

Supply Base Report: Wismar Pellets GmbH

www.sbp-cert.org



Completed in accordance with the Supply Base Report Template Version 1.2

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

Document history

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SBP Sustainable Biomass Program

Focusing on sustainable sourcing solutions

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1 Overview

Producer name: Wismar Pellets GmbH

Producer location: Am Torney 2a, 23970 Wismar, Germany

Geographic position: 53°54'15"N / 11°28'10"O

Primary contact: Holger Schwarz; 03841/30306144; Holger.Schwarz@wismar-pellets.de;

Company website: <u>www.wismar-pellets.de</u>

Date report finalised: 18/Oct/2017

Close of last CB audit: 19/Oct/2017 Wismar

Name of CB: NEPCon

Translations from English: N/A

SBP Standard(s) used: Standard 2 Version 1.0; Standard 4 Version 1.0; Standard 5 Version 1.0

Weblink to Standard(s) used: http://www.sbp-cert.org/documents

SBP Endorsed Regional Riska Assessment: N/A

Weblink to SBE on Company website: N/A

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations				
Main (Initial) Evaluation	First Surveillance	Second Surveillance	Third Surveillance	Fourth Surveillance
Х				



2 Description of the Supply Base

2.1 General description

Wismar Pellets is a wood pellets producer in northeast Germany in the town of Wismar. The plant has a capacity of 220.000t of pellets per year and produces 6mm and 8mm pellets in ENplus Quality and for industrial use.

Wismar Pellets is located near the port of Wismar and is receiving the raw material from different suppliers by trucks and by vessels over the Baltic Sea. The list of suppliers consists of traders, sawmills and forest owners. The raw material is to be differentiated between sawdust, woodchips, cut-offs, shavings and roundwood. The Roundwood is low- grade wood that is usually not processable in other industries.

The countries of origin for the Wismar Pellets Supply Base are:

- Germany
- > Poland
- Norway
- Sweden
- Denmark
- Finland
- > Estonia
- Lithuania
- Russia
- Latvia
- France
- > United Kingdom
- ➤ USA

Feedstock product group	Origin	Approx. Proportions	Species and proportions
SBP-compliant Primary Feedstock	Germany, Norway	30%	Spruce (70%), Pine (20%), Birch (5%), Alder (5%), Poplar (traces)
SBP-compliant Secondary Feedstock	Germany, Norway, Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, France, UK, USA, Canada, Poland	35%	Spruce (60%), Pine (40%)
SBP-compliant Tertiary Feedstock	Germany	5%	Birch (20%), Pine (80%)
SBP non-compliant Feedstock	Russia	30%	Aspen 80%, Alder 10%, Birch 10%



Germany

Overview

The supply base in Germany consists of various input materials. Sawdust comes from an area of around 200 km radius and occurs as a by-product in sawmills of various sizes. The same applies to woodchips.

Off-cuts also come from a comparable supply radius, but are not only found in sawmills but also in the wood processing industry.

Roundwood comes from native forests, including both state forests as well as municipal and private forests. Timber from state forests is 100 % PEFC or FSC certified. The roundwood for pellet production is industrial wood or firewood, which cannot be used as material.

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.

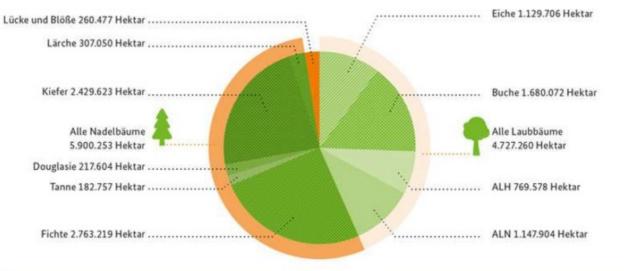
The German forest is diverse and offers habitat for many animal and plant species. Spruce, pine, beech and oak are the most important tree species in Germany. The forest contains around 224 million m³ of deadwood. In the German forest, there is an average of 20.6 m³ deadwood per hectare, which means 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.







Basis: Holzboden 10.887.990 Hektar, rechnerischer Reinbestand

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 characterised 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 %.



Naturnähe der Hauptbestockung bzw. der Jungbestockung



Basis: Bestockter Holzboden

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 76 million m³ of raw timber (cubic metres of timber harvested not including bark) were used per year in Germany in the period from 2002 to 2012. In particular, private woodland owners were able to increase their logging and utilised 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.





Basis: Alle Bestandesschichten

2.000

1.500

1.000

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 %).

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



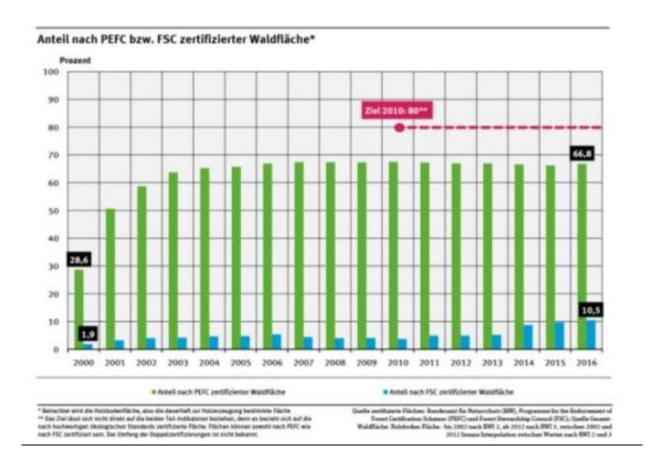
Carbon storage

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.



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

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³ http://www.umweltbundesamt.de/daten/land-forstwirtschaft/forstwirtschaft/nachhaltigewaldwirtschaft# textpart-5



Protected Areas

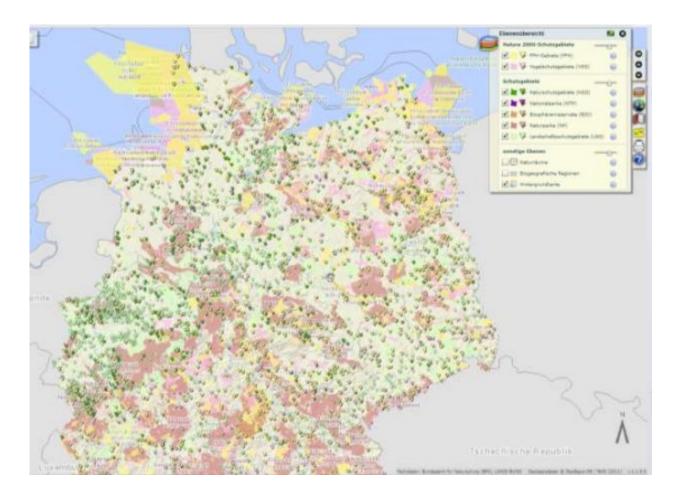
The 16 German National Parks comprise approximately 2145 km², not including the North Sea and Baltic areas. This is 0.6 % of the German land area.

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

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





Poland

Overview

According to data of the Polish Statistical Office, 9.3 million hectares were wooded 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.

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.

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.

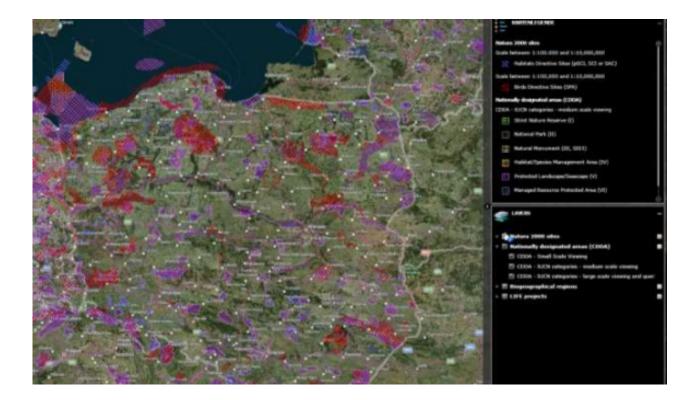
The Polish reforestation programme provides for a growth in Poland's forested area to 30 % of the land area by 2020 and 33 % by 2050.⁷

Protected Areas

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.

⁷ https://www.iucn.org/regions/europe?12794





Sweden

Overview

The raw material from Sweden consists of sawmill by-products and is certified 100% PEFC.

In 2013, the total forest area in Sweden was 22.5 million hectares, of which 11 million hectares is PEFC certified and 12 million hectares FSC certified. An area of about 7 million hectares is therefore dual certified.

About 86 million cubic metres were felled in 2013, most of which was used in the pulp industry, followed by the Swedish sawmill industry. The wood fuel sector accounted for less than 10 % of the annual felling.

The Swedish pulp industry is an important economic sector with more than 50 pulp and paper factories. These works are often sited near sawmills, thus enabling cascading use of sawmill by-products.

Forest Cover, Land Use, Economics and Forest-Based Policy

The forest area accounts for about 70 % of Sweden's total land area, which is 40.8 million hectares.

Swedish forests consist predominantly of conifers. The two tree species Spruce at 40 % and Pine at 38 % represent by far the largest stocks and supplies. Birch is the third most common tree species at 12 % of the inventory volume. (* The Swedish National Forest Inventory 2010 - 2014).

In 2010, the timber stocks consisted of 3,000,000,000 cubic metres and the annual growth rate was around 120 million cubic meters. 80 million cubic metres are felled annually and the annual stock increase is 40 million cubic metres.

More than 70 % of the annual logging comes from felling as end use, whilst the rest comes from thinning.



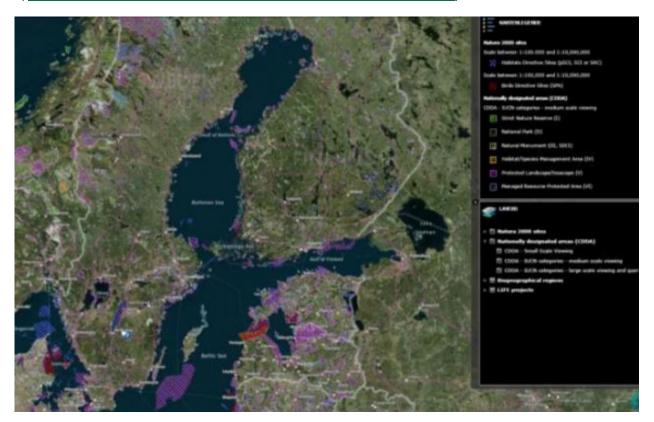
Protected Areas

More than 5 million hectares of forestland in Sweden are protected in the form of National Parks and Nature Parks (Nature Reserves). In these areas, timber felling is allowed only for nature conservation purposes. Furthermore, approximately 4 million hectares have been protected by the Forestry Act since the 1970s. The forest management system, which is applied to the cultivated areas, attaches value equally to biomass production and environmental protection.

Currently, there are more than 4,500 Natura 2000 sites covering a total area of > 6.5 million hectares. Protected areas often overlap in different protection categories.

Sweden has adopted a Red List classification based on the IUCN criteria. Most of the Red List species are associated with deciduous forests in Sweden. Since the raw material obtained is sawdust from softwood sawmills, the risk of conflicts in the harvesting of timber with regard to Red List species is negligibly small. The Swedish Government has also noted in a publication that biodiversity impacts do not arise from timber harvesting and forest use, but mainly from land use change (LUC), and are found in the agricultural and urban sectors.⁸

*(http://www.artdatabanken.se/en/the-red-list/the-2015-red-list---summary/)



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⁸ http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Environment/Land-use/Protectednature/Aktuell-Pong/24548/Behallare-for-Press/374336

http://www.artdatabanken.se/en/the-red-list/the-2015-red-list---summary



Norway

Overview

The raw material from Norway consists of sawmill by-products from softwood sawmills and from roundwood. All raw materials from Norway are 100 % PEFC certified. A total of approximately 90 % of the productive forest area in Norway is PEFC and / or FSC certified.

More than 50 % of the annual logging is taken by the Norwegian sawmill industry. A further 40 % falls into the area of pulpwood, which is used to some extent in the pulp industry. More than 50 % of the volume logged is used in the sawmill industry. 10

Forest Cover, Land Use, Economics and Forest Based Policy

In Norway there are about 12 million hectares of forest area, which corresponds to about 37 % of the land area. The inventory is estimated at around 880 million cubic metres, and growth is given at approximately 25 million hectares per year. In 2011, about 8.5 million cubic metres of industrial wood were felled, and logging as a whole amounted to about half of the annual growth. As a result, the stock of timber as a whole is increasing steadily.

15 % of the forest area is classified as not economically useful due to difficult terrain and long transportation distances.

The most economically important tree species in Norway are spruce at 47 %, pine at 33 % and birch at 18 % proportion of the stocked area.

The average felling areas are relatively small at 1.4 hectares. There are generally very long periods between fellings during which the stock can recover. This combination benefits biodiversity in Norwegian forests.

The Norwegian forest management policy is particularly concerned with sustainability and the long-term stability of stocks. In addition, the principles of the "Convention on Biological Diversity", which came into effect in 1993, are anchored and implemented in Norwegian forestry policy.

Protected Areas

Norway has adopted a Red List classification based on the IUCN criteria. Most of the Red List species are associated with deciduous forests in Sweden. Since the raw material obtained is sawdust from softwood sawmills and coniferous roundwood, the risk of conflicts in the harvesting of timber with regard to Red List species is negligibly small.¹¹

Currently, there are 39 national parks in Norway on the mainland (3,139,700 hectares).

Denmark

<u>Overview</u>

Primary feedstock sourced from a PEFC certified processor in Germany and sourced as secondary feedstock in Germany by Wismar Pellets.

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¹⁰ http://www.nordictimber.org/forest-industry-in-norway

¹¹ http://www.biodiversity.no/Pages/135380



Danish forests consist of state-owned forests, which are managed by the Nature Agency's local units, and of many privately owned forests and woodlands. 12

14.1% of Denmark's land area are covered by forests, corresponding to 608.708ha of land. The total area of Denmark is 4,239,400 ha. Approx. 200,000 ha are owned by the state.

Jutland, Northern Zealand and Bornholm are containing much of the forests. A lot of smaller forestland is located close to large towns and smaller cities.

The most common tree species in Denmark is spruce which grows on 19% of the forest land in Denmark. Overall conifers are comprising more than 50% in certain areas.

Conifers are hardy and thrive on heath and dune areas, which has made them very successful in Denmark, and because they grow quickly and therefore they have been more profitable for forest owners than deciduous trees. Conifers take up 50% of the total forest land, while deciduous trees account for 46.4%, beech (Fagus sylvatica) constituting a large proportion of deciduous in Denmark. (The remaining area is bare or a specific tree species has not been identified on the area. Most species of deciduous tree, such as oak and beech, are indigenous to Denmark, while conifers have been imported over the past 200-300 years. For example, the most common tree species in Denmark, the spruce, has been imported from other European countries like Sweden and Germany, while other species such as Sitka spruce and Douglas have been imported from North America.

Around 65% of the Danish forests are owned by private persons. These are often farmers and it is likely that their families have owned the forest land for generations. Danish family forestry has been under considerable pressure in recent years, with the economic sustainability of forestry being brought into question and concerns within the biomass industry which has lead to the Danish Industry Energy Agreement – a voluntary agreement for generation stations to adhere to that are > 20MWe. Commercial harvesting (not final fellings) and wood biomass use indicates a significant proportion and there is not a sawmill or pulp-based forestry sector in Denmark.

However, Denmark uses far more wood than it produces. Each year around 4.3 million m3 are felled, but despite this the amount of timber in Danish forests is growing by an annual net 2.4 million m3. Figure 8. Final Felling in Denmark Wood for energy chips total for all of Denmark according to national statistics was 1,295,000 m3 in 2014 and 412,000 m3 for logs for energy use out of a total 1,732,000 m3 harvested in 2014. Denmark has a national plan for species management, nature protection and enhancement of biodiversity. International nature protection in Denmark includes 252 Natura 2000 areas, 261 Sites of Community Importance and 113 Special Protection Areas covering 8,3 %. Furthermore, 27 wetland areas have been designated as Ramsar sites. In total 18% of the Danish land area that is protected. Description in the content of the protection of the Danish land area that is protected.

Finland

Overview

Primary feedstock sourced from a PEFC certified processor in Germany and sourced as secondary feedstock in Germany by Wismar Pellets.

Most of the Finish forests are certified with the PEFC certificate or the FSC certificate.

http://eng.mst.dk/nature-and-water/nature/nature-protection/forestry

http://www.statbank.dk/10477

¹⁴ https://www.protectedplanet.net/



Finland is one of the European countries with the most forest covered area. Forest covered 2015 more than 23 million ha.

The finish wood based industry used app. 65 million m³ of Roundwood. Biggest consumer was the pulpwood industry, second biggest was the sawmill industry. Followed by mechanical pulp industry and plywood industry. The majority of finish biomass is residue from wood processing industries and low- grade energywood.

Forest Cover, Land Use, Economics and Forest Based Policy

84% of Finland's forest area is used for logging. Today the total volume is app. 2,2 million m³, which consists of 50% Pine, 30% Spruce and 20% deciduous species (i.e. Birch). 92% of the growing stock is available for usage. The annual increment is up to 100 million m³, the fellings are, as mentioned above, lower to maintain sustainability.

52% of Finland's forest is private owned and the average area is 30 ha. 35% is state owned and 8% is owned by forest industries.

Protected Areas

Natura 2000 protects 3,6 million ha on land. To increase biodiversity, snag trees and deadwood is left in the forests and are protected for their biological value.

App. 5% of the finish forest area is strictly protected. Most of the protected areas are in the northern parts of Finland, where most of the state owned forests is situated.

In 2017 Finland identifies 39 National Parks, 19 Strict Nature Reserve Areas, 170 Protected Mires and 1158 Protected Habitat Types.

IUCN and Red List

Finland has formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature (IUCN). 594 Protected Areas have an IUCN category. Finland participates in political agreements as CITES Convention, Bern Convention and the Convention on Biological Diversity.

Estonia

Overview

Primary feedstock sourced from a PEFC certified processor in Germany and sourced as secondary feedstock in Germany by Wismar Pellets.

In 2013 2,3 million ha were covered with forest, what equals 49% of the Estonian territory. In total the stock was estimated to be 480 million m³. Pine (33%) and birch (31%) are the predominant species, followed by spruce (16% and alder (9%).

Forest Cover, Land Use, Economics and Forest-Based Policy

The Estonian Forestry Development Program is the framework document for the development of forestry in the current decade. The forest is defines in the Forest Act and there are 3 categories described in the legislation: commercial forests, protection forests, municipal and state owned forests.

40% of the forest area is state owned and PEFC and/or FSC certified.



The annual increment is 5,7 million m³. The Forestry Development Program specifies an annual felling of 13 million m€ as an optimal level for the Estonian forest structure to maintain sustainable.

In 2013 more than 10.000 ha of forest was replanted.

Sawmills and pulp mills are the largest user of Estonian roundwood.

Protected Areas

20,2% of Estonian land area are protected. That is an area of 9168 km².

In 2017 Estonia identifies 3432 IUCN categories. 5 National Parks, 153 Protected Landscape and 152 Nature reserve Areas.

Total Natura 2000 areas are 11320 km².

IUCN and Red List

Estonia has formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature. IUCN has defined a series of six protected area management categories, based on primary management objectives.

Forest activities are regarded as a threat to endangered species.

Lithuania

Overview

Primary feedstock sourced from a PEFC certified processor in Germany and sourced as secondary feedstock in Germany by Wismar Pellets.

More than 50% of Lithuania is covered by forest. Most of the forest is situated in the southern and eastern part of Lithuania.

App. 50% is state owned forest, 40% is private owned, 10% is reserved for restitution.

Forest Cover, Land Use, Economics and Forest- Based Policy

According to scientist from Yale University, in 2012 Lithuania hat the best managed forests, due to the protection programms.

Lithuania is situated within the so- called mixed forest belt with a high percentage of broadleaves and mixed conifer-broadleaved stands. Most of the forest often grow in mixed stands.

Pine forests are the most common type, covering about 38%, spruce and birch for about 24% and 20%. Alder makes up about 12%, Oak, Ash and Aspen only some few percent.

The growing stock is about 244m³ per ha and the annual growth comes to app. 12.000.000m³.

Protected Areas

Protected areas are established not only for the protection of natural and cultural values, but also for their adaption to allow public use and acess.

Today 15% of Lithuanias territory is protected area. Lithuanias system of protected areas consists of of 5 strict reserves, around 400 reserves of different types, 5 national parks, 30 regional parks and many natural objects. Natura 2000 covers about 13% of the total territory. The largest part of the nature conservation system includes national and regional parks.



IUCN and Red List

Lithuania as an EU Member state has committed to halting biodiversity loss by 2020, but urgent action is needed to meet this target and better monitoring capacity is required to measure if the target is reached. Despite national forests being FSC certified, habitat loss, fragmentation and degradation are the most significant threats at the European level to species in Lithuania. Major threats come from logging, wood harvesting and commercial development.

Russia

Overview

Primary feedstock sourced from a PEFC certified processor in Germany and sourced as secondary feedstock in Germany by Wismar Pellets.

In Russian forests, the boreal type is predominant and mainly consists of pine, spruce, birch, aspen, larch. The forest is separated in 3 types: production forest, protection forest and reserve forest. Overall app. 70% are classified production forest.

The biggest industry is the sawmill industry, followed by the pulp industry.

Forest Cover, Land Use, Economics and Forest-Based Policy

Russian forest area amounts to 850 million ha and covers nearly 70% of the territory of the Russian Federation. Due to the vast areas of forest, the annual growth is calculated to be over 500 million m³, but only 100 million m³ are harvested. One of the reasons is minor demand in various regions with almost no wood demanding industry.

Almost 100% of Russia's forests are state owned and controlled by the Federal Forest Agency. Regional forest authorities are responsible for allocating forest use rights. A harvesting permit and lease contracts can be obtained for a period of 10-49 years. In this period, the leaseholder is responsible for replanting and forest tending after cuttings.

Protected Areas

9,7% of Russian terrestrial territory is protected area, what equals 1.637.677km². 10820 protected areas are identified according to the IUCN management categories.

Latvia

Primary feedstock with latvian origin is sourced from a PEFC certified processor in Germany and sourced as secondary feedstock in Germany by Wismar Pellets.

Forests cover area of 3 056 578 hectares in Latvia. According to the data of the State Forest Service (concerning the surveyed area allocated to management activities regulated by the Forest Law), forest Land amounts to 51.8 % (ratio of the 3 347 409 hectares covered by forest to the entire territory of the country).

The Latvian State owns approx 49% of the total forest area (1 495 616 ha), while around 51% (1 560 961 ha) belong to other/private owners.



In Latvia the forest covered area is increasing. The expansion is caused by afforestation of infertile land unsuitable for agriculture, but also happens naturally. The timber production in Latvia has fluctuated between 9 and 13 million cubic metres within the last ten years.

The forest are consisting of the following species:

- pine 34.3 %;
- spruce 18.0 %;
- birch 30.8 %;
- black alder 3.0 %;
- grey alder 7.4 %:
- aspen 5.4 %;
- oak 0.3 %;
- ash 0.5 %:
- other species 0.3 %.

The field of forestry In Latvia is supervised by the Ministry of Agriculture, in cooperation with other stakeholders it develops the forest policy, the development strategy and drafts of legislative acts concerning forest management, the use of forest resources, nature protection and hunting.

The implementation of requirements of national law and regulations is carried out by the State Forest Service under the Ministry of Agriculture.

Management of the state-owned forests is performed by the Joint Stock Company "Latvia's State Forests", established in 1999. The enterprise ensures implementation of the best interests of the state by preserving value of the forest and increasing the share of forest in the national economy.

For the sake of conservation of natural values, a total number of 674 protected areas have been established. Part of the areas have been included in the European network of protected areas Natura 2000. Most of the protected areas are state-owned. In order to protect highly endangered species and biotopes located without the designated protected areas, if a functional zone does not provide that, micro-reserves are established. According to data of the State Forest Service (2015), the total area of micro reserves is 40 595 ha. Identification and protection planning of biologically valuable forest stands is carried out continuously.

For preservation of biological diversity during forest management activities, general nature protection requirements binding to all forest managers have been established. They stipulate that at felling selected old and large trees, dead wood, underwood trees and shrubs, land cover around wet microlowlands (terrain depressions) are to be preserved, thus providing habitat for many organisms. Latvia has been a signatory of the CITES Convention since 1997. CITES requirements are respected in forest management, although there are no species included in the CITES lists in Latvia. Forest and community Areas where recreation is one of the main forest management objectives add up to 8 % of the total forest area or 293 000 ha (2012y).

Observation towers, educational trails, natural objects of culture history value, picnic venues are just a few of recreational infrastructure objects available to everyone free of charge. Special attention is devoted to creation of such areas in state-owned forests.

Recreational forest areas include national parks (excluding strictly protected areas), nature parks, protected landscape areas, protected dendrological objects, protected geological and geomorphologic objects, nature parks of local significance, the Baltic Sea dune protection zone, protective zones around cities and towns, forests within administrative territory of cities and towns.



Management and governance of specially protected natural areas in Latvia is co-ordinated by the Nature Conservation Agency under the Ministry for Environmental Protection and Regional Development. All forest area of Latvijas valsts meži as well as some part of forests in private and other ownership are FSC and PEFC certified. From all totally forest area 3 347 409 ha are approx. 1,737 million ha of Latvian forest certified according to FSC and PEFC certification scheme.

France

Overview

The French forest area amounts up to 16,4 millon hectare. This corresponds to 29.7% of the total landscape. Taking the French oversea territories into account the total forest area covers more than 36% of the country. The forest land has increased since the 19th century as there have been several reafforestation programmes.

In 2011 the total wood stand was around 2.5 bln cubic meters. Thereof 64% hardwood and 36% softwood.

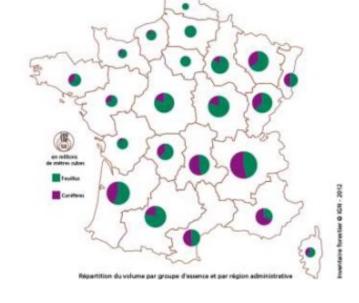
The most common wood species are:

Hardwood:

- oak, 27%
- beech, 15%
- chestnut, 5%
- ash-tree, 4%
- others, 14%

Softwood:

- spruce, 7%
- fir, 7%
- pine, 6%
- douglas, 4%
- others, 5%



Ownership

Three quarters of the French forests are in private ownerships. 15% are owned by cities and local authority districts and roughly 10% are state forests.

Since 1965 the forests are managed by the "office national des fôrets"(ONF). Since the last 25 years the total forest area has grown by 78k hectare, which is a yearly increase of 1.6%.

The ONF has developed several guidelines to ensure the preservation and restoration of endangered plant species. Under the patronage of the French ministry for agriculture and ecology three main fields of activities have been developed:

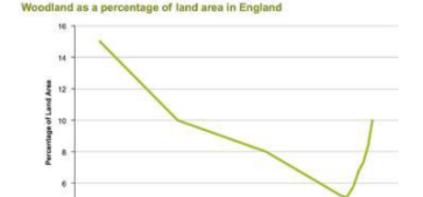
- Development of knowledge about threatened species,
- Preservation of habitats and species,
- Sensitization for and communication of the respective programmes.



United Kingdom

Overview 15

The total British land area is 24.249.500 ha, of which 12,9% is covered with forest. The forest area is still increasing and recovering from the situation after the Second World War, when the forest area was down to 5% of the total land area. The 1919 established Forestry Commission, began to take care for the reforestation, planning of timber use and environmental protection of the UK forests.



Nowadays 30% of the 31 million ha forest are state owned and 70% are in private ownership.

Of this total, 1.4 million hectares (45%) is in Scotland, 1.3 million hectares (41%) is in England, 0.3 million hectares (10%) is in Wales and 0.1 million hectares (4%) is in Northern Ireland.

1,37 million ha in the UK are certified under the FSC scheme. Overall, 44% of the UK woodland area is certified. The UK forests are slightly dominated by broadleaf species (55% of total forest area), manly Birch (18% of broadleaf woodland), Oak (16%) and Ash (12%).

Coniferous species account to 45% in total, mainly Sitka Spruce (50%), followed by Scots Pine (16%) and Larches (10%). ¹⁶

In 2017 the UK had 28,7% of the total land area protected in different categories. Among those are 15 national parks, 365 National Nature Reserve Areas, 9 Wildlife Reserve Areas and 947 Nature Reserve Areas. ¹⁷

In 2013 the harvested amount was 11 million tonnes of softwood and 0,53 million tons of hardwood. It was consumed as follows:¹⁸

- Sawmills: 6.5 million green tonnes
- Wood-based panels: 1.3 million green tonnes

https://upload.wikimedia.org/wikipedia/commons/thumb/c/c6/Woodland_as_a_percentage_of_land_area_in_England.png/370px-Woodland_as_a_percentage_of_land_area_in_England.png

Supply Base Report: Wismar Pellets

https://www.forestry.gov.uk/

https://protectedplanet.net/country/GB

https://www.forestry.gov.uk/pdf/ForestryStatistics2014.pdf/\$FILE/ForestryStatistics2014.pdf



- Integrated pulp and paper mills: 0.5 million green tonnes
- Other uses, including round fencing, woodfuel, shavings and exports of roundwood: 2.9 million green tonnes

According to the 2014 published National Forest Inventory, the annual availability of softwood from 2017-2021 is 17,15 million cubic meters over bark, the availability of hardwood is 0,63 million cubic meters over bark.

The United Kingdom has formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature. The United Kingdom participates in political agreements as CITES Convention, Bern Convention and the Convention on Biological Diversity.

There are 10.046 protected areas are identified according to the IUCN management categories.





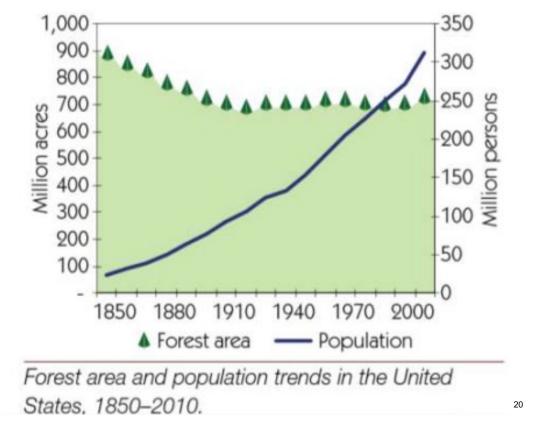
¹⁹ https://www.mapsofworld.com/united-kingdom/maps/uk-forests-map.jpg



United States of America

Overview

In 2012, forest land comprised 766 million acres, or 33% of the total land area of the United States. Forest area has been relatively stable since 1910. The northern and southern regions, the forest land sums up to 443 million acres. Of the total forest land, 10 percent are classified as reserved. This classification indicates that these forest lands are not managed for timber harvest, which is prohibited by law on these lands in most cases. Most reserved land is in the West, reflecting a larger proportion of publicly owned land in that region. In general, U.S. private forest land is classified as "timber land" by FIA, even if landowners do not intend to harvest timber.



U.S. forest ownership patterns are quite diverse with public forests dominant in the West and private forests dominant in the East. Private industrial forest ownership is concentrated in the South, Pacific Northwest, upper Lake States, and northern New England.

Public Forests

The Federal Government predominantly owns public forest lands in the West and State and county governments own most of the public lands in the East. Of all public forest acres, 75 percent are located in the West. Most protected forests are in public ownership while most production forests are in private ownership.

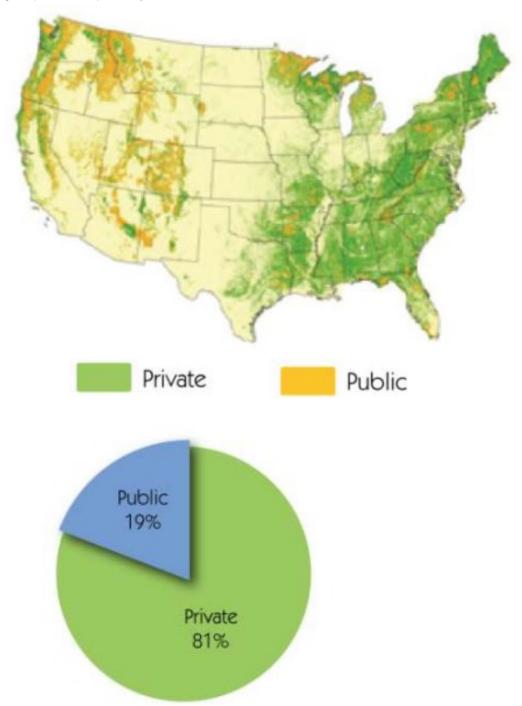
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https://www.fs.fed.us/sites/default/files/legacy_files/media/types/publication/field_pdf/forestfacts-2014augfs1035-508complete.pdf



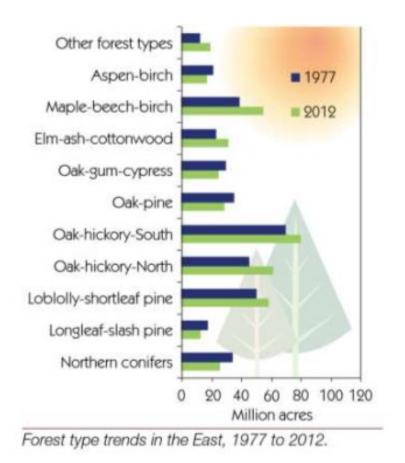
Private Forests

Private ownership accounts for 56 percent of total forest land. More than 10 million individual and family forest landowners own 42 percent of total forest land, representing a diverse group of people who have many reasons for owning their forest land. Most of this family-owned forest is used for the aesthetics that forests provide, as habitat for wildlife, and as part of a family legacy. Corporations, partnerships, and tribes own most of the remaining 14 percent of privately owned U.S. forests.



Forest ownership in the Eastern United States.





The United States formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature. The United States participates in political agreements as CITES Convention, Bern Convention and the Convention on Biological Diversity.

Canada

Overview

The Canadian forestry industry is a major contributor to the Canadian economy. The total land area of Canada accounts to 998 million hectare. With 42 percent of the land acreage of Canada covered by forests, the country contains 10 percent of the world's forested land, made up mostly of spruce, poplar and pine. 270 million hectare are boreal forests. Of the total forest area, only 226 million hectare are managed by Natural Resources Canada (NRCan) and the Canadian Forest Service, in cooperation with several organizations which represent government officials, policy experts and numerous other stakeholders. 24 million hectare of Canadian forests are protected

With 94%, the majority of Canadian forests are state owned and only 6% are in public ownership.

The growing stock in Canada in 2015 is stated by the Canadian government with 47.320 million cubic meters and the harvested volume was 160 million cubic meters. Total production of wood and wood based products in 2015 is divided in following categories:²¹

Hardwood lumber (1,5 million cubic meters)

²¹ http://cfs.nrc<u>an.gc.ca/statsprofile</u>



- Softwood lumber (66,9 million cubic meters)
- Pulp and Paper (22,9 million tonnes)
- Structural panels (8,7 million cubic meters)

Except for hardwood lumber, the annual production, exceeds the annual consumption in Canada by at least the double, for softwood lumber even by the triple volume.

In 2017 47% of Canadian forest were certified by the standards of sustainable forest management.

24 million hectare of Canadian forests are protected forests in 6 IUCN categories and 7642 single protected areas.

Canada formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature. Canada participates in political agreements as CITES Convention, Bern Convention and the Convention on Biological Diversity.



2.2 Actions taken to promote certification amongst feedstock supplier

Price difference between certified and uncertified feedstock, preference of certified suppliers. New suppliers are invited to get certified with a SBP-approved Chain of Custody System. e.g. FSC or PEFC.

2.3 Final harvest sampling programme

Not applicable.

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²² https://protectedplanet.net/country/CA



2.4 Flow diagram of feedstock inputs showing feedstock type [optional]

Not applicable.

2.5 Quantification of the Supply Base

Supply Base

- a. Total Supply Base area (ha): Cumulative area is 2135,71 million ha (Poland 8.6 million ha, Norway 7.2million ha Germany 11,4 million ha, Sweden 23.3 million ha, Denmark 0,61 million ha, Finland 23 million ha, Estonia 2,3 million ha, Lithuania 3,3 million ha, Russia 850 million ha, Latvia 3 million ha, France 16,4 million ha, United Kingdom 1,6 million ha, USA 766 million ha, Canada 419 million ha)
- b. Tenure by type:

Private ownership

Germany 46%

Norway 80%

Sweden 80% (incl. State owned company Sveaskog)

Poland 19%

Denmark 65%

Finland 48%

Estonia 40%

Lithuania 50%

Russia 0%

Latvia 51%l

France 75%

United Kingdom 70%

United States of Amerika 56%

Canada 6%

Public ownership

Germany 34% +20% communal or cooperative

Norway 20%

Sweden 20%

Poland 81%

Denmark 35%

Finland 52%

Estonia 60%

Lithuania 50%

Russia 100%

Latvia 49%

France 25%

United Kingdom 30%

United States of Amerika 44%

Canada 94%

- c. Forest by type (ha): boreal and temperate zone culminates to 2135,7 million ha
- d. Forest by management type (ha): managed natural 2135,7 million ha





e. Certified forest by scheme (ha): (e.g. hectares of FSC or PEFC-certified forest)

FSC 23:

Germany: 1,159,650 ha
Poland: 6,936,469 ha
Norway: 444,823 ha
Sweden: 12,255,794 ha
Denmark: 212,654 ha
Finland: 1,478,032 ha
Estonia: 1,428,767 ha
Lithuania: 1,094,362 ha
Russia: 43,462,516 ha
Latvia: 1,022,196 ha
France: 40,083 ha

United Kingdom: 1,610,965 ha

USA: 13,496,856 ha Canada: 54,791,164 ha

PEFC 24:

Germany: 7,392,42 ha Poland: 7,252,2 ha Norway: 7,380,75 ha Sweden: 11,658,11 ha Denmark: 264,411 ha Finland: 17,660,520 ha Estonia: 1,174,511 ha

Lithuania: -

Russia: 12,875,38 ha Latvia: 1,700,889 ha France: 8,211,435 ha

United Kingdom: 1,409,761 ha USA (ATFS): 7,564,949 ha USA (SFI): 25,937,681 ha Canada (CSA): 40,118,451 ha Canada (SFI): 90,818,877 ha

Feedstock

- f. Total volume of Feedstock: tonnes or m3 total volume in band 1
- g. Volume of primary feedstock: tonnes or m3 volume of primary feedstock in band 1
- h. List percentage of primary feedstock (g), by the following categories.
 - Certified to an SBP-approved Forest Management Scheme in band 1
 - Not certified to an SBP-approved Forest Management Scheme in band 2
- i. List all species in primary feedstock, including scientific name
 - Spruce (Picea abies)
 - Pine (Pinus sylvestris)

Supply Base Report: Wismar Pellets

²³ https://ic.fsc.org/en/facts-and-figures

https://de.scribd.com/document/147379606/PEFC-Global-Certificates



- Birch (Betula spec)
- Alder (Alnus spec)
- Aspen (Populus tremula)
- Poplar (Populus nigra) just in traces
- j. Volume of primary feedstock from primary forest: 0%
- k. List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP approved

Forest Management Schemes:

- Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme
- Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme
- I. Volume of secondary feedstock: specify origin and type Sawdust, Woodchips, shavings and cut-offs from primary producers in Germany, Norway, Sweden, Poland. Volume in band 1.
- m. Volume of tertiary feedstock: Band 1 (0 200.000t)



3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
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The amount of sold SBP-compliant material is purchased in a congruent amount of feedstock that is certified with a SBP-approved forest management system. (i.e. PEFC, FSC).



4 Supply Base Evaluation

4.1 Scope

Not applicable.

4.2 Justification

Not applicable.

4.3 Results of Risk Assessment

Not applicable.

4.4 Results of Supplier Verification Programme

Not applicable.

4.5 Conclusion



5 Supply Base Evaluation Process



6 Stakeholder Consultation

Not applicable.

6.1 Response to stakeholder comments



7 Overview of Initial Assessment of Risk

Not applicable for feedstock from SBP- approved COC systems.



8 Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

Not applicable for feedstock from SBP- approved COC systems.

8.2 Site visits

Not applicable.

8.3 Conclusions from the Supplier Verification Programme Not applicable.



9 Mitigation Measures

9.1 Mitigation measures

Not applicable.

9.2 Monitoring and outcomes



10 Detailed Findings for Indicators

Not applicable for feedstock from SBP- approved COC systems.



11 Review of Report

11.1 Peer review

Reviewed by Nico Westphal on 18.10.2017.

Graduate forestry engineer (FH) since 1998. Since 2010 in Poland, Denmark, Norway, Sweden, Finland, Baltic republics, Russia as Trader. Focusing on the implementation and adherence to the FSC or PEFC standards at suppliers.

Nico Westphal accepts no responsibility or liability for the accuracy of the information included in this report.

11.2 Public or additional reviews

No public reviews.



12 Approval of Report

Approval of Supply Base Report by senior management				
Report Prepared by:	Holger Schwarz	Purchase	13.10.2017	
~y.	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:	Thomas Kresser	Managing Director	18.10.2017	
	Name	Title	Date	
Report approved by:	Michael Hessing	Managing Director	18.10.2017	
_	Nama	Title	Data	



13 Updates

- 13.1 Significant changes in the Supply Base Not applicable.
- 13.2 Effectiveness of previous mitigation measures
 Not applicable.
- 13.3 New risk ratings and mitigation measures
 Not applicable.
- 13.4 Actual figures for feedstock over the previous 12 months

Not applicable.

13.5 Projected figures for feedstock over the next 12 months

Not applicable.