Sustainable Biomass Partnership

Supply Base Report: Enermontijo S.A.

First Surveillance Audit

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Completed in accordance with the Supply Base Report Template Version 1.1

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

Document history

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Contents

1 Overview

Producer name:	ENERMONTIJO, SA
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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

ENERMONTIJO is an industrial facility established in 2008 with a production of 80,000 tons per year of high quality wood pellets for both supply of industrial pellets for power plants in the demanding international market, as well as domestic pellets for the Iberian market.

The company acquires roundwood, chips, sawdust, waste and harvest surplus as feedstock for the industrial process, especially pine (umbrella pine/ Pinus pinea and Maritime Pine / Pinus pinaster), eucalyptus (Eucalyptus spp), poplar (Populus spp) and acacia (Acacia spp).

For the drying process, as well as the biomass of the above species, other plant wastes from industrial processes, such as almond shells, may be consumed seasonally.

Last year's consumption (January to December 2015) is thus characterized:

Material	Specie	Origin	Quantity (t)	%
Logs, treetops and branches	Umbrella pine	Portugal	44.402,96	33,24
Logs and branches	Maritime pine	Portugal	29.478,72	22,07
Logs	Poplar	Portugal	1.193,32	0,89
Logs	Acacia	Portugal	1.593,16	1,19
Logs and branches	Eucalyptus	Portugal	1.669,82	1,25
Forestry Chips	Umbrella pine	Portugal	22.866,57	17,12
Industrial Chips	Maritime pine	Portugal	4.994,24	3,74
Industrial Sawdust	Maritime pine	Portugal	3.352,02	2,51
Industrial Sawdust	Eucalyptus	Portugal, Spain	18.978,00	14,21
		Brazil, Uruguay	3.089,44	2,31
Shavings and leftovers	Maritime pine	Portugal	1.014,48	0,76
Leftovers	Cork	Portugal	942,24	0,71

In 2016, about 91% of the timber came from the forest areas of Portugal, belonging mainly to the districts of Setúbal, Lisbon, Santarém, Évora, Beja and Portalegre.

The primary material, including logs, harvest leftovers and other forest residues, particularly those resulting from pruning branches of umbrella pines, represented approximately 76% of the supply, being provided by approximately 15 small and medium enterprises, which are currently being made aware of, and controlled in order to obtain the necessary information about the origin of the material, having a demonstrated commitment to this effect.

Suppliers who purchase standing timber and conduct the operation usually make a selection of the material made up of large round logs, essentially maritime pine to higher value added processes (sawmills) and small roundwood and the surplus to other processes, including the production of pellets.

This practice is encouraged by the company, with a supply policy to promote the effective use and the sustainability of forest resources by limiting the reception of larger logs, except in cases of defective parts and with no possibility of use for other processing, as is usually the case of roundwood of umbrella pine.

The company also acquires "standing" materials, especially umbrella pine, using harvesting contractors to carry out the harvest and transport of the material, representing about 6% of the supply in 2016.

The company also consumed for the drying process, a small amount (about 0,7% of the 2016 supply) of timber from cork oak (*Quercus suber*), provided by companies that sell firewood obtained from dead trees. This is remains of timber unfit for sale as firewood and with no other possibility for use, and essentially consists of degraded parts of small dimensions.

The secondary material (pine woodchips and sawdust) represented about 7% of the supply in in 2016 from suppliers that deliver the material produced (chips) or resulting from the sawing process (sawdust) essentially two sawmills, which also supply of wood from forest areas of Portugal near the sawmills.

The fine chips of eucalyptus used by the company in 2016 represented about 16% of the supply and is a material which results from the selection of the chips used for the production of cellulose pulp, provided as FSC Controlled Wood (FSC CW) from two mills of a major pulp and paper producer in Portugal, certified by FSC and PEFC in both Forest Management and Chain of Custody (CoC) since 2006. The pulp mills of this company in 2016 consumed only Eucalyptus wood from certified and controlled sources, with 86% originating from forests located in Portugal and Spain, and 14% in Uruguay and Brazil, where the eucalyptus plantations are also well developed.

Thus, in 2016, the supply area of the company was formed mainly by Portugal (c.91%) and a small fraction related to fine eucalyptus woodchips FSC CW that came from Spain (c.7%) and Uruguay and Brazil (2%).

The ENERMONTIJO produced in 2016 a total of 55.925 tons of pellets, with a level of consumption of forest raw material in the order of 120.239 tons. These are average values for similar companies located in Portugal.

Portugal has about 9.8 million inhabitants and 8.7 million hectares.According to preliminary data from the latest National Forest Inventory, 2013 (IFN6 - Areas of land use and forest species in mainland Portugal in 1995, 2005 and 2010), the forest land use is the dominant use of the mainland. The Portuguese forest occupies 3.2 million hectares, which corresponds to 35.4% of the country, one of the largest proportions of forested areas of Europe.

Land-Uses in Portugal – 2010
Source: ICNF National Forest Inventory, Preliminary Results, 2013

- 35% Forestry
- 32% Bushland and Natural Pastures
- 24% Agriculture
- 5% Urban
- 2% InlandWaters
- 2% Unproductive

Forest Stands in Mainland Portugal – 2010
Source: ICNF National Forest Inventory, Preliminary Results, 2013

- 26% Eucalyptus / *Eucalyptus spp*.
- 23% Cork oak / *Quercus suber*
- 23% Maritime Pine / *Pinus pinaster*
- 11% Holm oak / *Quercus rotundifolia*
- 6% Umbrella Pine / *Pinus pinea*
- 2% Oak / *Quercus spp.*
- 1% Chestnut Tree / *Castanea sativa*
- 6% Other Hardwoods
- 2% Other softwoods

The dominant forest species is Eucalyptus, representing the largest area of the country (812,000 ha; 26%), second is Cork Oak (737,000 ha; 23%), followed by the Maritime Pine (714,000 ha; 23%). The area occupied by softwood species corresponds to 31% of the Portuguese forest, the remainder (69%) is occupied by broadleaf species.

Over the period 1995-2010 the forest areas exhibited a decrease of 4.6%, corresponding to a net loss rate of 0.3% / year (10 mil ha / year). The net decrease of forest areas (-150,611 ha) is mainly due to conversion to the land use class "brush and pastures." In addition to this conversion, significant amount of forested land was converted to urban use between 1995 and 2010 (28 000 ha).

Note that although there is a decrease in forest area, the fact that this is not accentuated demonstrates the significant resilience of the forest to large disturbances to which it was subjected to during the review period. On the one hand, the very serious forest fires of the last two decades (more than 2.5 million hectares burned between 1990 and 2012), and on the other, the occurrence of diseases such as the pine wood nematode which has severely affected the maritime pine nationally, forcing excessive harvests due to enforcing of phytosanitary regulations. No other country in Europe has been subject to this level of disturbance.

The decrease of forest area is mainly due to reduction in temporarily treeless areas (burned areas, harvested areas and regenerated areas), with emphasis on increasing the areas reforested, which is explained in part by the action of nature itself (natural regeneration) demonstrating the natural adaptation of the soil to the forest, but also by the action of forest owners who have continued to invest in reforestation.

According to preliminary data from IFN6, the main change of forest species between 1995 and 2010, were maritime pine presenting a decrease of about 263 000 ha (26.9% less). Most of this area became "brush and pastures" (165,000 ha), 70,000 ha to eucalyptus, 13 000 ha in urban areas and 13,700 ha in forest areas with other tree species.

On the other hand, there is an increase of eucalyptus area of about 95,000 hectares. It is also to highlight the increase of umbrella pine (46% in total area and 54% in terms of replanted area).

The harvest Umbrella Pine stands takes a leading role in the forestry economy in some regions, particularly in the south (Alentejo), mainly due to the unique characteristics of its main production (pine nuts for the food industry) which has allowed the rapid development of the umbrella pine envelope, which today occupies an

important place in the regional and national economy. In the Alentejo region, about 67% of the national production of pine cone and 15% of world production of pinecone occurs.

According to data from the National Strategy for Forests, forest properties in Portugal are mostly private, with 2.8 million hectares, or 84.2% of the total area owned by family-oriented smallholdings and 6.5 % are owned by industrial companies. Public areas correspond to 15.8% of the total, of which only 2% (the lowest percentage in Europe) are the private domain of the State.

The size of the forest estate has a very defined geographical distribution, with a large number of properties located in the north and center of less than 1 hectare in size. It is estimated that there are over 400 000 forest owners in the country.

According to the prospective study for the Forest Sector published by the AIFF (Association for the Competitiveness of Industry Forestry Sector) in 2013, the size of the stands is a key factor in the context of the Portuguese forest, with significant impact on the profitability and sustainability of the activity. In the North and center of the country approximately 54% of this forest area spread over stands of less than 10 ha. The small size of the properties has particular relevance to the two main species whose distribution and harvest are in the central and northern regions:

- In Maritime Pine, 63% of the stands are in areas less than 10 ha and 25% in areas less than 2 ha;
- In Eucalyptus, 50% of forest stands are in properties of less than 10 ha.

Also according to the same study, the Portuguese business structure in the forest industry has some of the most representative European companies in the sector. In the point of view of transactions to the international market for forest and forest-based products, the most important are: paper and cardboard, pulp, cork, wood and resin products and furniture.

The wood sector, particularly softwood for industrial purposes and softwood for sawlogs are essentially based on maritime pine. The pulp, paper and board sector are based mainly on eucalyptus.

According to the Characterization of the Forestry Sector Report 2014 prepared by the AIFF, the trade balance related to the industries of forestry sector had a positive balance of 2,474 million euros in 2013, representing 9.1% of total national exports of goods and 3 4% of the total national imports of goods. The forestry sector represents 2.2% of the total company employees in Portugal and 1.7% of the total employed population.

A breakdown of forestry goods production allows us to observe different trends. The production of maritime pine (softwood for industrial purposes) shows a decrease of 3.6% in value compared to 2011 and for the year 2002 a decrease of 4.5%. In 2012, the production value of wood for sawing was lower than the previous year (-2.3%), due to the price decrease (-2.6%), as the volume has increased (+0 4%) for the third consecutive year;

The production of Eucalyptus (hardwood to mill) maintained the growth trend (interrupted only in 2009), of an increase of 9.2% over the previous year and an increase of 63.4%. This high growth in eucalyptus wood production for industrial use makes this the main forestry goods (representing 36.8%), about 17% higher than the production of softwood for industrial purposes.

Also according to the AIFF in 2012, the Gross Value Added (GVA) in the forestry increased by 3.9% in volume and 2.4% in value relative to 2011. With regard to the Forestry Production an increase of 4.3% in volume and

3.6% in value in relation to 2011 was recorded. In the same year, the GVA of the forestry sector industries accounted for 1.2% of national GVA, maintaining a significant importance in total manufacturing (11%).

The analysis of GVA by sector reveals a particular negative impact on the timber industry in recent years, with the GVA presenting a reduction of about 40% between 2007 and 2012 (-429 million euros), much lower than reported values for the pulp industry, paper, paperboard and articles thereof (-4%). In the whole period considered (2004-2012) only the sectors pulp, paper, paperboard and articles thereof presents a growth of GVA.

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 socio-economic 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 "Diagnostic del Forestal Sector Español" Análisis y Prospectiva - Serie Agrinfo / Medioambiente # 8 "Spain has 18.4 million hectares of forest area, representing 36.3% of the national territory, being the third largest of European countries. Currently, 68.6% of national forest area is private and 31.4% is public, mainly from local authorities (Ayuntamientos).

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

According to the publication "Criteria and gestión indicators forestal sostenible en los españoles woods" of AGRICULTURE MINISTRY, ALIMENTACIÓN Y MEDIO ENVIRONMENT de Espanha, the volume of wood with bark, according to the 3rd Inventory National Forest, reaching the figure of 927, 76 million m3. The average annual production of timber and firewood, according to available data (2005-2009) was 17.19 million m³ with bark – 14.45 million m³ without bark.

An average of 45% of the production comes from harvests of softwoods, 35% from hardwoods and 20% are mixtures of various species. The main timber producing species are Eucalyptus, Maritime Pine, Radiata Pine Radiata, Scotch Pine and Poplars, all with annual productions of more than 500,000 m3.

Between 1970 and 2010 the forest area in Spain increased by about 6.48 million ha. 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 and logging, the timber industry, and the paper produced in 2009, a GVA of 6,635 million Euros, representing a direct contribution of 0.63% of the Spanish GDP. Forestry and logging amounted in 2013 an average of 31,000 active workers, while the forestry industry (wood, cork and paper) totalled 104,600 workers.

In Brazil, according to the report iba 2015 (Brazilian Industry Association of Trees), the area of planted forests for industrial purposes totalled 7.74 million hectares in 2014. This total represents only 0.9% of the Brazilian territory. In addition to the planted trees, 851millions hectares of the country, 66.1%, were covered by natural

habitats, 23.3% occupied by pastures, 6.2% in agriculture and 3.5% for infrastructure and urban areas. The eucalyptus plantations occupy 5.56 million hectares of planted forest areas in the country, representing 71.9% of the total and are located mainly in the states of Minas Gerais (25.2%), São Paulo (17, 6%) and Mato Grosso do Sul (14.5%).

The participation of the planted forest sector in the Brazilian GDP has grown every year and closed in 2014 representing 1.1% of the wealth generated in the country and 5.5% of industrial GDP.

One of the tools used by companies in the industry to demonstrate the sustainability of the productive chain of planted forests and the commitment to environmental and social issues in Brazil is forest certification. Of the total 7.74 million hectares of planted forests in Brazil, 4.88 million hectares (63%) are certified by FSC and PEFC.

In Uruguay, according to the document "Monitoreo de los Forestales Resources Inventory Nacional Forestal Resumen Results" prepared by the Dirección General Forestal-MGAP-FAO, approximately 10% of the territory (with 17.62 million ha) has forest cover of which planted forests (969,500 ha) represent 56% of the total and the remaining 44% correspond to the native forests (752,158 ha).

According to a document of the Uruguay XXI agency of the Uruguayan Government (Forestry Sector Opportunities inversión en Uruguay), 70% of the total planted forest area is Eucalyptus (*Eucalyptus spp*). The country has a stable legal environment conducive to investment in the sector and a national code of good forestry practices for achieving sustainable production, fulfilling the requirements of international demand.

According to the same document, the forestry activities harvesting and processing of wood products accounted for 3.5% of gross domestic product in 2010. The Uruguayan forestry sector accounted for 12.5% of total exports of Uruguay in 2010 and has a strong presence for the future. The main exported product of the sector from the year 2008 was "Cellulose pulp" representing 64.5% of total sector exports. The second product exported is "Chips", 13% of the total, followed by "Paper & Cardboard" with 9.3%.

In Chile, according to the publication CONAF (Corporación Nacional Forestal) "*POR UN CHILE FORESTAL SUSTENTABLE*", the total area covered with forests in the country is 16,7 million ha, representing 22% of the territory (with 75.61 million ha). Native forests cover a surface of 13,6 million ha, representing 81.4% of the forests.

Planted forests cover an area of 2.8 million ha, consisting principally of Pinus radiata and Eucalyptus globulus. The forestry sector is a key pillar of the economy in Chile, and in 2010 contributed to 3.1% of the GDP, generating 134,000 direct jobs, making it the second export sector of the country.

In Portugal, the pine forests are distributed throughout the territory with maritime pine occupying 23% of the forest area of the mainland, mostly located in small properties, and umbrella pine, occupying 6 % of the forest area, with its main distribution area in the south of the country.

Maritime 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 use cases of natural regeneration and planting in the initial phase operations are designed to gradually reduce the density of plants for 1200 to 1600 trees / ha, first in groups and then selectively with disking or mechanical or manual mowing. From the age of 10, they can be made pruning (1-2) and thinning (2-3) with

use of the material, leaving a final cut (30 to 40 years) about 500 to 600 trees / ha, proceeding also control spontaneous vegetation along the revolution with disking or mechanical or manual mowing 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 site condition, 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 Umbrella Pine silviculture, the intertree distance at planting depends on the future purpose of the stand: production of wood or cones (pine nuts).

For the production of wood intertree distances of 4x3 m. are used to promote natural pruning. The distance between rows should allow the passage of agricultural machines mainly used for brushing. In stands oriented to cone production (with or without using grafting technique), the trees should grow in favorable light and ventilation, in order to develop large canopies that favor the production of pine cones. The most commonly used intrertree distance is (5x5), but also (6x5), (6x6) and (8x6) are used.

In areas adapted for Umbrella Pine, natural regeneration can be used. The natural regeneration results in a high number of plants per hectare. Thus a selection of the best developed plants must be done promptly.

Stand tending is done through pruning and thinnings that produce considerable amount of woody material. The first pruning should occur after 5-6 years after planting. The 2nd pruning should occur between 10 and 12 years, taking into account the development of the stand. This pruning often coincides with the 1st thinning. The 3rd pruning is between 20 and 25 years, coinciding with the 2nd thinning. The final cut is usually done after 40 years.

Eucalyptus forestry for the production of raw material for pulp and paper is highly developed and standardized among the major producing countries, including Portugal and Spain (mainly E. globulus), Brazil, Uruguay and Chile.

It is based on planting and 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.

A eucalyptus plantation begins with the preparation of the ground, which usually consists of removing the stumps followed by site preparation (disking, ripping, sub soiling) while incorporating existing organic material. Planting is done in densities ranging between 1,100 and 1,300 plants per hectare followed by fertilization. Between the second and the sixth year a second fertilization is recommended and control of competing vegetation.

The selection of shoots is made to two or three years after cutting, while maintaining a number of rods per hectare corresponding to the initial density of planting.

In most cases, the cut is made between 10 and 15 years but could be done earlier on sites with higher growth, as in the case of Brazil. The operating base system based on a combination of processor utilization tractor and tractor loader, usually with manual falling with chainsaws.

In Portugal, Poplar is currently cultivated on a small scale. Given the nature of the soil (deep and wet), site preparation is done in late summer or early autumn. The intertree distance commonly used is 4x4 meters. The 1 year old plants from cuttings are planted as deep as possible (0.5 meters) in order to develop a good root system.

Usually there is a heavy competition from weeds that requires manual weeding two times, complemented with shallow harrowing during the first four years.

During the first 3 to 4 years it is very important to carry out pruning, to prevent forking and add value to the wood, whose final use are veneer.

The Poplar can be managed in coppice, with clear cuts made from 14 years, depending on the purpose and market opportunities.

Acacia is an invasive species in Portugal, appearing in pure or mixed formations, and it is not permitted to plant and cultivate. However, harvesting is allowed.

According to UNAC - the Mediterranean Forest Union, Cork Oak stands “Montado” is a production system with unique environmental characteristics that result from the many activities that coexists and various ecological niches contained therein, mainly support a tree structure, the cork oak (*Quercus suber*), producer of cork. The cork oak also has an additional importance, within a multiple-use system, a variety of complementary activities, with emphasis on livestock, hunting, mushroom production, aromatic plants, among others.

Cork is the main product of the economic harvest of this system and which, by the value of its production, ensure their sustainability, allowing the low degree of intensity of harvesting that ensures biodiversity, environmental value, and protection and conservation of a set of species and high-value habitats.

For restocking the “montado” the most widely adopted method is the use of natural regeneration. When a proper density cannot be achieved, fill planting is performed. The initial density is 600-650 plants per ha. In the case of planting, a light discontinuous site preparation is carried out.

The vegetation control, if necessary, is performed in discontinuous bands or spots. Brush-saws or very light harrowing is used. It is usually performed when the density exceeds a vertical and horizontal number, respecting the area of projection of the tree crown.

The first pruning is performed when the cork oak reaches 1.5 meters and the second when the tree reaches 3 meters, with one being carried out the following 3 years after and secondary cork extraction. Maintenance pruning is done after 30 years, on average one every 25 years.

The thinnings are made at around 10 to 15 years old and 3 years after the extraction of virgin and secondary cork. They are then made with a periodicity of 15 to 20 years, according to tables due to the CAP (circumference at breast height).

The extraction of cork is made according to parameters defined by law. The first stripping occurs in cork whose perimeter of the stem on bark, measured at 1.30m (DBH), exceeds 70 cm and a maximum height of up to twice this perimeter, which occurs at around 20 to 25 years.

Subsequent harvests occur at an interval of at least 9 years. The second harvest, the maximum height is 2.5 times the DBH, resulting in secondary cork.

From the third debarking reproduction of cork is obtained, which is intended primarily for the manufacture of cork stoppers. The stripping of height in the 3rd and subsequent circulation is three times the DBH. Following a 10-15 cork extraction cycle (periodically 9 9 years), usually up to 150 or 200 year old cork oaks.

The Forest Management Plan (FMP) is a planning instrument within the legal framework provided by the Forest Policy Framework Law (Law No. 33/96 of August 17) and later by Decree-Law No. 16 / 2009 of January 14, which approves the legal framework of management plans, management and interventions of forest areas (repealing Decree-Law No. 205/99 of June 9, which governed the elaboration process, approval, implementation and modification of FMPs to be applied to forest areas).

The dynamics of the FMP development processes and the PEIFs (Specific Plans for Forest Intervention) in a more general way to private and public forest areas is still young, having started with the approval of the Regional Forest Management Plans (PROF) in 2006-2007, reinforced with the conditions of having the FMPs approved as eligibility criteria for access to support for forest investment programs under the PRODER, together with the development of forest certification processes.

In April 2013 (last available ICNF information), there were 2,266 approved PGF (1,522,195 hectares), representing 44% of the forest area in 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, in private areas, if there is a PORF (Forest Management Plan) or management tools, the owner must notify the forestry agency of the Autonomous Community (CCAA) of its harvesting plans. Otherwise, they must communicate the harvest plan to the forestry agency CAAC serving Autonomic rules. Public areas are regulated by the forestry agency of the CAAC.

In Brazil, forest plantations and the harvest of planted trees, including eucalyptus, are permitted, however, limitations in environmental terms must be respected (buffer strips of river system, slopes, areas of legal reserve); it is prohibited to convert natural forests to plantations. The operations are subject to supervision by the authorities.

In Uruguay and Chile, the forest plantations, including eucalyptus, are only allowed on land classified as forests, being subjected to government approval by submitting a Forest Management Plan.

In Brazil, Uruguay and Chile, in reforestation projects of industrial size, including the use of species like Eucalyptus, a pre-environmental impact study is mandatory, there is also specific legislation for the protection and conservation of natural forests.

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

Portugal:

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

Spain:

Gallotia simonyi	*Podarcis lilfordi*	*Podarcis pityusensis*
Aulocyathus atlanticus	*Caryophyllia seguenzae*	*Stephanocyathus crassus*
Trochocyathus mediterraneus	*Balanophyllia thalassae*	*Flabellum chunii*
Crypthelia affinis	*Stylaster ibericus*	*Euphorbia aphylla*
Euphorbia atropurpurea	*Euphorbia berthelotii*	*Euphorbia bourgaeana*
Euphorbia bravoana	*Euphorbia broussonetii*	*Euphorbia canariensis*
Euphorbia handiensis	*Euphorbia jubaephylla*	*Euphorbia lambii*
Euphorbia minuta	*Euphorbia navae*	*Euphorbia petterssonii*
Barlia metlesicsiana	*Habenaria tridactylites*	*Ophrys balearica*
Ophrys fusca	*Orchis canariensis*	

Common in Portugal and Spain:

Lynx pardinus	*Stichopathes ichardi*	*Tanacetipathes squamosa*
Crypthelia vascomarquesi	*Euphorbia longifolia*	

In the "Red List" of IUCN (International Union for Conservation of Nature and Natural Resources), are indicated 891 species for the continental territories of Spain and Portugal (Iberia), of which 49 have as one of the threats to forest activities:

Ammoides pusilla	*Anarrhinum longipedicellatum*	*Andrena curtula*
Andrena fulva	*Andrena gredana*	*Antirrhinum lopesianum*
Arabis sadina	*Aristolochia paucinervis*	*Armeria rouyana*
Arnica montana	*Asphodelus bento-rainhae*	*Bunium bulbocastanum*
Calopteryx virgo	*Candidula belemensis*	*Centaurea fraylensis*
Clytus tropicus	*Culcita macrocarpa*	*Dactylorhiza elata*

Dianthus marizii	*Elona quimperiana*	*Eryngium viviparum*
Euphorbia transtagana	*Festuca brigantina*	*Festuca summilusitana*
Flavipanurgus granadensis	*Flavipanurgus ibericus*	*Flavipanurgus venustus*
Helicigona lapicida	*Juncus valvatus*	*Leiostyla anglica*
Lucanus barbarossa	*Lynx pardinus*	*Malus sylvestris*
Narcissus asturiensis	*Narcissus cyclamineus*	*Narcissus triandrus*
Neottia nidus-avis	*Nomada similis*	*Oestophora lusitanica*
Ononis maweana	*Paeonia officinalis*	*Picris willkommii*
Reitterelater bouyoni	*Silene longicilia*	*Spermodea lamellata*
Stenagostus laufferi	*Thorella verticillato-inundata*	*Thymus capitellatus*
Veronica micrantha		

Product Groups	**Certification**	**Suppliers**	**Species**	**Quantity (Ton)**	**%**
SBP non-compliant Feedstock		15	Pinho Bravo	38.839	29,1
			Pinho Manso	67.270	50,3
			Eucalipto	23.737	17,8
			Outras	3.729	2,8
SBP-compliant Primary Feedstock	FSC	2	Pinho Bravo	0	0
			Pinho Manso	0	0
			Eucalipto	0	0
			Outras	0	0
SBP-compliant Secondary Feedstock	FSC	1	Pinho Bravo	0	0
SBP-compliant Secondary Feedstock	FSC	1	Eucalipto	0	0

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

It is estimated that ENERMONTIJO consumed about 7.500 tons older than 40 years in 2016.

Essentially this refers to pine roundwood, especially umbrella pine (Pinus pinea) grown for the main objective of producing pine nuts.

Taking into account the experience of the Supply Manager at ENERMONTIJO, of the roundwood supplies from final cuts of umbrella pine, 100% is for wood pellets production or energy purposes, mainly due to the heterogeneously these trees present.

In the case of first logs from maritime pine, it is estimated that 60 to 70% of this type of material is intended for other uses, mainly for sawing.

2.4 Flow diagram of feedstock inputs showing feedstock type

Not applicable.

2.5 Quantification of the Supply Base

Supply Base

a. The 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:621.745 ha PEFC: 2.224.302 ha

Note: There is a possibility that up to 2% of secondary material has originated in eucalyptus plantations located in Brazil and Uruguay, countries which together have an area of 868,62 million ha and 8,71 million ha occupied by forest plantations and certified areas of 7,19 million hectares by FSC and 3,32 million ha by PEFC.

Feedstock

f. Total volume of feedstock: 0 - 200,000 tonnes (133.575 tons)
g. Volume of primary feedstock: 0 - 200,000 tonnes (101.205 tons)
h. Percentage of primary feedstock categories:
    - Certified to an SBP-approved Forest Management Schemes: 0 % (0 tonnes)
    - Not certified to an SBP-approved Forest Management Schemes: 100 % (133.575 tonnes)
i. List all species in primary feedstock, including scientific name

- Maritime pine (Pinus pinaster)
- Umbrella pine (Pinus pinea)
- Eucalyptus (Eucalyptus spp)
- Poplar (Populus spp)
- Acacia (Acacia spp)

j. No feedstock from primary forest
k. Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme – Not applicable
l. Volume of secondary feedstock: 32.370 tonnes (24%)
m. No tertiary feedstock

For the next year changes are not expected in the supply profile, maintaining the forecasts in the same order of magnitude of this period.

However, with the FSC certification, all material consumed will be controlled (FSC CW), and with the company's efforts to encourage the suppliers to source certified material (FSC or PEFC), there may be values for these categories.

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
□	**X**

All forest raw 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.

4 Supply Base Evaluation

Not applicable.

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

This report was sent to an independent reviewer. The review period was 5 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 SBP, FSC, PEFC, ISO 9001, ISO 14001, ISO 19011, OHSAS 18001 and GAP analyses.

11.2 Public or additional reviews

Not applicable.

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	Joana Carvalho Giovanni de Alencastro	Quality and Sustainability Manager Forestry Consultant	19/05/2017
	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 Rocha Páris	Administrator	19/05/2017
	Name	Title	Date

13 Updates

The main changes on the 2016 Supply Base are related to the following:

- Significant reduction in the consumption of primary feedstock, mainly roundwood
- Increase in consumption of forest residues

The combination of these changes is reflected in a significant improvement in the supply profile regarding to sustainability of forest production and, consequently, of pellets production for energy purposes.

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 of feedstock over the previous 12 months

The supply of last year (January to December 2016) is thus characterized:

Material	Specie	Origin	Quantity (t)	%
Logs, treetops and branches	Umbrella pine	Portugal	44.402,96	33,24
Logs and branches	Maritime pine	Portugal	29.478,72	22,07
Logs	Poplar	Portugal	1.193,32	0,89
Logs	Acacia	Portugal	1.593,16	1,19
Logs and branches	Eucalyptus	Portugal	1.669,82	1,25
Forestry Chips	Umbrella pine	Portugal	22.866,57	17,12
Industrial Chips	Maritime pine	Portugal	4.994,24	3,74
Industrial Sawdust	Maritime pine	Portugal	3.352,02	2,51
Industrial Sawdust	Eucalyptus	Portugal, Spain	18.978,00	14,21
		Brazil, Uruguay	3.089,44	2,31
Shavings and leftovers	Maritime pine	Portugal	1.014,48	0,76
Leftovers	Cork	Portugal	942,24	0,71

13.5 Projected figures of feedstock over the next 12 months

Projected figures for feedstock for 2017 is thus characterized:

Material	Specie	Origin	Quantity (t)	%
Logs, treetops and branches	Umbrella pine	Portugal	37.500	28,09
Logs and branches	Maritime pine	Portugal	25.000	18,73
Logs	Poplar	Portugal	1.000	0,75
Logs	Acacia	Portugal	1.000	0,75
Logs and branches	Eucalyptus	Portugal	1.500	1,12
Forestry Chips	Umbrella pine	Portugal	30.000	22,47
Industrial Chips	Maritime pine	Portugal	5.000	3,75
Industrial Sawdust	Maritime pine	Portugal	5.000	3,75
Industrial Sawdust	Eucalyptus	Portugal, Spain	25.000	18,73
		Brazil, Uruguay	2.000	1,50
Shavings and leftovers	Maritime pine	Portugal	500	0,37
Leftovers	Cork	Portugal	37.500	28,09