Council Regulation (EC) No 338/97 of 9 December 1996 Document showing a notification of import of wood from tree species in appendix C of the Council Regulation (EC) No 338/97 of 9 December 1996 - Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)

	- Bundesartenschutzverordnung (BArtSchV) vom 16. Februar 2005 (BGBl. I S. 258, 896) – "Federal Species Protection Ordinance"
Evidence Reviewed	http://checklist.cites.org/#/en/search/country_ids%5B%5D=23&output_layout=alphabetical&level_of_listing=0&show_synonyms=1&show_author=0&show_english=1&show_spanish=1&show_french=1&scientific_name=plantaes&page=1&per_page=20 http://www.gesetze-iminternet.de/bartschv_2005/index.htm http://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:31997R0338 http://www.transparency.org/policy_research/surveys_indices/cpi https://www.transparency.org/country/#DEU
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
1.6.1	The BP has implemented appropriate control systems and procedures to ensure that feedstock is not sourced from areas where there are violations of traditional or civil rights.
Finding	<p>In 2014 (latest available year) Germany scores 79.1 on the dimension Political Stability and Absence of Violence/Terrorism. The scores range from 0 (lowest) to 100 (highest rank) with higher values corresponding to better outcomes.</p> <p>"As far as FSC Germany is aware, Germany is not deemed to be a source of conflict wood (STD40 005; Anh. 2B; 2.2)."</p> <p>Civil rights are ensured by law in the German Civil Code (BGB). Civil- and human rights in Germany enjoy a high level of protection, both in theory and in practice, and are enshrined in the Grundgesetz. The country has ratified most international human rights treaties. Reports from independent organizations such as Amnesty International certify a high level of compliance with human rights. The 2008 Freedom in the World report by US-funded Freedom House gives Germany a score of "1" (the best possible) for both political rights and civil liberties. As a consequence of the Nazi Regime, the constitution now in place provides a strict separation of powers. Law enforcement is strictly in the hands of the federal states and the respective agencies and institutions.</p> <p>In general the level of law enforcement in Germany could be described as high. In comparison to many other states, police, courts and law enforcing infrastructure are quite well funded.</p> <p>Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND the FSC controlled wood risk assessment confirms enforcement of applicable legislation.</p> <p>Transparency International ranks Germany in 2019 on 9th place worldwide of the corruption perception index.</p> <p>There are no indigenous people and no traditional people in Germany. There is no</p>

	evidence leading to a conclusion of presence of indigenous and/or traditional people in the area under assessment and other available evidence do not challenge 'low risk' designation.
Means of Verification	<ul style="list-style-type: none"> - From national CW RA: FSC Controlled Wood Risk Assessment for Germany - Worldwide Governance Indicators - the WGIs report - ILO Declaration on Fundamental Principles and Rights at Work. Country reports. - Bürgerliches Gesetzbuch (BGB) in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738) "German Civil Code" FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	http://info.worldbank.org/governance/wgi/index.aspx#reports http://www.ilo.org/declaration/lang--en/index.html
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.1.1	The BP has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped.
Finding	<p>At federal state level, particularly high quality biotope structures located in forest areas are mapped. Profound data is collected within the scope of forest biotope mapping to enable an integral balancing of aspects of biotope and species protection as well as the diverse planning goals in the field of forestry and out of this range and for the management planning of Natura 2000 sites on the other hand (FVA Baden-Württemberg 2005). The data is digitally accessible and allows determining which areas and area percentages are subject to certain laws or regulations, without additional on-site surveys.</p> <p>Forest management measures and tending strategies are recorded in national park plans and elsewhere (Nationalparkverwaltung Bayerischer Wald 2010). There is an ongoing monitoring of HCVs and mapping of new species and areas, as well as the identification of new HCVs. It is intended to implement conservation measures as well as measures for further improvement of the biological diversity of forests in Germany with the help of the National Biodiversity Strategy and the Forest Strategy 2020, i.e. to set aside up to 5% of the German forest area (BMEL 2017), what has not yet been reached.</p> <p>Germany possesses 8,676 nature protection areas (BfN, 2016; Adler, 2014). The combined area of nature protection areas in Germany is 1,378,410 ha. This corresponds to 3.9 % of the national territory. Reports and maps detailing the designated areas do exist on federal state level according to the various protection categories</p> <p>Monitoring of the whole German forest area is prescribed by law in the National Forest Act Article 41a. The monitoring must be repeated every ten years.</p>

	<p>Each category has regulations in terms of timber harvesting activities, access rights and management of endangered species and their habitats, partially statutory. The different types/categories are classified by the Federal Nature Conservation Act (BNatSchG) Articles 20–36 (including Natura 2000 or N2000) and vary by size, protection purpose and by the restrictions on land use. Protected sites that are covered by European Law are sites that are under the regime of the Habitats Directive and Birds Directive. The combined area of nature protection areas in Germany is 1,378,410 ha. This corresponds to 3.9 % of the national territory. Reports and maps detailing the designated areas do exist on federal state level according to the various protection categories. For some strictly protected areas, harvesting, access and management are highly restricted (national parks, nature conservation areas, biosphere reserves). Whether managing and harvesting is allowed, is regulated by management plans based on the Federal Nature Conservation Act.</p> <p>According to the German Federal Agency for Nature Conservation (BfN) 1,8 Mio ha of the German forests have been designated as FFH-/Natura2000 sites in 2012. At federal state level, particularly high quality biotope structures located in forest areas are mapped.</p> <p>Profound data is collected within the scope of forest biotope mapping to enable an integral balancing of aspects of biotope and species protection as well as the diverse planning goals in the field of forestry and out of this range and for the management planning of Natura 2000 sites on the other hand (FVA Baden-Württemberg 2005). The data is digitally accessible and allows determining which areas and area percentages are subject to certain laws or regulations, without additional on-site surveys. Legally records are Forest function mappings (mapping of forest functions like water, soil, air).</p> <p>The status of protected sites is documented and monitored in the midterm planning (“Forsteinrichtung”) and is therefore respected when planning management measures. Controls are carried out by forest control (“Forstaufsicht”), employees of the Nature Conservation Federal Agency or by the police.</p> <p>Various types of protected sites in Germany are legally defined and mapped at international, national and federal state level.</p> <p>For this indicator the area under assessment is determined to be ‘low risk’.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Geographical maps showing conservation areas - Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora - Article 2,6,12,17 - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - “Federal Nature Conservation Act” 1. Article §5 (“Agriculture, forestry and fisheries”) - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - “National Forest Act” - Article §41a (“Forest Monitoring”) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
<p>Evidence Reviewed</p>	<p>http://www.geodienste.bfn.de/schutz_gebiete/#?centerX=3786876.500?centerY=5669060.000?scale=5000000?layers=524 http://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:31992L0043 http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/bnatschg_en_bf.pdf http://www.gesetze-im-internet.de/bwaldg/___11.html</p>
<p>Risk Rating</p>	<p>Low Risk</p>

Comment or Mitigation Measure	
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	Indicator
2.1.2	<p>The BP has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.</p>
Finding	<p>High conservation values (HCVs) refer to biological, ecological, social or cultural values of exceptional or key significance. There are six HCV categories that are taken into consideration.</p> <p>HCVs are forests that are of special importance due to the occurrence of rare species or unusually high occurrence of rare plant species. Similarly, the importance of a forest can be important for the local population of a forest because the forest provides them with food, water or income, or because it is a place of spiritual significance. There are six HCV categories that are taken into consideration. To date there is no official definition, interpretation or formal anchoring of the HCVRN's six categories of high conservation value forests (Brown et al. 2014) for Germany. An expert group developed a definition during the process revising the German FSC Forest Standard taking into consideration the political, legal, social and ecological framework conditions in Germany. This permits an approximate assessment of the individual HCV categories.</p> <p>This conceptual diagram shows the relationship between the intensity of management required to protect or maintain conservation values. The P&C require all HCVs to be maintained, enhanced and/or restored. As the threat to conservation values from management activities, the level of protection on these values must also increase. This level and type of protection can move from limiting human activities to excluding human activities in reserves. The outcome must always be the protection, maintenance and / or restoration of HCVs.</p> <p>HCV 1 Species diversity. Concentration of biological diversity including endemic, rare and endangered species of significance on a global, regional or national level. Risk: Habitat removal, Habitat fragmentation, Introduction of invasive species.</p> <p>Definition for Germany: Occurrence of strictly protected species. These are stated in the "Rote Liste" provided by the Bundesministerium für Naturschutz. Red Lists are lists of extinct, lost and endangered animal, plant and fungal species, plant communities, biotope types and biotope complexes. They are scientific expert opinions in which the threat status for a specific reference area is presented. They assess the risk on the basis of the population size and population development. Red Lists serve to inform the public about the endangered situation of species and biotopes and, as a permanently available expert opinion, argumentation aids for spatial and</p>

environmental planning show need for action in nature conservation increase the political significance of nature conservation are data source for legislative measures and international Red Lists serve to coordinate international nature conservation serve to review the degree of fulfilment of the National Biodiversity Strategy and show further need for research Red Lists are usually compiled or published by the nature conservation authorities. In Germany, the Red Lists of the Federal Government and the Federal States are of particular importance.

Germany's Red List of endangered animals, plants and fungi covers the plant groups of terrestrial, limnic and marine habitats (with the exception of marine macroalgae, which were already published in Volume 2 under marine organisms). This concludes the risk analysis of the plants in this series.

According to a forest report (BMEL 2017) the Red List of endangered biotope types in Germany shows that the development of many forest biotopes has stabilized.

The most important legal basis for nature conservation in Germany is the Federal Nature Conservation Act (BNatSchG), which transposes European nature conservation directives, in particular the Flora-Fauna-Habitat Directive (RL 92/43/EEC) and the Birds Directive (RL 2009/147/EC), into national law. In contrast, European regulations such as the EC Species Protection Regulation (Regulation 338/97/EC) have a direct effect on citizens without requiring further implementation by the national legislator.

The Federal Nature Conservation Act was comprehensively amended with effect from 01.03.2010. In addition to provisions on species and area protection, it contains, among other things, regulations on landscape planning, compensation for interventions in nature and the landscape, biotope networks and interlinking, marine nature conservation, recreation in nature and the landscape and the participation of recognised nature conservation associations in certain decision-making procedures. It is supplemented by regulations under the laws of the 16 federal states, although deviations may occur. In practice, it is therefore essential that the relevant state nature conservation legislation is also taken as a basis.

According to the division of competences in the Basic Law (GG), the enforcement of nature conservation law is, with few exceptions, the exclusive responsibility of the Länder.

According to Article 83 of the Basic Law, this applies even when federal laws such as the Federal Nature Conservation Act are enforced. This is based not least on practical considerations, as the Land authorities are best placed to assess the special circumstances on the ground. In contrast, the Federal Agency for Nature Conservation (BfN) itself can only enforce laws in a few exceptional cases and is not an authority superior to the Land authorities.

The contact persons for practical questions concerning the application of nature conservation law are therefore generally the lower nature conservation authorities (in the administrative districts or independent towns). In the case of questions of national importance or of principle, the highest nature conservation authorities of the Länder are also available for further inquiries.

Germany imposes strong penalties for the violation of the Animal Protection Act, especially with regard to endangered species. Such violations can be punished with imprisonment of up to 5 years. This is regulated in the catalogue of fines of the Federal Republic of Germany (see link below).

The German federal states take different approaches to the management of Natura 2000 sites. Some federal states are initially developing concepts for uniform procedures in drawing up management plans, while others are starting directly to draw up test or sample management plans for selected sites. In some cases, the initial recording of habitat types and species within the FFH areas is still in the foreground as a basis for management planning.

Despite considerable differences in the preparation and implementation of management plans in the various German federal states, the following generalizations can be made about management planning in Germany:

- Management planning is usually independent nature conservation planning.
 - Habitat types (Annex I Habitats Directive) and species (Annex II Habitats Directive) and birds (Annex I Birds Directive) are the subject of management planning in all federal states.
 - Annex IV species and migratory bird species have not yet been (sufficiently) taken into account in most federal states.
 - In many federal states, area-wide planning takes place in Natura 2000 sites.
 - Half of the federal states plan on a parcel-by-parcel basis.
- A cost estimate is part of the management planning in about half of all federal states.
- Implementation is preferably carried out through contractual nature conservation, further through compensation measures, own funds, sponsoring or EU co-financing (financing).
 - The regular participation of public bodies and the public is provided for in management planning in almost all federal states. The type and extent of participation varies greatly and ranges from information events to round tables and planning advisory boards.

HCV 2 Landscape ecosystems and mosaics. Large landscape ecosystems and ecosystem mosaics of significance on a global, regional or national level and which contain viable populations of the large majority of the naturally occurring species in their natural composition with respect to distribution and frequency.

Risk: Fragmentation, including access (roading)

Definition for Germany: In Germany these are all forests subject to a protection status under German nature conservation law and that are of national significance. These are designated national parks, biosphere reserves, SACs areas (Special Areas of Conservation, meaning areas protected under the Habitat Directive and Birds Directive), SPAs (Special Protection Areas). (Note: excluded are natural monuments, protected landscape components, landscape protection areas)

Whereas the status reports, and the nature conservation assessment of the SAC status reports, paint a largely positive picture of the conservation status of forest habitat types in Germany, a mix of silvicultural concepts on the ground would appear to be of fundamental importance to the maintenance of conservation values in SACs and to counter fragmentation (cf. HCV 1). Apart from the issue of the primary conservation objective of these areas, the difficulties experienced in the implementation of these areas, and so their effectiveness, would appear to reside chiefly on an administrative level. The greatest adjustment and/or challenge in connection with the conservation of species and habitats would appear to concern stipulations of the habitats directive with respect to the designation. and management of SACs in private forest. Private forest accounts for a smaller proportion of the SACs, however, and so the impacts are limited to only a limited proportion of the overall area. Potential threats to SACs in private forest ownership can be specified, and may be minimized by means of investment, advisory services and efforts at promotion at national and European level. Fragmentation as a consequence of clear fell is legally regulated.

Reports such as the forest report published by BUND reveal local shortcomings. At the same time, however, positive examples of good cooperation between nature conservation interests and forestry enterprises are also described.

According to the national definition, however, this HCV category includes all forests in Germany with a designated protection status under nature conservation law and that are of national significance. These are national parks, biosphere reserves, SACs and SPAs. According to the Federal Agency for Nature Conservation, these areas – distinguished by protected area category – are: 16 national parks (terrestrial area: 214,588 ha) 16 biosphere

reserves (1,914,446 ha) 104 nature parks (9.8 million ha)

As there are no intact forest landscapes in Germany according to the definition provided by Global Forest Watch, the main threat to this HCV category is further fragmentation.

Possible threats related to fragmentation in forest habitats by forest management could be:

- clear-felling that need permission because of their extent
- construction of roads, forest roads
- conversion
- large-scale planting of foreign species
- deer overpopulation

The FSC National Risk Assessment specifically deals with this concerns in detail and concludes a low risk designations for Germany. The point "deer overpopulations" is also additionally discussed in indicator 2.3.1.

Important large-scale landscape ecosystems have been identified and placed under protection in the form, for example, of national parks. Management for forestry purposes is either prohibited or partially regulated. Although representatives of nature conservation interests may wish to see specific improvements in relation to the management of HCVs, essentially the risk based on the foreseeable threat of further fragmentation of the overall area of the landscape ecosystem and mosaics, especially the SACs, is considered low.

HCV 3 Ecosystems and habitats. Rare, threatened or endangered ecosystems, habitats and refuges.

Risk: Lack of effective protection of HCV3

Definition for Germany: In Germany these are nature protection areas, mapped SAC habitat types (with the exception of the beech habitat types 9110 and 9130), biotopes protected under the German federal nature conservation act (BNatSchG, §30) and the state nature conservation laws, and the protection forests designated under the state forest laws insofar as they serve the protection or the promotion of certain species, forest associations or forest biotopes.

Silvicultural use is permitted in Natura 2000 sites provided the silvicultural measures employed do not contribute to a deterioration of the conservation status of FFH -habitat types or of habitats home to species protected under the Habitats and Birds Directives.

An important basis for identifying landscapes in Germany worthy of protection is a Germany-wide landscape classification, typification and evaluation.

Cultural landscapes can be understood as the result of the interactions between land nature and land use. Conceptually, the landscape differs from the natural area (in the sense of MEYNEN & SCHMITHÜSEN 1953-62) above all in that in the former, the actual use that takes place is included as a significant formative factor.

The criteria used for delimiting the landscapes are natural boundaries, current land use based on satellite image evaluations (CORINE Land Cover) and other landscape delimitations applicable to sub-areas. The landscape types are defined in such a way that the characteristic and landscape-forming elements easily recognisable in the terrain are in the foreground. Landscape qualities that are not obviously recognisable are not used for typification. A total of 858 individual landscapes, including 59 densely populated areas, can be delimited in this way in Germany. The individual landscapes are each assigned to one of 24 landscape types due to similar characteristics of certain features. In addition, each landscape is assigned to one of the three major regions "lowland/plain", "low mountain range" and "Alps and Alpine foreland" (GHARADJEDAGHI et al. 2004).

The assignment to the landscape types in 2004 was based on the land use data of the Corine Land Cover data with the reference year 2000 (figure above). In the meantime, satellite data on land use with the reference year 2006 (CLC 2006) are available (figure below).

In some landscapes (approx. 11%) the land uses have changed so significantly between these two reference years that a new classification of the landscape type has been made. Particularly striking is the decline in landscapes characterised by grassland in Schleswig-Holstein and west of Berlin.

Landscape type assignment 2011

A two-stage assessment procedure is used to identify landscapes of importance for nature conservation. Only data and information that is available for the whole of Germany in a comparable density of information and up-to-dateness is used for the assessment.

Each landscape is first assigned a "type value" on the basis of its affiliation to a landscape type. This basic value of each individual landscape is then further specified on the basis of the individual characteristics of the individual landscapes within the scope of a second evaluation step, the "object evaluation".

In 2006, the undissected nature of the landscape, the significance for biotope and species protection on the basis of the proportion of protected areas (national parks, nature reserves, Natura 2000 areas, core areas of biosphere reserves) and the proportion of historically old forest sites were included in the object valuation. Type and object value are then combined into an overall valuation in five value levels (see table).

The landscape valuation was updated in 2011. On the one hand, updated data on landscape fragmentation were used. On the other hand, the data available at that time on the proportions of protected areas (status 2010) were included in the assessment. In addition, the proportion of areas of national importance for the biotope network in the respective landscapes was integrated into the assessment. The areas of national importance for the biotope network were determined on the basis of the biotope mapping of the federal states.

The result of this evaluation procedure in 2006 showed that 402 individual landscapes (approx. 49% of the federal territory) could be designated as worthy of protection. Of these, 91 landscapes (12.3% of the federal territory) were classified as "landscapes particularly worthy of protection", 90 landscapes (9.6% of the federal territory) as "landscapes worthy of protection" and 221 landscapes (26.8% of the federal territory) as "landscapes with deficits worthy of protection" (see figure).

When the landscape evaluation was updated in 2011, 89 landscapes were classified as "particularly worthy of protection" (approx. 12.3% of the federal land area), 99 landscapes as "worthy of protection" (10.8% of the federal land area) and 273 landscapes as "worthy of protection with deficits" (31.6% of the federal land area) (see figure below). As a result of the new evaluation procedure, which takes into account not only the protected areas but also the other mapped valuable biotopes in each landscape, the area share of landscapes in the highest three evaluation levels has risen to just under 55 % of the federal land area.

Landscape assessment 2006 Landscape assessment 2011

There are claims that the requirements of Natura 2000 implementations in regards to the habitat directive are not met in concerns of the time schedule. This is also reason for infringement

proceedings from the EU commission against Germany. Nevertheless walldkontor comes to the conclusion of a "low risk" designation for the risk of HCV 3 areas being threatened by non-identification and negative impacts by forest management activities. This assumption is mainly based on the FSC national risk assessment for Germany and its argumentation. Where the SACs and SPAs are implemented in Germany, the protection and monitoring is on a high level with a high and trustworthy level of enforcement. Silvicultural use is permitted in Natura 2000 sites, provided the silvicultural measures employed do not contribute to a deterioration of the conservation status of FFH -habitat types or of habitats home to species protected under the Habitats and Birds Directives. Measures of forest restructuring and to increase the share of deciduous forests are taking place on the whole German forest area since several years and are a consequence of long term forest management planning towards more diverse and stable forests, which pay tribute to local and regional preconditions. It is assumed that the current efforts to observe the prohibition on deterioration and to implement management plans have a positive effect. A slightly different risk with regard to private forest arises from existing deficits with respect to knowledge and information concerning natural, economic and legal impacts stemming from the designation of SACs. It may be assumed that this is slightly higher than in federally-owned forests, where the regulations are binding. The approach to address private forests owners includes other instruments such as contract nature protection. Many small private forest owners are supervised by the public forest authorities. The share of SACs in public forests is predominant, so regulations are binding on the bigger share of SACs. The differences in implementation the Habitat Directive in public and private forests do not lead to a divergent risk determination for the different types of ownership. Germany ranks on place 4 of the so-called Environmental Performance Indicators (EPI) for the aspect of biodiversity / habitats in 1st place as compared to international standards

HCV 4 Special ecosystem services. Fundamental, endangered ecosystem services including the protection of water catchment areas and protection against the erosion of endangered soils and slopes.

Definition for Germany: In Germany these are forests bearing a legally binding protection status and which fulfil the following functions (in accordance with the federal forest act, §12): protection against damaging environmental influences sensu the German federal emissions protection act (Bundes-Immissionschutzgesetz, BImSchG) of 15 March 1974 (Bundesgesetzblatt I, p. 721), erosion by water and wind, desiccation, damaging run-off of precipitation and avalanches.

In the case of fertilisation in forests, nutrients that are lacking are specifically added to the soil. This is intended to stimulate the nutrient cycle. Together with an adapted use, damaged soils are thus to be restored to a condition that enables ecologically sustainable wood use without further fertilisation. Soil acidification can also be counteracted by means of liming. The pH value is increased, soil organisms become more active and the organic layer decomposes more quickly, mobilising nutrients. Plant ash has a similar effect to lime due to its high calcium and magnesium content. The different methods of soil improvement are controversially discussed. Improper and excessive use can have serious consequences. For example, some plants react very sensitively to direct contact with the substances applied. Roots and soil organisms are also very susceptible to abrupt changes in pH. Naturally acidic or lean sites must also be taken into account. Here, measures for "soil improvement" would destroy the naturally occurring, rare plant communities.

Soil erosion can be reduced by permanent growth. The plants reduce the wind speed on the soil surface and strengthen the soil with their roots. In this way, a plant stocking can also reduce erosion on steep slopes. Furthermore, more water can be absorbed by the soil through rooting. This also reduces water-induced erosion.

In addition to preventing soil erosion and improving soil quality, it is also necessary for the ecosystem to give special protection to water bodies and alluvial areas. Here, too, Germany is constantly implementing measures to stabilise the ecosystem.

Watercourse and floodplain development serves to restore ecologically functional riverine landscapes. This makes an important contribution to sustainable flood protection, to the self-purification of water bodies, to the creation of attractive leisure and recreational areas and to the improvement of living conditions for plants and animals. Since the early 1980s, increased efforts have been made to restore water bodies and floodplains to a near-natural state. The possibilities for implementation are manifold and range from the dismantling of transverse structures, bank revetments and dikes, the reconnection of artificially cut-off oxbow lakes, the promotion of extensive forms of use, the re-establishment of floodplain forests to the renaturation of entire river landscapes.

Within the framework of federal funding programmes, the department "Inland Waters, Floodplain Ecosystems and Water Balance" is responsible for large-scale nature conservation projects as well as testing and development projects that serve to protect, develop and permanently safeguard running waters and floodplains.

Risk: Reduction of water quality/quantity – negative impact on humans health (e.g. poisoning water etc.)

HCV 5 Needs of the resident communities. Sites and resources satisfying the basic needs of resident communities and indigenous populations (for their basis of existence, health, nutrition, water, etc.); identified with the participation of the local communities/indigenous population.

Risk: Compromising (impacting) fundamental needs of local communities by management activities

Definition for Germany: Official recreation forest and forests with a level 1 recreation function according to the national map of forest function.

Recreational use frequently occurs in sensitive areas as these locations often possess an especially high nature experience value. Often these are large protected areas such as biosphere reserves, national parks and forests in metropolitan catchment areas. The latter is not a category of protection forests but represents a conglomerate of nature and landscape protection areas (e.g., SACs) and forest sites subject to normal forest use. The recreational use by local recreation seekers is of huge significance in densely populated areas. A fifth of the German forest area is situated in the catchment areas of metropolitan areas (Zundel & Völksen, 2002) Forest management of these forests is often perceived as a disturbance by the population. Most public forest owners take this into account

HCV 6 Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance and/or or key cultural, ecological, economic or religious significance for the traditional cultures of the resident communities or indigenous population; identified with the participation of the resident communities and indigenous population.

Risk: Destruction and/or disturbance of rights/values determining HCV6 presence

Definition for Germany: In Germany these include woodland cemeteries, relicts of historical forms of land use worthy of conservation (coppice and coppicewith-

standards forests, forest pasture) and monuments of built and archaeological heritage identified by regulatory agencies.

Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves. E.g. the Federal Forest Authority of Baden-Württemberg has extended the forest function mapping, soil and culture heritages need to be mapped as well. Forest management activities have to be adapted to avoid damages to those sites.

Designated cultural monuments in the forest are considered in the midterm planning (Forsteinrichtung) and respected accordingly during the execution of forest management activities.

Where new conservation values worthy of a heritage designation are discovered, the necessity for protection is assessed by the responsible authorities. Woodland cemeteries are a relatively new form of forest use and are only found at a small number of selected locations at present, currently around 400 woodland cemeteries do exist in Germany (Aeternitas 2017).

Direct threats or impairments to the recreational use of forests posed by forest management activities may stem from, among other things, machine traffic and timber harvesting. These activities involve the installation of extraction trails, the use of heavy machinery and corresponding effects on the aesthetics of trails in the forest and on the appearance of the forest as a whole. The right to access may be restricted temporarily and locally for the purposes of harvesting and other operations.

Protection forests are covered by additional protection designations that apply tighter restrictions to forest management activities.

When planning harvesting measures or other forest management activities (e.g. road construction), attention to environmental values and protected sites is required. In mid-term management planning ("Forsteinrichtung", see above) protected sites and protective functions of forests are addressed.

Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types.

On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.

Forest management measures are subjected to the Federal Forest Act (BWaldG) (BMEL 2015) and the State Forest Acts (LWaldG), which fulfill the requirements of the BWaldG and require management and site planning. The occurrence of special conservation values is also considered, i.e. in forest management plans. §11 of the BWaldG requires on principle to consider the forest function "ecosystem" (BMEL 2015) in forest management activities.

In addition to the BNatschG, the Federal Environmental Ministry and the BfN as a subordinate authority the threats from forest managements are identified and forests effectively protected against.

The significance of § 39 BNatSchG is that since 1 March 2010, a uniform nationwide regulation will apply with regard to logging and cutting bans, and the laws of the respective country may extend these, but may under no circumstances restrict them.

This applies to especially for the protection period, which has so far been in the different national laws was regulated differently. In the future the period of protection shall in principle be the Period between 1 March and 30 September. Since 1 March 2010, the following rules

apply to this Protection period nationally uniform felling and felling Pruning bans for all trees that outside the forest or horticultural of the land used by the company.

The Federal Nature Conservation Act regulates now nationwide uniform in § 39 BNatSchG certain felling and cutting bans for closer designated trees and for hedges, live fences, bushes and other woodland in a basically fixed Period from 1 March to 30 September. The legally provided Exceptions are very far-reaching and have no significant Tightening of the felling and cutting bans compared with the previous arrangements guided. However, roadside trees, alleys...on roads and trees in the open countryside now specially protected. The following applies to them since 1 March 2010 the cutting bans and felling prohibitions of § 39 BNatSchG, so that during the protection period, the Caps for example on Street trees as an administrative offence fined up to € 10 000 if they are not, for reasons the traffic safety from the nature conservation authority have been approved. All trees in gardens, i.e. house and allotments, in green spaces, grass sports facilities and cemeteries do not have under the temporary felling and Cutting prohibitions of § 39 BNatSchG. You can also between 1 March and 30. September without permission and be cut back if no Habitats of wildlife species and if there are no other nature conservation regulations (e.g. tree protection statutes). All hedges, live fences, bushes and other woody plants are subject to the felling and cutting bans of § 39 BNatSchG, even if they are, for example, in gardens and green spaces. Necessary measures for production of road safety are of the felling and cutting bans of § 39 BNatSchG, but can be due to other nature conservation prohibitions must be subject to approval. Tree and wood care measures according to the ZTV tree care and comply with the relevant regulations the exemption under § 39 NatSchG. These measures have been implemented at all trees and other woody plants during of the whole year, unless, that habitats of protected animal species are in it or other nature conservation law Prohibitions exist. Protected trees that pose a traffic hazard may only be used for concrete and imminent Danger even without the approval of the nature conservation authorities which are then must be informed immediately. At every felling and each felling application are the defects and diseases found on the tree, which requires felling and to provide reasons and sufficient information to document.

Sites falling under HCV6 definition are even more than regular forest a site of interest by the public and therefore more often visited. As argued before, the public is a strong control mechanism. This applies for private forest as well as for public ownership. It could be assumed, that private forests could be evaluated with the same risk as public forests regarding HCV6 protection.

Waldkontor is strictly working according to the requirements of the FSC Controlled Wood Standard (FSC-STD-40-005). The waldkontor staff is at least annually educated regarding the requirements. Also annually an internal and external audit is performed to survey the handling of mentioned procedures.

The FSC-CW Standard in combination with the national risk assessment FSC-NRA-DE V1-1 provided by the FSC as guidance, the HCV forests and areas are reliable to be identified.

The FSC National Risk Assessment states for all HCV Categories in Germany a low risk for being threatened by forest management activities.

Waldkontor follows this evaluation. There are undisputedly improvements necessary to implement the designated protection status for some areas and Germany is behind that determined schedule. On the other hand there is significant progress and effort made in catching up to specified biodiversity aims, that Germany committed itself to with the Nagoya Protocol. The tendency towards more diverse forests, more area under protection status, and environmental protection in general, is clearly to see in legislative and regulatory frameworks. With most of the areas under protection and/or of high conservation value located in forests with obligatory forest management and in combination with the mentioned

	high level of enforcement, the overall risk for this indicator and the area under assessment, is determined to be “low risk”
Means of Verification	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - “National Forest Act” 1. Article §8 “Protection of forest functions upon plannings and measures by public projects” - Richtlinie zur Forsteinrichtung (“Guideline for Forest Planning“) - Bundes-Bodenschutzgesetz(BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – “Soil Protection Act” 1. Article §17 (“Good agriculture practice“) - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - “Federal Nature Conservation Act” 1. Article §5 (“Agriculture, forestry and fisheries“) - Bundesministerium für Ernährung und Landwirtschaft (BMEL), „Bundeswaldinventur: Unser Wald - nutzen und bewahren.“ - Bundesamt für Naturschutz (2016): Monitoring gemäß FFH-Richtlinie - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-NRA-DE V1-1 (Approved: 03 April 2018)
Evidence Reviewed	<p> http://www.gesetze-im-internet.de http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/bnatschg_en_bf.pdf https://www.bundeswaldinventur.de/. https://www.bfn.de/0315_ffh_richtlinie.html https://www.bussgeldkatalog.org/tierschutz-artenschutz/#artenschutz https://www.bfn.de/themen/recht/naturschutzrecht.htm https://www.bfn.de/themen/biotop-und-landschaftsschutz/schutzwuerdige-landschaften.html https://www.bfn.de/fileadmin/BfN/natura2000/Dokumente/Meldeueb_FFH_20171123_barrierefrei.pdf http://www.ffh-gebiete.de/ https://geodienste.bfn.de/schutzgebiete?lang=de http://intactforests.org/world.webmap.html https://epi.yale.edu/epi-results/2020/country/deu </p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.1.3	The BP has implemented appropriate control systems and procedures for verifying that feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008.
Finding	<p>Official national forest inventories (“Bundeswaldinventur“) do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization.</p> <p>Conversion of natural forests to plantations or non-forest use in the area under</p>

assessment is less than 0.02% or 5000 hectares average net annual loss for the past 5 years.

According to the third Federal Forest Inventory ("3. Bundeswaldinventur") from 2012 the forest area only showed slight changes between 2002 and 2012. A forest loss of 58,000 hectares is compensated by 108,000 hectares of forest growth. In total, the forest area has increased by 0.4% or 50,000 hectares. The average annual gain of 5.000 hectares is far below the threshold of 5.000 hectares net annual loss ('low' risk).

There is a Programme for long-term forest development called LÖWE Programm.

§ 2 of the National Forest Act excludes areas that are used for short rotation coppice or short rotation forestry, these areas are not defined as forests and are subjected to other legislation than forest legislation. Article 9 (1) of the National Forest Act states that conversion of forests to any other land use is allowed only with the permission of the corresponding federal state authority. If necessary, the Environmental Impact Assessment Act is applied to assess potential environmental impacts and develop mitigation or compensation measures, if a conversion of land use shall take place.

By making the decision as to whether conversion will be permitted, the rights, duties and economic interests of the forest owner as well as public interests have to be evaluated. The request to permit conversion will be declined, if conservation of the forest is of public interest –particularly if the forest is considered highly significant due to characteristics of its ecosystem, its silvicultural production level or its use for public recreation.

In addition, due to the National Forest Act §9 (3), Federal states can determine whether an approval for another type of land use is necessary for a particular forest area e.g. for infrastructure. In this case permits are granted under the planning law and compensation (e.g. afforestation, compensation payments) must take place as required by legal regulations. This is regulated through the Building Code (BBauGB) §§1a, 35 and Federal Nature Conservation Act (BNatschG) §§14, 15. The procedure of intervention into nature is regulated in §17 (BNatschG) and in the Environmental Impact Assessment Act.

However, in any case of conversion in Germany, compensation measures have to be undertaken, it is legally binding to create such measures, several court decisions offer guidelines and describe requirements (e.g., afforestation, payment) for the extent (e.g., area size, at least the same area that has been converted) and quality this measures need to be implemented. The type (e.g., afforestation, payment) and quantity (e.g., area size) of the compensation varies by the federal states.

Penalties exist for conversions occurring without permission and are defined by the forest acts of the federal states (usually afforestation is required, or a heavy fine imposed). In protected areas as defined by the Federal Nature Conservation Act (§§ 23, 24, 25, 26, 27, 28, 29, 30, 31), by the National Forest Act (§§12, 13), by Federal Forest Acts or in Habitat Directive areas, stricter rules apply in relation to conversions and levels of compensation. Without an extraordinary reason, permissions are normally not granted for any conversion in these areas.

Due to the complex and non-uniform system in the federal states, enforcement and monitoring are executed by different authorities. Depending on administrative structures, these authorities can be lower forest authorities, higher forest authorities, municipal forest authorities, Federal Ministry of Food and Agriculture, Federal Agency for Nature Conservation, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.

In 2016 in Germany only 5.700 ha were stocked with short rotation plantation.

Waldkontor is not using material from those areas. Those materials are also excluded in the delivery contracts with the customers so far for several reasons.

In Reference to indicator 1.1.2 the risk for material from plantations becoming part of the biomass is low as the origin and forest type are always known by waldkontor.

	<p>According to the "Bundeswaldgesetz" plantations are not defined as forest area. For this criterion, the area under assessment is considered as 'low risk'.</p>
Means of Verification	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. § 41: Inventory Forest acts of the federal states (1) - Fragile States Index 2015 - National Forest Act (BWaldG) Articles 2 "Definition of forest" "Bundeswaldgesetz vom 2. Mai 1975 (BGBl. I S. 1037), das zuletzt durch Artikel 1 des Gesetzes vom 17. Januar 2017 (BGBl. I S. 75) geändert worden ist" - LÖWE Programm (Programme for long-term forest development) - National Forest Act (BWaldG) Articles 9 "Preservation of the forest", 41a "Forest Inventories", (12 "Protection Forest", 13 "Recreational Forest") "Bundeswaldgesetz vom 2. Mai 1975 (BGBl. I S. 1037), das zuletzt durch Artikel 1 des Gesetzes vom 17. January 2017 (BGBl. I S. 75) geändert worden ist"; last accessed on 1st of February 2017 - Building Code (BBauGB) Articles §§ 1a "Supplementary Provisions for Nature Protection", 35 "Construction on the outskirts" - Federal Nature Conservation Act (BNatschG) Articles §§14 "Interventions in nature and landscape", 15 "Obligations of the intervening party, inadmissibility of intervention; authorization to issue statutory ordinances", 17 "Procedures; authorization to issue statutory ordinances" (Protective sites §§ 23, 24, 25, 26, 27, 28, 29, 30, 31) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) <p>Federal State Forest Acts:</p> <ul style="list-style-type: none"> - Berlin: §§ 6 "Forest conversion", 8 "Environmental impact assessment" - Baden-Württemberg: §§ 9 "Preservation of the Forest", 10 "Special cases of conversion" - Bayern: §§ 9 "Preservation of the Forest", 39a "Environmental Impact Assessment" - Brandenburg: §8 "Conversion of forest to other land uses" - Bremen: §8 "Forest conversion" - Hamburg: §4 "Forest conversion" - Hessen: §12 "Forest preservation and Conversion" - Mecklenburg-Vorpommern: §15 "Conversion of forest to other land uses", 15a "Special cases of forest conversion" - Niedersachsen: §8 "Forest conversion" - Nordrhein-Westfalen: §§39 "Conversion of forest", 42 "Procedure", 43 "Exceptions" - Rheinland-Pfalz: §14 "Preservation and increase of forest area" - Thüringen: § 10 "Change in Land use" - Sachsen: § 8 "Forest preservation" 9 "Special cases of forest conversion" - Sachsen-Anhalt: § 8 "Forest conversion to other land uses" - Saarland: § 6 "Forestry frameworks", § 8 "Preservation of forest" - Schleswig-Holstein: § 9 "Conversion of forest"
Evidence Reviewed	<p>http://fsi.fundforpeace.org/ https://www.landesforsten.de/LOEWE-LangfristigeOekologische-Waldentwicklung.20.0.html https://bwi.info/start.aspx http://www.gesetze-im-internet.de/uvpg/</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.10.1	Genetically modified trees are not used.
Finding	<p>Laws and Acts in Germany strictly regulate the use of GMO species in Germany. GMO is currently an important topic in agriculture, so the regulation of transport, agricultural use or commercial use is mainly important for agriculture. All regulations are also binding for forest management activities.</p> <p>In German forestry GMOs have no importance at all. This is strictly regulated by (1) the mentioned laws and acts and (2) the long-term objectives in forestry, which makes the use of GMOs unsecure and uninteresting. There is no relevant sign of motivation for using GMOs by German forest owners. Interviewed experts stated that in order to receive possible gains from GMO trees, it would be required to do research on GMOs as well as well as to put them into tests in experiments under natural conditions on a large scale over several decades. It is also unclear what would be effects of climate change and how tree species would react to that. Against this background GMOs in forestry are irrelevant in Germany and in addition, the existing legislation calls for strict regulation and supervision. The strict legislation prohibiting and limiting the use of GMO in agriculture as well as in forestry also reflects the negative and skeptical attitude of the German population towards GMOs. The GMO lobby in Germany is negligible.</p> <p>There is no prohibition in Germany. The commercial use of GM trees is regulated by law and requires a permit, which is preceded by an inspection, including consideration of the reasons for the use of GM trees. Regulated in: Forstvermehrungsgutgesetz (FoVG) (“Act of Forestry Reproductive Material) §4,3 (“admission of original material”), Gentechnikgesetz (GenTG) (“Genetic Engineering Act”) §§14-16 (release, bringing on the market, admissions) and European Law, here mainly EU-guideline 2001/18.</p> <p>No, no source of the unauthorized use of genetically modified trees was found in Germany, since laws, controls and measures are effectively enforced. There are some cases linked to agricultural activities but these are individual cases, as the legislation in Germany is strict and the social and political attitude towards genetic modified organisms is negative.</p> <p>commercial use does not have any relevance in the German forestry sector. According to the Expert interviews, but also on based of investigations, scientists come to the result that the use of GMOs in forestry in Germany makes no sense. The costs are too high and the negative environmental impacts are unknown. The precautionary approach of the German Environmental legislation applies.</p> <p>Four trials for research purposes since 1991, which have been strictly monitored by research centres (prevention of reproduction by bud control, daily monitoring of area, duty of documentation) are known.</p> <p>There are licenses required for commercial use of genetically modified trees in form of Forstvermehrungsgutgesetz (FoVG) (“Act of Forestry Reproductive Material) §4,3 (“admission of original material”) and Gentechnikgesetz (GenTG) (“Genetic Engineering Act”) §§14-16 (release, bringing on the market, admissions).</p> <p>Any use and release onto the market must be registered and approved due to the requirement for assessment and monitoring.</p> <p>There is no commercial use of GMO (tree) species in the area under assessment AND other available evidence does not challenge a ‘low risk’ designation.</p>

Means of Verification	<ul style="list-style-type: none"> - Forstvermehrungsgutgesetz (FoVG) (“Act of Forestry Reproductive Material”) §4,3 (admission of original material) - Gentechnikgesetz (GenTG) (“Genetic Engineering Act”) §§14-16 (release, bringing on the market, admissions) - Further overview over German Acts, laws and decrees concerning genetic engineering - Overview over European Law - Prohibition of GMO cultivation - Genetic engineering in Germany - Expert interviews in forest research centres and federal authorities (e.g. for consumer protection) - Detailed report of last research project with GMO trees (17/04/2003)
Evidence Reviewed	<p>http://www.gesetze-iminternet.de/fovg/BJNR165800002.html</p> <p>http://www.bvl.bund.de/EN/06_Genetic_Engineering/08_LegalFramework/01_Germany/legal_basis_national_node.html;jsessionid=9259812F03E4081844E45269CD6C58F9.2_cid350</p> <p>http://www.bvl.bund.de/EN/06_Genetic_Engineering/08_LegalFramework/02_Europe/legal_basis_eu_node.html</p> <p>https://www.bmel.de/DE/Landwirtschaft/Pflanzenbau/Gentechnik/_Texte/NatRegelungAnbauverbote.html</p> <p>https://www.foodwatch.org/de/informieren/gentechnik/mehr-zum-thema/gentechnik-in-deutschland/</p> <p>http://gmoinfo.jrc.ec.europa.eu/gmp_report.aspx?CurNot=B/DE/02/145 (release of 72 poplars in rural district Mansfelder Land, Saxonia-Anhalt, Germany)</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.1	The BP has implemented appropriate control systems and procedures to verify that feedstock is sourced from forests where there is appropriate assessment of impacts, and planning, implementation and monitoring to minimise them.
Finding	<p>Both public forests and private forests have to execute a strategic planning (“Forsteinrichtung”).</p> <p>Official national forest inventories (“Bundeswaldinventur”) do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability. To take account of long-term developments in forestry, every ten to 20 years, public organizations establish a mid-term framework report (“Forsteinrichtung”), for which responsibility occurs at sovereign level.</p>

Furthermore, state forests organizations establish an annual forest plan including actual and predicted stock, harvesting measures, establishment measures, silvicultural and management measures, conservation, welfare etc. Public municipal forests of medium size (normally 50 or 100 ha or larger) are bound by law to execute annual planning. In addition to these statutes and requirements, some federal states have binding guidelines for silviculture, which define silvicultural best practices for public forests (also recommended for private forests).

For private forests, different regulations do exist; which are described in the Federal Forest Acts, varying between the different federal states. Basically private forestry organizations of mid-size (normally 100 ha) and upwards have to produce an annual plan and a mid-term framework report every ten years. Small private organizations under 100 ha have to prepare an annual report, which is not included in the annual planning, to provide evidence for its management ("Forstbetriebsgutachten"). Below 30 ha, organizations are exempt from planning works, but are bound to the German Forest Act and to supervision by authorities. For small private forests, this type of planning is recommended but not mandatory.

Based on this planning, forest authorities have measures to control and monitor forest use. As described above, these authorities vary from federal state to federal state.

When planning occurs in relation to public or private forests, reports have to be sent to the corresponding forest authorities for evaluation and control. Private organizations that are not obliged to do planning are subjected to a control mechanism by the tax assessment.

For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. The preparation of mid-term framework reports is done by officials or freelancing consultants. The results of the National Forest Inventory (Bundeswaldinventur) 2012 have demonstrated that the average timber stocks in German forests rose compared to earlier inventories, which is an indicator of sustainable forestry and proper planning. Risks can arise when small forest organizations – which are not bound to planning due to their size – manage their forest unsustainably OR – if they are bound only to ten-year planning – use the ten-year gap to harvest beyond the sustainability level. However, in any case, monitoring does exist: Municipal public forests in most federal states are managed and thus supervised by state authority foresters, so that control mechanisms exist. Private forest organizations, which are bound only to ten-year planning, are thus controlled every ten years and, if the forests are not sustainably managed, the organizations are sentenced. For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. A control mechanism, not to be underestimated, is the public. Forest visitors are, according to an interview with staff from the lower environmental protection agency in lower saxony, the group that reports the most (suspected) violations of laws and regulations.

The absolute minority of small private forest owners is not engaged in any form of association when it comes to silvicultural land use with economic intentions. Numerous interviews with forest owners, foresters and forest working companies revealed and underlined this assumption. Only a properly managed forest is economically stable and sustainable. Costs for management, harvesting, wood marketing and so forth, are disproportionate for small, unassociated forests. Therefore the vast majority of above mentioned forest owners are associated in "Forstbetriebsgemeinschaften" (FBG), "Forstbetriebsverbänden" (FBV) or "Waldwirtschafts-genossenschaften" (WWG). Those associations act as a single forest owner and is bound to legislation and forest management with regards to the accumulated forest area of all members, which is in terms of economics, large enough to be professionally managed. The remaining small private forests are often owned by farmers and people generating firewood for their own purposes. The chance of significant amounts of biomass from such origins to enter the

national or even international biomass market is negligible. Those owners normally would need to mandate a company to harvest, move and chip biomass and it could be assumed, that professional biomass companies are up to date with applicable legislation and regulations and advise the forestowner accordingly.

The legal background for monitoring and planning is clearly regulated and enforced. Due to the good governance and law enforcement indicators, it can be concluded that there are no enforcement deficits. Management plans are publically available ("Forsteinrichtungswerk"; updated every 10-20 years).

Planning and sustainable management is described in the statute books: Mid-term management planning ("Forsteinrichtung") and annual planning ("Forstbetriebsgutachten") are required in most cases. When plans are submitted to and approved by forest departments, harvesting measures are assumed, based on this planning. Therefore, the owner of the area or the harvesting rights does not need to ask for permission to carry out harvesting activities.

The status of protected sites is documented and monitored in the midterm planning ("Forsteinrichtung") and is therefore respected when planning management measures. Controls are carried out by forest control ("Forstaufsicht"), employees of the Nature Conservation Federal Agency or by the police.

In mid-term management planning ("Forsteinrichtung") protected sites and protective functions of forest are addressed.

Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. Designated cultural monuments in the forest are considered in the midterm planning ("Forsteinrichtung") and respected accordingly during the execution of forest management activities.

Woodland cemeteries have to be included as designated areas in the midterm planning ("Forsteinrichtung") and mapping.

In the *Verwaltungsverfahrensgesetz (VwVfG)* – the central Act that defines administrative procedures for federal authorities in Germany -, the 2016 approved new § 25 (3) is to introduce a general rule for an "early public participation" in large projects with a corresponding so-called "obligation to act" of the administration. The broad and early participation of the public comprises the early notification of the general objectives of the project, the means of implementation and the likely impact.

Forests in Germany are designated with a legal protection status and fulfil the following functions (*sensu* Federal Law Gazette, §12): protection against damaging environmental impacts in the sense of the Federal Emissions Protection Act.

If necessary, the Environmental Impact Assessment Act is applied to assess potential environmental impacts and develop mitigation or compensation measures, if a conversion of land use shall take place.

The legislator demands that primarily avoidable impairments of nature and landscape should be avoided. Unavoidable adverse effects must be compensated by measures of nature conservation and landscape management (compensation and replacement measures) (*Ausgleichs- und Ersatzmaßnahmen*). If the impairments cannot be avoided or compensated for, the interests of nature conservation and landscape management must be weighed against other public concerns/interests and justifications must be provided (BfN 2002/2007). In particular, ecosystem functions should not be impaired and biodiversity should be preserved.

Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are

	<p>duty-bound to enforce and supervise regulations or obligations equally in all forest types. There are no statistics available relating to regular on-site visits by relevant authorities focusing on environmental requirements; however on-site visits are a known measure of control and planning.</p> <p>The authors of the FSC National Risk Assessment for Germany come to the conclusion, that identified laws are upheld. Cases where law/regulations are violated are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities. For this indicator the area under assessment is determined to be 'low risk'. This conclusion is endorsed by the lack of relevant cases in which sustainability was seriously compromised by small forest organizations.</p>
Means of Verification	<ul style="list-style-type: none"> - Richtlinie zur Forsteinrichtung ("Guideline for Forest Planning") - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. § 41: Inventory Forest acts of the federal states (1) - Additional frameworks and documents for inventory, survey and measuring - Verwaltungsverfahrensgesetz in der Fassung der Bekanntmachung vom 23. Januar 2003 (BGBl. I S. 102), das zuletzt durch Artikel 20 des Gesetzes vom 18. Juli 2016 (BGBl. I S. 1679) geändert worden ist". Last accessed on 15.02.2017 - Environmental Impact Assessment Act (Gesetz über die Umweltverträglichkeitsprüfung (UVpG) in der Fassung vom 24. Februar 2010 (BGBl. I S. 94)) <p>FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)</p>
Evidence Reviewed	<p>https://www.verkuendungbayern.de/files/allmbl/2012/01/anhang/7905.0-L-213A001.pdf</p> <p>https://www.wald-und-holz.nrw.de/wald-und-holznrw/service/ausschreibungen-undvergaben/unterlagen-zur-forsteinrichtung.html</p> <p>http://www.gesetze-im-internet.de/uvpg/</p> <p>https://www.bmel-statistik.de/forst-holz/tabellen-zu-forst-und-holzwirtschaft/</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.2	The BP has implemented appropriate control systems and procedures for verifying that feedstock is sourced from forests where management maintains or improves soil quality (CPET S5b)
Finding	Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. Because of that the site-adapted selection of species a persistent soil fertility for long-term usability must be ensured, the natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable

yield, fertilizers and pesticides must only be used in accordance with the provisions of the agricultural and forest legislation and in accordance with the German legislation fertilization in a conventional sense is excluded to a major extent for forest management. This applies to all federal states in Germany.

More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).

Every federal state has the authority to monitor the implementation of the law by the forest supervision ("Forstaufsicht"). Since state forest organizations are supervised by the federal forest department, forest activities are monitored in both private forest and public forest. The forest supervision ("Forstaufsicht") is the implementing authority of the federal state, whereby the state secures legal implementation. Forest supervision overall is executed by officials of the corresponding low-level forest department with help of the police.

Permanent soil monitoring

On almost 800 permanent soil observation plots under arable land, grassland, forest and special use (e.g. settlements, viticulture), the soil in Germany is monitored on a long-term basis. The aim of the monitoring programme is to record the current condition of the soils, to monitor their changes over the long term and to map development trends. The federal states are responsible for long-term soil monitoring. The permanent soil monitoring data are collected and used in the federal states and by the Federal Environment Agency for a wide range of soil protection issues. The accuracy of the series of measurements will increase with each further investigation. The Federal Environment Agency collates the data in a specialist information system and has the possibility of carrying out cross-state evaluations.

Long-term soil monitoring is a central instrument of environmental monitoring
Source: S. Marahrens / Federal Environment Agency

Soil condition survey in forests

BZE Forest and ICP Forest (Level I and II)

The BZE Forest and ICP Forest projects assess and monitor forest condition and the condition of forest soils. The data can be used, for example, to make statements on the carbon cycle, the nutrient and water balance and diffuse material loads in the soil. The Federal and State Working Group on Soil Condition Surveys (BZE) coordinates and regulates the establishment and operation of the monitoring sites, the minimum set of parameters and the investigation methods. The programme is the responsibility of the Federal Ministry of Food, Agriculture and Consumer Protection. The Thuenen Institute, Institute of Forest Ecology and Forest Inventories keeps the data in a central database and is responsible for the coordination and analysis of the data.

The result of the last BZE showed that actions taken regarding air immissions, soil protection and forest restructuring to more mixed forests in the past, were making impacts. The key results are:

- Soil acidity decreased
- Status of humus and bases saturation increased
- Carbon stock up to 30cm and also 90cm depth increased

	<ul style="list-style-type: none"> - Heavy metals depositions and content in humus layer decreased - Nutritional conditions of trees are predominantly good - Sample points of critical loads of eutrophication nitrogen decreasing <p>The litter layer of forest soils requires special sampling. Source: Federal Environment Agency</p> <p>The Federal Nature Conservation Act (“Bundesnaturschutzgesetz”) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries). In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners (e.g. Bundes-Bodenschutzgesetz (BBodSchG): Soil Protection Act; Düngemittelgesetz (DüV): Fertilizer legislation; Düngemittelverordnung (DüMV): Fertilizer ordinance; Wasserhaushaltsgesetz (WHG): Water Resources Act; Europäische – Wasserrahmenrichtlinie: European Water Framework Directive).</p> <p>On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.</p> <p>Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves. E.g. the Federal Forest Authority of Baden-Württemberg has extended the forest function mapping, soil and culture heritages need to be mapped as well. Forest management activities have to be adapted to avoid damages to those sites.</p> <p>Between 2006 and 2008, the government performed the second, nationwide “Bodenzustandserhebung” to determine the soil situation in German forests and to monitor impacts of forest management activities.</p> <p>There are several non governmental organisations like the “Kuratorium für Waldarbeit und Forsttechnik e.V. (kwf)” that research harvesting activities and their impact on, among other terms, the soil quality and present technical and process orientated recommendations to protect the impacts on the soil.</p> <p>The following statistic shows the number of cases nationwide of violations against soil protection laws. It is to be mentioned, that there is no statistical data for specifically forests, so a legitimate assumption is, that most of the cases happened outside forest areas.</p> <p>For this indicator the area under assessment is determined to be ‘low risk’.</p>
Means of Verification	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - “National Forest Act” 1. Article §8 “Protection of forest functions upon planning and measures by public projects”; Article §9 “Preservation of the Forests”; Article §11 “Management of forest - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - “Federal Nature Conservation Act” 1. Article §5 “Agriculture, forestry and fisheries“ Forest acts of the federal states (1) - Bundes-Bodenschutzgesetz(BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – “Soil Protection Act” 1. Article §17 (“Good agriculture practice“)

	<ul style="list-style-type: none"> - Wasserhaushaltsgesetz(WHG) vom 31. Juli 2009 (BGBl. I S. 2585) - “Water Resources Act” - Düngeverordnung (DüV) in der Fassung der Bekanntmachung vom 27. Februar 2007 (BGBl. I S. 221) – “Fertilizer legislation” - Düngemittelverordnung (DüMV) vom 5. Dezember 2012 (BGBl. I S. 2482) - “Fertilizer ordinance” - German Federal Environmental Agency (Umweltbundesamt) (2012): Soil Condition in Germany - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Waldbericht der Bundesregierung 2017 - Umweltbundesamt - Umweltdelikte 2016: Auswertung von Statistiken
Evidence Reviewed	<p>http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/bnatschg_en_bf.pdf</p> <p>http://www.gesetze-im-internet.de/bwaldg/</p> <p>https://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/4291.pdf</p> <p>https://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/4291.pdf</p> <p>https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-08-24_texte_66-2018_umweltdelikte-2016.pdf</p> <p>https://www.umweltbundesamt.de/themen/boden-landwirtschaft/boden-schuetzen/boden-beobachten-bewerten#umweltprobenbank-des-bundes</p> <p>http://www.icp-forests.org/Manual.htm</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.3	The BP has implemented appropriate control systems and procedures to ensure that key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b).
Finding	<p>Forest management measures are subjected to the Federal Forest Act (BWaldG) (BMEL 2015) and the State Forest Acts (LWaldG), which fulfill the requirements of the BWaldG and require management and site planning. The occurrence of special conservation values is also considered, i.e. in forest management plans. §11 of the BWaldG requires on principle to consider the forest function “ecosystem” (BMEL 2015) in forest management activities.</p> <p>Important large-scale landscape ecosystems have been identified and placed under protection in the form, for example, of national parks. Management for forestry purposes is either prohibited or partially regulated.</p> <p>Large landscape ecosystems and ecosystem mosaics are identified.</p> <p>The protection of forests as habitat types, landscape ecosystems and mosaics plays an important role.</p> <p>Clear cuttings, which could lead to fragmentation on the size of landscape ecosystems, are</p>

in any case subject to approval and may require compensation.

Most important representative forest habitats and landscape ecosystems with forests are under protection and often set aside from forest management activities or managed with low intensity forest management. The European habitats directive was transposed in national law in 1998 (Sipped, 2007) and is anchored in §§32 to 38 of the federal nature conservation act.

There are Natura 2000/habitat types of the Habitats directive and sites protected under the Federal Nature Conservation Act as landscape-level ecosystems and small habitats.

Sites subjected to the Habitats Directive, combined with Bird Protection Areas (EGV), form the Natura 2000 sites. They need to be managed either in compliance with the Habitats Directive or the Birds Directive, partially there are overlaps. According to Art. 6 para 1 of the Habitats Directive mandatory management plans need to be elaborated. Management plans have to maintain or restore a favorable conservation status. According to Art. 6 para 2 member states are in bond to avoid damaging activities that could significantly disturb these species or damage or deteriorate habitats or habitats of protected species.

In Germany there are nature protection areas, mapped SAC habitat types (with the exception of the beech habitat types 9110 and 9130), biotopes protected under the German federal nature conservation act (BNatSchG, §30) and the state nature conservation laws, and the protection forests designated under the state forest laws insofar as they serve the protection or the promotion of certain species, forest associations or forest biotopes.

The Red List, published by the "Bundesamt für Naturschutz", catalogizes plants, animals and fungi according to their recent endangerment level. It also provides a short- and longterm tendency. As this list includes nearly 22.000 species overall, a link to the download section is provided in the evidence reviewed, instead a complete list.

The Red List is regularly reviewed and acts as a scientific basis for strategic and legislative decisions. According to interviewed staff from federal state forests, the Red List is an essential tool to be used when forest management planning is done in any form.

The following statistic provided by the Umweltbundesamt shows that there are only a few cases nationwide of violation of protected areas and most of the cases were solved by governmental authorities. Also the tendency is pointing downwards.

Concerning non-forest biomass, there is a variety of scenarios of biomass origin in the non-forest sector. Therefore focus is on the most likely ones with regards to waldkontors main supply area and companies to work with.

Waldkontors own sister company "claus rodenberg forst- und landschaftspflege gmbh" for example is only working for the public sector. This leads to very detailed tenders with exactly defined tasks. Those tenders have been prepared from client side in accordance to applicable laws and in cooperation with responsible authorities. Regarding ecosystems and habitats, the "untere Naturschutzbehörde" has checked with own resources how the ecological situation of each individual site is and what measures are possible.

In the private sector, the contracted company is responsible for knowing and complying with existing laws. Waldkontor uses partner with not only a flawless reputation, but with known experience in this field. Interviews showed, that in the majority of cases, feedback from authorities is asked and a proper documentation is provided.

Depending on federal state or even smaller administrative districts, the clients handling differs vastly. In Mecklenburg-Hither Pomerania it is common practise, that every measure is reconciled in advance with authorities and given definite instructions, often combined with on site visits. Background checks for legal, sustainable and ecological matters have been done by authorities. Also on site inspections after completion are common.

In other federal states, the control mechanisms are not as tight, but nevertheless random visits are happening. According to interviewed companies, the public is the attentive control institution and has a quite good knowledge of laws and regulations concerning executed

	<p>measures. Allegations from the public are prosecuted by local authorities like “untere Naturschutzbehörde” and act as a wide spread and continuous control instrument.</p> <p>As this indicator is in major parts redundant to indicators 2.1.1 and 2.1.2, this indicator for the area under assessment is determined to be ‘low risk’ as well.</p>
Means of Verification	<ul style="list-style-type: none"> - Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora - Article 2,6,12,17 - Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Umweltbundesamt - Umweltdelikte 2016: Auswertung von Statistiken - Interview with staff of Federal State Forest of Lower Saxony <p>Durchführungsbestimmungen zum Knickschutz – MELUR SH - Erlass V534-531.04</p>
Evidence Reviewed	<p>https://www.bfn.de/fileadmin/MDB/dokumente/themen/natura2000/gebiete/meldestand_ffh_03012014.pdf</p> <p>http://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:31992L0043</p> <p>http://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:32009L0147</p> <p>https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-08-24_texte_66-2018_umweltdelikte-2016.pdf</p> <p>https://www.bfn.de/themen/rote-liste.html</p> <p>Rote Liste der Tiere, Pflanzen und Pilze Deutschlands: Säugetiere (bfn.de)</p> <p>https://www.rote-liste-zentrum.de/de/Die-Roten-Listen-1707.html</p> <p>https://www.schleswig-holstein.de/DE/Fachinhalte/N/naturschutz/Downloads/DB_Knickschutz.pdf?__blob=publicationFile&v=2</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.4	The BP has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	<p>In Germany, there are both nongovernmental (like the NABU or WWF) and governmental organizations around to ensure and protect the biodiversity.</p> <p>Nature conservation and species protection as well as biodiversity conservation are already incorporated in the German legislation both at federal and state level. The precautionary principle (risk prevention and resource provision) is the guideline of environmental policy and legislation in Germany (UBA website 2015). The precautionary principle and, if applicable, associated interventions and conversions in the landscape, also outside protected areas, are</p>

generally covered by the Intervention Compensation Scheme (Eingriffs- und Ausgleichs-Regelung) (§13, 15, 17 BNatschG) with the basic idea of a general prohibition of deterioration for the state of nature and landscape in Germany. The legislator demands that primarily avoidable impairments of nature and landscape should be avoided. Unavoidable adverse effects must be compensated by measures of nature conservation and landscape management (compensation and replacement measures) (Ausgleichs- und Ersatzmaßnahmen). If the impairments cannot be avoided or compensated for, the interests of nature conservation and landscape management must be weighed against other public concerns/interests and justifications must be provided (BfN 2002/2007). In particular, ecosystem functions should not be impaired and biodiversity should be preserved.

For example, the German Federal Nature Conservation Act (BNatSchG) regulates the general protection of nature and landscape, the protection of certain parts of nature and landscape as well as of wild animal and plant species. Species and area protection, recreational use, provision for fines and penalties are addressed as well (BfN 2009). But also an adapted forest management compatible and connected with nature conservation aspects is reflected. Each federal state has its own land conservation law, which is linked to the Federal Nature Conservation Act according to Art. 72 GG.

In 2011 the European commission adopted the “Biodiversity Strategy for the European Union” with the aim to stop the loss of biodiversity and to restore the biodiverse situation as far as possible. An assessment showed success in some aims, but EU- wide more measures and more funding is necessary.

In 2007 the German government put in place the National Strategy for Biodiversity (NBS) with 330 objectives and 430 measures to improve biodiversity on national and regional level. The strategy is implemented, coordinated and monitored by the Federal Environmental Ministry. In 2014 a survey of the NBS revealed, that the measures so far are not sufficient to obtain the aims of the Strategy. As a consequence the Federal Environmental Ministry implemented in 2015 an ambitious Program called “Naturschutz- Offensive 2020” in which 10 top priority domains are named with 40 specific determined measures. Domain IV is specifically assigned to forests and forest management in order to improve biodiversity. Domain VI is assigned to protected areas, Natura 2000 and high conservation value areas. An assessment in 2017 showed that overall successes of the program have become apparent.

On federal state level are additional programs and strategies implemented or planned. An overview is provided in the “ Biologische Vielfalt in Deutschland – Rechenschaftsbericht 2017“. In those are in addition to the national strategy and independently as well measures described to maintain and improve biodiversity.

Forest management measures are subject to the Federal Forest Act (BWaldG) (BMEL 2015) and the State Forest Acts (LWaldG), which fulfill the requirements of the BWaldG and require management and site planning. The occurrence of special conservation values is also considered, i.e. in forest management plans. §11 of the BWaldG requires on principle to consider the forest function “ecosystem” (BMEL 2015) in forest management activities. In addition to monitoring individual species, habitats in Germany are also protected through Natura 2000 management plans. Natura 2000 intends to conserve biodiversity and combine it with the sustainable development of land and natural resources. The multifunctional approach to forest management tries to take biodiversity protection into account, among other things by Forest conversion of coniferous and deciduous wood or increasing portions of dead wood to protect biodiversity. As described in indicator 1.1.1, the Forsteinrichtung is providing inventories of several categories, Natural habitats, biotopes, Natura 2000 areas and a lot more are identified, described and mapped. One part is the Waldbiotopkartierung (WBK) as integral part of the mapping of forest functions

	<p>(Waldfunktionskartierung). In the later planning process, care measures are defined and put into long-term and annual planning. One aspect among many is the inventory of carbon stocks in forests. Here is the standing biomass and the soil carbon to mention and binding regulations for the proportion of dead wood (Microhabitats) per ha. The specific handling is regulated on federal state level in individual laws and regulations.</p> <p>As there is no established procedure to measure biodiversity, one approach is to determine the forest development phases in seven categories and monitoring the biodiversity in each phase. With mapping as shown below and the data from monitoring, a biodiversity indication could be derived. This is established common practice in several federal states in Germany and executed within the scope of regular forest inventories.</p> <p>Germany ranks on place 6 of the so-called Environmental Performance Indicators (EPI) for the aspect of biodiversity / habitats in 1st place as compared to international standards. Germany has developed a national Biodiversity Strategy that integrates the targets and which have been integrated i.e. in the BNatschG and progress is documented. On non-governmental side there is significant scientific research going on focusing on biodiversity, not at least as this topic gains more and more attention in the public awareness.</p> <p>The risk designation is 'low risk'.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" - Bundesamt für Naturschutz, Gesetz über Naturschutz und Landschaftspflege: (Bundesnaturschutzgesetz – BNatSchG). 2009 - Bundesamt für Naturschutz (German Federal Agency for Nature Conservation) - Umweltbundesamt (UBA) - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. Article 12 "Protection Forest" (last amended by article 1 on the 17.01.2017) - Landeswaldgesetz: (LWaldG). 2000 - „Natura 2000 und Wälder: Teil I–III.“ - Küchler-Krischun J. Dr., Walter A.M., „Nationale Strategie zur biologischen Vielfalt.“ - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Naturschutz-Offensive 2020 <p>Biologische Vielfalt in Deutschland – Rechenschaftsbericht 2017</p>
<p>Evidence Reviewed</p>	<p>https://www.bfn.de/fileadmin/MDB/documents/themen/monitoring/BNatSchG.PDF http://www.umweltbundesamt.de/themen/nachhaltigkeit-strategieninternationales/umweltrecht/umweltverfassungsrecht/vorsorgeprinzip http://www.gesetze-im-internet.de/bwaldg/___12.html http://www.lexsoft.de/cgi-bin/lexsoft/justizportal_nrw.cgi?t=147627962538439433&sessionID=6154111711774293430&chosenIndex=Dummy_nv_68&templateID=document&source=context&source=context&highlighting=off&xid=187469,1 http://ec.europa.eu/environment/nature/natura2000/management/docs/Final%20Guide%20N2000%20%20Forests%20Part%20I-II-Annexes_de.pdf http://www.bfn.de/fileadmin/MDB/documents/themen/landwirtschaft/nationale_strategie.pdf https://www.bmu.de/naturschutz-offensive-2020/ https://www.bmu.de/fileadmin/Daten_BMU/Pool/Broschueren/biologische_vielfalt_bf.pdf</p>

	https://www.lwf.bayern.de/mam/cms04/biodiversitaet/dateien/a63_mikrohabitate_lwfaktuell_63-13.pdf
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.5	The BP has implemented appropriate control systems and procedures for verifying that the process of residue removal minimises harm to ecosystems.
Finding	<p>The German Forest Act states that the intention of the Forest Act is to maintain and protect forests of Germany and increase the forest area. An additional intention is to promote the sustainable management of the forests, including an explicitly stated objective of maintaining and increasing the biological diversity of the forests.</p> <p>Residues are removed in connection with thinnings, selective logging and clear cuts, carried out as an integrated part of the logging operations in forests. It is common practice to remove residues after felling operations, either for the production of biomass feedstock or for firewood. Removal of residues occur in connection with removal of wood vegetation from protected open habitats like heaths and bogs where the aim is to regulate the wood vegetation in order to maintain the characteristic of these open habitats. As these habitats are generally protected by law the removal of wooden vegetation shall be carried out without negative impact on the ecosystem and consequently it would be illegal if residues are removed in a way that causes harm to these ecosystem.</p> <p>As mentioned in 2.2.3 there are appropriate control systems and procedures to ensure that ecosystems are protected.</p> <p>Unavoidable interventions and removal of high conservation value forests or habitats require a prior environmental impact assessment or a separate authorization from superior forest authorities.</p> <p>Water and soil are protected. Because of that, the damage by processes of residue removal is excluded or of minimised harm to ecosystems.</p> <p>Sustainable conservation of soil fertility is predefined by (federal) law (e.g. §4 & §5 Landeswaldgesetz Rheinland Pfalz).</p> <p>§7 of the Federal Soil Protection Law obliges (forest) owner to protect soils against threads to soil quality.</p> <p>The demand for energy wood has also made weaker assortments and crown material profitable and led to increased use. In the environmental policy debate, too, the use of energy wood plays an increasingly important role in reducing CO2 emissions. Forestry products are a considerable carbon sink both in conventional use and in the form of energy wood, or at least have a positive effect on the CO2 balance by substituting fossil fuels. In the general euphoria, it</p>

	<p>is often overlooked that there are also restrictions on different legislative level (e.g. §7 Bodenschutzgesetz; §4 & §5 Landeswaldgesetz Rheinland Pfalz; other federal state legislation) on the use of energy wood, which result from the functioning of forest ecosystems and their nutrient balance. Also as significant parts of the german forests are PFC and/or FSC certified, the respective regulations apply for the use of biomass.</p> <p>In the long term and sustainably, forest ecosystems only function according to the principle of closed nutrient cycles, as a "closed loop economy" (Fig. 2, left). In the unaffected primeval forest all absorbed nutrients are sooner or later returned to the soil via litterfall and deadwood. The nutrient losses here are very low and are in balance with the additional supply from the weathering of minerals and the input with precipitation.</p> <p>The situation is different when humans intervene: When forests are heavily polluted by pollutant inputs, the originally closed material cycles break down and nutrient losses occur with the seepage water (Fig. 2, right). Pollutants are introduced, nutrients leave the forest soil in exchange with the leachate. The material balance is disturbed and the soil acidifies. A similar situation occurs when nutrients are removed from the forest together with the biomass during use. The orange arrow in figure 2 symbolizes this withdrawal. The material inputs from the atmosphere also contain nutrients which, together with the weathering of minerals in the soil, can at least partially compensate for the nutrient losses caused by leachate discharge and use withdrawal. However, through intensified biomass use, forests can quickly experience greater losses than are covered by the revenues. This situation must be avoided in order to maintain the fertility of the soil as working capital undiminished.</p> <p>In practice the forest owner, beside being bound by law, is interested to preserve soil quality as one cornerstone of sustainable forest management and therefore future yields and profits from growth of the forest. As the majority of nutrients are accumulated in needles and leaves, this prevents a significant loss of nutrients. If the nutrients supply is decreasing, expensive countermeasures have to be taken to restore the supply by fertilizing. This is widely known and respected by forest owners, so the preservation of soil fertility and quality is in their own interest. As a consequence the soil situation is considered in common practice by the forest owners to which extend biomass is removed. For instance in spruce or pine forests most of the harvest residues are left in the forests and when broadleaf trees are harvested, the biomass is significantly later than the harvest removed to retain the leaves in the forest. If the forest is certified, the respective regulations have to be met anyway.</p> <p>As mentioned in indicator 2.2.2, the BZE ranked the nutritional conditions of trees in general as good. This indicator helps monitoring the soil conditions and gives indications on the necessary remain of biomass in the forests.</p> <p>Since 2009 there is data from the second Bodenzustandserhebung (BZE 2), to categorize forest soils according to their nutrients supply. (see also 2.2.2)</p> <p>The development of growth in forests with biomass use in form of forest residues is partially monitored by federal state forest authorities and by several research instituts to develop a documentation system and to give recommendations for future use of forest residues. (See also 1.1.1)</p> <p>There is no available evidence challenging a 'low risk' designation.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" - Bundesamt für Naturschutz, Gesetz über Naturschutz und Landschaftspflege: (Bundesnaturschutzgesetz – BNatSchG). 2009 - Bundesamt für Naturschutz (German Federal Agency for Nature Conservation) - Umweltbundesamt (UBA)

	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. Article 12 "Protection Forest" (last amended by article 1 on the 17.01.2017) - Landeswaldgesetz: (LWaldG). 2000 - „Natura 2000 und Wälder: Teil I–III.“ <p>Küchler-Krischun J. Dr., Walter A.M., „Nationale Strategie zur biologischen Vielfalt.“</p>
Evidence Reviewed	<p>https://www.bfn.de/fileadmin/MDB/documents/themen/monitoring/BNatSchG.PDF http://www.umweltbundesamt.de/themen/nachhaltigkeit-strategieninternationales/umweltrecht/umweltverfassungsrecht/vorsorgeprinzip http://www.gesetze-im-internet.de/bwaldg/___12.html http://www.lexsoft.de/cgi-bin/lexsoft/justizportal_nrw.cgi?t=147627962538439433&sessionID=6154111711774293430&chosenIndex=Dummy_nv_68&templateID=document&source=context&source=context&highlighting=off&xid=187469,1 http://ec.europa.eu/environment/nature/natura2000/management/docs/Final%20Guide%20N2000%20%20Forests%20Part%20I-II-Annexes_de.pdf http://www.bfn.de/fileadmin/MDB/documents/themen/landwirtschaft/nationale_strategie.pdf https://www.waldwissen.net/technik/holzernte/boden/lwf_biomasse_naehrstoffentzug/index_DE</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.6	The BP has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised (CPET S5b).
Finding	<p>In Germany, the forests are bearing a legally binding protection status and which fulfil the following functions (in accordance with the federal forest act, §12): protection against damaging environmental influences sensu the German federal emissions protection act (Bundes-Immissionsschutzgesetz, BImSchG) of 15 March 1974 (Bundesgesetzblatt I, p. 721), erosion by water and wind, desiccation, damaging run-off of precipitation and avalanches.</p> <p>Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves.</p>

Forest function maps using the example of Lower Saxony. Here the individual protection zones including water protection areas are marked.

Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. The natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield.

This applies to all federal states in Germany. More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. The specific measure (harvesting under various conditions, forest road maintenance or building, pest or calamity management,...) provides specific risks to the environment. Not only regarding water protection, these guidelines request an individual risk potential analysis when planning the operations. Basis are for instance data from the Forsteinrichtung and all accompanying data like the mentioned Waldfunktionskarten etc. Result of the planning must be, that the risk to harm ecosystems, habitats or applicable is negligibile. The use of such guidelines is mandatory to consider and implemented in common practice.

In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).

Every federal state has the authority to monitor the implementation of the law by the forest supervision ("Forstaufsicht").

In general there are two kinds of negative impacts on water by biomass generation.

1. Contamination with substances

Certified forests and companies (PEFC and FSC) are obliged to use bio oils in machinery that are biodegradable. As contractors with own machinery work on order of the forest owners and the majority of forest areas is PEFC or FSC or both certified (see graphic below) the vast majority works with applicable certification standards and use biodegradable fluids. From time to time, federal state forest authorities take fluid samples and test for biodegradability.

Therefore most contractors work in private forests as if in certified forests, as they do not change back to mineral oil or switch to tires that are not soil protecting, for works in private forests.

2. consequences of biomass harvest concerning changed waterflow, erosion protection, etc.

Prevention of such consequences is a matter of following best practise, certification requirements and not least applicable law.

Biomass is typically a by-product of round wood harvest which has more economic value and therefore such harvesting operations are usually accompanied and controlled by the ordering forester to. Those controls then include the biomass harvest as well, so to say as as side-effect of roundwood- harvest. According to waldkontors own havesting company, more than 90% of the operations are at least once visited by the responsible forester or client. Maintainig the forests productivity is a crucial aim for future incomes and water protection, protection from erosion etc. is a key factor to achieve this aim. So beside laws and regulations, an intrinsic motivation of forest owners results in respective control mechanisms.

Forestry is a land use that is particularly beneficial to water protection. In this context,

	<p>compliance with the legal framework, such as forest and water laws, is a basic requirement for water-protective forestry. The aim of sustainable and near-natural forestry, to preserve forest ecosystems adapted to the location, is generally in line with the requirements of effective water protection. The water-protecting effect of forests can be impaired by external factors, e.g. germination by wildlife, acidification and nutrient surpluses due to the combing effects of trees in the presence of air pollution.</p> <p>Non-forest biomass is harvested under the same preconditions as biomass from forests. Applicable laws and regulations are to be known and followed by executing companies. Depending on the federal state, the legislation predefines measures and behavior when working near or next to open water or with regards to ground water.</p> <p>As described in indicator 2.2.3, planned operations are often, sometimes mandatorily discussed with relevant authorities and detailed work instructions to ensure environmental protection in general, are given to the contractors.</p> <p>Also in contrast to forest works, the non-forest biomass is harvested under the eye of the public, what leads to an enhanced sensitivity with the contractors, as they must expect every violation against laws and regulations will be reported to police or authorities, According to interviews, the public opinion on allowed measures is usually more strict than applicable legislation.</p> <p>The Federal Nature Conservation Act (“Bundesnaturschutzgesetz”) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries). In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners.</p> <p>On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.</p> <p>The following statistic shows the cases of violation against water protection laws nationwide. The cases refer to pollution of surface water, ground water and sea water in general. No specific data for forests is available.</p> <p>The case ‘water’ is also discussed in indicator 2.5.2.</p> <p>The risk designation is ‘low risk’</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Wasserhaushaltsgesetz(WHG) vom 31. Juli 2009 (BGBl. I S. 2585) - “Water Resources Act” (last amended by article 1 on the 18.07.2017) - Bundes-Bodenschutzgesetz(BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – “Soil Protection Act” 1. Article §17 (“Good agriculture practice“) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) <p>Umweltbundesamt - Umweltdelikte 2016: Auswertung von Statistiken</p>
<p>Evidence Reviewed</p>	<p>http://www.fvabw.de/indexjs.html?http://www.fvabw.de/forschung/wg/wfk/wfk_themen.php?t_hema=3;</p> <p>http://www.gesetze-im-internet.de/whg_2009/</p> <p>https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-08-24_texte_66-2018_umweltdelikte-2016.pdf</p> <p>https://de.dwa.de/de/regelwerksankuendigungen-volltext/waldbewirtschaftung-und-gewaesserschutz.html</p>

Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.7	The BP has implemented appropriate control systems and procedures for verifying that air quality is not adversely affected by forest management activities.
Finding	<p>Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types. On sites visits by authorities for water protection and nature conservation are done on a regular basis.</p> <p>The aim of the German Air pollution Prevention and climate Protection Policy is to reduce air pollution and climate emissions in the long term. The exact knowledge of the emission situation is fundamental for the necessary strategies and measures. For this purpose, a reporting system has been set up with which the proportionate emission quantities are determined and published annually. This information and data are collected and calculated on the basis of national, European and international conventions and agreements. Emissions are reported in uniform structures, on specified dates and accompanied by comprehensive documentation and quality assurance and control regulations.</p> <p>In the national trend tables, the contributions of the individual source groups to the total emissions of greenhouse gases are shown. Other emissions are the absolute dominance of energy related emissions. Overall, emissions of greenhouse gases and other air pollutants have fallen significantly since 1990. Considerations of the individual components prove this trend to a different degree.</p> <p>In addition it needs to be mentioned, that the vast majority of the emissions referred to in the following statistic is emitted by the transport sector, the energy sector, industry, and the agricultural sector.</p> <p>There is no available evidence challenging a 'low risk' designation.</p>
Means of Verification	<p>- Umweltbundesamt, nationale Trendtabellen für die deutsche Berichterstattung atmosphärischer Emissionen seit 1990 – Development of air quality 1990-2017 (Stand 02/2019)</p> <p>FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)</p>
Evidence	<p>https://www.umweltbundesamt.de/themen/luft/emissionen-von-luftschadstoffen</p> <p>https://www.umweltbundesamt.de/sites/default/files/medien/384/bilder/dateien/3_tab_emi-</p>

Reviewed	<p>ausgew-luftschaadt_2019.pdf https://www.umweltbundesamt.de/daten/luft/luftschaadstoff-emissionen-in-deutschland#textpart-3 - Waldfunktionskarte Niedersachsen (32 Blatt) Waldflächen mit bes. Schutz- und Erholungsfunktionen, auch sonstige schutzwürdigen Flächen, Topographische Karte M 1:50000 Übersichtskarten der Niedersächsischen Landesforstverwaltung Hrsg. Nds. Forstplanungsamt Wolfenbüttel https://www.baysf.de/fileadmin/user_upload/07-publikationen/2016/Grundsaeetze_zum_Boden-_und_Gewaesserschutz.pdf</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.8	<p>The BP has implemented appropriate control systems and procedures for verifying that there is controlled and appropriate use of chemicals, and that Integrated pest management (IPM) is implemented wherever possible in forest management activities (CPET S5c).</p>
Finding	<p>Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements. Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types.</p> <p>There are no statistics available relating to regular on-site visits by relevant authorities focusing on environmental requirements; however on-site visits are a known measure of control and planning. On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act. In cases of violations penalties are in place and are implemented.</p> <p>Environmental NGOs function as watchdogs, also the public is present in most of the forests and natural sites for recreational purposes. According to forest authorities, most of the reported pollutions and violations of laws and restrictions, are reported by the public.</p> <p>For private forests, the silvicultural guidelines are only recommendations, but of course private forests are also bound to national and federal law. Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. Fertilizers and pesticides must only be used in accordance with the provisions of the agricultural and forest legislation. In accordance with the German legislation fertilization in a conventional sense is excluded to a major extent for forest management.</p> <p>Pesticides may only be applied in Natura 2000 areas if their use has been carefully tested for compatibility in a nature conservation approval procedure under EU nature conservation law. The Federal Agency for Nature Conservation (BfN) and the Federal Environment Agency</p>

(UBA) have now developed a guideline for the competent state authorities on how to carry out this assessment.

Natura 2000 sites, i.e. fauna, flora, habitat and bird sanctuaries, together form the EU network of protected areas Natura 2000, which was established to protect particularly endangered animal and plant species and habitat types. New scientific findings now show that the use of pesticides is particularly problematic in nature conservation terms. This is especially true when the agents are to be applied by helicopter, because such an application from the air does not allow the targeted treatment of individual trees, but inevitably affects larger areas.

If impairments of a Natura 2000 area and its protected assets cannot be reliably excluded by the use of pesticides, an FFH compatibility assessment must be carried out in any case. A permit may only be granted after a thorough investigation. BfN and UBA explain in their updated information paper "Plant protection with aircraft" which exact nature conservation regulations must be observed in the approval procedure for such applications

Common practise and communicated aim of all federal state forests and most of private forests is to keep the use of chemicals as low as possible. For cost reasons and not at least because of the (public) awareness. A core principle of integrated pest management in german forests is, that the use of pesticides is only to be considered as an ultima ratio, when all organisatory and technical countermeasures have proven insufficient.

In recent times hot and dry summers and mild winters lead to a wide spread of bark beetles in the central European regions. The mitigation measures are mostly harvesting of infected trees and areas. Those logs are commonly transported as fast as possible out of the forests to prevent further spreading. In parts this is not possible and the use of approved chemicals come to use on the log piles. This is regulated by applicable laws mentioned in the means of verification. Also it is common practise, that this work is closely monitored by foresters. In praxis, the use of chemicals in large scale is not efficiently to handle, as the piles to treat should not exceed 2m height and 20 scbm in volume. Otherwise only the top layer of logs is treated. Due to the very high volumes of bark beetle infesteted logs that are harvested, the piles usually exceed hundreds of scbm. The method of choice of several federal state forest administrations for the moment is, to sell the beetle logs for very low prices under the condition to remove all volume shortly after the sale.

Therefore the use of chemicals in german forests is according to interviews with forestowners and foresters only an exemption in the scope of pest management.

Federal states have different legislation and regulation regarding the integrated pest management, the common practice does also differ due to different forest types, but laws like the "Bundesnaturschutzgesetz", "Bundeswaldgesetz" and more on state level, are forming the framework for chemical use, as state legislation is superior to federal state legislation.

If chemicals are used in forests, there is the obligation to have documentation of the details what chemical was used, how much, where it was used, who was involved. However, the use of chemicals on forest management unit is not reported to any entities, so there is no statistical data available. Interviews with forest management in federal state forests confirmed, that the extreme bark beetle outbreak lead to increased chemical usage in the hope to slow down or even prevent new infestation.

One reported observation is, that the chemical pest control had only a negligible effect on the spreading. So the cost-benefit equation seems to be negative. Also working staff is rare and needed in other fields of pest control. According to interview partners, the use of chemicals in large scale, like treatment of log piles etc. is predicted to decrease. A selective use on small scale areas with regards to the individual situation with higher chance of success, will increase instead.

The following picture gives an overview of the information given on the approved chemicals within a database with all approved chemicals by the "Bundesamt für Verbraucherschutz und Lebensmittelsicherheit".

	<p>The chemicals law (“ChemG”) function as a protection of dangerous substances. Germany ranks high on the worldwide governance indicator with rule of law and control of corruption, therefore it can be concluded that the existing legislation is effectively enforced. Chemicals could only be bought with a “Sachkundenachweis”, a proof of competence according to §23 PflSchG.</p> <p>At the moment 4 insecticides are approved by the ”Bundesamt für Verbrauchersicherheit und Lebensmittelsicherheit“ for use against bark beetles. According to the IRAC classification, all are category 3A chemicals. The closest distance to use next to surface water is 40 meters. When applied correctly in the intended purpose, all are rated not dangerous for bees. The active agents are instable in water and adhere to soil particles, where a degradation to non-toxic metabolites happens. According to research, no significant eluviation into ground water occurs. PEFC takes all above into consideration and allows the uses of pesticides in cases of substantial dangers for the forest, under consideration of applicable plant- and environmental protection laws. FSC does not allow the use of pesticides. If wood was treated, a period of 6 months need to pass, before it could be sold with a valid FSC claim.</p> <p>As the form of application for products mentioned above, is direct and thick spraying on logs, an application by spraying from planes or helicopters would have almost none effect. The agent would deposit on branches and needles and not reach infested stem parts. In general, the application by aircraft is forbidden in Germany and needs to be individually permitted by authorities.</p> <p>There is on the other hand reported pest management by helicopter, against oak processionary. This caterpillar is benefiting from consequences of climate change as well and occurs in larger numbers as in the past. Not only is it a danger for oak forests, but also a significant danger to human health if getting in contact. Therefore an enforced fight against the spread is intended, especially in urban and non-rural areas. Forest areas are hardly target for this attention. The application via aircraft is only approved, when other ground based methods are inadequate. As the oak processionary mainly lives in tree crowns, the tree height is one factor and helicoters come to use for heights above 20m. Also in contrast to bark beetle pest control, a deposition of active agents in the crown will be highly effective. There are 4 products approved for application via aircraft. The most commonly used agent againsts oak processionary is “Bacillus turengiensis”. The mode of action works by degradation of larva intestinals. Technically it is not a chemical pest control, but biologically and strictly speaking not part of this indicator. For this indicator the area under assessment is determined to be ‘low risk’.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - “National Forest Act” 1. Article §8 (“Protection of forest functions upon plannings and measures by public projects”); Article §9 (“Preservation of the Forests”); Article §11 (“Management of forests”); Article §41a (“Forest Monitoring”) - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - “Federal Nature Conservation Act” 1. Article §5 (“Agriculture, forestry and fisheries“) - Düngeverordnung (DüV) in der Fassung der Bekanntmachung vom 27. Februar 2007 (BGBl. I S. 221) – “Fertilizer legislation” - Düngemittelverordnung (DüMV) vom 5. Dezember 2012 (BGBl. I S. 2482) - “Fertilizer ordinance”

	<ul style="list-style-type: none"> - Chemikaliengesetz (ChemG) in der Fassung der Bekanntmachung vom 28. August 2013 (BGBl. I S. 3498, 3991)– “Chemicals Act” - Pflanzenschutzgesetz (PflSchG) vom 6. Februar 2012 (BGBl. I S. 148, 1281) – “Plant Protection Act” - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Merkblatt - Aufzeichnungspflicht für die Anwendung von Pflanzenschutzmitteln gemäß Verordnung (EG) 1107/2009 und § 11 PflSchG
Evidence Reviewed	<p>http://www.gesetze-im-internet.de/bwaldg http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/bnatschg_en_bf.pdf https://www.umweltbundesamt.de/publikationen/pflanzenschutz-luftfahrzeugen-naturschutzfachliche https://www.bvl.bund.de/SharedDocs/Downloads/04_Pflanzenschutzmittel/psm_uebersichtsliste.pdf?__blob=publicationFile&v=10 https://www.waldwissen.net/de/waldwirtschaft/schadensmanagement/pflanzenschutz/insektizide-gegen-borkenkaefer https://www.fva-bw.de/fileadmin/publikationen/wsinfo/wsinfo2007_01.pdf https://www.wald-und-holz.nrw.de/fileadmin/Forstwirtschaft/Borkenkaefer/190401_Merkblatt_Spritzapplikation.pdf https://bfw.ac.at/400/pdf/fsaktuell_43_4.pdf https://www.umweltbundesamt.de/themen/chemikalien/pflanzenschutzmittel/im-hubschrauber-gegen-eichenprozessionsspinner-co</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.2.9	The BP has implemented appropriate control systems and procedures for verifying that methods of waste disposal minimise negative impacts on forest ecosystems (CPET S5d).
Finding	<p>There are no significant impacts – from forest management activities or other forest owner-mandated activities – due to waste disposal in forests under any type of ownership in Germany.</p> <p>Interviews with foresters did not show that harvesting or any other forest works lead to waste disposal in the forests, put aside single cases that were reported and pursued. The majority of waste disposal originates from forest visitors.</p> <p>Littering and illegal waste disposal in German forests do occur along roads, parking spaces and recreational facilities, especially where these occur near cities and recreational sites that are often visited by forest guests. Whenever possible, the source</p>

	<p>of the waste is identified and authorities notified.</p> <p>The purpose of the circular economy and waste disposal law (KrW-/AbfG) promotes the circular economy to conserve natural resources and ensure the environmentally sound disposal of waste. This law applies naturally to forest works as well.</p> <p>In reference to the aspect of sustainability (2.4.2), forest management in Germany ensures the preservation of health, vitality and ecosystem services of the forests.</p> <p>The risk of negative impacts from waste disposal in forest is assessed to be 'low'.</p>
Means of Verification	<ul style="list-style-type: none"> - Existing legislation - Level of enforcement - Regional best management practices - KrW-/AbfG - Kreislaufwirtschafts- und Abfallgesetz <p>Gesetz zur Förderung der Kreislaufwirtschaft und Sicherung der umweltverträglichen Beseitigung von Abfällen, vom 27. September 1994 – „circular economy and waste disposal law“</p>
Evidence Reviewed	<p>https://umwelt-online.de/recht/abfall/krwabfg/krw_ges.htm http://www.gesetze-im-internet.de/</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.3.1	<p>Analysis shows that feedstock harvesting does not exceed the long-term production capacity of the forest, avoids significant negative impacts on forest productivity and ensures long-term economic viability. Harvest levels are justified by inventory and growth data.</p>
Finding	<p>Harvesting permits do not exist in Germany. The legal owner of the forest is allowed to harvest or to sell harvesting rights, without additional permits. Related to activities in private to the purchase tenancy of claims the legislation shall not be violated (concerning taxes protection).</p> <p>Official national forest inventories (“Bundeswaldinventur”) do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability. To take account of long-term developments in forestry, every ten to 20 years, public organizations establish a mid-term framework report (“Forsteinrichtung”), for which responsibility occurs at sovereign level.</p>

The following chart shows the stock of standing wood and how it developed between 2002 and 2012.

In general it could be stated, that continuously the forest area and the growing stock (see below) is increasing.

When planning occurs in relation to public or private forests, reports have to be sent to the corresponding forest authorities for evaluation and control. Private organizations that are not obliged to do planning are subjected to a control mechanism by the tax assessment. The preparation of mid-term framework reports is done by officials or freelancing consultants. The results of the National Forest Inventory ("Bundeswaldinventur") 2012 have demonstrated that the average timber stocks in German forests rose compared to earlier inventories, which is an indicator of sustainable forestry and proper planning.

The legal background for monitoring and planning is clearly regulated and enforced. Due to the good governance and law enforcement indicators described in the introduction, it can be concluded that there are no enforcement deficits. Management plans are publically available. Planning and sustainable management is described in the statute books: Mid-term management planning ("Forsteinrichtung") and annual planning ("Forstbetriebsgutachten") are required in most cases. When plans are submitted to and approved by forest departments, harvesting measures are assumed, based on this planning. Therefore, the owner of the area or the harvesting rights does not need to ask for permission to carry out harvesting activities.

Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. A site-adapted selection of species a persistent soil fertility for long-term usability must be ensured, the natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield. Regarding the use of woodlands for forestry purposes, the aim must be to establish seminatural forests and to manage these sustainably without clear-cuts; with an adequate proportion of native woodland plants retained. Clear-cutting is prohibited, unless afforestation is completed in a reasonable time. Conversion of forests into any other form of land use is only allowed with a permission of a Federal State authority ("Forstbehörde"), when appropriate compensation measures take place.

This applies to all federal states in Germany. More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).

Forestry in Germany adheres to the concept of the multifunctionality of forests, as is reflected among other things in the legal intent of the Federal Forest Act. This means that the forest area shall be preserved, increased and sustainably managed not only for its economic utility but also for its environmental values (e.g., the hydrological cycle, climate, landscape aesthetics, recreation) (BMEL, 2015).

Municipal public forests in most federal states are managed and thus supervised by state authority foresters, so that control mechanisms exist. Private forest organizations, which are bound only to ten-year planning, are thus controlled every ten years and, if the forests are not sustainably managed, the organizations are sentenced. For small forests with no planning, statutory possibilities for punishment do exist, if laws are not adhered to. We are not aware of

relevant cases in which sustainability was seriously compromised by small forest organizations.

As a consequence of storms, extreme dry years and a following bark beetle calamity, the volumes of calamity roundwood grew since 2017 from 12 mio scbm to 70 mio scbm in 2019. The predicted figures for 2020 in the following graph are most likely to be even higher than 2019.

Mainly affected by bark beetles is spruce in mid Germany and in the southern regions. Also eastern France, Czech Republic and Poland report bark beetle outbreaks and significant volumes of damaged wood. Those monoculturelike areas are often historically planted spruce forests on sites, where Spruce normally would not be dominant. One example is the Harz Region in the middle of Germany, where Spruce was planted in past centuries to meet the demand of fast growing wood for the mining industrie, to smelt ore and stabilize mine shafts. After the second worldwar, reparations claims of victorious powers lead to clear cuts in many forests. Replanting Spruce was a common way to aim for a quick reforestation. Exponential growth of bark beetles in the extreme years 2018 and 2019 lead to high volumes of infested trees. A high population pressure among the beetles lead to quick infestation and death of healthy trees, even beyond pure spruce.

Those infested trees and harvested logs, are to be removed from the forests as quickly as possible to prevent surrounding trees to be infested as well. As a result, some beetle stricken areas were clear cut.

The "Bundesministerium für Landwirtschaft und Ernährung" stated in June 2020, that 285.000 ha are to be replanted as the forest is a key factor for climate protection, biodiversity and rawmaterial source.

In 2019 a key issue paper was published to address the most important topics to deal with this crisis and open discussion for the announced Forest Strategy 2050. One result of the discussion, are financial aids of about 800 mio € until 2024. This includes beside replanting, the removal of infested trees, slowing down/preventing further infestation...

To cope with the changing conditions due to the climate change, scientific projects have been started on many levels, as several challenges are to be met.

è Selection of species to plant. The specific impacts of changing climate is only based on modulation. Diversification should be a key element. Also following an approach of the LWF Bavaria, to generate maps with regional risk based planting recommendations.

è Establishing high supplies of seeds and nursed trees. In addition an infrastructure to be able to replant such areas in adequate time.

è Transfer the knowledge to private forests. Strongly specified financial aids could act as incentives to restock forests in sustainable ways, instead of financially focused.

At this moment, there is no definite strategy what to plant and how to do it.

Undoubtedly the areas are planned to be restocked with trees that cope with upcoming challenges of the ongoing climate change and lead to an ongoing, emotional debate, how to achieve this. One approach is to decrease the game density massively in afflicted regions to maximize natural regeneration. This debate started in the 80's in the last century and are now more up to date than ever

Until now, there is no governmental decision made, but a legislative draft was issued to amend the "Bundesjagdgesetz" in 2020.

Interviews showed that foresters are pleading for an amendment toward lower game density, as traditional hunters care for higher numbers to pursue their hobby.

The approach of lower density is also favoured by forest scientists.

Even though non-forest biomass is not assessed in this indicator, it is worth mentioning, that,

	<p>where applicable, the long term viability and productivity is taken care of. As mentioned in 2.2.3 and 2.2.6, there is often a close cooperation with authorities in advance, when it is not a standard measure. This results in quite specific work regulations and instructions. Non-forest biomass is mainly generated while areas are (completely) cleared for construction projects like industrial site or infrastructure projects. In those cases, there is always an official approval from one or more authorities with regards to binding laws. This ensures appropriate compensatory measures and guarantees that the whole process was revised by governmental officials, regarding legal, social and ecological aspects.</p> <p>Another source is road, rail, canal, etc. maintenance and securing the traffic safety. Top priority here is the avoidance of harm to human health, which ranks higher than ecological concerns. Nevertheless those measures are carefully planned and underlie defined regulations, depending on the state and responsible authority. As the correct execution of commissioned works is relevant to safety, the control mechanisms are quite strong. The public sector is the biggest contracting entity for landscaping companies in Germany. From interviews and reviewed evidence, it is fair to contend, that biomass from those measures is bound by laws, closely controlled and often in cooperation with competent authorities. Therefore legality and sustainability for this biomass category are determined "low risk"</p> <p>For this indicator the area under assessment is determined to be 'low risk'. As the decision process on measures is still ongoing, this indicator will be surveyed regularly.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. § 41: Inventory Forest acts of the federal states - Richtlinie zur Forsteinrichtung ("Guideline for Forest Planning") - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Bundes-Bodenschutzgesetz (BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – "Soil Protection Act" <p>Deutschlands Wald im Klimawandel – Eckpunkte und Maßnahmen</p>
<p>Evidence Reviewed</p>	<p>http://www.gesetze-im-internet.de/bwaldg/ https://www.wald-und-holz.nrw.de/wald-und-holznrw/service/ausschreibungen-und-vergaben/unterlagen-zur-forsteinrichtung.html https://www.oejv.org/app/download/5822818170/Eckpunkte+der+Waldstrategie+2050+-+Wiissenschaftlicher+Beirat+%28BMEL%29+Feb.+2020.pdf https://www.oejv.org/waldwissenschaftlerfordern/ https://www.jagdverband.de/licht-und-schatten-beim-entwurf-des-bundesjagdgesetzes https://www.bmel.de/SharedDocs/Downloads/DE/_Wald/Wald_Diskussionspapier.pdf?__blob=publicationFile&v=4 https://www.bmel.de/DE/themen/wald/wald-in-deutschland/wald-trockenheit-klimawandel.html https://www.landundforst.de/landwirtschaft/forst/baumartenwahl-gruendlich-planen-559838 https://www.lwf.bayern.de/boden-klima/baumartenwahl/index.php</p>
<p>Risk Rating</p>	<p>Low Risk</p>
<p>Comment or Mitigation</p>	

n Measure	
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	Indicator
2.3.2	Adequate training is provided for all personnel, including employees and contractors (CPET S6d).
Finding	<p>Generally, forest managers and workers in Germany have a high level of education. Basic training for skilled forest worker lasts three years and includes both practical placement and classroom education. The curriculum includes forest mechanization, ergonomics, health and safety, forestry techniques, biology and economics. The ministry of education approves the curriculum.</p> <p>Shorter and more specific courses are also available and even unskilled forest workers and contractors typically attend one or more trainings every year.</p> <p>Foresters in Germany receive mandatory training in accordance with safety procedures and accident prevention.</p> <p>Waldkontor is education forest workers annually in cooperation with different partners. For instance the regional forest worker school or with the local fire brigade to train the rescue chain. Those trainings are partially without preparation to simulate real conditions. New techniques from forest research or non-governmental institutions like the Kuratorium für Wald- und Forstwirtschaft (KWF) are adapted and new equipment is tested if it supports work safety. Also first aid and first response is trained regularly by every waldkontor forstworker. Every 2 years a medical examination by a designated occupational physician is mandatory. This covers beginning or existing conditions as well as preventative measures regard methods of working.</p> <p>Personal protective equipment for foresters, or PPE forestry for short, is intended to help reduce the risk of injury when working in the forest, particularly when using a chain saw. The following five items of equipment are part of a complete protective equipment:</p> <p>The protective helmet for forestry work must be equipped with face and ear protection and comply with DIN EN 397, 352 and 1731. It should protect against falling branches. The wire mesh visor shows as much as possible, but protects eyes and face from whipping branches, splinters or sawdust. The helmet also indicates the location of the worker in a warning colour. Hearing protection is essential to prevent permanent damage to hearing due to the noise of the chain saw.</p> <p>A work jacket with sections in signal colours should indicate the location of the forest worker.</p> <p>Protective gloves according to DIN EN 420 and 388. A cut protection insert in the gloves is only mandatory when working in work baskets.</p> <p>The cut protection trousers should protect against injuries when working with a chain saw. On contact with the running saw chain, larger bundles of the long plastic fibres incorporated in the trousers (cut protection insert) are pulled out, wrap themselves around the chain saw drive wheel and block it in a fraction of a second. The cut protection trousers must comply with DIN EN 381 Parts 2 and 5.</p> <p>Safety shoes or boots must have an upper length of at least 19.5 centimetres and be equipped with a non-slip sole, toe cap, ankle protection and cut protection in accordance with DIN EN 345 and 344 Part 2.</p> <p>claus rodenberg waldkontor gmbh implemented regular safety educations for forest</p>

	<p>workers. Regular contractors are invited to be educated together with own personnel. Those trainings “in the field” are commonly held together with institutions like local fire rescue or the “Lehranstalt für Forstwirtschaft” to simulate different kinds of accidents and train aspects of the rescue chain.</p> <p>Within the scope of existing certifications like PEFC, FSC, RAL, annual educational measures are performed. This includes the mentioned safety trainings and education concerning work instructions regarding indicators mentioned in this template.</p> <p>Measures and trainings are defined in waldkontors manual and constantly advanced. Annual audits are performed by independent surveyors to check if the requirements of the mentioned certification schemes are met.</p> <p>The risk for this indicator has been assessed as ‘low’.</p>
Means of Verification	<ul style="list-style-type: none"> - Existing legislation - Level of enforcement - Training course curricula - Internal audits - Training records - Training plans <p>claus Rodenberg waldkontor gmbh manual</p>
Evidence Reviewed	<p>https://www.forstwirtschaft-in-deutschland.de/forstwirtschaft/arbeitgeber-forstwirtschaft/forstwirt-in/</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.3.3	Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.
Finding	<p>Nearly 500.000 people were employed in the wide range of the forest-, wood- and paper industry in Germany in 2017. The vast majority of forest areas in Germany are privately owned, although the regional distribution of ownership types varies greatly. For example, the proportion of private forest varies between 24% in Hesse and up to 67% in North Rhine-Westphalia. The majority of those private forests consist of forest areas < 2ha and the majority of the forest working companies are one-man companies or smaller 5 employees. As those companies work on a very regional level, the local economy is benefiting.</p> <p>Depending on the used source, up to 1.2 million people work in the wide frame of the wood cluster, what makes it the cluster with the most employees in Germany,</p>

	Accordingly, for this indicator the area under assessment is determined to be 'low risk'.
Means of Verification	- Agentur für Erneuerbare Energien – agency for renewable energy Unemployment statistics, employment statistics
Evidence Reviewed	https://www.unendlich-viel-energie.de/themen/wirtschaft/arbeitsplaetze https://de.statista.com/statistik/daten/studie/1223/umfrage/arbeitslosenzahl-in-deutschland-jahresdurchschnittswerte/ https://de.statista.com/statistik/daten/studie/71776/umfrage/arbeitsplaetze-im-bereich-erneuerbare-energien/
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.4.1	The BP has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).
Finding	<p>Important large-scale landscape ecosystems have been identified and placed under protection in the form, for example, of national parks.</p> <p>Management for forestry purposes is either prohibited or partially regulated. Although representatives of nature conservation interests may wish to see specific improvements in relation to the management of HCVs, essentially the risk based on the foreseeable threat of further fragmentation of the overall area of the landscape ecosystem and mosaics.</p> <p>The size of clear-cutting is regulated by law in Germany. Clear cuttings, which could lead to fragmentation on the size of landscape ecosystems, are in any case subject to approval and may require compensation and compensation. The licensing requirement also applies to the conversion of forest areas.</p> <p>To protect landscape ecosystems and mosaics from fragmentation, different approaches are pursued in Germany.</p> <p>Forest habitats and landscape ecosystems with forests are under protection and often set aside from forest management activities or managed with low intensity forest management.</p> <p>The conservation value is present in the form of Natura 2000/habitat types of the Habitats directive (with exception of beech forest habitat types 9110 and 9130) and in the form of sites protected under the Federal Nature Conservation Act as landscape-level ecosystems and small habitats. Germany possesses 8,676 nature protection areas (BfN, 2016; Adler, 2014).</p> <p>In addition, the Federal Nature Conservation Act (§30), the Federal State Nature Conservation Laws (e.g., LNatSchG BaWü, §24a) and the State Forest Laws specify special biotopes. Relevant forest biotopes in this context are fen woods, swamp forest, riparian</p>

	<p>forest, ravine forest, forest on stone runs, talus forest and subalpine larch and larchSwiss pine forests (BfN, 2016). According to the national forest inventory (BWI) (BMEL, 2015), especially protected biotopes occupy ca. 593,000 ha, or 5 % of the forest area. In most cases (77 %) these are fen woods, swamp forest or riparian forests and other wet biotopes.</p> <p>Certificates of exemption that give priority to timber production over other ecosystem services are issued only after an official impact assessment in individual cases. The threat assessment is, therefore, classified as 'low risk.'</p> <p>As mentioned in criterion 2.4.2 the natural processes in forests are managed responsible. The forest management does not endanger food or water supply as carved out in criterion 2.5.2.</p> <p>In reference to the aspect of sustainability (2.4.2), forest management in Germany ensures the preservation of health, vitality and ecosystem services of the forests. The status of protected sites is documented and monitored in the midterm planning (Forsteinrichtung) and is therefore respected when planning management measures. Controls are carried out by forest control (Forstaufsicht), employees of the Nature Conservation Federal Agency or by the police.</p> <p>Environmental values in relation to timber harvesting activities are covered by Articles 8, 9 and 11 in the National Forest Act which contains effective regulations, but also the regulative framework for federal state laws. Further environmental requirements are also defined by each federal state in their guidelines for silviculture which are binding for municipal forests and state forests.</p> <p>The Federal Nature Conservation Act (Bundesnaturschutzgesetz) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries). In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners (e.g. Bundes-Bodenschutzgesetz (BBodSchG): Soil Protection Act; Düngemittelgesetz (DüV): Fertilizer legislation; Düngemittelverordnung (DüMV): Fertilizer ordinance; Wasserhaushaltsgesetz (WHG): Water Resources Act; Europäische – Wasserrahmenrichtlinie: European Water Framework Directive).</p> <p>Germany signed the Convention on Biological Diversity in 1992. In cases of violations penalties are in place and are implemented.</p> <p>The risk designation is 'low risk'.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. Article §8 "Protection of forest functions upon plannings and measures by public projects" - Bundes-Bodenschutzgesetz(BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – "Soil Protection Act" 1. Article §17 ("Good agriculture practice") - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - "Federal Nature Conservation Act" 1. Article §5 ("Agriculture, forestry and fisheries") - Wasserhaushaltsgesetz(WHG) vom 31. Juli 2009 (BGBl. I S. 2585) - "Water Resources Act" - Düngeverordnung (DüV) in der Fassung der Bekanntmachung vom 27. Februar 2007 (BGBl. I S. 221) – "Fertilizer legislation" - Düngemittelverordnung (DüMV) vom 5. Dezember 2012 (BGBl. I S. 2482) - "Fertilizer ordinance" - C Chemikaliengesetz (ChemG) in der Fassung der Bekanntmachung vom 28. August 2013 (BGBl. I S. 3498, 3991)– "Chemicals Act"

	<ul style="list-style-type: none"> - Forest function mapping (mapping of forest functions like water, soil, air) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	http://www.gesetze-im-internet.de/bwaldg/ http://www.gesetze-im-internet.de/bbodschg/___17.html http://www.gesetze-im-internet.de/chemg/index.html http://www.gesetze-im-internet.de/d_v/ http://www.gesetze-im-internet.de/whg_2009/ https://www.bfn.de/fileadmin/MDB/documents/themen/monitoring/BNatSchG.PDF . http://www.geodienste.bfn.de/schutzgebiete/#?centerX=3786876.500?centerY=5669060.000?scale=5000000?layers=524
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.4.2	The BP has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately (CPET S7b).
Finding	<p>Germany has numerous laws, regulations, ordinances and directives designed to regulate environmental values and requirements.</p> <p>Federal state Forestry Departments are duty-bound to enforce and supervise regulations or obligations equally in all forest types. There are no statistics available relating to regular on-site visits by relevant authorities focusing on environmental requirements; however on-site visits are a known measure of control and planning. On sites visits by authorities for water protection and nature conservation are done on a regular basis.</p> <p>Environmental NGOs function as watchdogs (see also CW Category 3) and bring up cases of non-compliances, which might lead to law cases and/or penalties respectively correction measures.</p> <p>For example, the German Federal Nature Conservation Act (BNatSchG) regulates the general protection of nature and landscape, the protection of certain parts of nature and landscape as well as of wild animal and plant species. Species and area protection, recreational use, provision for fines and penalties are addressed as well (BfN 2009). But also an adapted forest management compatible and connected with nature conservation aspects is reflected. Each federal state has its own land conservation law, which is linked to the Federal Nature Conservation Act according to Art. 72 GG.</p> <p>. Due to a very good structure of fire brigades in Germany, forest fires are effectively dealt with. In case of bigger fires, within the scope of administrative assistance, the German armed forces could be installed as support.</p> <p>The forest act requires that forest owners maintain forest cover on forest land, as well as establishing resistant and resilient forests towards calamities such as pests, wind and climate</p>

	<p>change.</p> <p>The main natural process that has negative impact on forests are storm calamities. Since 2017 exceptional growth in bark beetle populations, due to already weakened by storm, in forest areas, lead to a new form of calamity. It is the responsibility of the forest owners and/or managers to apply silvicultural methods that improve the stability of forest stands. As a response to this thread, the government decided in 2019 to provide financial aids of 800 mio € for the next 4 years to protect forest resources and replant infected areas. In addition the forest structure at least in federal state forests is going to be changed from partially monoculture to a wider mix of species to help the forest dealing with calamities by natural resistance. Those measures are included in the strategic forest management planning.</p> <p>Official national forest inventories (BWI) do exist in Germany, the last one was finished in 2012. The inventories are subject to binding regulations in the German Forest Act. Forest inventories form the basis of forest planning for each forest organization. The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability. That ensures the development of sustainable and stable forests to resist calamities. As a countermeasure the salvage loggings overall and specifically due to bark beetle infection were increased. The following statistic, provided by the Federal Statistical Office, shows the regional effects on federal state level.</p> <p>The following statistics show a trend of wood harvest due to calamities until 2013. This shows no specific trend. In the second statistic focusing on 2017 and 2018, a short term trend is observed due to 2 years of very hot and dry summers after a storm event in 2017, that gave a kick off for exponential bark beetle growth. As weather statistics show, the average temperatures increased of the last decades continuously what is attributal to the climate change and it's impacts.</p> <p>Representative areas of natural forest habitats and valuable ecosystems are identified and some of these have been given a protection status. Nature conservation and species protection as well as biodiversity conservation are already incorporated in the German legislation both at federal and state level. The Federal nature conservation act regulates the conferral of protection status on monuments of natural heritage and natural monuments. Protection measures are effective and sufficient, as several laws do exist (such as BWaldG, BNatschG, DSchG) and intensive mapping takes place.</p> <p>The risk designation is 'low risk'.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Federal Nature Conservation Act (BNatschG) Articles §§14 "Interventions in nature and landscape", 15 "Obligations of the intervening party, inadmissibility of intervention; authorization to issue statutory ordinances", 17 "Procedures; authorization to issue statutory ordinances" (Protective sites §§ 23, 24, 25, 26, 27, 28, 29, 30, 31) - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. § 41: Inventory Forest acts of the federal states - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - "Federal

	Nature Conservation Act" 1. Article §5 "Agriculture, forestry and fisheries" Forest acts of the federal states - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	http://www.gesetze-im-internet.de/index.html https://www.bfn.de/fileadmin/MDB/documents/themen/monitoring/BNatSchG.PDF . http://www.geodienste.bfn.de/schutzgebiete/#?centerX=3786876.500?centerY=5669060.000?scale=5000000?layers=524
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.4.3	The BP has implemented appropriate control systems and procedures for verifying that there is adequate protection of the forest from unauthorised activities, such as illegal logging, mining and encroachment (CPET S7c).
Finding	<p>Germany enjoys well established forest legislation across all of the federal states. The legislation is applied reliably with respect to the legality of forest wood harvesting measures.</p> <p>Germany scores 80 points on the Corruption Perceptions Index (CPI) 2019 on a scale from 0 (highly corrupt) to 100 (very clean). Germany ranks 9th out of 198 with rank nr.1 being the cleanest country.</p> <p>Legal authority is given by the Federal Ministry of Finance and wood trading is recorded Germany is not reported as a source for illegal timber. As far as FSC Germany is aware, Germany is not deemed to be a source of conflict wood. There is a high level of law enforcement in Germany.</p> <p>Trading within Germany is regulated as described in the Handelsgesetzbuch or HGB (Commercial Code), which is also binding for forestry companies (HGB §§2, 3). Forestry companies must follow the trading laws described in the Commercial Code. A special case exists for companies that harvest timber in primary forests (HGB § 341), but this has no practical relevance in Germany. All documents are sent to the finance authorities for verification – also irrespective of size, turnover quantity and form of organization. All cash flows have to be documented to verify and to avoid illegal and black market profits. There are only occasional reports on timber thefts, what is backed up by the following statistic that shows the estimated illegal logging volume in Germany is 0. According to staff interviews and discussions with federal state foresters, illegal logging in Germany is, if any, happening due to unclear property boundaries, misread maps or comparable reasons. Waldkontor implemented control mechanisms like detailed mapping and work instructions combined with on site visits of responsible personal, to avoid the risk of</p>

	<p>accidental illegal harvest. Also annual internal trainings are performed to educate responsible staff concerning the requirements to prevent illegal harvesting according to PEFC and FSC-certification including the regulations of FSC Controlled Wood.</p> <p>As already mentioned, Germany ranks high on the worldwide governance indicator with rule of law as well as above the Corruption Perception Index, which states the effectiveness of law enforcement.</p> <p>Legal authority is the Federal Ministry of Finance and wood trading is recorded with the aid of bills or purchase agreements.</p> <p>It is assessed that the risk from unauthorised activities in German forests is 'low'.</p>
Means of Verification	<ul style="list-style-type: none"> - Transparency International Corruption Perceptions Index - WWF report: Failing the Forests; Europe's illegal timber trade# - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Handelsgesetzbuch (HGB) 1897 (BGBl. I S. 1474) - "German Commercial Code" 1. Article 2 - Holzzentralblatt (Nummer 10; 2012) – "Holz aus illegalem Einschlag in Deutschland und in der EU"
Evidence Reviewed	<p>http://cpi.transparency.org/cpi2013/results/</p> <p>http://d2ouvy59p0dg6k.cloudfront.net/downloads/failingforests.pdf</p> <p>https://www.thuenen.de/media/ti/Infrastruktur/Thuenen-Kompetenzzentrum_Holzherkuenfte/Pressemappe/130225_BMELV_TI_PRESSEMAPPE_1_Holzeinschlag_FINAL.pdf</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.5.1	The BP has implemented appropriate control systems and procedures for verifying that legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest, are identified, documented and respected (CPET S9).
Finding	<p>Tenure rights are determined through the German Constitution and the Civil Code("Bürgerliches Gesetzbuch"). Ownership of estates is documented in the Land Charge Register ("Grundbuch").</p> <p>Customary rights to forest products do not legally exist; but there are traditions that are</p>

	<p>respected. These, however, refer to a small scale and small amount of use (e.g. traditional collection of non-merchantable wood by local citizens). In some cases, customary rights are registered via entries in the land register.</p> <p>Based on United Nations and ILO definitions, no indigenous people exist in Germany. Also, there is no Act in the German Constitution concerning indigenous people. Therefore, this indicator is not really applicable.</p> <p>In 2013 the Federal Cabinet has adopted a draft Law for the Improvement of Public Participation and Standardization of Planning Procedures (PIVereinhG). With this Act, the Federal Government ensures that greater public participation is achieved in large projects. The law also serves to harmonize special regulations from different technical laws. Overall, plan approval procedures are in principle simplified and accelerated.</p> <p>The Law for Freedom of Information (IFG) provides a precondition for access to official information of federal authorities. The entitlement to information or access to the files in the authority: Everyone is entitled to claim (Jedermannsrecht); There is no need to be concerned about the matter, either legally or actually. The information claim can be restricted, in particular by public and private interests of §§ 3 to 6 IFG (exceptions possible). These acts allow citizen to receive information, participate in consultation and make statements.</p> <p>As mentioned in indicators before, the majority of non-forest biomass originates from public orders and therefore underlies dense control mechanisms. Orders from the private sector need more attentiveness from contractor's side. Interviews revealed, that a common practise is, to check new clients. For example if trees should be felled, one check could be if the client is the legal land owner or tenant. This could be done by tenancy agreements or via land office (Grundbuchamt) or land registry office (Katasteramt).</p> <p>Identified laws are upheld. Cases where law/regulations are violated are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities. Recognized and fair processes regulating conflicts surrounding traditional rights, including land use, are anchored in the German legislation. Some such conflicts arose in the federal states formerly belonging to East Germany (German Democratic Republic) following German reunification in 1990. The German authorities systematically pursued and processed these cases according to due legal process (STD40 005; Anh. 2B; 2.4). There are no indigenous populations in the Federal Republic of Germany, as defined by the United Nations (see also German FSC Standard, Principle 3) (STD40 005; Anh. 2B; 2.5).</p> <p>There is no evidence leading to a conclusion of presence of indigenous and/or traditional peoples in the area under assessment; AND Other available evidence do not challenge 'low risk' designation.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> - Grundgesetz für die Bundesrepublik Deutschland vom 23. Mai 1949 (BGBl. I S. 2438) "German Constitution" - Article 14 - Bürgerliches Gesetzbuch (BGB) in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738) "German Civil Code" - § 873 (1): Acquisition by agreement and registration - Grundbuchordnung in der Fassung der Bekanntmachung vom 26. Mai 1994 (BGBl. I S. 1114) GBO - "Landbook Rule"

	<ul style="list-style-type: none"> - Law for Freedom of Information (Gesetz zur Regelung des Zugangs zu Informationen des Bundes (Informationsfreiheitsgesetz - IFG)) "Informationsfreiheitsgesetz vom 5. September 2005 (BGBl. I S. 2722), das durch Artikel 2 Absatz 6 des Gesetzes vom 7. August 2013 (BGBl. I S. 3154) geändert worden ist" - Law for the Improvement of Public Participation and Standardization of Planning Procedures (Gesetz zur Verbesserung der Öffentlichkeitsbeteiligung und Vereinheitlichung von Planfeststellungsverfahren" (PIVereinHG)) - Definition of UN - ILO Dossier on Indigenous People (pp. 5 ff.) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	http://www.bmi.bund.de/SharedDocs/Pressemitteilungen/DE/2012/02/planfeststellung.html http://www.gesetze-iminternet.de/. html http://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf http://www.ilo.org/wcmsp5/groups/pu
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.5.2	The BP has implemented appropriate control systems and procedures for verifying that production of feedstock does not endanger food, water supply or subsistence means of communities, where the use of this specific feedstock or water is essential for the fulfillment of basic needs.
Finding	<p>Access to forests is generally permitted by law and is respected.</p> <p>Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest. the natural features of the managed site (soil, water, flora, fauna) must not be impaired beyond the extent required to achieve a sustainable yield.</p> <p>This applies to all federal states in Germany. More precise details for timber harvesting activities, technologies and forest management rules are incorporated in the silviculture guidelines, including minimum age, diameter, felling activities, skidding trails etc. In addition to forest laws various other relevant laws do exist that (e.g.) regulate protection of soils, water bodies and other environmental values. They need to be considered when working in forests (e.g. Bodenschutzgesetz: Soil Protection Act).</p> <p>The Federal Nature Conservation Act (Bundesnaturschutzgesetz) defines environmental requirements at a national level in Article 5 (Agriculture, forestry and fisheries).</p> <p>In addition to these Acts are various laws and regulations that define protection of environmental values (e.g. soils, water resources) and which have to be followed when working in forests. These are equally binding for all forest owners (e.g. Bundes-Bodenschutzgesetz (BBodSchG): Soil Protection Act; Düngemittelgesetz (DüV): Fertilizer</p>

	<p>legislation; Düngemittelverordnung (DüMV): Fertilizer ordinance; Wasserhaushaltsgesetz (WHG): Water Resources Act; Europäische – Wasserrahmenrichtlinie: European Water Framework Directive).</p> <p>On sites visits by authorities for water protection and nature conservation are done on a regular basis. It is obligatory to notify/register water and soil damages, e.g. as mentioned in the Soil Protection Act, the Water Resources Act.</p> <p>Mapping of forest functions for the individual forest areas, presents an overview and valuation basis concerning utility, protection and recreation functions. In addition to forest areas with particular importance for individual forest functions, the forest function map also includes topography and protected areas such as natural forest reserves, water protection areas, soil monuments or nature reserves.</p> <p>There is low/negligible threat to Special ecosystem services caused by management activities in the area under assessment.</p> <p>Fundamental, endangered ecosystem services including the protection of water catchment areas and protection against the erosion of endangered soils and slopes.</p> <p>In Germany these are forests bearing a legally binding protection status and which fulfil the following functions (in accordance with the federal forest act, §12): protection against damaging environmental influences sensu the German federal emissions protection act (BundesImmissionsschutzgesetz, BImSchG) of 15 March 1974 (Bundesgesetzblatt I, p. 721), erosion by water and wind, desiccation, damaging run-off of precipitation and avalanches.</p> <p>There is no compromising of fundamental needs by forest management activities in Germany. Access to forests is legally regulated and the provision of recreation forest is a part of the multifunctional approach to forest management.</p> <p>Local restrictions may arise in isolated cases, for example, during harvesting operations, but these are provided for legally.</p> <p>In Germany the regular biomass in form of wood chips is produced from stem wood, forest residues, thinnings or from landscaping measures. These production areas are not competing against agricultural areas, as they are clearly separated by law and the land use form is not allowed to be changed without permissions by responsible authorities.</p> <p>Biomass production from short rotation plantation is also regulated by authorities and does not play a significant role in Germany.</p> <p>Based on the above, it is concluded that there is low risk of non-compliance with the requirement.</p> <p>Other available evidence does not challenge a 'low risk' designation.</p> <p>Therefore the risk designation for this indicator is 'low risk'.</p>
Means of Verification	<ul style="list-style-type: none"> - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. Article §8 "Protection of forest functions upon plannings and measures by public projects" - Bundes-Bodenschutzgesetz(BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – "Soil Protection Act" 1. Article §17 ("Good agriculture practice") - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - "Federal Nature Conservation Act" 1. Article §5 ("Agriculture, forestry and fisheries") - Wasserhaushaltsgesetz(WHG) vom 31. Juli 2009 (BGBl. I S. 2585) - "Water Resources Act" - Düngeverordnung (DüV) in der Fassung der Bekanntmachung vom 27. Februar 2007 (BGBl. I S. 221) – "Fertilizer legislation" - Düngemittelverordnung (DüMV) vom 5. Dezember 2012 (BGBl. I S. 2482) - "Fertilizer ordinance"

	<ul style="list-style-type: none"> - C Chemikaliengesetz (ChemG) in der Fassung der Bekanntmachung vom 28. August 2013 (BGBl. I S. 3498, 3991)– “Chemicals Act” - Forest function mapping (mapping of forest functions like water, soil, air) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	http://www.fvabw.de/indexjs.html?http://www.fvabw.de/forschung/wg/wfk/wfk_themen.php?t_hema=3 ; http://www.gesetze-im-internet.de/index.html
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.6.1	<p>The BP has implemented appropriate control systems and procedures for verifying that appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions.</p>
Finding	<p>Tenure rights are determined through the German Constitution and the Civil Code (“Bürgerliches Gesetzbuch”). Ownership of estates is documented in the Land Charge Register (“Grundbuch”).</p> <p>The legal owner of an estate also owns the management rights of the estate, as long as no other laws are violated. Ownership of land is not legally valid, until the owner is registered in the Land Charge Register.</p> <p>To establish a more efficient management, some small private forest owners are incorporated in Forstbetriebsgemeinschaften (‘forest enterprises associations’). Here, organizations keep the land ownership and the right to manage, but the management of several small forests is centralized. All owners have to agree to the management and harvesting plans of the association. So every single member is part of the decision making.</p> <p>Fair working conditions are guaranteed by the ILO Fundamental Principles and Rights at work. Detailed description in indicator 2.7.5.</p> <p>Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.</p> <p>In addition, fair working conditions are ensured by the Allgemeines Gleichbehandlungsgesetz (AGG), Jugendarbeitsschutzgesetz (JArbSchG), Kinderarbeitsschutzverordnung (KindArbSchV), Schwarzarbeitsbekämpfungsgesetz (SchwarzArbG), Arbeitsgenehmigungsverordnung (ArGV), Das Fünfte Buch Sozialgesetzbuch (SGB V), Das Sechste Buch Sozialgesetzbuch (SGB VI), Das Siebte Buch Sozialgesetzbuch (SGB VII), Arbeitszeitgesetz (ArbZG), Bundeselterngeld- und Elternzeitgesetz (BEEG), Bundesurlaubsgesetz (BUrIG), Kündigungsschutzgesetz (KSchG) and Mutterschutzgesetz (MuSchG).</p>

	<p>Legislation and control mechanisms are in place and are constantly adapted. The legal framework conditions were assessed previously as part of the legality assessment of the centralized national risk assessment and were classified as 'low risk.'</p> <p>There are no known conflicts relating to compulsory labor or child labor in Germany. No information was found about Germany as being a source of conflict timber and the forest sector is not associated with any violent armed conflict.</p> <p>Germany scores positive on all indicators reviewed in this context section. It is ranked relatively high on all relevant aspects such a stable country, with good governance, absence of conflicts of any magnitude and it is a free country for all its citizens with a good justice system. Human rights issues are around migrants and asylum seekers, mostly, and are, in global context, minor</p> <p>Recognized and fair processes regulating conflicts surrounding traditional rights, including land use, are anchored in the German legislation.</p> <p>Some such conflicts arose in the federal states formerly belonging to East Germany (German Democratic Republic) following German reunification in 1990. The German authorities systematically pursued and processed these cases according to due legal process (STD40 005; Anh. 2B; 2.4). There are no indigenous populations in the Federal Republic of Germany, as defined by the United Nations (see also German FSC Standard, Principle 3) (STD40 005; Anh. 2B; 2.5).</p> <p>There are identified core conflicts between nature conservation and various land uses (e.g. agriculture, forestry). However nature conservation requirements are widely applied within forestry concepts and forestry planning, e. g. in the form of mapping of the occurrences of strictly protected species, old and dead wood concepts for habitat conservation, selection of ecological forest management concepts and environmentally friendly harvesting methods, identification of FFH areas and habitat types in the forest as well as development of monitoring concepts by the state governments.</p> <p>Disputes concerning forest management are prevented by the federal forest management plans. Each federal state drafts guidelines for silviculture which are obligatory for the forest management in municipal forests and state forests.</p> <p>For private forests, those guidelines are only recommendations, but of course they are also bound to national and federal law. Regulations of the silvicultural guidelines are based on the National Forest Act and the Federal Nature Conservation Act, which include the stipulations that forests have to be managed properly, advantageously and sustainably, retaining the function of the forest.</p> <p>Other available evidence do not challenge 'low risk' designation.</p>
Means of Verification	<ul style="list-style-type: none"> - Grundgesetz für die Bundesrepublik Deutschland vom 23. Mai 1949 (BGBl. I S. 2438) "German Constitution" - Article 14 - Bürgerliches Gesetzbuch (BGB) in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738) "German Civil Code" - § 873 (1): Acquisition by agreement and registration - Grundbuchordnung in der Fassung der Bekanntmachung vom 26. Mai 1994 (BGBl. I S. 1114) GBO - "Landbook Rule". - ILO Fundamental Principles and Rights at work - Allgemeines Gleichbehandlungsgesetz (AGG) vom 14. August 2006 (BGBl. I S. 1897) – "General Equal Treatment Act" - Jugendarbeitsschutzgesetz (JArbSchG) vom 12. April 1976 (BGBl. I S. 965) – "Youth employment protection act" - Kinderarbeitsschutzverordnung (KindArbSchV) vom 23. Juni 1998 (BGBl. I S. 1508) –

	<p>"Child Labor Protection Ordinance"</p> <ul style="list-style-type: none"> - Schwarzarbeitsbekämpfungsgesetz (SchwarzArbG) vom 23. Juli 2004 (BGBl. I S. 1842) - "Act against illegal employment" - Arbeitsgenehmigungsverordnung (ArGV) vom 17. September 1998 (BGBl. I S. 2899) – "Regulation on Work Permits for Foreign Workers" - Das Fünfte Buch Sozialgesetzbuch (SGB V) – Gesetzliche Krankenversicherung – (Artikel 1 des Gesetzes vom 20. Dezember 1988, BGBl. I S. 2477, 2482) – "Social Code Book V - Statutory Health Insurance" - Das Sechste Buch Sozialgesetzbuch (SGB VI) – Gesetzliche Rentenversicherung – in der Fassung der Bekanntmachung vom 19. Februar 2002 (BGBl. I S. 754, 1404, 3384) – "Social Code Book VI – Statutory Annuity Insurance" - Das Siebte Buch Sozialgesetzbuch (SGB VII) – Gesetzliche Unfallversicherung – (Artikel 1 des Gesetzes vom 7. August 1996, BGBl. I S. 1254) - "Seventh Social Code Book - statutory accident insurance" - Allgemeines Gleichbehandlungsgesetz (AGG) vom 14. August 2006 (BGBl. I S. 1897) – "General Equal Treatment Act" - Arbeitszeitgesetz (ArbZG) vom 6. Juni 1994 (BGBl. I S. 1170, 1171) – "Working Time Act" - Bundeselterngeld- und Elternzeitgesetz (BEEG) vom 5. Dezember 2006 (BGBl. I S. 2748) – "Federal Parental Benefit Act" - Bundesurlaubsgesetz (BUrlG) vom 20. April 2013 (BGBl. I S. 868) - Federal Holiday Act - Kündigungsschutzgesetz (KSchG) in der Fassung der Bekanntmachung vom 25. August 1969 (BGBl. I S. 1317) – "Employment Protection Act" - Mutterschutzgesetz (MuSchG) in der Fassung der Bekanntmachung vom 20. Juni 2002 (BGBl. I S. 2318) – "Maternity Protection Act" - Global Gender Gap Index 2014 - Gender Wage Gap; OECD 2014 - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" 1. Article §8 "Protection of forest functions upon plannings and measures by public projects"
Evidence Reviewed	<p>http://www.gesetze-iminternet.de/.html https://www.bundestag.de/blob/4147_74/826f537e22a405a15f495700b37a_b15b/wd-7-018-16-pdf-data.pdf http://familienbetriebe.de/themen/eigentum/ / http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102643 https://www.oecd.org/gender/data/genderwagegap.htm http://reports.weforum.org/global-gender-gap-report-2014/rankings/ http://www.gesetze-im-internet.de/index.html</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.7.1	<p>The BP has implemented appropriate control systems and procedures for verifying that Freedom of Association and the effective recognition of the right to collective bargaining are respected.</p>
Finding	<p>No information was found that proved that labour rights as well as the ILO Fundamental Principles and Rights at work are at risk.</p> <p>Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND other available evidence does not challenge a 'low risk' designation.</p> <p>The Observation (CEACR) document contains no information that leads to a 'specified risk' designation in Germany regarding ILO Convention C87.</p> <p>Since 1972 exists the "Betriebsverfassungsgesetz" that guarantees the right to form an employee organization in every company. It is by this law prohibited to prevent such forms of organizations and the existing level of enforcement is high in Germany.</p> <p>According to the Government's report, employees in the public service ("Arbeitnehmer des öffentlichen Dienstes"), e.g. teachers employed under collective agreements in the education services of the Länder, do enjoy the right to bargain collectively, whereas civil servants ("Beamte") do not have the right to bargain collectively because the legislative regulation of the civil service is a constitutionally endowed traditional principle of the civil service under article 33(5) of the Basic Law and because civil servants ("Beamte") have the duty to exercise their functions lawfully, impartially and altruistically. The Government stressed that, even for particular groups of civil servants ("Beamte"), collective bargaining which is aimed at concluding collective agreements is incompatible with the principle of the legislative regulation of the civil service, and that this remains valid regardless of the outcome of wage negotiations by employees in the public service ("Arbeitnehmer des öffentlichen Dienstes").</p> <p>So there is a pecified risk of exclusion of the right to collective bargaining for foresters who are civil servants (Beamte) (see additional information for low risk indication).</p> <p>In the forest sector in Germany, the number of employees employed by collective bargaining and the number of employees who are employed have declined for more than 10 years.</p> <p>The different status groups "tariff workers" and "civil servants" are not considered by the BDF as a core problem with regard to the risk assessment of "controlled wood"!</p> <p>The issue is of low relevance for IG BAU.</p> <p>Rights like freedom of association and collective bargaining are upheld, except for foresters who are civil servants (Beamte). Experts of the Federation of German Foresters don't consider this to be a core problem, but as negligible risk.</p> <p>Other available evidence does not challenge a 'low risk' designation.</p> <p>Therefore the risk designation for this indicator is 'low risk'.</p>
Means of	<ul style="list-style-type: none"> - ILO Fundamental Principles and Rights at work - Observation (CEACR) - adopted 2014, published 104th ILC session (2015) Right to Organize and Collective Bargaining Convention, 1949 (No. 98) - Germany (Ratification:

Verification	1956) <ul style="list-style-type: none"> - Answer from BDF to request of FSC Germany 14-11-2016 - Answer from IGBAU (forest workers union) representative on the board of FSC Germany as of 16-11-2016# - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Betriebsverfassungsgesetz
Evidence Reviewed	http://www.ilo.org/dyn/normlex/en/f?p=1000:13100:0::NO:13100:P13100_COMMENT_ID:3187670:NO http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::no::P12100_Ilo_Code:C098
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.7.2	The BP has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using any form of compulsory labour.
Finding	<p>Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.</p> <p>There are no known conflicts relating to compulsory labor or child labor in Germany. Germany signed the eight Fundamental ILO (International Labor Organization) Conventions (29, 87, 98, 105, 100, 111, 138, 182) which represent principal rules on labor law. Labor rights are respected including rights as specified in ILO Fundamental Principles and Rights at work.</p> <p>No information was found that proved that labour rights as well as the ILO Fundamental Principles and Rights at work are at risk.</p> <p>Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND other available evidence does not challenge a 'low risk' designation.</p> <p>Regulations relating to illegal employment are described in Schwarzarbeitsbekämpfungsgesetz – SchwarzArbG (Act Against Illegal Employment). In public forests, illegal work is not an issue due to the legal framework and requirements. Contractors working in public forests are required to include details of legal employment in their terms and conditions. In private forests, there are no known cases of illegally employed employers or contractors. Risk can arise in cases where workers (especially overseas</p>

	<p>workers) are hired as temporary assistant forest workers, e.g. after wind catastrophes. Since this is illegal, random inspections are carried out by the employers' liability insurance association.</p> <p>There are no known significant cases of illegal employment in Germany in the forestry sector. The existing associations for subcontractors in the forestry sector are very active to set up certifications for subcontractors to guarantee a standard for quality management including wages, e.g. DFSZ or RAL Certificate GZ 244.</p> <p>There is evidence confirming absence of compulsory and/or forced labor. Other available evidence does not challenge a 'low risk' designation. Therefore the risk designation for this indicator is 'low risk'.</p>
Means of Verification	<ul style="list-style-type: none"> - ILO Fundamental Principles and Rights at work - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Schwarzarbeitsbekämpfungsgesetz (SchwarzArbG) vom 23. Juli 2004 (BGBl. I S. 1842) - "Act against illegal employment" - Arbeitsgenehmigungsverordnung (ArGV) vom 17. September 1998 (BGBl. I S. 2899) – "Regulation on Work Permits for Foreign Workers"
Evidence Reviewed	<p>http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102643</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.7.3	<p>The BP has implemented appropriate control systems and procedures to verify that feedstock is not supplied using child labour.</p>
Finding	<p>There are no known conflicts relating to compulsory labor or child labor in Germany.</p> <p>Germany signed the eight Fundamental ILO (International Labor Organization) Conventions (29, 87, 98, 105, 100, 111, 138, 182) which represent principal rules on labor law. Further national laws covering minimum age, working hours and working conditions of children are based on two legal foundations, namely Kinderarbeitsschutzverordnung (KindArbSchV or Child Labor Protection Ordinance) and Jugendarbeitsschutzgesetz (JArbSchG) or Youth Employment Protection Act).</p> <p>No information was found that proved that labour rights as well as the ILO Fundamental Principles and Rights at work are at risk.</p> <p>Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law. The status on the ILO website for all 8 Conventions is 'in force' Further national laws covering minimum age, working hours and working conditions of children are</p>

	<p>based on two legal foundations, namely Kinderarbeitsschutzverordnung (KindArbSchV or Child Labor Protection Ordinance) and Jugendarbeitsschutzgesetz (JArbSchG) or Youth Employment Protection Act).</p> <p>There are no known conflicts relating to compulsory labor or child labor in Germany. Germany does not feature in the Child Labor Country Dashboard. No references to Germany regarding child labor or child trafficking. Germany has ratified the Convention on the rights of the child. Most Länder have explicitly recognized children’s rights in their constitutions. Germany scores ‘low risk’ on the Child Labor Index. “FSC Germany is not aware of any instances of child labor or of any violations of fundamental principles and rights of the International Labor Organization (ILO) occurring at work places in the forestry sector in Germany (STD40 005; Anh. 2B; 2.3).”</p> <p>Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND the risk assessment confirms enforcement of applicable legislation.</p> <p>Other available evidence does not challenge a ‘low risk’ designation. The risk designation for this indicator is ‘low risk’.</p>
Means of Verification	<ul style="list-style-type: none"> - Kinderarbeitsschutzverordnung (KindArbSchV) vom 23. Juni 1998 (BGBl. I S. 1508) – "Child Labor Protection Ordinance" - ILO Fundamental Principles and Rights at work, C182 Worst Forms of Child Labor Convention, 1999 - Jugendarbeitsschutzgesetz (JArbSchG) vom 12. April 1976 (BGBl. I S. 965) – "Youth employment protection act" - Convention 182 on Worst Forms of Child Labor, 1999 - Convention 138 on Minimum Age for Admission to Employment, 1973 - Direct Request (CEACR) - adopted 2012, published 102nd ILC session (2013) Worst Forms of Child Labor Convention, 1999 (No. 182) - Germany (Ratification: 2002) Article 7(2) - ILO Child Labor Country Dashboard - Office of the United Nations High Commissioner for Human Rights (OHCHR), Committee on Rights of the Child - Global March Against Child Labor - Child Labor Index 2014 produced by Maplecroft - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	<p>http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C182</p> <p>http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C138</p> <p>http://www.ilo.org/ilolex/english/docs/declworld.htm</p> <p>http://www.ilo.org/dyn/normlex/en/f?p=1000:13100:0::NO:13100:P13100_COMMENT_ID:3079464:NO</p> <p>http://www.ilo.org/ipec/Regionsandcountries/lang-en/index.htm</p> <p>http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx</p> <p>http://www.globalmarch.org/</p> <p>http://maplecroft.com/portfolio/new-analysis/2013/10/15/childlabour-risks-increase-china-and-russia-most-progress-showsouth-america-maplecroft-index/</p>

Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.7.4	The BP has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using labour which is discriminated against in respect of employment and occupation.
Finding	<p>Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.</p> <p>There is no information that leads to a 'specified risk' designation neither with relation to the forestry sector nor on any other specified risks in Germany regarding ILO Convention C111.</p> <p>There are activities to reduce the payment gap as well as the issue of gender inequality or discrimination gains recognition in special support programs for women, girls to get involved in technical, scientific jobs. A special representation of women's interests in the forestry sector has been established in form of the association "Forstfrauen". http://forstfrauen.de/der-verein/</p> <p>It is estimated that 1.5 million workers a day in Germany are victims of on-the-job bullying. Germany is watching the suit closely as it struggles with integration and discrimination. Discrimination and racism are problems that immigrant groups have faced in Germany for many years.</p> <p>There is also a specific risk for discrimination because of foreign names.</p> <p>In 2006 Germany has implemented a "Law for Equal Treatment" (Allgemeines Gleichbehandlungsgesetz (AGG)). Its object is to prevent or eliminate discrimination because of racial or ethnic origin, gender, religion or belief, disability, age or sexual identity.</p> <p>The rights of handicapped people are protected via the AGG as well as "Schwerbehindertengesetz" (SchwbG) in Germany.</p> <p>The gender pay gap is no specific risk because of the opportunities for women in Germany to express themselves freely for their rights and because of existing legislation to protect women's rights to close this gap and because of support programs for women in technical professions or management positions, there is no danger of serious discrimination.</p> <p>There is evidence of structural socio-cultural discrimination at the workplace. Germany tackles this issue via different instruments, e.g. studies have been undertaken in context with the National Integration Action plan and there are measures to improve transparency. There is no special reference to people working in the forestry sector describing a higher imbalance.</p> <p>Germany is in the process of implementing European legislation and strengthening civil society measures to address these problems. The fact that the German government and non-governmental organizations are active in the field of combating discrimination, carry out surveys, offer access to advice and legal instruments and that these findings and legal</p>

	<p>cases are public, shows the existing / increasing sensitivity. With regard to this issue, freedom of expression, freedom of information and legal recognition, there is no clear evidence of high risk in the forestry sector or that this risk is comparatively high. There are indications that confirm for a low incidence of forms of discrimination in relation to employment and/or occupation and/or gender and indications of occurrence. Instances of reported discrimination in the workplace are not widespread and no specific cases have been found in forestry. This is also confirmed by an expert survey. While taking the precautionary approach into consideration, the evidence found does not challenge a 'low risk' designation.</p> <p>Applicable legislation for the area under assessment covers the key principles recognized in the ILO Fundamental Principles and Rights at work (which are recognized as: freedom of association and right to collective bargaining; elimination of forced and compulsory labor; eliminations of discrimination in respect of employment and occupation; and effective abolition of child labor), AND the risk assessment for relevant indicators of Category 1 confirms enforcement of applicable legislation ('low risk').</p> <p>Other available evidence does not challenge a 'low risk' designation</p> <p>The risk designation for this indicator is 'low risk'.</p>
Means of Verification	<ul style="list-style-type: none"> - ILO Fundamental Principles and Rights at work, C111 Discrimination (Employment and Occupation) Convention, 1958 - Committee on the Elimination of Discrimination against Women; Fiftieth session; 3 – 21 October 2011 - Law for Equal Treatment (Allgemeines Gleichbehandlungsgesetz), 2006 - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011) - Schwerbehindertengesetz (SchwbG), Gesetz zur Sicherung der Eingliederung Schwerbehinderter in Arbeit, Beruf und Gesellschaft in der Fassung der Bekanntmachung vom 26. August 1986 (BGBl I S. 1421, 1550), zuletzt geändert durch Art. 9 des Gesetzes vom 19. December 1997 (BGBl I S. 3158)/ Disabled Persons Act (SchwbG), Act on the Integration of Disabled Persons into Work, Occupation and Society as amended by the Notice of 26 August 1986 (Federal Law Gazette I p. 1421,1550), as last amended by Article 9 of the Act of 19 December 1997 (Federal Law Gazette I p. 3158)
Evidence Reviewed	<p>http://www.ilo.org/ilolex/english/docs/declworld.htm http://uhri.ohchr.org/document/index/c66445d0-b850-4286-9b4d-51e02541e6d4?from=ru http://forstfrauen.de/der-verein/ http://www.antidiskriminierungsstelle.de/SharedDocs/Aktuelles/DE/2016/20160809_AGG_Evaluation.html</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

Indicator

<p>2.7.5</p>	<p>The BP has implemented appropriate control systems and procedures for verifying that feedstock is supplied using labour where the pay and employment conditions are fair and meet, or exceed, minimum requirements.</p>
<p>Finding</p>	<p>Since 2015 there exists a minimum wage, which is binding and is strictly controlled. No violations could have been detected for the forestry and timber sector so far, as workers are paid above the minimum wage.</p> <p>The existing associations for subcontractors in the forestry sector are very active to set up certifications for subcontractors to guarantee a standard for quality management including wages, e.g. DFSZ (http://www.alko-cert.de/zertifizierungen/dfs/) or RAL Certificate GZ 244 (http://www.ral-ggwl.de/index.php/wirzertifizieren-betriebe-fuer/7-guetezeichen-holzernte-ralgz-244-1).</p> <p>A new study of the Hands-Böckler-Stiftung (2017) comes to the result that almost half of the so-called “Minijobbers” haven’t received the minimum wage in 2015, with no special reference to the forestry sector.</p> <p>Legislation and control mechanisms are in place and are constantly adapted.</p> <p>In addition, fair working conditions are ensured by the Allgemeines Gleichbehandlungsgesetz (AGG), Jugendarbeitsschutzgesetz (JArbSchG), Kinderarbeitsschutzverordnung (KindArbSchV), Schwarzarbeitsbekämpfungsgesetz (SchwarzArbG), Arbeitsgenehmigungsverordnung (ArGV), Das Fünfte Buch Sozialgesetzbuch (SGB V), Das Sechste Buch Sozialgesetzbuch (SGB VI), Das Siebte Buch Sozialgesetzbuch (SGB VII), Arbeitszeitgesetz (ArbZG), Bundesurlaubsgesetz (BUrIG), Kündigungsschutzgesetz (KSchG) and Mutterschutzgesetz (MuSchG).</p> <p>There are differences in wages between the employees in the public service (Arbeitnehmer des öffentlichen Dienstes) and Civil Servants and a gender gap in salary outcome, too. According to OECD data from 2014 Germany is on rank 14 by international comparison, with a pay gap about 17%, while looking on fulltime employees. Global Gender Gap Index 2014. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality) Germany scores nr. 12 out of 142 countries with a score of 0.778 but ranks nr. 80 on wage equality for similar work with a score of 0,63. The gender pay gap is no specific risk because of the opportunities for women in Germany to express themselves freely for their rights and because of existing legislation to protect women's rights to close this gap and because of support programs for women in technical professions or management positions, there is no danger of serious discrimination. The evidence found does not challenge a 'low risk' designation.</p> <p>Other activities to reduce the payment gap as well as the issue of gender inequality or discrimination gains recognition in special support programs for women, girls to get involved in technical, scientific jobs. A special representation of women’s interests in the forestry sector has been established in form of the association “Forstfrauen”. http://forstfrauen.de/der-verein/</p> <p>There do exist associations for employees in Germany like the Forest worker association (IG BAU).</p> <p>Germany has ratified all the 8 Fundamental ILO Conventions that represent principal rules on labor law.</p> <p>Further national laws covering minimum age, working hours and working conditions of children are based on two legal foundations, namely Kinderarbeitsschutzverordnung (KindArbSchV or Child Labor Protection Ordinance) and Jugendarbeitsschutzgesetz (JArbSchG) or Youth Employment Protection Act). Requirements for foreign people working in Germany are covered by the Verordnung über die Arbeitsgenehmigung für ausländische Arbeitnehmer (Regulation on Work Permits for Foreign Workers).</p> <p>Regulations relating to illegal employment are described in</p>

	Schwarzarbeitsbekämpfungsgesetz – SchwarzArbG Act Against Illegal Employment). The risk designation for this indicator is 'low risk'.
Means of Verification	<ul style="list-style-type: none"> - Allgemeines Gleichbehandlungsgesetz (AGG) vom 14. August 2006 (BGBl. I S. 1897) – "General Equal Treatment Act" - Jugendarbeitsschutzgesetz (JArbSchG) vom 12. April 1976 (BGBl. I S. 965) – "Youth employment protection act" - Kinderarbeitsschutzverordnung (KindArbSchV) vom 23. Juni 1998 (BGBl. I S. 1508) – "Child Labor Protection Ordinance" - Schwarzarbeitsbekämpfungsgesetz (SchwarzArbG) vom 23. Juli 2004 (BGBl. I S. 1842) - "Act against illegal employment" - Arbeitsgenehmigungsverordnung (ArGV) vom 17. September 1998 (BGBl. I S. 2899) – "Regulation on Work Permits for Foreign Workers" - Das Fünfte Buch Sozialgesetzbuch (SGB V) – Gesetzliche Krankenversicherung – (Artikel 1 des Gesetzes vom 20. Dezember 1988, BGBl. I S. 2477, 2482) – "Social Code Book V - Statutory Health Insurance" - Das Sechste Buch Sozialgesetzbuch (SGB VI) – Gesetzliche Rentenversicherung – in der Fassung der Bekanntmachung vom 19. Februar 2002 (BGBl. I S. 754, 1404, 3384) – "Social Code Book VI – Statutory Annuity Insurance" - Das Siebte Buch Sozialgesetzbuch (SGB VII) – Gesetzliche Unfallversicherung – (Artikel 1 des Gesetzes vom 7. August 1996, BGBl. I S. 1254) - "Seventh Social Code Book - statutory accident insurance" - Allgemeines Gleichbehandlungsgesetz (AGG) vom 14. August 2006 (BGBl. I S. 1897) – "General Equal Treatment Act" - Arbeitszeitgesetz (ArbZG) vom 6. Juni 1994 (BGBl. I S. 1170, 1171) – "Working Time Act" - Bundeselterngeld- und Elternzeitgesetz (BEEG) vom 5. Dezember 2006 (BGBl. I S. 2748) – "Federal Parental Benefit Act" - Bundesurlaubsgesetz (BUrlG) vom 20. April 2013 (BGBl. I S. 868) - Federal Holiday Act - Kündigungsschutzgesetz (KSchG) in der Fassung der Bekanntmachung vom 25. August 1969 (BGBl. I S. 1317) – "Employment Protection Act" - Mutterschutzgesetz (MuSchG) in der Fassung der Bekanntmachung vom 20. Juni 2002 (BGBl. I S. 2318) – "Maternity Protection Act" - Global Gender Gap Index 2014 - Gender Wage Gap;OECD 2014 - ILO Fundamental Principles and Rights at work, C138 Minimum Age Convention, 1973 - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	https://www.oecd.org/gender/data/genderwagegap.htm http://reports.weforum.org/global-gender-gap-report-2014/rankings/ http://www.gesetze-im-internet.de/index.html
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.8.1	<p>The BP has implemented appropriate control systems and procedures for verifying that appropriate safeguards are put in place to protect the health and safety of forest workers (CPET S12).</p>
Finding	<p>Legal requirements for health and safety are regulated by the German Occupational Safety and Health Act (Arbeitsschutzgesetz, ArbSchG) and the Occupational Safety Act (Arbeitssicherheitsgesetz, ASiG).</p> <p>The so-called PSA-Benutzungsverordnung is a detailed regulation relating to safety and health protection through use of personal protective equipment at work, based on European Union directive 89/656/EWG. Binding health and safety regulations – particularly for people who work in forests and/or are employed by forest enterprises – is a matter for the Sozialversicherung für Landwirtschaft Forsten und Gartenbau (SVLFG, 'Social Insurance for Agriculture, Forestry and Horticulture program') or the German Statutory Accident Insurance scheme (Deutsche Gesetzliche Unfallversicherung, DGUV). Every employee signing an employment contract at a private or public forest company automatically agrees to the Unfallverhütungsvorschrift (Accident Prevention Regulations) available through the SVLFG or the so-called Regel Waldarbeiten (Rules on Forest Work) and Sichere Waldarbeiten (Safe Forest Working) distributed by the DGUV. There is no known instance of a private or municipal forest company that is not a member of the SVLFG. If this were the case, however, SVLFG would still pay in the event of an accident; however, the company would be required to pay SVLFG back afterwards. Unfallverhütungsvorschrift Accident Prevention Regulations) and Regel Waldarbeiten (Rules on Forest Work) are based on laws and describe duties in terms of safety, health and working appropriately in forests. Employees working in a private or municipal forest are insured by SVLFG, whereas employees in a state forest are insured through DGUV. Both are legally binding due to §15 in the Seventh Social Code Book – Statutory Accident Insurance (Siebtes Buch Sozialgesetzbuch, SGB VII – Gesetzliche Unfallversicherung).</p> <p>In addition to these, there are many guidelines for occupational safety published by public and private forest organizations. In some cases, these organizations demand additional commitments to safety conditions from their employees. This depends on what work has to be done (e.g. harvesting in steep areas). Foresters in Germany receive mandatory training in accordance with safety procedures and accident prevention. If work-related accidents occur (while employees are either working in stands or on forest roads) and the accident leads to three or more days of illness, this has to be disclosed and documented with the employer's insurance association. State forest enterprises document such accidents themselves. The Social Insurance for Agriculture, Forestry and Horticulture scheme produces statistics for public municipal forests as well as private forests.</p> <p>The Employer's liability insurance coverage ("Berufsgenossenschaft") acts as legal authority. Documents or records are the Employment contract/agreement or the Social Security card.</p> <p>Also see indicator 2.3.2 concerning health and safety measures of waldkontor.</p> <p>The personal safety equipment of forest workers is provided by the employer and always kept above the legal requirements. New equipment, technologies and techniques are often tested under real conditions to improve health and safety of employees. Designated and specially educated personal are acting as safety experts (Sicherheitsfachkraft) throughout the whole company. Above mentioned measures include office staff as well.</p>

	<p>Identified laws are upheld. Cases where law/regulations are violated are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities.</p> <p>For this indicator the area under assessment is determined to be 'low risk'.</p>
Means of Verification	<ul style="list-style-type: none"> - Arbeitsschutzgesetz (ArbSchG) vom 7. August 1996 (BGBl. I S. 1246) - Occupational Safety and Health Act - Gesetz über Betriebsärzte, Sicherheitsingenieure und andere Fachkräfte für Arbeitssicherheit (ASiG) vom 12. Dezember 1973 (BGBl. I S. 1885) – "Occupational Safety Act" - PSA-Benutzungsverordnung (PSA-BV) vom 4. Dezember 1996 (BGBl. I S. 1841) – Directive on personal equipment protection - DGUV Regel 114-018 Juni 2009 "Regel Waldarbeiten" - "Rules on Forest Work" - DGUV-Information 214-046 Mai 2014 "Sichere Waldarbeiten" - "Safe forest working" - Unfallverhütungsvorschrift(VSG) – "Accident prevention regulations" 1. VSG 1.1 Allgemeine Vorschriften für Sicherheit und Gesundheitsschutz – General Regulations on Security and Health protection - VSG 4.3 Forsten – Forsten – Forestry - VSG 4.5 Gefahrstoffe – Gefahrstoffe - Hazardous substances - Social security for agriculture, forestry and horticulture - IGBAU (forest workers union) - FSC Controlled Wood Risk Assessment for Germany Assigned code: FSC-CWRA-007-DEU (V 3-1) (Approved: 03 June 2011)
Evidence Reviewed	<p>http://www.bmas.de/EN/OurTopics/Occupational-Safety-andHealth/european-and-internationaloccupational-safety-and-health.html</p> <p>http://www.arbeitssicherheit.de/media/pdfs/bgr_2114.pdf</p> <p>http://www.arbeitssicherheit.de/media/pdfs/CCC_3426.pdf</p> <p>https://www.svlfg.de/30-praevention/prv03-gesetzeund-vorschriften/prv0301-vorschriften-fuer-sicherheitund-gesundheitsschutz/01_vsg11.pdf</p> <p>http://www.svlfg.de/</p> <p>https://www.svlfg.de/30-praevention/prv03-gesetzeund-vorschriften/prv0301-vorschriften-fuer-sicherheitund-gesundheitsschutz/17_vsg43.pdf</p> <p>http://www.svlfg.de/30-praevention/prv03-gesetzeund-vorschriften/prv0301-vorschriften-fuer-sicherheitund-gesundheitsschutz/19_vsg45.pdf</p> <p>http://www.kwf-online.org/menschund-arbeit/unfallstatistik/2013.html</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.9.1	Feedstock is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.

<p>Finding</p>	<p>Peat- and wetlands in Germany are substantially located in the northern part and in the very south. The northwestern peatlands are mainly high moores, the northeastern and southern peatlands are mainly low moores.</p> <p>Peatlands have been intensely used as source for peat, have been converted to farmland and dewatered for infrastructural reasons.</p> <p>Recently 90% of the original peatlands are in use for Greenland (50%) agriculture (25-30% and forestry (13%).</p> <p>Many plants and animals that occur in wet- and peatlands are strictly protected according to the red list. But also the wet – and peatlands are endangered as biotope and therefore on the red list of biotope types.</p> <p>Nearly all high moores in Germany are covered in protected areas. All moores in general are protected according to the Bundesnaturschutzgesetz" §30.</p> <p>In the scope of the National Biodiversity Strategy and the funding program "chance.natur", a revitalisation of moores and wetlands is encouraged and executed. This contributes to the national efforts to reduce carbon emissions, as drying moores and wetlands emit significant greenhouse gas volumes.</p> <p>In the map above, a ranking of landscape types is shown. Landscapes especially worth protecting, are in many cases congruent with the regions of moores and wetland.</p> <p>Since the 1980s no new concessions for peat depletion are granted in Germany for peatlands. Exceptions are made for peatlands that are already in agricultural use since then and are denatured. Now existing moores cannot be transformed in any other form of use or landscape type and are strictly protected. In addition to the "Bundesnaturschutzgesetz" on federal state level are several individual regulations</p> <p>Regarding wetlands, the international "Ramsar-Convention" was closed in 1971 and ratified in Germany in 1976. This convention is designated to the protection of wetlands. Currently 34 Ramsar sites with 868,226 ha of designated area are labelled in Germany. As the map below shows, those are located mainly in the same regions as the moores.</p> <p>For Ramsar sites a management plan and a constant monitoring is mandatory. In Germany nearly the complete Ramsar area is protected in the scope of Natura 2000.</p> <p>The federal environmental agencies compiled a "Moorbodenkarte" to classify moores and wetlands. This data is publicly available from several governmental sources. The classifications and definitions are according to those of the International Panel on Climate Change (IPCC).</p> <p>This maps are a fundamental basis for the moore protection and is included in forest management planning in regions with moores and wetlands.</p> <p>In several contexts peat- and wetlands are protected for quite a while by law and regulations. In addition every measure to change the form of land use needs to be approved by relevant authorities. As mentioned in various indicators of this Risk assessment, a broad bandwidth of data and information is available and to be considered in such cases.</p>
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	Therefore the risk designation for this indicator is 'low risk'.
Means of Verification	<ul style="list-style-type: none"> - Existing legislation - Level of enforcement - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - "National Forest Act" - Bundes-Bodenschutzgesetz(BBodSchG) vom 17. März 1998 (BGBl. I S. 502) – "Soil Protection Act" 1. Article §17 ("Good agriculture practice") - Bundesnaturschutzgesetz (BNatSchG) vom 29. Juli 2009 (BGBl. I S. 2542) - "Federal Nature Conservation Act" - Bundesamt für Naturschutz (2016): Monitoring gemäß FFH-Richtlinie - https://www.bfn.de/themen/biotop-und-landschaftsschutz/schutzwuerdige-landschaften.html - Bfn-Skripten 462: Moorschutz in Deutschland" -
Evidence Reviewed	<p>https://www.bfn.de/themen/biotop-und-landschaftsschutz/moorschutz/moore-entstehung-zustand-biodiversitaet.html</p> <p>https://www.nabu.de/imperia/md/content/nabude/naturschutz/moorschutz/190502-broschuere-moorschutz-2017.pdf</p> <p>https://www.lbeg.niedersachsen.de/boden_grundwasser/moore/moore-und-moormanagement-162108.html</p> <p>https://www.moorschutz-deutschland.de/fileadmin/user_upload/ghg/Home/01_Projekt_Moorschutz_in_Dtl/BfN-Skript_462_Moorschutz_internet.pdf</p> <p>https://www.ramsar.org/wetland/germany</p> <p>https://www.bfn.de/foerderung/naturschutzgrossprojekt.html</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	

	Indicator
2.9.2	Analysis demonstrates that feedstock harvesting does not diminish the capability of the forest to act as an effective sink or store of carbon over the long term.
Finding	<p>As the commitment period in 2008 for reduction of the greenhouse emissions began, the first inventory study was carried out in 2008. The is set in the Treibhausgas-Emissionshandelsgesetz ("greenhouse emissions trading act").</p> <p>The Kohlenstoffinventur 2017 (CI 2017) in combination with the Bundeswaldinventur (BWI) deliver the data for the implementation of the Kyoto-Protokoll.</p> <p>The outcome of this inventories every five years is a data base for the climate reporting und political decisions.</p> <p>Basis for those inventories for recording the carbon storage in forests is the §41a BWaldG</p>

	<p>Absatz 3 (“National forest act”). The Bundeswaldinventur (“Federal Forest Inventory”) is applied to analyse the carbon stocks in the areas covered with forests. The increase of carbon stocks in the space of time from BWI 2002 to BWI 2008 in overground and underground biomasse feedstock amounts 4.7 million tonnes per annum. Considering the huge increase in sustainable use of wood in recent years, it is remarkable that further additional carbon was set in the forests, to a level far in excess of the cap of 1.24 million tonnes of carbon annually under the Kyoto Protocol applicable to Germany. The intensive accumulation of deadwood to support the biodiversity contributed considerably. With reference to the amount of the stock of wood there is to record an increase of 1.6 % in Germany.</p> <p>As key elements are redundant, see also indicator 2.9.1 in this Annex.</p> <p>As the results of the BWI analysis show, the german feedstock harvesting does not diminish the carbon storage and sink capability of the forests. For this indicator the area under assessment is determined to be ‘low risk’.</p>
Means of Verification	<ul style="list-style-type: none"> - Kohlenstoffinventur 2017 (“carbon inventory 2017”) - Bundeswaldinventur 2008 (“Federal Forest Inventory 2008”) - Bundeswaldinventur 2012 (“Federal Forest Inventory 2012”) - Bundeswaldgesetz (BWaldG) vom 2. Mai 1975 (BGBl. I S. 1037) - “National Forest Act” - Gesetz über den Handel mit Berechtigungen zur Emission von Treibhausgasen (Treibhausgas-Emissionshandelsgesetz -TEHG) unter Einschluss der Änderungen durch Art. 2 des Gesetzes zur Änderung der Rechtsgrundlagen zum Emissionshandel im Hinblick auf die Zuteilungsperiode 2008 bis 2012 vom 07.08.2007 (BGBl. I, S. 1788) – “Greenhouse Gas Emissions Trading Act”
Evidence Reviewed	<p>https://www.thuenen.de/media/institute/wo/Waldmonitoring/THG/Projekt/CI2017/AFZ_14_19_Kohlenstoff_Artikel_3_Schwitzgebel.pdf https://www.thuenen.de/de/wo/projekte/waldressourcen-und-klimaschutz/projekte-treibhausgasmonitoring/inventurstudie-2008/ https://www.bmu.de/fileadmin/bmu-import/files/pdfs/allgemein/application/pdf/tehg.pdf https://www.bundeswaldinventur.de/fileadmin/SITE_MASTER/content/Downloads/BMEL_BWI_Bericht_Ergebnisse_2012_RZ02_web-4.pdf https://www.bundeswaldinventur.de/fileadmin/SITE_MASTER/content/Downloads/202009_AFZDerWald.pdf</p>
Risk Rating	Low Risk
Comment or Mitigation Measure	