SBP

Sustainable Biomass Program

# Supply Base Report

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# Completed in accordance with the Supply Base Report Template Version 1.3

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

*Document history*

*Version 1.0: published 26 March 2015*

*Version 1.1 published 22 February 2016*

*Version 1.2 published 23 June 2016*

*Version 1.3 published 14 January 2019*

# Contents

# 1 Overview

Producer name: José Afonso & Filhos, SA. (JAF)

Producer location: Zona Industrial de Açude Pinto. 6160-301 - Oleiros - PORTUGAL

Geographic position: 37º 06' 25.06" N, -7º 66' 21.27" W

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Companywebsite: http://www.jaf-madeiras.com

Date report finalized: 31/01/2020

Close of last CB audit: 08/04/2019, Oleiros.

Name of CB: NEPCon Spain l C

Translations from English: [Yes]

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.sustainablebiomasspartnership.org/documents

SBP Endorsed Regional Risk Assessment: 'not applicable'

Weblink to SBE on Company website: 'not applicable'

Weblink to SBR on Company website: http://www.jaf-madeiras.com/en/certificacao/default.html

| Indicate how the current evaluation fits within the cycle of Supply Base Evaluations | | | | |
|---|---|---|---|---|
| **Main (Initial) Evaluation** | **First Surveillance** | **Second Surveillance** | **Third Surveillance** | **Fourth Surveillance** |
| ☐ | ☐ | ☐ | ☐ | **X** |

# 2 Description of the Supply Base

## 2.1 General description

**José Afonso & Filhos, SA. (JAF)** was established in 1990, in the town of Oleiros, district of Castelo Branco, at which time they were a small sawmill.

In recent years, the sawmill has been modernized several times. Actually, the sawmill has 8 production lines which produce around 60,000 m3 / year.

Beside the sawmill, in 2008 a pellet factory was built and put into operation with a capacity of producing about 70,000 t /year. In 2010, a briquette factory was built and put into operation with a capacity of producing 7,000 t /year.

With this structure, **JAF** can optimize their operations and the use of raw wood material.

The company acquires logs, woodchips and sawdust, mainly of pine or Maritime Pine (*Pinus pinaster*), as raw material for industrial processes (sawmill, pellet plant and briquette factory). For kiln drying processes, in addition to pine biomass (forest residues, bark, waste and leftover material), roundwood, waste and leftover material from Eucalyptus (*Eucalyptus* spp.) can also be used.

Wood purchased standing or piled comes from forests in Portugal (90%) and Spain (10%). In Portugal, the logging and transportation is conducted by the company. These activities are conducted within the scope of the company's Chain of Custody Management System, including wood suppliers. In Spain, logging is done by sub-contractors while trucking is provided by the company.

In Portugal, the wood comes mainly from the central region, from forests located in the districts of Castelo Branco, Portalegre, Santarém, Leiria, Coimbra, Aveiro, Viseu, Guarda and Bragança.

In Spain, the wood originates from mainly forested areas located near the border with Portugal. These areas belong to the Autonomous Communities of Galicia, Castilla y Leon and Extremadura. There is a possibility of wood coming from other regions in Spain, as the company has expanded its markets and seeks to profit in the transport and the purchase of wood close to the delivery locations.

The logs (for sawing or chipping) and biomass (forest residues, bark and logging debris) acquired "at the mill" come exclusively from forests in Portugal, especially from the Castelo Branco district and the surrounding area. Within this area there are 47 small to medium enterprises who buy the timber standing, logs and transports the timber.

Chipped wood (chips and sawdust) that is acquired "at the mill", comes from suppliers who deliver the material (chips) or the by-product from the sawing process (sawdust) from 14 pine sawmills. These sawmills also purchase their logs, mainly within in their vicinity but may include wood from any region of the country as well as from Spain, especially the areas along the border, from Galicia to Extremadura.

Therefore, the supply area includes the entire mainland of Portugal and potentially all of mainland of Spain.

In Portugal, the pine wood consumption stood at 3.83 M $m^3$ in 2017. It is estimated that the availability is 2.25 M $m^3$, resulting in an annual deficit of 1.58 M $m^3$. The pellet production industry consumes currently about 730,000 tons of biomass per year, having 26 production units in the country (source: Centro PINUS, 2018.).

In Portugal, the pulp, particle board and saw mill industry consumes around 3 million tons/year of pine. The pellet industry consumes about 1.4 million tons of biomass annually with 24 producers in the country.

**JAF** produces about 90,000 t /year of pellets; resulting in a consumption of raw forest material of 145,000 t/year.

In regards to the sawmills, there are many in the region, but smaller and consumes less wood.

There is also the pulp industry in Portugal that consumes about 6 million tons/year of eucalyptus.

The forestry sector in the Iberian Peninsula represents a strategic wealth, environmentally, economically and socially. If we consider the Iberian Peninsula as one unit within the EU, it has a total of 28,715,000 ha of forested land, which is 48% of the landmass of the two countries placing the Iberian Peninsula in 4th place after important countries such as Sweden, Finland and France.

Forested land on the Iberian Peninsula totals 8.852 million ha (15% of the territory), which is less than in countries that are more forested, but is well above the rest of the EU, harvesting approximately 25.5 million $m^3$ annually.

Portugal has about 9.8 million inhabitants and has an area of 8.7 million hectares.

According to data of the last National Forest Inventory (IFN6 – Principais resultados – relatório sumário, ICNF, 2019.), forest, which includes wooded and temporarily not wooded land (cut, burned and regenerating) is the main national land use (36%), representing one of the largest proportions of forested areas in Europe.

The forest of the continent alarea is dominated by native species, highlighting the oaks (including cork oak and holm oak, about 36% of the total) and pine trees (about 30%). Eucalyptus plantations occupy 26% of the forest area and the rest of the area is distributed by species of lower expression (including *Castanea sativa*, *Arbutus unedo, Ceratonia siliqua, Acacia* spp, *Poplars*, and others).

National Forest Inventory (IFN6) also presents the following conclusions:

- Forest areas covers 6.1 million hectares (69.4%) of the continental national territory.
- The reducing trend of the forest area, which has been in place since 1995, was reversed in 2015, with an increase of 59.000 ha (1.9%) since 2010 (date of the last Inventory).
- The national forest is mostly composed of native species (72%), some occupying territories larger than their original.
- In structural, functional and landscape terms, the forest of the continent can be organized into four large groups: pine forests (Maritime Pine - *Pinus pinaster* and Umbrella Pine - *Pinus pinea*); perennial

hardwoods (cork oak and holm oak); deciduous hardwoods (oaks, chestnut trees and others); and industrial hardwood plantations (*Eucalyptus* spp.).

- The "montado" (perennial hardwoods - cork oak and holm oak) are the main forest occupation, with about 1 million hectares and representing a 1/3 of forest area. Are multi-use forest ecosystems, which do not have wood production as the main function.
- Pine forests are the second forest occupation, with an area close to 825 thousand hectares, with the greatest reduction in the occupied area. The reduction is caused by forest fires and diseases (Mainly the Nematode). However, in the period between 2010 and 2015, the area of, recorded a very significant slowdown in the rate of reducing trend that occurred since 1995 (IFN4), which reveals the extraordinary resilience of these pine forests to disturbances.
- Deciduous hardwood (oaks, chestnut trees and others) are the least representative forest occupation, although there has been a systematic increase over the last 20 years, which is most significant in the period between the last two inventories (2005 and 2015) (46,000 ha; 17%).
- Eucalyptus plantations occupy 844,000 ha, about 26% of the continental forest area and presenting a systematic increase over the last 50 years.
- In 2015, Portugal had 172 million $m^3$ of growing wood, an identical value to what occurred in IFN5 (2005).
- The maintenance of timber volumes between the last two inventories shows that in this period forest production, overall, can be considered sustainable, as wood cuts and losses by fires or pests have been in balance with forest growth. However, this analysis carried out for the main species with woody use reveals a distinct situation.
- The growing wood volume (i.e. of live trees) of Maritime Pine shows a decrease of 30,2 $Mm^3$ compared to the previous IFN, resulting in 2018 51,8 $Mm^3$. The volume of eucalyptus growing wood remains constant since the IFN5 (44 $Mm^3$), despite the area increase of about 58,000 ha. That is, the availability of Maritime Pine is decreasing and eucalyptus wood does not follow it's increase in area.
- In terms of wood biomass and carbon stored in living trees in forest areas, there is an increase in both values, resulting from the change in the specific composition of the forest, and partly from the improvement of evaluation methods.
- IFN6 characterizes the state of the forest in 2015 which is necessarily different from its current situation, as a result of the dynamics of forest ecosystems and, in particular, severe rural fires of 2017 and 2018 (Monchique). The impact of these disturbances and the dynamics of deforestation/reforestation and exploitation of resources will be properly assessed in the next IFN, which is scheduled for the start of next year. However, it is possible to make approximate estimates of the consequences of these rural fires on the basis of existing IFN6 data and affected areas. Thus, it is estimated that these fires have affected a forest area of 329,4 thousand ha.

Forest ownership is mostly private, with 2.8 million hectares, or 84.2% of the total area owned by small private properties and 6.5% which is owned by industrial companies. About 85% of the Portuguese forest is

privately owned, only 3% are public (the lowest percentage in Europe), and the remaining 12% are communitarian.

The size of the forest properties has a very distinct geographical distribution. A large number of the properties are located in the north and center, where logging occur on properties of less than 1 hectare. It is estimated that there are more 400 000 forest owners in the country.

Despite the high number of owners and the small size of the forest properties, the goods produced from these areas account for 5% of the GVA (Gross Value Added) of the economy, accounting for about 4% of the gross domestic product (GDP) and 14% of the industrial GDP.

The Portuguese business structure in the forestry sector includes some of the most representative European companies in this sector. In regards to the international market sales for forest products and forest-based products, the most important are: paper and cardboard, pulp, cork, wood and resin products and furnitures.

According to information in the “Characterization of the Forest Industry Report of 2014”, sponsored by the Association for the Competitiveness of the Forestry Industry (AIFF), for the reference period of 2011-2013, the trade balance associated with the forestry industries sector presents a positive balance of 2,474 million euros (2013), corresponding to 9.1% of total national exports of goods and 3.4% of total national imports of goods. The forest industry employs 2.2% of all persons employed by companies in Portugal and 1.7% of the total employed population

In 2012, the Gross Value Added (GVA) in forestry increased by 3.9% in volume and 2.4% in value in relation to 2011. In relation to forestry production there was also a recorded increase of 4 3% in volume and 3.6% in value in relation to 2011. During this same year, the GVA of the forestry sector industries accounted for 1.2% of the national GVA, having maintained a significant presence in total manufacturing (about 11%).

However, according to Centro PINUS (Association for the development of the Pine Forest), as to recently published data from the INE (National Institute of Statistics), the turnover for pine wood industrial companies in 2018 was 4.137 million Euros, representing an increase of 6% compared to 2017. The pine wood industries maintain a turnover of 46% of the wood manufacturing sector in Portugal. This is evidence as good as any for the powerful dynamism and economic importance of the pine wood industries in Portugal.

.According to Pedro Sebastião Perestrelo de Souza e Holstein Campilho in his thesis Assessment of National Potential for Forest Biomass Utilization for Energy Purposes published in 2010, the trend of loss of socioeconomic sustainability of the Portuguese forestry sector in recent years, when supplemented with a conjecture to encourage the production of renewable energy, translates into a set of developments which enhance the demand for biomass from logging residues for energy use. The demand for biomass tends to be met in the short term, in scenarios substantially sustainable. However, in the medium and long term projection, even without considering significant increases in demand for this resource, results in difficulties to meet existing market demands with conditions for sustainability as those experienced in the short term.

According to the "Diagnosis del Sector Forestal Español" Análisis y Prospective - Serie Agrinfo/Medioambiente No. 8, Spain has 18.4 million hectares of forest area, representing 36.3% of the national land base, being the third largest in Europe. Currently 68.6% of national forest area is private (19 million ha) and 31.4% is public, mainly from local authorities (Ayuntamientos).

An enormous diversity exists, both in the number of species as in the variety of forest stands. According to the National Forest Inventory, more than 80% of forest areas are composed of two or more species.

According to the publication "Criterios e Indicadores de gestión forestal sostenible en los bosques españoles" from the Spanish MINISTRY OF AGRICULTURE, FOOD AND THE ENVIRONMENT, the volume of wood (with bark), according to the 3rd National Forest Inventory, reaches the figure of 927 760 000 m3 . The average annual production of timber and firewood, according to available data (2005-2009) was 17.19 million m3 with bark - 14,450,000 m3 without bark.

45% of the average production corresponds to the harvest of softwood, 35% hardwood and 20% are mixtures of various species. The main producing wood species are Eucalyptus, Maritime Pine, Radiata Pine, Scots Pine and Poplar, all with an annual production over 500,000 m3.

Between 1970 and 2010 the forest area in Spain increased by about 6.48 million hectares. Between 1990 and 2010 the growth was 31%: 4.4 million ha, with an average rate of 210,000 ha / year. It is the European country with the highest growth.

Forestry, harvesting and the timber and paper industry produced in 2009, a GVA of 6,635 million euros, representing a direct contribution of 0.63% to the national GDP.

In forestry and harvesting in 2013, there was an average of 31,000 workers, while in the forestry industry (wood, cork and paper) had a total of 104.600 employees.

Pine forests are usually managed in stands of trees, generally of seed or seedling origin, that normally develop a high closed canopy, and can be managed using natural regeneration or by sowing or planting.

In cases of natural regeneration and planting, the initial phase is intended to gradually reduce the density of plants to 1200-1600 trees / ha. Initially in groups and then selectively with mechanical or manual harrowing or slashing. After 10 years the trees can be pruned (1-2) and thinned (2-3) utilizing the residual material, leaving a final cut (30-40 years) of about 500-600 trees / ha, while proceeding to also control unwanted vegetation mechanically or manually harrowing or slashing. In the case of natural regeneration, during the final cut about 25 large trees / ha are left as seed trees.

In the case of a plantation, the ground is prepared with disking, ripping and harrowing along the contours in areas with slopes up to 30%, on steeper slopes the site preparation and planting is manual. The planting density depends on the season, usually 1200 to 1600 seedlings / ha.

After 10 years the trees can be pruned (1-2) and thinned (2-3) utilizing the residual material, leaving a final cut (30-40 years) of about 500-600 trees / ha, while proceeding to also control unwanted vegetation mechanically or manually harrowing or slashing. In the case of natural regeneration, during the final cut about 25 large trees / ha are left as seed trees.

Eucalyptus silviculture is based on planting and the clear-cutting the forest, usually between 10 and 15 years, utilizing all of the wood with or without the bark (simple coppice). Priority is given to conducting coppice for 1, 2 up to 3 rotations, selecting shoots after each cut. If last cut is not deemed productive then the area is re-planted.

In mixed stands with Maritime Pine, the system is based on thinning the forest in order to leave a percentage of remaining trees for future use when the stumps of the harvested Eucalyptus trees produce shoots (composed coppice)

Beginning with the site preparation, which normally consists of destroying and incorporating existing woody material, followed by tillage (disking, ripping, and harrowing).

Fertilization depends on the season and the owners conditions. The planting is carried out to a density typically between 1100 and 1300 seedlings per hectare. Between the second and sixth year a second fertilization and competing vegetation control is recommended.

The selection of shoots is made during the second and third year, maintaining a number of stems per hectare corresponding to the initial density of planting.

In most cases, the cut is made between 10 and 15 years. The basic logging operating system consists of utilizing a tractor processer and a tractor loader, and usually manual felling with a chainsaw.

The elaboration of a PGF is a legal requirement for some private properties (depending on the size and requirement of the applicable Regional Plan of Territorial Planning (PROF) for the property, as well as the Forest Intervention Areas (ZIF).

In November 2018 (date of the last information available from the ICNF), there were more than 3,000 approved PGFs (1.72 million hectares), representing 31% of the forest area in Mainland Portugal.

In Portugal it is not necessary to have specific authorization for harvesting except for cork oak, holm oak and logging in protected or classified areas. When logging Pine it is necessary to produce a harvest manifest, pruning and transport of coniferous wood (Decree-Law 123/2015 of 3 July), which concerns the application of the extraordinary measures of plant protection essential to the control of the pine wood nematode (PWN).

In Spain, for private properties, if there is a PORF (Forest Management Plan) or management tools, the owner must notify the forestry agency of the Autonomous Community (CCAA) with their logging plan. Otherwise, the owner shall communicate their logging plan to the forestry agency of the Autonomous Community (CCAA) adhering to the Autonomous Community regulations.

Public areas are regulated by the forestry agency of the CAAC.

CITES – (Convention on International Trade in Endangered Species of Wild Fauna and Flora) not includes timber species on the lists for Portugal and Spain.

**Proportions of SBP feedstock product groups in 2018**

| Product Group | Certification | Nº Supplyers | Species | Quantities (t) | % |
|---|---|---|---|---|---|
| Controlled Feedstock | FSC CW / Controlled Sources PEFC (*) | 14 and JAF | Pine | 140.828,0 | 96,5 |
| SBP-compliant Secondary Feedstock | PEFC | JAF | Pine | 5.054,8 | 3,5 |

## 2.2 Actions taken to promote certification amongst feedstock supplier

The company has contacted each of its suppliers and affirmed the importance of providing certified material (FSC or PEFC), pointing out the increasing demands of markets and consumers regarding the legal and sustainable source of forest products, including biomass for energy production.

The person responsible for standing timber or log purchases has also informed the producers and forest owners that added value is gained by managing their areas as certified, either individually or through group initiatives recognized by the company.

In addition, the company's employees have participated in events related to management and forest certification, trying to gather information and give their contribution to the development of the subject, especially in Portugal.

## 2.3 Final harvest sampling programme

The company uses roundwood originating in final *fellings* from forest areas with rotation period exceeding 40 years only for the production of saw wood. Uses only forest residues (branch, tree tops, etc) and secondary feedstock for pellets production.

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

## 2.5 Quantification of the Supply Base.

### Supply Base

a. Total Supply Base area: 21,5 millions ha
b. Tenure by type: Privately owned: 15,8 millions ha; Public: 5,7 millions ha
c. Forest by type: Temperate: 21,5 millions ha
d. Forest by management type: Plantation: 16,9 millions ha; Natural/Semi natural: 4,6 millions ha
e. Certified forest by scheme: FSC: 773.983 ha PEFC: 2.519.151 ha

### Feedstock

f. Total volume of Feedstock: 0 – 200.000 tonnes (145.883 tonnes)
g. Volume of primary feedstock: 0 – 200.000 tonnes (0 tonnes)

h. Percentage of primary feedstock categories
   - Certified to an SBP-approved Forest Management Schemes: 0 %
   - Not certified to an SBP-approved Forest Management Schemes: 0 %

i. List all species in primary feedstock, including scientific name
   - Maritime pine (*Pinus pinaster*)
   - Radiata pine (*Pinus radiata*)
   - Umbrella pine (*Pinus pinea*)
   - Eucalyptus (*Eucalyptus* spp) – Only for energy production

j. Volume of primary feedstock from primary forest: 0 tonnes

k. Percentage of Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme – 0 %
   Percentage of Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme – 0 %

l. Volume of secondary feedstock: 145.883 tonnes - 5. 80% - 100% (100%)

m. Volume of tertiary feedstock used: 0 tonnes – 1.0%-19% (0%)

Forecasts to **2020**:

For the following year are not expected major changes in supply profile, we will keep the guidelines of pellet production programs, keeping the predictions in the same orders of magnitude of this period.

With the company's efforts to encourage the supply of certified material (FSC or PEFC), there may be values for these categories of material next year.

# 3 Requirement for a Supply Base Evaluation

| SBE completed | SBE not completed |
|---|---|
| ☐ | X |

All raw forest material consumed is certified by PEFC or FSC. If the material is not certified, it is controlled within the Chain of Custody Management System of the company, which is certified according to FSC-STD-40-005 Standard for company Evaluation of FSC Controlled Wood and PEFC ST 2002: 2013: Chain of Custody of Forest Based Products - Requirements.

# 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

*Not Applicable.*

# 5 Supply Base Evaluation Process

*Not Applicable.*

# 6 Stakeholder Consultation

*Not Applicable.*

## 6.1 Response to stakeholder comments

*Not Applicable.*

# 7 Overview of Initial Assessment of Risk

*Not Applicable.*

Table 1. Overview of results from the risk assessment of all Indicators (prior to SVP)

| Indicator | Initial Risk Rating | | |
|---|---|---|---|
| | Specified | Low | Unspecified |
| 1.1.1 | | | |
| 1.1.2 | | | |
| 1.1.3 | | | |
| 1.2.1 | | | |
| 1.3.1 | | | |
| 1.4.1 | | | |
| 1.5.1 | | | |
| 1.6.1 | | | |
| 2.1.1 | | | |
| 2.1.2 | | | |
| 2.1.3 | | | |
| 2.2.1 | | | |
| 2.2.2 | | | |
| 2.2.3 | | | |
| 2.2.4 | | | |
| 2.2.5 | | | |
| 2.2.6 | | | |
| 2.2.7 | | | |
| 2.2.8 | | | |
| 2.2.9 | | | |

| Indicator | Initial Risk Rating | | |
|---|---|---|---|
| | Specified | Low | Unspecified |
| 2.3.1 | | | |
| 2.3.2 | | | |
| 2.3.3 | | | |
| 2.4.1 | | | |
| 2.4.2 | | | |
| 2.4.3 | | | |
| 2.5.1 | | | |
| 2.5.2 | | | |
| 2.6.1 | | | |
| 2.7.1 | | | |
| 2.7.2 | | | |
| 2.7.3 | | | |
| 2.7.4 | | | |
| 2.7.5 | | | |
| 2.8.1 | | | |
| 2.9.1 | | | |
| 2.9.2 | | | |
| 2.10.1 | | | |

# 8 Supplier Verification Programme

## 8.1 Description of the Supplier Verification Programme

*Not Applicable.*

## 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

*Not Applicable.*

# 10 Detailed Findings for Indicators

Not Applicable 1.

# 11 Review of Report

## 11.1 Peer review

This report was sent to an independent reviewer. The review period was 10 days. The comments received were duly considered in the final edition of the report.

The reviewer is a Registered Professional Forester with university degrees in forestry from both Sweden and Canada. Since 1982, he has worked for various forest based companies and organisations in Sweden, Canada, Switzerland and Portugal where he currently resides.

At this time, he works in Portugal, Sweden, Norway and Canada as a natural resource consultant in management, representation and certification as well as an auditor for FSC, PEFC, ISO 9001, ISO 14001, ISO 19011, OHSAS 18001 and GAP analyses.

This version of the SBR has been revised in order to update the values of consumption and production, with no changes in the characteristics of the supply base to justify a new peer review.

## 11.2 Public or additional reviews

# 12 Approval of Report

| Approval of Supply Base Report by senior management | | | |
|---|---|---|---|
| Report Prepared by: | Francisco Fernandes<br>Giovanni de Alencastro | Commercial Responsible<br>Consultant | 31/01/2020 |
| | Name | Title | Date |
| The undersigned person confirms is General Director of the organization and do hereby affirms that the contents of this evaluation report were duly acknowledged as being accurate prior to approval and finalization of the report. | | | |
| Report approved by: | José Luís Afonso | General Director | 31/01/2020 |
| | Name | Title | Date |

# 13 Updates

## 13.1 Significant changes in the Supply Base

There was some changes in sawmill production lines, with the introduction of a more efficient equipment in order to optimize the use of the wood.

The new equipment allowed an increase in production capacity of saw wood as well as chips and sawdust.

## 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

Material that was acquired last year (2019) is thus summarized:

| Material | Origin | Species | Amount (t) |
|---|---|---|---|
| Roundwood, purchased standing or piled. (For sawing or chipping) | Spain | Pine | 12.054,39 |
| | Portugal | Pine | 108.426,64 |
| Purchased roundwood delivered at the mill (For sawing or chipping) | Portugal | Pine | 78.580,83 |
| Own chips and sawdust (sawmill residues) | Portugal | Pine | 65.392,8 |
| Purchased chips and sawdust delivered at the mill | Portugal | Pine | 80.623,1 |
| Own biomass (bark and other sawmill residues) | Portugal | Pine | 4.501,8 |
| Own biomass (forest residues) | Portugal | Pine and Eucalyptus | 1.494,9 |
| Purchased biomass delivered at the mill (bark and sawmill residues) | Portugal | Pine | 396,1 |

## 13.5 Projected figures for feedstock over the next 12 months

The planned supply for 2020 is thus summarized:

| Material | Origin | Species | Amount (t) |
|---|---|---|---|
| Roundwood, purchased standing or piled. (For sawing or chipping) | Spain | Pine | 20.000 |
| | Portugal | Pine | 130.000 |
| Purchased roundwood delivered at the mill (For sawing or chipping) | Portugal | Pine | 70.000 |
| Own chips and sawdust (sawmill residues) | Portugal | Pine | 85.000 |
| Purchased chips and sawdust delivered at the mill | Portugal | Pine | 70.000 |
| Own biomass (bark and other sawmill residues) | Portugal | Pine | 2.000 |
| Own biomass (forest residues) | Portugal | Pine and Eucalyptus | 9.000 |
| Purchased biomass delivered at the mill (bark and sawmill residues) | Portugal | Pine | 2.000 |