

Supply Base Report: Enerpellets

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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
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Document history

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Contents

1	Overview	1
2	Description of the Supply Base	2
2.1	General description	2
2.2	Actions taken to promote certification amongst feedstock supplier	13
2.3	Final harvest sampling programme	13
2.4	Flow diagram of feedstock inputs showing feedstock type [optional]	13
2.5	Quantification of the Supply Base	13
3	Requirement for a Supply Base Evaluation	15
4	Supply Base Evaluation	16
4.1	Scope	16
4.2	Justification	16
4.3	Results of Risk Assessment	16
4.4	Results of Supplier Verification Programme	16
4.5	Conclusion	16
5	Supply Base Evaluation Process	17
6	Stakeholder Consultation	18
6.1	Response to stakeholder comments	18
7	Overview of Initial Assessment of Risk	19
8	Supplier Verification Programme	20
8.1	Description of the Supplier Verification Programme	20
8.2	Site visits	20
8.3	Conclusions from the Supplier Verification Programme	20
9	Mitigation Measures	21
9.1	Mitigation measures	21
9.2	Monitoring and outcomes	21
10	Detailed Findings for Indicators	22
11	Review of Report	23
11.1	Peer review	23
11.2	Public or additional reviews	23
12	Approval of Report	24

13 Updates25

13.1 Significant changes in the Supply Base25

13.2 Effectiveness of previous mitigation measures25

13.3 New risk ratings and mitigation measures25

13.4 Actual figures for feedstock over the previous 12 months25

13.5 Projected figures for feedstock over the next 12 months25

1 Overview

Producer name: Enerpellets – Produção, Comercialização de Pellets de Madeira, SA

Producer location: Rua da Zona Industrial, 139, Pinheiro Bordalo, 3270 – 029 Graça

Geographic position: +39° 60' 41,75'' N – 8° 98' 79.45'' W

Primary contact: Sílvia Jorge
Rua da Zona Industrial, 139,
Pinheiro Bordalo, 3270 – 029 Graça
email: qualidade@pelletsfirst.pt

Company website: <http://www.enerpellets.pt/>

Date report finalized: 13/Jul/2016

Close of last CB audit: 20/Jul/2016, Graça, Pedrógão Grande

Name of CB: NEPCon Spain I 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: <http://www.enerpellets.pt/pdf/supplybase.pdf>

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

The Enerpellets Group has its origin from an initiative coming from a group of professionals highly experienced in the management of companies. This group identified an export opportunity in the value chain of thermal and electrical production.

The Enerpellets Group is active in the energy business as a competent producer of renewable biomass, wood pellets. The Group has two industrial units located in Pedrogão Grande and Alcobaça, both units situated in the District of Leiria.

The production unit located in Pedrogão Grande started the production of wood pellets in January 2009. Until today this unit is one of the largest wood pellet production plants in southern Europe and the largest one in the Iberian Peninsula.

The actual annual production capacity is 140,000 tons, and the destiny for the wood pellets produced is mainly the industrial market with a product concentrated on quality. The unit in Pedrogão Grande is since March 2015 also certified for the production of certified wood pellets in bulk (EN plus A1).

The geographical position of this plant is mainly due to a strategic option. The plant is situated in the largest forested area in Portugal which is a guarantee for a good and sustainable supply of raw material.

In terms of equipment, the unit is equipped with a selected set of equipment, widely tested in this industry. Moreover this equipment was internally improved and developed in many details by the Group's own engineering department.

Close to the same unit since 2015 the Group also operates a production unit for the processing of forest residues from the wood pellet production. The final product is bark in different grain sizes and degrees of purity.

The company purchases forest waste from the logging process as well as left - over's from the thinning of the forest and industrial sub-sawmills products like wood chips and timber processing residues.

Primarily pine (***Pinus spp***) and eucalyptus (***Eucalyptus globulus***) are used as raw material for the industrial process.

For the drying process in the production process, besides certain biomass like pine waste (peels, bark and branches), is also used left over's from eucalyptus (***Eucalyptus spp.***) and to a lesser extent Acacia (***Acacia spp.***), poplar (***Populus spp***).

The consumption for the last year (January to December 2015) had the following profile:

Material	Species	Quantity (t)
Biomass Forest Waste (Thinning)	<i>Pinus Pinaster</i>	104.141,24
	<i>Pinus Pinea</i>	138,80
	<i>Eucalyptus</i>	16.370,97
	<i>Others</i>	396,08
Biomass Forest Waste (Cascas, Entre-casco e Ramas)	<i>Pinus Pinaster</i>	6.844,80
	<i>Eucalyptus</i>	1.764,32
Timber processing residues industrial products (Wood chips, saw dust and slabs)	<i>Pinus spp</i>	47.729,03
Total		177.385,24

The forest material is provided by approximately 66 small and medium-sized companies, every company informed and controlled in order to have the necessary information about the management of the sourced area. Furthermore each one of these companies declares in writing their commitment for this purpose.

Almost all of the material comes from forested areas in Portugal (99.65%), only a small fraction (0.35%) from forested area in Spain.

The wood material from Portugal, comes mainly from the forested areas in the districts of Castelo Branco, Portalegre, Santarém, Leiria, Coimbra, Aveiro, Viseu, Guarda and Setúbal.

From Spain, the origin of wood is mostly forested areas located close to the Portuguese border, These holdings are mainly owned by the autonomous communities of Castile León and Extremadura.

Suppliers, who buy standing timber and contract the operation, make the selection of round wood for value added processes like saw mills (***Pinus spp***), wood pulp industries (***Eucalyptus globulus***). Left over's i.e. waste from forestry exploitation, namely thinning of forests and cleaning of round wood without any conditions for other uses (bent, defective round wood, a lot of resin, burned, sick trees, etc.) are destined for other processes giving economical value to this kind of woody material, including the manufacturing of wood pellets, energy production, and MDF chipboard.

The practice to buy left over's is encouraged by the company including a supply policy to promote the good use and the sustainability of forest resources. The reception of thinned wood is limited to diameters ≤ 40 cm, except in the cases of defective pieces without any possibility for use for in demanding added value processes.

The timber processing residues from the sawmilling industry (wood chips, slabs and sawdust) are provided from about 27 sawmills, who in their turn also supply wood from forested areas in Portugal. The main part of this material is coming from neighbouring forested areas and to a very small extent from other regions in Portugal.

Consequently the supplying area includes the Portuguese continental territory and a small part of the Spanish mainland.

Enerpellets had a consumption of 177,385.24 tons of wood material in 2015.

Portugal has approximately 9, 8 million of inhabitants and 8, 7 million hectares of territorial land area. According to preliminary data for the last National Forest Inventory, 2013 (IFN6 – Land use and Areas for different Forest Species for Continental Portugal in 1995, 2005 and 2010), the forest land is the dominant part of the continental territory.

The Portuguese Forest occupies 3.2 million hectares representing 35.4% of the national territory, one of the highest proportions of forested areas across Europe.

Land use in Portugal – 2010

Source: ICNF – Inventário Florestal Nacional, Resultados Preliminares, 2013

- 35% Forest
- 32% Brushwood and Pastures
- 24% Agriculture
- 5% Urban
- 2% Lakes and rivers
- 2% Not productive

Forest occupation (species) for Continental Portugal – 2010

Source: ICNF- Inventário Florestal Nacional, Resultados Preliminares, 2013

- 26% ***Eucalyptus spp.***
- 23% ***Quercus suber***
- 23% ***Pinus pinaster***
- 11% ***Quercus rotundifolia***
- 6% ***Pinus pinea***
- 2% ***Quercus spp.***
- 1% ***Castanea sativa***
- 6% Other broadleaf species
- 2% Other conifer species

The forested land whose dominant species are ***Eucalyptus spp*** represents the largest area of the country (26%), 812,000 ha. The second in range is ***Quercus suber*** (737,000 ha; 23%), followed by *Pinus pinaster* (714,000 ha; 23%). The area occupied by conifer species corresponds to 31% of the total Portuguese forest, land and the rest (69%) is occupied by different hardwood species.

The forested land whose dominant species are *Eucalyptus* spp represents the largest area of the country (26%), 812,000 ha. The second in range is *Quercus suber* (737,000 ha; 23%), followed by *Pinus pinaster* (714,000 ha; 23%). The area occupied by conifer species corresponds to 31% of the total Portuguese forest, land and the rest (69%) is occupied by different hardwood species.

Over the period 1995-2010, forested areas show a decrease of - 4.6%, which corresponds to a net loss of 0.3%/year (10000 ha/year). The net decrease of forested areas (-150 611 ha) is due mainly to their conversion to brushwood and pastures. Apart from that a significant size of forested land has been converted to urban use between 1995 and 2010 (28000 ha).

It is important to remember that this reduction is not very dramatic despite a decrease in forest area which demonstrates the Portuguese forest's resilience. There have been very significant disturbances during the reviewed period like many wild fires. During the last two decades > 2,500,000 acres of forest burnt has burnt. Furthermore the outbreak of diseases such as the Pine Wood Nematode has severely affected the pine forest. The result has been the introduction of phytosanitary regulations and a national implementation of exceptional cutting of trees in affected areas, no other European country has been subjected to this level of disturbances.

The decrease of forested area is a result of land temporarily stripped of any trees (forest fires, harvested land and forest regeneration). The increase of forested area that can be explained in part by action of nature (natural regeneration) shows the natural aptitude of the Portuguese soil for forest use. The actions of the forest owners have also been important which have continued to invest in the forest through various actions of reforestation.

According to preliminary data in the IFN6, the principal changes for the land use of different forest species between 1995 and 2010, occurs at the level of the ***Pinus Pinaster*** demonstrating a decrease of about 263,000 ha (26.9%). The main part of this area was transformed into "brushwood and pastures" (165,000 ha) and converted to ***Eucalyptus spp*** (70, 000 ha). Other tree species have taken over 13 000 ha and finally forested land which was converted into urban space reached 13700 ha.

On the other hand, the area of the ***Eucalyptus*** has increased with about 95 1000 ha. Another fact to draw the attention to is the increase of ***Pinus Pinea***, 46% in total area and 54% in terms of forested area.

The area for the remaining species has less expressive changes during the period 2005 to 2010.

According to "Estratégia Nacional para as Florestas" (National Forestry Strategy), the forest property in Portugal is mostly private, covering 2,800,000 acres. Small landholders own 84.2% of the total forested area. These properties are often family-oriented and only 6.5% of the forest land is owned by industrial companies. The Public Forest Estates correspond to 15.8% of the total forest land and only 2% (the lowest percentage in Europe) is directly owned by the State.

The size of the forest property has a very much defined geographical distribution. The largest number of properties is situated in the north and central part of Portugal. In these parts the size of a property is less than one hectare many times. It is estimated that there are over 400 000 forest owners in the country.

According to a study in 2013 (Estudo Prospectivo e Visão) published by AIFP (Competitiveness and Technology Center for the Forest Industries), the size of the properties is a key factor in the context for the

Portuguese forest, with important repercussions on the activity regarding profitability and sustainability. In the north and the centre of the country around 54% of the forest area belongs to holdings with less than 10 hectares. The small size of the property is of particular relevance for the two main species whose distribution and exploitation areas are in the Central and Northern regions:

- ***Pinus Pinaster***: 63% is situated in woodlands with holdings less than 10 ha and 25% less than 2 ha;
- ***Eucalyptus spp***: 50% is situated in woodlands with holdings less than 10 hectares

Nevertheless according to the same study, the business structure in Portugal for the forest industry has some of the most representative European companies in the sector. From an international perspective of the transactions of forest products, the most important are: paper and paperboard, cork, furniture, wood and resin products.

The wood based industries, in particular the subsectors for resinous wood for industrial purposes and the resinous wood for sawing, essentially rely on the production of ***Pinus Pinaster***. The pulp, paper and paperboard industry are based mainly on eucalyptus production.

According to the “Relatório de Caracterização da Fileira Florestal” published in 2014 (A characterization of the Portuguese Forest Industry by AIFF, Competitiveness and Technology Center for the Forest Industries), the forest sector presented a positive trade balance of 2,474,000,000 Euros in 2013. This value represents 9.1% of the total national exports of goods and 3.4% of the total national imports of goods. Forest industry occupies 2.2% of the total number of employees in Portuguese companies and 1.7% of the total occupied population.

Analysing the production of goods from the forest sector allows us to observe trends. The production of pine (coniferous wood for industrial purposes) presents a decrease of 3.6% in value since 2011 and, for the year 2002, a decline of 4.5%. In 2012, the production value of sawed wood was lower than the previous year (2.3%) as a result of reduced prices (-2.6%), though the volume increased (+0.4%), for the third consecutive year.

The production of ***Eucalyptus*** (hard wood for shredding) maintained its growing trend (only interrupted in 2009), showing an total increase of 63.4% and compared with previous year (2013), an increase of 9.2% . This high production increase for eucalyptus wood for industrial use turns ***Eucalyptus*** to the main forest asset (36,8%) almost 17 % higher than the production of resinous wood for industrial purposes.

According to AIFF in 2012, the gross value added (GVA) for forestry products showed an increase of 3.9% in volume and 2.4% in value, compared to 2011. There was also an 4,3 % increase in volume and 3,6 % in value in relation to the forestry production during the same period. In 2012 the GVA of the forest industry accounted for 1.2% of the national GVA, having maintained a significant weight among all the manufacturing industries (about 11%).

The analysis of the VAB by sector reveals a particular negative impact on the timber industries in recent years. The VAB value has been reduced by approximately 40% between 2007 and 2012 (- 429 1,000,000 Euros). This value is much higher than the values recorded for the sector of pulp and paper, paperboard and wood articles (- 4%). However considering the whole period (2004-2012), this segment reports a GVA growth.

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 2014 was 3,600,000,000 Euros, representing an increase of 9% compared to 2013. The pine wood industry succeeded in reaching a turnover of 46% for the wood manufacturing sector in Portugal. This is an 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 for the Portuguese forestry sector in recent years, when supported with measurements to encourage the production of renewable energy, transforms this situation into a set of developments increasing the demands for biomass from logging residues for energy use. The demand for biomass tends to be met in the short term, in scenarios more or less sustainable. However, in the medium and long term projection, and without considering significant increases in the demand for this resource, the result will be difficulties to meet existing market demands and to secure sustainability as those observed in the short term.

The pine forest is distributed throughout the Portuguese territory. ***Pinus Pinaster*** occupies 23% of the continental forested area, mostly located in the small holdings. ***Pinus Pinea*** occupies 6% of the total forest area of the Portuguese mainland, with main distribution area in the South of the country.

According to a Spanish report, "Diagnóstico del Sector Forestal Español Análisis y Prospectiva - Serie Agrinfo/Medioambiente nº 8", Spain has 18,400,000 ha of forested area, corresponding to 36.3% of the national territory which is the third largest forested area among European countries. Currently, 68.6% of the forest area is private and 31,4% public, mainly owned by local authorities (Ayuntamientos).

There is a huge diversity, both in the number of existing species as to the variety of forest types. According to the National Forest Inventory, more than 80% of the forest areas are composed of two or more species.

As reported by "Criterios e Indicadores de gestión forestal sostenible en los bosques españoles" ("Criteria and indicators for sustainable forest management in Spanish forests" a publication by the MINISTERIO DE AGRICULTURA, ALIMENTACIÓN Y MEDIO AMBIENTE, the volume of wood including bark, according to the third National Forest Inventory, achieves a figure of 927,760,000 m³. The average annual production of timber and firewood, according to the data available (2005-2009) was 17,190,000 m³ with bark - 14,450,000 m³ debarked.

The average soft wood production corresponds to 45% of the total production, 35% is hardwood and 20% are mixtures of several species. The main wood-producing species are ***Eucalyptus spp***, ***Pinus Radiata***, ***Pinus Pinaster***, ***Pinus Silvestris*** and ***Populus spp***, totalizing an annual production close to 500,000 m³ or more.

Between 1970 and 2010 the forest surface in Spain increased by around 6,480,000 ha. Between 1990 and 2010 the growth was 31%, (4,400,000 ha), with an average rate of 210,000 ha/year. Spain is the country in Europe with the fastest growing forest area.

Forestry and timber harvesting together with wood industry and paper produced 2009 a GVA of € 6,635,000,000 Euros, representing a direct contribution of 0.63% to the Spanish GDP. Forestry and timber

harvesting employed in 2013 approximately 31,000 active workers in average, while forest-based industry (wood, cork and paper) occupied around 104,600 workers.

The forests composed of ***Pinus Pinaster*** are normally maintained as high growing trees and are regenerated naturally by sowing or planting.

The work operations initially intend to gradually reduce the density of plants from 1200 to 1600 trees/ha when applying natural regeneration and sowing. In the beginning in rows and then selectively by harrowing or mechanical or manual trimming.

After 10 years the first pruning can be done (1 to 2) and thinning (2 to 3). The cut material is used and the final cut is done after 30-40 years, corresponding to about 500 to 600 trees/ha. The spontaneous vegetation along the growth process is controlled by harrowing or mechanical or manual trimming. When using natural regeneration approximately 25 large trees/ha are left as a seed source.

Before planting, the soil is prepared with harrowing, ripping or by sub soiling. If the area is sloping > 30% the preparation and planting is manually done. The planting density depends on the quality of the site; 1200 to 1600 trees/ha.

The techniques applied for ***Pinus Pinea*** when planting depends on the final purpose of the forestation: production of wood or fruits.

When the forest production will be used for wood based products the natural pruning is tightened and encouraged (4 x 3). The distance between lines should allow the passage of agricultural machines for the cleaning of the forest. In production settlements for fruits (using or not grafting techniques), the trees must grow in good light and with good ventilation, in order to develop large cups that promote the production of cones. The most widely used measure is (5 x 5), but (6 x 5), (6) and (8 x 6) are also used.

In sites well adapted to ***Pinus Pinea*** natural regeneration is reliable. The natural spread of this species presents a high quantity of plants per hectare. The selection of those plants in the beginning will guarantee that the selected ones will have the best conditions.

Stand tending is done through pruning and thinning which produces considerable amounts of woody material. The first pruning occurs 5/6 years after planting. The second pruning occurs after 10/12 years and taking into considering the development of the stand. This pruning often coincides with the first thinning. The third pruning will occur after 20/25 years coinciding with the second thinning. The final cutting is typically done from 40 years age.

Eucalyptus forestry (mainly e. ***globulus***) is based on the clear-cutting of the forest, typically between 10 to 15 years of age. All wood is used, withdrawn from the stand with or without bark (Simple Coppice). The plants are rotated and cut one, two or even three times. After every cut a selection of seedlings is left. After the last final cutting considered productive the area is reforested. In mixed populations with pine trees, the system is based on a thinning of the forest in order to leave a percentage of remaining trees for future utilization and rotating the seedlings from cut strains of eucalyptus trees (composed coppice).

An eucalyptus plantation starts with the preparation of land, which normally means the shredding of existing wood material which will be incorporated in the soil preparation. After this the normal procedure is tillage (harrowing, ripping and sub soiling).

Fertilization depends on the quality of the site and the landowner's conditions. The planting is done with a planting density from 1,100 to 1,300 plants per hectare. Between the second and the sixth year it is recommended to do a second fertilization and a control of competing vegetation.

The selection of seedlings is done each two or three years, maintaining the number of plants per hectare corresponding to the initial planting density.

In most cases, the cutting is done after 10 to 15 years. The system normally used for cutting is based on the combination of tractor processors and tractor loaders, usually with a pre-logging with motor saw.

The ***Populus spp*** is currently cultivated on a small scale. Depending on the nature of the soils (depth and moisture), the ground preparation is prepared late in summer or early fall. The model usually used is 4 x 4 meters. Plants from cuttings and one year old cuttings with buds are planted as deep as possible (0.5 meters) to develop a good root system.

Usually there is a strong competition from weeds which obliges hand weeding twice, complemented with surface harrowing during the first 4 years. The pruning during the first 3 to 4 years is very important to avoid forks and add value to the wood as normally the final destiny are production plants that process the round wood.

The ***Populus spp*** can be cultivated in coppice, with clear-cutting from 14 years age, but often older depending the purpose and the opportunity of exploitation.

The ***Acacia spp*** is an invasive species in Portugal, appearing in pure or mixed stands. The plantation or cultivation of ***Acacia spp*** is not permitted but their exploitation is allowed.

The Portuguese Forest Management plan (PGF) is a planning instrument provided for in the legal framework for forest policy law (Law No. 33/96 of 17 August) and, subsequently, in Decree-Law No. 16/2009 of January 14th which approves the legal framework of land use, management plans and general forest interventions, suspending Decree-Law No. 205/99 of June 9th, which regulates the process of preparation, approval, implementation and amendment of the PGF to be applied in forest areas.

The dynamics of the processes for the elaboration of the PGF and the PEIF (Planos Específicos de Intervenção Florestal - Specific Plans for Forest Intervention) in a more general degree for the private and public forest areas are still recent, having started with the adoption of regional plans for the forest planning (PROF.), during the period 2006-2007. These plans were later reinforced with the condition of approved PGF as a criterion for the eligibility to access for forestry investment and supporting programmes under the PRODER program together with the development of forest certification processes.

In April 2013 (date of the last information available from ICNF), there were 2,266 PGF approved (1,522,195 acres), representing 44% of the forest area in Continental Portugal.

It is not required a specific authorization for cutting in Portugal, except for ***Quercus suber*** and *Quercus ilex* and for logging in protected or classified areas. For coniferous species (pine and other) is it necessary to issue the "Manifesto de Abate "(Manifest for Cutting) for the cutting, pruning and transportation of wood from conifers (Decree-Law No. 123/2015, of 3 July). This concerns the implementation of extraordinary phytosanitary steps to protect the pine forest and control the pine wood nematode (PWN).

In Spain, on private land, if there is a PORF (Forest Management Plan) or other management tools, the owner must notify the harvesting plans to the forestry agency of the Autonomous Community (CCAA). Otherwise, the owner must communicate the harvesting plan to the forestry agency CAAC following the general rules. Public areas are regulated by the forestry agency of the CAAC.

CITES – (Convention on International Trade in Endangered Species of Wild Fauna and Flora) lists the following species in Portugal and Spain, not including timber species:

Portugal:

<i>Antipathes erinaceus</i>	<i>Stichopathes dissimilis</i>	<i>Stichopathes richardi</i>
<i>Stichopathes robusta</i>	<i>Stichopathes setacea</i>	<i>Leiopathes expansa</i>
<i>Tanacetipathes cavernicola</i>	<i>Tanacetipathes squamosa</i>	<i>Tanacetipathes wirtzi</i>
<i>Paracyathus arcuatus</i>	<i>Leptopsammia formosa</i>	<i>Madracis profunda</i>
<i>Crypthelia medioatlantica</i>	<i>Crypthelia vascomarquesi</i>	<i>Errina atlantica</i>
<i>Errina dabneyi</i>	<i>Lepidopora eburnea</i>	<i>Euphorbia despoliata</i>
<i>Euphorbia longifolia</i>	<i>Euphorbia pedroi</i>	<i>Euphorbia piscatoria</i>
<i>Euphorbia stygiana</i>	<i>Dactylorhiza foliosa</i>	<i>Goodyera macrophylla</i>
<i>Orchis scopulorum</i>	<i>Platanthera micrantha</i>	

Spain:

<i>Gallotia simonyi</i>	<i>Podarcis lilfordi</i>	<i>Podarcis pityusensis</i>
<i>Aulocyathus atlanticus</i>	<i>Caryophyllia seguenzae</i>	<i>Stephanocyathus crassus</i>
<i>Trochocyathus mediterraneus</i>	<i>Balanophyllia thalassae</i>	<i>Flabellum chunii</i>
<i>Crypthelia affinis</i>	<i>Stylaster ibericus</i>	<i>Euphorbia aphylla</i>
<i>Euphorbia atropurpurea</i>	<i>Euphorbia berthelotii</i>	<i>Euphorbia bourgaeana</i>
<i>Euphorbia bravoana</i>	<i>Euphorbia broussonetii</i>	<i>Euphorbia canariensis</i>
<i>Euphorbia handiensis</i>	<i>Euphorbia jubaephylla</i>	<i>Euphorbia lambii</i>

<i>Euphorbia minuta</i>	<i>Euphorbia navae</i>	<i>Euphorbia petterssonii</i>
<i>Barlia metlesicsiana</i>	<i>Habenaria tridactylites</i>	<i>Ophrys balearica</i>
<i>Ophrys fusca</i>	<i>Orchis canariensis</i>	

Both Portugal and Spain:

<i>Lynx pardinus</i>	<i>Stichopathes ichardi</i>	<i>Tanacetipathes squamosa</i>
<i>Cryptelia vascomarquesi</i>	<i>Euphorbia longifolia</i>	

In the "Red List" of the IUCN (International Union for Conservation of Nature and Natural Resources), posted 891 species for the continental territories of Spain and Portugal (Iberia), of which 76 have forestry activity as one of the threats:

<i>Anacyclus pyrethrum</i>	<i>Anarrhinum longipedicellatum</i>	<i>Andrena bucephala</i>
<i>Andrena curtula</i>	<i>Andrena fulva</i>	<i>Andrena gredana</i>
<i>Andrena semilaevis</i>	<i>Antirrhinum lopesianum</i>	<i>Arabis sadina</i>
<i>Armeria rouyana</i>	<i>Arnica montana</i>	<i>Asphodelus bento-rainhae</i>
<i>Bombus reinigiellus</i>	<i>Bunium bulbocastanum</i>	<i>Buprestis splendens</i>
<i>Calopteryx virgo</i>	<i>Candidula belemensis</i>	<i>Candidula najerensis</i>
<i>Centaurea citricolor</i>	<i>Centaurea fraylensis</i>	<i>Centaurea gadorensis</i>
<i>Centaurea pulvinata</i>	<i>Cordulegaster bidentata</i>	<i>Coronopus navasii</i>
<i>Culcita macrocarpa</i>	<i>Cypripedium calceolus</i>	<i>Dactylorhiza elata</i>
<i>Dianthus marizii</i>	<i>Dryopteris corleyi</i>	<i>Elona quimperiana</i>
<i>Epeolus cruciger</i>	<i>Epipactis leptochila</i>	<i>Epipactis phyllanthes</i>
<i>Epipactis purpurata</i>	<i>Erodium rupicola</i>	<i>Eryngium viviparum</i>
<i>Euphorbia nevadensis</i>	<i>Ferula communis</i>	<i>Festuca brigantina</i>

<i>Festuca summilusitana</i>	<i>Flavipanurgus granadensis</i>	<i>Flavipanurgus ibericus</i>
<i>Flavipanurgus venustus</i>	<i>Ionopsidium savianum</i>	<i>Juncus valvatus</i>
<i>Leiostyla ânglica</i>	<i>Lithodora nítida</i>	<i>Luronium natans</i>
<i>Lynx pardinus</i>	<i>Malus sylvestris</i>	<i>Moehringia fontqueri</i>
<i>Narcissus asturiensis</i>	<i>Narcissus cyclamineus</i>	<i>Narcissus triandrus</i>
<i>Neottia nidus-avis</i>	<i>Nomada similis</i>	<i>Oestophora lusitânica</i>
<i>Oestophora silvae</i>	<i>Oestophorella buvinieri</i>	<i>Omphalodes littoralis</i>
<i>Ononis maweana</i>	<i>Paeonia officinalis</i>	<i>Phenacolimax major</i>
<i>Picris willkommii</i>	<i>Pteris incompleta</i>	<i>Ropalopus femoratus</i>
<i>Silene longicilia</i>	<i>Stenagostus laufferi</i>	<i>Suboestophora altamirai</i>
<i>Teucrium charidemi</i>	<i>Thorella verticillato-inundata</i>	<i>Thymus capitellatus</i>
<i>Trissexodon constrictus</i>	<i>Veronica micrantha</i>	<i>Vertigo moulinsiana</i>
<i>Xerocrassa edmundi</i>		

Product Group	Certified	Nº Supplies	Species	Quantities (t)	%
SBP - No Compliant Feedstock		93	<i>Pinus Pinaster</i>	158.715,07	0.0
			<i>Pinus Pinea</i>	138,80	0.0
			<i>Eucalyptus</i>	18.135,29	0.0
			<i>Other</i>	396,08	0.0
SBP-Compliant Primary Feedstock	FSC	0	<i>Pinus Pinaster</i>	0.0	0.0
SBP-Compliant Secondary Feedstock	FSC	0	<i>Pinus Pinaster</i>	0.0	0.0

2.2 Actions taken to promote certification amongst feedstock supplier

Enerpellets promotes sustainable forest management as part of its certification. The company has since February 2016 the FSC chain of custody certification, conducting an annual audit program for the companies' suppliers (verification of the wood supply chain). The objective is to check the documentation and establish evidence for the correct supplying of the forest material received in the plant. The audit process includes field visits annually (inspections) to selected suppliers, in order to verify the origin of the material provided. Other evidences relating to the quantity, quality, the veracity and accuracy of the transport documents as well as other items are also controlled to meet the requirements of FSC Controlled Wood.

Linked to the previous precondition, the company has established a direct contact with every one of its suppliers making them to understand the importance of providing certified material (FSC or PEFC) and drawing their attention to the increasing demands regarding the legal and sustainable sourcing of forest products from the markets and consumers including biomass for energy production.

The responsible for the purchasing of wood has also raised the awareness among the producers and the forest owners as how they can create added value when certifying the management of their forest land, either individually, or through associations recognized by Enerpellets.

Furthermore the responsible people of the company has participated in events related to the management and forest certification, collecting information and giving contribution to the development of taken actions in Portugal.

2.3 Final harvest sampling programme

It is estimated that in 2015, 0.02% (Cleaning type B) of forest material supplied may have originated from final cuts from forest areas with a higher turnover period then 40 years as a result of the separation of dimensions larger than 40 cm at when receiving the material at the plant. This refers primarily to the cleaning of ***Pinus Pinaster***.

Considering the enquiry done to major suppliers who have delivered woody material from final cuts is it estimated that 80% of this type of material was intended for other purposes, in particular intended for saw mills..

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: 21,5 million ha (Portugal and Spain)

- b. Tenure by type: Private: 15,4 million ha; Public: 6,1 million ha
c. Forest by type: Temperate Forest: 21,5 million ha
d. Forest by management type: Plantations: 16,9 million ha; Natural/Semi natural: 4,6 million ha
e. Certified forest by scheme: FSC: 578.580 ha; PEFC: 2.100.686 ha

Feedstock

- f. Total volume of Feedstock: 0 – 200.000 tonnes (177.385,24 Ton)
g. Volume of primary feedstock: 0 – 200.000 t (129.656,21 Ton)
h. List percentage of primary feedstock:
 - Certified to an SBP-approved Forest Management Scheme: 1. 0%-19% (0 %)
 - Not certified to an SBP-approved Forest Management Scheme: 5. 80%-100% (100 %)

i. List all species in primary feedstock, including scientific name

 - ***Pinus pinaster***
 - ***Pinus pinea***
 - ***Eucalyptus spp***
 - ***Populus spp***
 - ***Acacia spp***

j. No feedstock from primary forest (natural, virgin or untouched)
k. Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme – 0%
 - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme – 100%

l. Volume of secondary feedstock: 47.729,03 Ton – 2. 20% - 39% (27 %)
m. Volume of tertiary feedstock: 0 Ton – 1. 0%-19% (0 %).

For the next year changes are not expected in the supply profile, maintaining the forecasts in the same order of magnitude of this period, possibly tending to cease supplies from Spain.

However, with the company's efforts to encourage the suppliers to source certified (FSC or PEFC), there may be values for for these categories.

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
☐	X

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

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

11 Review of Report

11.1 Peer review

Not applicable.

11.2 Public or additional reviews

Not applicable.

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	Sílvia Jorge Giovanni de Alencastro	Quality Manager Consultant	13/07/16
	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:	João Magalhães Administrador	Administrator	02/08/16
	Name	Title	Date

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