

# Supply Base Report (SBR)

Futerra

[www.sustainablebiomasspartnership.org](http://www.sustainablebiomasspartnership.org)



## Version 1.2 June 2016

### NOTE:

This template, v1.2, is effective as of the date of publication, that is, 23 June 2016. Template v1.1 may still be used for those audits undertaken prior to 23 June 2016 and where the certificate is issued to Certificate Holders before 1 October 2016.

*For further information on the SBP Framework and to view the full set of documentation see [www.sustainablebiomasspartnership.org](http://www.sustainablebiomasspartnership.org)*

### *Document history*

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# 1 Overview

Producer name: FUTERRA, TORREFAÇÃO E TECNOLOGIA - TRANSFORMAÇÃO DE BIOMASSA PARA ENERGIA, S.A.

Producer location: Zona Industrial de Campo 4440 Campo Valongo, Portugal

Geographic position: 41.162651 (41°09'45.5"N) latitude -8.454410 (8°27'15.9"W) longitude

Primary contact: Ana Castro

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Company website: <https://futerrafuels.com>

Date report finalised: 21 June 2019

Close of last CB audit: 26 June 2019

Name of CB: Control Union Certifications

Translations to Portuguese: Yes

SBP Standard(s) used: Standard 1, v. 1.0;  
Standard 2, v. 1.0;  
Standard 4, v. 1.0;  
Standard 5, v. 1.0.

Weblink to Standard(s) used: <http://www.sustainablebiomasspartnership.org/documents>

SBP Endorsed Regional Risk Assessment: N/A

Weblink to SBE on Company website: <https://futerrafuels.com/en/certifications>

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations				
Main (Initial) Evaluation	First Surveillance	Second Surveillance	Third Surveillance	Fourth Surveillance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 2 Description of the Supply Base

### 2.1 General description

Futerra a pellet production company located in the village of Valongo in Portugal. Valongo is located near to the city of Porto. Futerra buys low-quality primary feedstock from over a hundred suppliers and secondary feedstock from around 10 sawmills. Around 10 feedstock suppliers are FSC certified but not all deliver the feedstock with an FSC claim. Futerra can produce white and black (torrefied) pellets. Primary feedstock accounts for approximately 90% of total feedstock supply.

Futerra has a production capacity of 120.000 tons of torrefied pellets and 55.000 tons of white pellets a year. It is the world's largest production facility of torrefied pellets. The plant is the first commercial scale torrefaction plant in Portugal. Considering the total amount of feedstock it processes, Futerra is the second largest company in the north of Portugal, after a pulp and paper company. The innovative technology makes it feasible to use low-grade forest residues and debris. This activity contributes to the regional economy and to effective forest fire fighting – the main issue in Portuguese forestry today.

The supply base is Portugal.

Although the Supply Base consists of the whole of Portugal, at present Futerra is only procuring wood from the central and northern administrative regions of Portugal; in specific from:

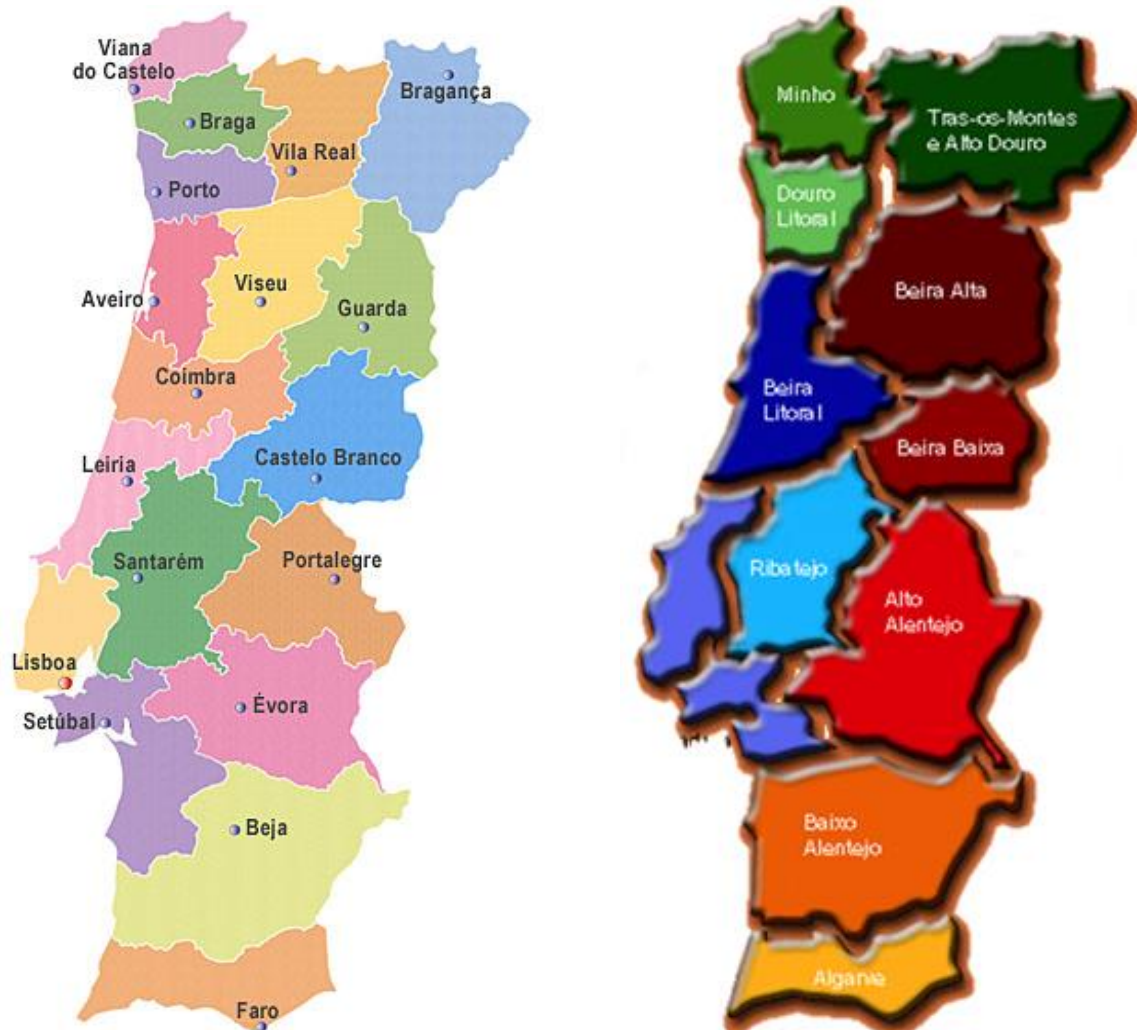
- Viana do Castelo;
- Braga;
- Villa Real;
- Bragança;
- Porto;
- Aveiro;
- Viseu;
- Coimbra;
- Castelo Branco;
- Leiria;
- Santarem.

Most landowners in these regions own very small plots of only one or two ha.

Futerra does not procure tree species listed by CITES or IUCN; the following tree species are used:

Maritime pine ( <i>Pinus pinaster</i> )	Champion oak ( <i>Quercus rubra</i> )
Scots pine ( <i>Pinus sylvestris</i> )	Weeping willow ( <i>Salix babylonica</i> )
Monterey pine ( <i>Pinus radiata</i> )	Acacia ( <i>Acacia spp.</i> )
Austrian pine ( <i>Pinus nigra</i> )	Planes ( <i>Platanus spp.</i> )
Stone pine ( <i>Pinus pinea</i> )	Chestnuts ( <i>Castanea spp.</i> )
Eucalyptus ( <i>Eucalyptus spp.</i> );	Ash ( <i>Fraxinus spp.</i> )
Poplar ( <i>Populus spp.</i> ).	Alder ( <i>Alnus spp.</i> )
Portuguese oak ( <i>Quercus faginea</i> )	

Figure 1. Regions of Portugal



3.2 million ha of forests cover Portugal, corresponding to 35.4% of the country's land mass, followed by soil considered uncultivated (32%) and farmland (24%). Private property by landowners (83%), industrial companies (6%), and communities (Baldios, 8%) correspond to 3.1 million ha of forests. The forest area under communitarian management (Baldios) are subject to old customary and traditional rights and regulated by specific laws. In Portugal, there are, however, no indigenous people or specific minorities relying on the forests for their livelihood.

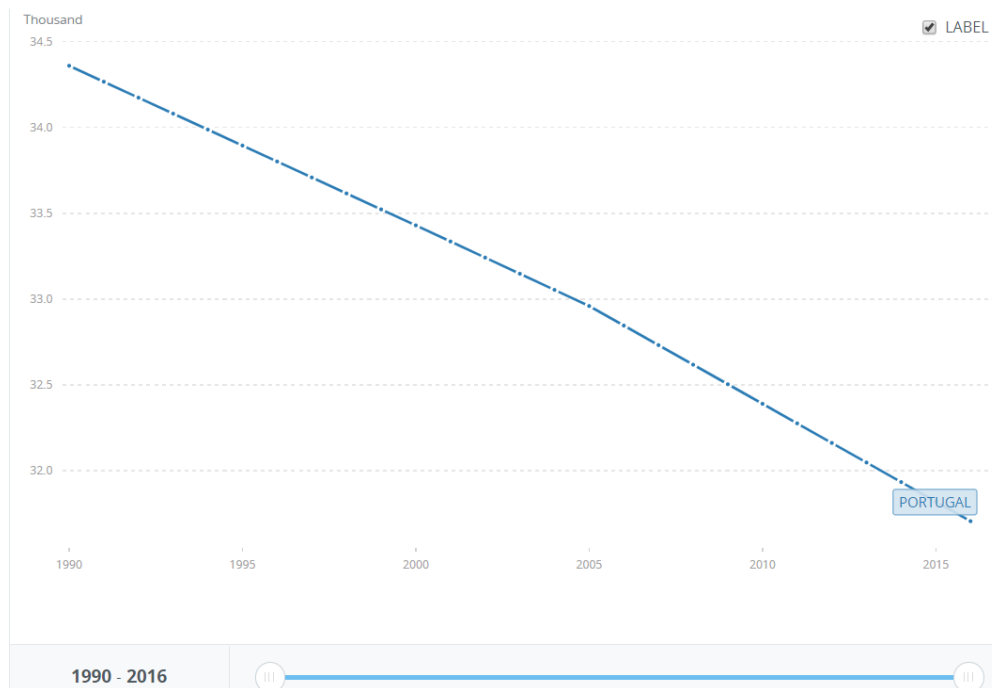
The following aspects related to forestry in Portugal are important to its sustainable management:

- 97% of the forest is in private ownership. More than half of the forests are very small parcels of only one or two ha (mainly in the northern and central regions). Regional forest management plans do not apply to small forests and woodlands;
- 47% of the land has no cadastral data and discrepancies in ownership rights complicate the procurement process. Moreover, many small woodland owners are not very interested in their properties (they can be living far away);

- Forest cover has increased from under 2.0 million to 3.2 million ha over the last 100 years and is dominated by introduced fast-growing species. Over the last decades, there is a tendency to replace semi-natural forests with fast-growing plantations.

Over the period 1995 – 2010 the forest decreased 4,6%. The net decrease of forest areas (150 611 ha) is mainly due to conversion to ‘brush and pastures’. In addition, significant areas of forests were converted to urban use (28 000 ha). Data of different sources, for example the FAO, indicate a clear trend in decreasing forest area in Portugal of over 1% every 3 years the last 20 years or more.

*Figure 2. Declining forestry area in Portugal from 1990 to 2016 (World Bank 2019, FAO data):*



Forest Management Plans (PGF) are mandatory for forest areas above a minimum area defined by Regional Forestry Management Plans (PROFs) as well as in Forest Intervention Areas (ZIF; 940 432 ha). In 2016, there were 1 680 000 ha under PGF from which 450 034 ha overlap the National Classified Areas Network. A felling manifest is required for commercial felling (including all thinning) of all tree species for industrial purposes, with a 30-day deadline after the operation is concluded. The Institute of Conservation of Nature and Forests (ICNF) is the national forest and conservation authority, with competencies on all forest, hunting and nature conservation affairs. ICNF also manages public forest areas and is involved in the management of community areas. Additionally, the Environmental Service of the National Republican Guard (SEPNA/ GNR) inspects environmental issues and natural resources in all private and public areas.

Figure 2: Tree species distribution

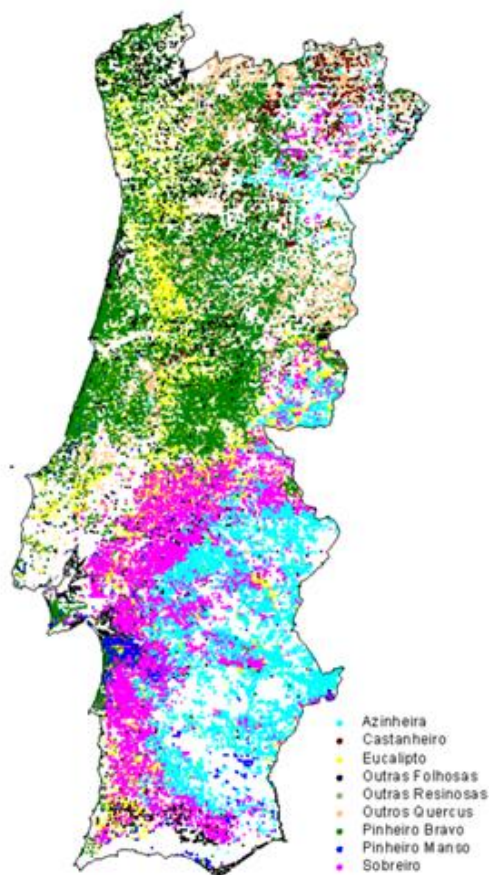
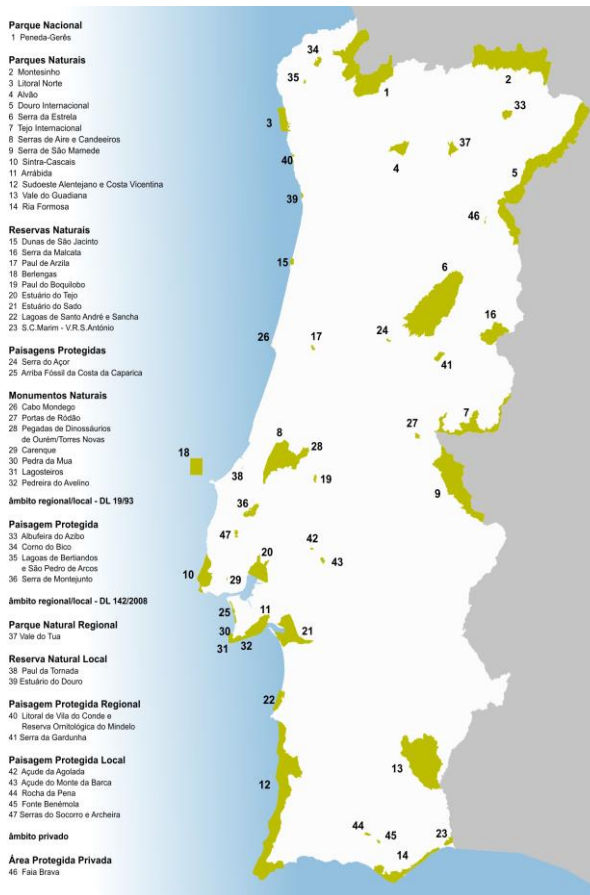


Figure 3: Protected areas



The felling phytosanitary manifest includes identification of the origin of the felling. Also, documentation for transportation mostly identifies the origin of the transport. This are the most common ways to trace the origin of the primary feedstock. However, there are still many areas in Portugal without cadastral data, complicating the matter. Considering the relatively positive Corruption Perception Index (2018) of Portugal (CPI 64) documents, such as invoices and transport documents, can be considered reliable sources of information.

Portuguese forests are 69% deciduous, and 31% coniferous. Regarding tree species, the most relevant are (ICNF, 2013):

- Eucalyptus (*Eucalyptus globulus* and other spp.), 26% of forest area. Originally from Tasmania, eucalyptus became one of the most planted trees in Portugal. Since the 1980's there is great controversy about the negative effects of these trees on soil fertility, water scarcity, and biodiversity, which in 1988 and '89 resulted in the implementation of a few laws that restricts the increase of monoculture plantation of this species. In 2017 a law was enforced that forbids the conversion of forests to eucalyptus stands.
- Maritime pine (*Pinus pinaster*), 23% of forest area. This species was chosen in the large afforestation campaigns carried out during the nineteenth century, due to its ability to adapt to poor and rocky soil. In addition, it regenerates easily. Its timber is widely used commercially;
- The cork oak (*Quercus suber*), 23% of forest area.



This is an evergreen indigenous species, typical of Mediterranean climate forests. Their presence can be found throughout the country. The cork oak is often seen as the 'national tree' of Portugal. Portugal is the leading producer and exporter of cork.

- Holm oak (*Quercus rotundifolia*), 11% of forest area.  
An evergreen tree of large size. It can be found throughout the Mediterranean climate. It can grow at any type of terrain except of those with poor drainage and or saline nature, but prefers fertile soil, deep and of loamy nature. The wood is well suitable for charcoal and firewood production.
- Stone pine (*Pinus pinea*), 6% of forest area.  
Stone pine is mainly used to produce pine nuts. The residues from thinning and pruning are used for pellet production. Stone pine can mainly be found in the south.

The national legislation of Portugal does list protected tree species, and, for example, it is forbidden to cut any cork oaks (*Quercus suber*), and holm oaks (*Quercus ilix* / *Quercus rotundifolia*; protective measures by Law N<sup>o</sup>.155/2004) and European holly (*Ilex aquifolium*; protected by Law N<sup>o</sup>. 423/89).

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) lists a considerable number of protected plants for Portugal. However, the list does not include any trees. The 'Red List' of the IUCN (International Union for Conservation of Nature and Natural Resources) indicates hundreds of plants for the continental territory of Portugal, but also does not include any trees either. Specialists reckon 49 of these plant species to the relevant ones for forestry.

Climate change, the occurrence of extreme meteorological events, in combination with large areas of insufficiently managed forests (especially eucalyptus forests) has increased the phenomenon of devastating forest fires. Portugal accounts for the largest and the most forest fires in Europe. Climate change may also induce pests and diseases due to stress in host plants. In Portugal, phytosanitary problems affect mainly the cork oak and holm oak, showing its decline. The loss of vitality and the mortality of maritime pine is mainly related with the Wood Pine Nematode (WPN), detected in Portugal since 1999.

The forestry industry of Portugal is vertically integrated to derive maximum economic benefit from the three main forest tree species – maritime pine, eucalyptus and cork oak. Maritime pine and eucalyptus dominate the timber-producing regions. Forests of cork oak are generally multifunctional.

Goods produced by way of forestry activities sustain an important industrial chain based on natural resources that in turn supports a strong export sector. Portugal, therefore, considers forests and forestry products as an area of crucial importance to its economy. The forest sector has a significant impact on its GDP. Forest sector products contribute to around 10% of the national export. Forests are also the base of an economic sector which generates around 100 000 jobs (4% of the employable population).

## 2.2 Actions taken to promote certification amongst feedstock supplier

Futerra interacts with its suppliers and encourages FSC forest certification. Futerra underlines the advantages and importance of forest certification to the wood sector in general and to the pellet business in particular. Most saw mills Futerra cooperates with are certified. Futerra needs larger quantities of FSC certified wood and has a program to stimulate suppliers to achieve FSC forest certification in exchange for long-term contracts.

## 2.3 Final harvest sampling programme

There are hardly any (no) energy plantations in Portugal. The tree stems are sold to the timber and paper and pulp industries. Futerra uses harvesting and woodworking residues.

The Portuguese law requires feedstock supply to be accompanied with 'Felling Manifests'. These documents state the tree species, traded volumes, land owners and place of harvest. In accordance with the SBP requirements, Futerra is able to classify and describe the tree species and types and categories of primary and secondary feedstock, as also the approximate share of round wood from final fellings.

From the tree species used by Futerra only the maritime pine (*Pinus pinaster*) has a planned forest management period of more than 40 years. Eucalyptus and Poplar are fast-growing tree species, which are to be cut before the age of 40 years.

Considering the used harvesting systems, nearly 90% are forest residues from clear cuts; over 10% originates from selective cuttings. A part of the pine wood originates from forest maintenance operations. Most clear cuts are small, around 2 ha or less. In the north of Portugal clear cuts are restricted to maximally 10 ha. Reforestation is performed by the land owners.

Futerra examines the forest plots and their age before harvest. The age of the forest is indicated on the 'Manifesto de Corte ou Arranque de Arvores', which is supplied together with the feedstock.

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

Suppliers of forest residues, burnt wood, etc.		<b>Futerra pellet plant</b> 175 ton per year production capacity Black and white pellets	Exports to the industrial market
Regional forest roundwood suppliers	Sawmills in the region supplying wood residues		Sales to medium sized applications in Portugal and abroad
1	2	3	4

## 2.5 Quantification of the Supply Base

### Supply Base

#### **Sub-scope 1 'Continental Portugal'**

- a. Total Supply Base area (ha): 3,2 million ha
- b. Tenure by type (ha): Private: 3,1 million ha (97%, including 8% community managed)  
Public: 0,1 million ha
- c. Forest by type (ha): Temperate Forest: 3,2 million ha
- d. Forest by management type (ha): Plantations: 1,8 million ha;  
Managed natural: 1,4 million ha
- e. Certified forest by scheme (ha): FSC: 434 thousand ha (2019)  
PEFC 277 thousand ha (2019)

### Feedstock

- a. Total volume of feedstock: 200,000 – 400,000 tonnes (estimation per year)
- b. Volume of primary feedstock: 200,000 – 400,000 tonnes (estimation per year)
- c. Percentage by categories of primary feedstock:
  - Certified to an SBP-approved Forest Management Scheme: 5% (estimation for 2019)
  - Not certified to an SBP-approved Forest Management Scheme: 95% (estimation for 2019)
- d. Species present in the primary feedstock:

Maritime pine ( <i>Pinus pinaster</i> )	Champion oak ( <i>Quercus rubra</i> )
Scots pine ( <i>Pinus sylvestris</i> )	Weeping willow ( <i>Salix babylonica</i> )
Monterey pine ( <i>Pinus radiata</i> )	Acacia ( <i>Acacia spp.</i> )
Austrian pine ( <i>Pinus nigra</i> )	Planes ( <i>Platanus spp.</i> )
Stone pine ( <i>Pinus pinea</i> )	Chestnuts ( <i>Castanea spp.</i> )
Eucalyptus ( <i>Eucalyptus spp.</i> );	Ash ( <i>Fraxinus spp.</i> )
Poplar ( <i>Populus spp.</i> ).	Alder ( <i>Alnus spp.</i> )
Portuguese oak ( <i>Quercus faginea</i> )	
- e. Volume of primary feedstock from primary forest: None (0,00 m<sup>3</sup>)
- f. List percentage of primary feedstock from primary forest (j), by the following categories.  
Subdivide by SBP-approved Forest Management Schemes:
  - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme
  - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme

*Not applicable*
- g. Volume of secondary feedstock: 0 – 200,000 tonnes (estimation per year)

### 3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Futerra has chosen to implement the SBP Supply Base Evaluation method (SBP Standard 1), because in the north and centre of Portugal there are very many (a few hundred thousand) small forest owners with only one or two ha forest lands, and FSC, or PEFC group certification has only started to develop. Clients of industrial wood pellets, however, are demanding full deliveries of SBP-compliant biomass already today.

Futerra is interested to obtain international recognition considering the quality and sustainability of forest operations and is motivated to cooperate with forest harvesting companies to implement risk mitigation measures.

## 4 Supply Base Evaluation

### 4.1 Scope

The scope of this assessment covers Portugal.

The scope includes primary and secondary feedstock that has been evaluated conform FSC Controlled Wood, or volumes which have been supplied with the FSC controlled wood claim.

In scope is only the final production 'wood pellets'.

Futerra is FSC certified, it uses the credit system and the FSC Controlled Wood evaluation method.

### 4.2 Justification

Futerra has in place a monitoring procedure on checking forest operations. During the forest sites and company visits the transparency and compliance with SBP sustainable feedstock indicators are checked and the results are recorded. The sampling and monitoring procedure also covers the forest operations of procured secondary feedstock.

The risk assessment has been developed on basis of SBP Standards No1 and No2, version 1.0 of March 2015. Futerra has assessed the risks related to each SBP indicator. The Supply Base Evaluation (SBE) procedure ensures active engagement with a diverse range of stakeholders.

Futerra has a team of specialists working on SBP certification. Rens Hartkamp, M.Sc. in forestry and a Ph.D. in forestry economics has assisted the team in the development of the Supply Base Evaluation. He has around 20 years of experience in certification, criteria development, and benchmarking. Rens Hartkamp assisted around 40 companies on SBP certification, some including SBEs in Portugal.

### 4.3 Results of Risk Assessment

Most indicators are assessed as low risk, mainly because:

- a. A stable cultural, juridical, and economical balance in the forestry sector;
- b. Low corruption in forestry (the Corruption Perception Index in Portugal is 64).
- c. The SBE assesses the management and control systems of the Biomass Producer. Futerra already had procedures in place to mitigate certain risks in the Supply Base.

The risk assessment resulted in 14 'specified risk' identifications, of which 5 indicators were only partly 'specified risk' (and partly low risk). The main reasons for assessing 'specified risk' are listed below in table 4.3. No 'Unspecified risk' indications were found.

Table 4.3: Risk Assessment Results of Futerra

SBP Indicator	Indicators of specified risk Futerra
1.2.1 for areas without cadastral data	<p>The Biomass Producer has implemented appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Supply Base</p> <p>43% of the land area of Portugal has no Cadastral date. Moreover, the northern and central part of Portugal is characterised by hundred thousands of small private properties. The boundaries of these properties are sometimes disputable. Also the official registration of the property rights can be outdated. For practical reasons, landowners can decide to sell or transfer (inherit) parts of their property without registering the change to the government. Plots can be abandoned and the property rights can be unclear. Wood lands can also be impounded by the government.</p>
2.1.1 HCV 1+3	<p>The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation values are identified and mapped.</p> <p>The specified risks are HCV 1 Species diversity, and HCV 3 Ecosystems and habitats. Portugal has a decreasing biodiversity and most wood lands are managed by small landowners, to whom few requirements on sustainable forest management apply; there is no obligatory analysis of critical ecosystem values.</p> <p>The regional forest management plans are not obligatory for the holders of small forests and plantations. Species diversity, ecosystems and habitats are insufficiently protected considering the majority of the forest operations in the north and centre of Portugal.</p> <p>Small land owners and harvesting companies working on small plots do not need to draw attention to the organisations, websites and reports mentioned in the SBE in relation to this indicator. The parcels are normally simply clear cut.</p> <p>A threat to forests like forest fire is identified on maps, but is not addressed adequately by many forest owners. A lot of estates are not or poorly maintained. SEPNA forest guards do not check on this sufficiently.</p>
2.1.2 HCV 1+3	<p>The Biomass Producer has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.</p> <p>HCV 1 – Species diversity There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity. Special attention Should be given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs).</p> <p>HCV 3 – Ecosystems and habitats There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm ecosystems and habitats.</p>
2.1.3	<p>The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008.</p> <p>There are no assurances, new eucalyptus plantations from after January 2008 are not already maintained or harvested. Moreover, the forest fires result in instant harvesting of plantations, regardless of their age. Besides, poplar and other tree species can be considered a plantation and the new law only covers Eucalyptus.</p>

	<p>In practise there will be many issues with regard to this indicator on land conversion in the future as well. The government has too little information on the present landcover and too little capacity to implement the new legislation in full. For example, after a forest fire, it will be difficult to determine if illegal conversion to plantations are taking place, regarding the many effected woodland parcels and timeframe for regenerating forest areas. Besides, eucalyptus plantations can result in aggressive natural regeneration after forest fires, and in that case, little can be done to avoid conversion of neighbouring plots.</p> <p>The conversion of forests to urban and agricultural use is significant. In total, the forest area decreased by 150 611 ha (between 1995 and 2010, according to the 6<sup>th</sup> National Forest Inventory of the ICNF). Over the last decades, Portugal has a negative trend concerning forest area. The ICNF, however, states that the increase of wood lands excels the decline in forests. FAO statistics (2016) show a decrease in forest and agricultural area in Portugal. The new law on restricting conversion to eucalyptus plantations does not safeguard this issue sufficiently.</p>
<b>2.2.1</b>	<p>The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is sourced from forests where there is appropriate assessment of impacts, and planning, implementation and monitoring to minimise them.</p> <p>To most small owners no forest management plan applies, the regional forest plans apply only to plots above a certain size.</p>
<b>2.2.2</b>	<p>The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is sourced from forests where management maintains or improves soil quality.</p> <p>In approximately half the country there is a risk of degradation of (dry) soils, mainly due to previous land-use practices and choice of introduced tree species. The problem of desertification has existed for centuries and has now become worse due to climate change. The plantations of eucalypt need fertilisation or deplete the soil. Soil quality also depends on the availability of fresh water.</p>
<b>2.2.3</b>	<p>The Biomass Producer has implemented appropriate control systems and procedures to ensure that key ecosystems and habitats are conserved or set aside in their natural state.</p> <p>In Portugal, key ecosystems and habitats are mostly located in protected areas and in Classified Areas (Natura 2000). However, approximately 2/3 of classified areas are not included in protected areas of the National Network of Protected Areas. Besides, there are key ecosystems and habitats occurring outside Protected and Classified areas. In practise, landowners and harvesting companies have too little knowledge of key-habitats and which habitats need to be conserved.</p>
<b>2.2.4</b>	<p>The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected.</p> <p>About 3 600 species of plants can be found in Portugal. There are 69 taxa of terrestrial mammals, a total of 313 bird species, of which around 35% are threatened, and 17 amphibians and 34 reptile species that are present in Portugal. Some of the main threats to the biological diversity of Portugal include: alteration or destruction of habitats; pollution; overexploitation; invasive alien species; urbanization and fires. This, in combination with the fact that there are many small parcels to which few regulations apply and the aggressive nature of Eucalyptus vegetations puts biodiversity under pressure. Several sources report its decline.</p>
<b>2.2.6</b>	<p>The Biomass Producer has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised.</p> <p>The thresholds mentioned by law are 50 ha and 10 ha. This are still large areas regarding the populated and hilly countryside of Portugal. A clear-cut area of less than 10 ha can easily</p>

	create runoff and erosion dangers. The landscape can create dangerous situations; residents could be living in the valley. Small land owners are not obliged to take risks to the surroundings into consideration. These risks can also be related to water lines.
<b>2.3.2</b>	<p>Adequate training is provided for all personnel, including employees and contractors.</p> <p>Despite legal requirements, Portugal still performs poorly on work efficiency (and safety). The National Strategy for Forests states that the focus on the professionalization and training of the different actors in the forestry sector is of key importance for increasing the competitiveness and, thereby, the development of the sector.</p>
<b>2.4.2</b> Fire fighting	<p>The Biomass Producer has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately.</p> <p>Considering the lack of an implementation of forest management plans and forest debris cleaning, the risk of forest fires is high. Fires are today the greatest perceived risk in the Portuguese forest sector. Biotic and abiotic risks are supported by disturbances affects. The forests and in particular the eucalyptus plantations have to be managed according to best practises or the risk of forest fire is significant.</p>
<b>2.6.1</b>	<p>Appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions.</p> <p>Considering the situation in Portugal this indicator needs additional attention to perform sufficiently well on social aspects related to sustainable forest management and best practices. There are many land owners with small properties in Portugal. Some regions of the country lack cadastral data, which gives problems on assessing the boundaries of harvesting plots. It is crucial to identify and solve grievances and disputes before the harvesting operations commence (with special attention to the indicators, which are categorised 'specified risk'). Land owners and harvesting companies normally do not actively implement complaint procedures and do not keep records on complaints and comments. This indicator is important to perform sufficiently on several other indicators.</p>
<b>2.8.1</b>	<p>The Biomass Producer has implemented appropriate control systems and procedures for verifying that appropriate safeguards are put in place to protect the health and safety of forest workers (CPET S12).</p> <p>Regardless of its legal requirements, Portugal still performs poorly on work safety. International Trade Union Confederation (IUTC) ranks countries against 97 indicators to assess where workers' rights are best protected. Portugal has a rating of 3 (from 1 to 5+). This score is given for countries where: There are 'Regular violations of rights. The government and/or companies are regularly interfering in collective labour rights. There are deficiencies in laws and/or certain practices which make frequent violations possible.'</p>
<b>2.9.1</b>	<p>Feedstock is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.</p> <p>There is a specified risk of reducing carbon stocks in certain areas. This risk is more specifically related to the risks mentioned in the following indicators:</p> <ul style="list-style-type: none"> <li>a. 2.1.3 (land conversion), and</li> <li>b. 2.2.2 (degradation of grounds).</li> </ul> <p>Data of different sources, for example the FAO, indicate a clear trend in decreasing forest area in Portugal of over 1% every 3 years the last 20 years or more. For example, the conversion of forests to urban use is significant. In total, the forest area decreased by 150 611 ha between 1995 and 2010, according to the ICNF.</p>



## 4.4 Results of Supplier Verification Program

Futerra has studied all the indicators of SBP Standard 1 in relation to the scope of the SBE and categorised all indicators as either low risk or specified risk. Therefore, a Supplier Verification Program was not needed. Verification of suppliers is conducted regularly, and all specified risks are addressed during desk reviews and field assessments of the harvesting plots and supplier's performance.

## 4.5 Conclusion

Discussion points and opinions on possible sustainability risks in feedstock procurement in Portugal have been studied in detail over the last years by a broad group of stakeholders and institutes. In general, there is a good understanding of the necessity of performing additional mitigating measures.

Forest ownership in Portugal is fragmented; there are many small holders, it is therefore clear that several forest management tasks, starting with an evaluation of ecological, economic and social impacts of operational plans should be considered before and during the forest operations commence.

Within the framework of the FSC Controlled Wood and Due Diligence evaluations, several mitigation measures were already in place.

Regarding legality, 1 SBP indicator was assessed 'specified risk', but only partly. Regarding sustainability, 13 SBP indicators were assessed 'specified risk', of which 4 partly.

Indicator 2.6.1 'Appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions' is one of the indicators that became 'specified risk'. Such mechanisms play an important function as a safety net for sufficient performance on social and cultural aspects of Sustainable Forest Management and in complying with other indicators of SBP standard 1. In practise, most land-owners and harvesting companies do not have comment and complaint procedures in place, nor investigate the concerns of local residents. If this indicator would not be categorized as a specified risk, several other indicators on the social aspects of sustainability could become insufficiently addressed as well.

There is an overlap in the root causes of most specified risks. They mainly derive from a few fundamental characteristics of forestry in Portugal, such as:

- Dominance of eucalyptus in forestry. It is an introduced tree species that jeopardises sustainability in Portugal. Its use needs to be monitored and contained.
- More than half of the harvesting forest plots are very small, it are privately owned areas of only one or a few ha (mainly in the northern and central regions of Portugal), to which regional forest management plans do not apply;
- Lacking cadastral data (on 47% of the land) and other problems related to the (non-) registration of ownership rights.

These specified risks are, however, well mitigatable. Moreover, corruption in Portugal is relatively low, what is confirmed by the CPI score of 64 points (2018). Forestry in Portugal has a long history and a sound framework of relevant institutes.

## 5 Supply Base Evaluation Process

The Supply Base Evaluation (SBE) was performed by the Sustainability Manager and Forestry Manager of Futerra (hereinafter: the certification team), with the assistance of an external SBP certification specialist with ample experience.

The Supply Base Evaluation Process started with public reports into consideration, as also national legislation, national policies, and publications of relevant institutions and authorities. During the preparation of the SBE, a detailed baseline study was made for each of the SBP indicators. A summarised description on each indicator is presented in Annex 1 and covers all relevant indicators of SBP Standard 1.

The certification team took the following steps in developing the Supply Base Evaluation:

- 1) Study publicly available reports on the legality and sustainability risks in Portugal;
- 2) Develop the Risk Assessment and Risk Mitigation Measures in cooperation with Futerra's suppliers ;
- 3) Develop procedures and check-lists related to the assessment of forestry operations and feedstock procurement;
- 4) Train the harvesting teams of the most developed feedstock suppliers;
- 5) Evaluate the effectiveness of the Risk Mitigation Measures in practice (during harvesting operations).

The Forestry Manager is a specialist, who has been involved in wood procurement and field inspections for many years.

Futerra and its feedstock suppliers have experience in forestry in Portugal and most risk mitigation measures were already in place.

The documents stated below are of importance to the management system:

- Signed declarations of selected feedstock suppliers;
- Documentation accompanying feedstock supply (verifying the origin of the wood);
- Procedure on the legality and origin of raw material;
- Best practices regarding harvesting operations;
- Sampling and monitoring procedure;
- Assessment reports and checklists on:
  - Planned forest operations (field inspections);
  - Primary feedstock suppliers (companies);
- Complaint procedures and journals.

The Risk Assessment (RA) did not result in inconclusive indicators (see paragraph 4.3).

## 6 Stakeholder Consultation

The process for stakeholder consultation consisted of sending e-mails to different stakeholders, including local NGOs, state institutions, government bodies, forest owners associations, academic and research institutions, etc.

The risk assessment is being consulted with around 50 stakeholders and leading experts in nature conservation and forestry. The stakeholder consultation was conducted from 25 June to 25 July 2019.

### 6.1 Response to stakeholder comments

The stakeholder consultation resulted in the following comments:

<b>Comment or input by stakeholder:</b>
<b>Response by Futerra</b>

## 7 Overview of Initial Assessment of Risk

Table 7.1. Overview of results from the risk assessment of all Indicators (prior to SVP)

Legality Indicators	Initial Risk Rating		
	Specified	Low	Unspecified
1.1.1		X	
1.1.2		X <sup>2)</sup>	
1.1.3		X	
1.2.1	X <sup>1)</sup>		
1.3.1		X	
1.4.1		X <sup>2)</sup>	
1.5.1		X	
1.6.1		X	

Sustainability Indicators	Initial Risk Rating		
	Specified	Low	Unspecified
2.1.1	X <sup>3)</sup>		
2.1.2	X <sup>3)</sup>		
2.1.3	X		
2.2.1	X		
2.2.2	X		
2.2.3	X		
2.2.4	X		
2.2.5		X	
2.2.6	X		
2.2.7		X	
2.2.8		X	
2.2.9		X	
2.3.1		X	
2.3.2	X		
2.3.3		X	
2.4.1		X <sup>4)</sup>	
2.4.2	X <sup>5)</sup>		
2.4.3		X	
2.5.1		x	
2.5.2		x	
2.6.1	X <sup>6)</sup>		
2.7.1		x	
2.7.2		x	
2.7.3		x	
2.7.4		x	
2.7.5		x	
2.8.1	X		
2.9.1	X <sup>7)</sup>		
2.9.2		x	
2.10.1		x	

- 1) Specified risk for areas without cadastral data.
- 2) These indicators are low risk, nevertheless, verification of the origin and legality of the feedstock are essential.
- 3) HCV 1 and 3 are specified risk. Social and cultural aspects regarding Sustainable Forest Management are considered during the evaluation of best practises.
- 4) The risk of impacts of harvest operations on the forests and their surroundings (also considering local residents and entrepreneurs) is present, but considered low.
- 5) Specified risk on forest fire fighting.
- 6) Plays an important role in reducing the risks related to social aspects of SFM.
- 7) Of main importance is the negative trend in forest cover (carbon stocks) over the last 20 years, due to the conversion to agricultural and urban lands.

## 8 Supplier Verification Programme

### 8.1 Description of the Supplier Verification Programme

The Risk Assessment had no inconclusive indicators (no 'unspecified risks'). The results have been discussed with feedstock suppliers and other stakeholders. The indicators, risks, and mitigation measures were clear.

### 8.2 Site visits

Not applicable.

### 8.3 Conclusions from the Supplier Verification Programme

Not applicable.

# 9 Mitigation Measures

## 9.1 Mitigation measures

The mitigation measures per indicator are given in the table below. Subsequently, information is given on the management system, implementing the mitigation measures regarding the sustainability indicators.

1.2.1	<p><b><i>The Biomass Producer has implemented appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Supply Base</i></b></p>
<p><b>Mitigation measures</b></p>	<p>A specified risk is determined for areas without cadastral data. Futerra does not buy wood from wood lands, of which the owner rights are disputed. Any dispute concerning the ownership of the wood needs to be solved first. The precise location of the forest plot is determined. Delivery documents for every cargo have to state the origin.</p> <p>Considering forestry in the north of Portugal, however, the fact that there are no disputes / complaints does not guarantee the wood is legal / the seller is indeed the owner of all the plots harvested. For example, areas can become ownerless or are sometimes abandoned and some could try to take advantage of the situation before the land is impounded by the government.</p> <p>If after the interview of the owner there are doubts about the ownership, other local stakeholders or residents are interviewed, if the doubts remain Futerra demands a copy of the Land registry or Caderneta Predial Rustica. If this document or another document proving the ownership rights is submitted in advance, Futerra does not conduct interviews.</p> <p>The person responsible for the purchase of the raw material is constantly accompanying the loggers and ensuring these issues. Suppliers must have an 'Economic operator registration. Futerra also checks if the feedstock suppliers fulfil all fiscal and legal obligations (financial declaration).</p> <p>Whenever (before or after the plot is harvested) complaints are submitted (see also indicator 2.6.1) about the seller, Futerra will collect the land registry document and if needed will acquire it itself from the local department of 'Finances'. Invoices are always paid via the bank (check ownership of the bank account).</p> <p>During the site visit information is gathered on:</p> <ul style="list-style-type: none"> <li>• The type of vegetation and species;</li> <li>• Ground boundaries;</li> <li>• Accesses routes.</li> </ul>
2.1.1 HCV 1 & 3	<p><b><i>The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation values are identified and mapped.</i></b></p>
<p><b>Mitigation measures</b></p>	<p>The control system for feedstock, which also includes regular inspections of suppliers, is duly implemented. All used material is traceable to its origin through the harvest manifests and transport guides. All suppliers have to comply with the laws in force, which are supervised by the Tax Authority and the ICNF (Please see the file 'Plano Regional de Ordenamento Florestal' 'Documentation point 4 'cartografia síntese' (ICNF) for each region). Some HCV areas are designated as protected and classified areas at the national</p>

or EU level (Natura 2000). There are also smaller areas or biotopes important to biodiversity, or classified as priority species' habitats.

Futerra identifies and maps areas with high conservation values (HCVs). HCV 1 and 3 were assessed to have a specified risk. Extra effort is needed to identify and map these values. Internet sources, as well as the local situation needs to be studied.

Some HCV areas are designated as protected and classified areas at the national or EU level (Natura 2000). There are also smaller areas or biotopes important to biodiversity or classified as priority species' habitats. Habitats and species vulnerable to forestry operations are identified within the scope of Reed Natura2000 and Habitats and Birds Directive reports.

Futerra ensures:

- Mapping of the harvesting plot;
- Harvesting according to best practices in sustainable forest management;
- Cleaning of waste from plantations;
- Tree species (no genetically modified trees).

Steps taken:

- Study publicly available sources (internet sites) and other information regarding the plots where harvesting operations are planned and their surroundings;
- Inform feedstock suppliers on found results regarding possible risks in front;
- Onsite assessment of the plots and their surroundings prior to harvesting, measures are taken for example, when habitats are found;
- Development of adaptations to the harvesting plans, if needed.

Below the main sources of information, used to prepare the identification of these values for our harvesting teams. The forestry specialist evaluate every plot before the harvesting operations begins. Futerra inspects the suppliers and harvesting areas.

### **HCV 1 – Species diversity**

There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity. Species diversity is evaluated and recorded before harvesting operations commence. Caution and best practises are applied. Special attention is given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs). See also below, indicator 2.2.4

*Some information sources:*

- Classified areas: <http://www.icnf.pt/portal/naturaclas/cart>
- Protected area plans: <http://www.icnf.pt/portal/naturaclas/ordgest/poap>
- Endangered species: <http://www.icnf.pt/portal/naturaclas/patrinatur/especies>
- Endemic species:  
[http://naturdata.com/index.php?option=com\\_content&view=article&id=78&Itemid=60](http://naturdata.com/index.php?option=com_content&view=article&id=78&Itemid=60)
- Digital mapping information from the Manual das Linhas Eléctricas [Manual of Electric Lines] (ICNB 2008)
- Important Bird Areas of Portugal at: <http://ibas-terrestres.spea.pt/>
- Regional Forest Plans (PROF): <http://www.icnf.pt/portal/florestas/profs>

### **HCV 3 – Ecosystems and habitats**

There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm ecosystems and habitats. In these

	<p>situations, Futerra demands to evaluate the environmental impacts (on Ecosystems and habitats) of the forest operations before the forest operations commence. Caution and best practises are applied. See also below, indicator 2.2.3.</p> <p><i>Some information sources:</i></p> <ul style="list-style-type: none"> <li>➤ Habitats Directive (2007-2012)</li> <li>➤ Rede Natura 2000 database: <a href="http://www.icnf.pt/portal/naturaclas/rn2000">http://www.icnf.pt/portal/naturaclas/rn2000</a></li> <li>➤ Important Bird Areas of Portugal at: <a href="http://ibas-terrestres.spea.pt/">http://ibas-terrestres.spea.pt/</a></li> <li>➤ Convention on Biological Diversity (CBD) via DL no. 21/93, dated 29 June.</li> </ul>
<b>2.1.2</b> HCV 1 & 3	<p><b><i>The Biomass Producer has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.</i></b></p>
<b>Mitigation measures</b>	<p>There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity, ecosystems and habitats. Species diversity is evaluated and recorded before harvesting operations commence. Special attention is given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs).</p> <p>Futerra identifies and addresses potential threats to forests and other areas with high conservation values (HCVs). The control system for feedstock, which also includes regular inspections of suppliers, is duly implemented. Some HCV areas are designated as protected and classified areas at the national or EU level (Natura 2000). There are also smaller areas and biotopes important to biodiversity, which can be classified as priority species' habitats.</p> <p>Steps taken:</p> <ul style="list-style-type: none"> <li>• Assessment, evaluation and 'SBE approval' of suppliers</li> <li>• Desk Assessment of possible impacts of harvesting operations, regarding Publicly available information from credible third parties;</li> <li>• Training of suppliers on identification of forests with HCVs, and methods to protect HCVs;</li> <li>• Identification and mapping of protected species, habitats and key ecosystems on the plot before harvesting;</li> <li>• Development of adaptations to the harvesting plans, if needed;</li> <li>• Harvesting according to best practices in sustainable forest management;</li> </ul> <p>See also below, indicator 2.2.4 and indicator 2.2.3.</p>
<b>2.1.3</b>	<p><b><i>The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008.</i></b></p>
<b>Mitigation measures</b>	<p>Futerra considers all pine stands as forests and eucalyptus and poplar stands as plantations. Futerra checks if forests have been changed to eucalyptus or poplar plantations after 2008. When forest is converted to agricultural land or a plantation, or when land use change (conversion) is planned, the feedstock is not categorized as SBP compliant.</p> <p>When a eucalyptus or poplar plantation are cut, the history of the plantation is investigated:</p> <ul style="list-style-type: none"> <li>• The year of conversion to plantation (if it was converted after 2008). If needed, interviews with stakeholders and residents are taken and the plot is searched for tree stumps.</li> <li>• Was it a forest before being converted to plantation?</li> </ul> <p>This is dealt with in the Feedstock Supplier Declaration and addressed in the field operations checklist.</p>



<b>2.2.1</b>	<b><i>The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is sourced from forests where there is appropriate assessment of impacts, and planning, implementation and monitoring to minimise them.</i></b>
<b>Mitigation measures</b>	<p>In case no forest plan is available (no PROF, PGF ZIF, PUB, SNAC, as well as no PEFC or FSC certification), or a plan is available but does not apply to a small holder, an additional assessment of environmental impacts is made and recorded before harvest. Special attention is given to plots smaller than the minimum threshold for the mandatory Forest Management Plan (PROF) and outside the SNAC.</p> <p>Before harvesting operations commence, the plot is visited and evaluated:</p> <ul style="list-style-type: none"> <li>• The possible economical, ecological and social impact of the forest operations, including its surroundings. Harvesting plans can be changed to avoid negative impacts;</li> <li>• Was the forest management conform the law in the past (has the forest been cleaned according to the law in the past);</li> <li>• Specific Plans for Forest Intervention (PEIF) are studied for specific measures for the intervention on forest areas with major biotic problems (e.g.: invasive species, plagues or diseases) or abiotic (e.g.: high risk of forest fire);</li> <li>• Potential impacts of operations on ecosystems and biodiversity are identified. Impacts inside and outside the area of operation are considered, for example downstream;</li> <li>• Impacts are monitored and monitoring results are used to improve operational practices.</li> </ul> <p>Indicators 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2 include relevant management measures which are checked.</p>
<b>2.2.2</b>	<b><i>The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is sourced from forests where management maintains or improves soil quality (CPET S5b).</i></b>
<b>Mitigation measures</b>	<p>Before harvesting operations commence the plot is evaluated. Best forestry practises are applied.</p> <p>Best forestry practices apply:</p> <ul style="list-style-type: none"> <li>• Were needed, considering the soil and groundwater level, only selective cuttings and small clear cuts of maximally 5 ha are planned;</li> <li>• Regeneration focusses on tree species that maintain or improve soil quality;</li> <li>• Leave nutrients in the forests, mainly the green fraction of forest residues less or equal to 3 cm (on the other hand other forest residues need to be cleared to prevent forest fires.</li> <li>• Do not operate near-water areas.</li> <li>• Fertilization of the ground, when needed and possible.</li> </ul> <p>On dry locations selective cuttings are often preferable, because the ground gets less direct impact of the sun and the forest can maintain soil quality and regenerate naturally.</p> <p>Poor soil quality can lead to erosion and other problems. Therefore, this indicator is related to indicator 2.2.6.</p>
<b>2.2.3 &amp; 2.2.4</b>	<b><i>The Biomass Producer has implemented appropriate control systems and procedures to ensure that key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b). &amp; The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).</i></b>
<b>Mitigation measures</b>	Futerra prepares (publicly available) data on ecosystems and habitats (see above 2.1.1 on mapping and 2.1.2 on identifying and addressing potential threats). This information is given to

	<p>all feedstock suppliers. Feedstock suppliers are trained to recognise key ecosystems and habitats.</p> <p>Steps in risk mitigation:</p> <ul style="list-style-type: none"> <li>• Training of suppliers, assessing and selecting ‘SBE approved’ suppliers;</li> <li>• Desk assessment (before harvesting operations commence) of key ecosystems and habitats: <ul style="list-style-type: none"> <li>○ All classified areas: <ul style="list-style-type: none"> <li>- National Network of Protected Areas;</li> <li>- Special Areas of Conservation (SAC);</li> <li>- Special Protection Areas (SPA);</li> <li>- Ramsar sites;</li> <li>- Important Bird Areas (IBA);</li> </ul> </li> <li>○ Priority habitats in Natura 2000 network;</li> <li>○ Areas where threatened species occur;</li> <li>○ Areas where endemic species of the Iberian Peninsula occur;</li> <li>○ Areas where seasonal concentrations of species occur;</li> <li>○ Large landscape level forests;</li> <li>○ Important areas for watershed protection;</li> </ul> </li> <li>• Forest plot inspection prior harvesting;</li> <li>• Mapping of the harvesting plot, indicating key ecosystems, habitats and objects of importance to biodiversity; making photos prior to harvesting.</li> <li>• Best forestry practices, including measures to conserve and increase biodiversity (for example, standing dead wood.</li> <li>• Change of operational plan, if necessary.</li> </ul>
<b>2.2.6</b>	<b><i>The Biomass Producer has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised (CPET S5b).</i></b>
<b>Mitigation measures</b>	<p>Futerra monitors the harvesting operations of its feedstock suppliers. Best practices are required to comply with the SBE program requirements.</p> <ul style="list-style-type: none"> <li>• Desk assessment (before harvesting operations commence) of Important areas for watershed protection <ul style="list-style-type: none"> <li>○ Cork oak and holm oak savannas located in areas with an aquifer recharge rate of over 175 mm/year</li> <li>○ Aquifers</li> </ul> </li> <li>• The plots and the surroundings (hill slopes and streams) are inspected on: <ul style="list-style-type: none"> <li>○ Runoff problems (regarding the landscape, onsite and in the surroundings);</li> <li>○ Groundwater level problems (too high or too low);</li> <li>○ Protection of riversides and (lake) coastlines;</li> </ul> </li> <li>• In areas vulnerable to water damage, the maximal contiguous clear cut area is 5 ha;</li> <li>• Best forestry practices; Feedstock suppliers are trained to not contaminate ground water and to plan forest management operations that protect the soil, forest and surroundings from surface water runoff; Runoff of elements of fertilizers and pesticides into the surrounding environment.</li> </ul>
<b>2.3.2</b>	<b><i>Adequate training is provided for all personnel, including employees and contractors (CPET S6d).</i></b>
<b>Mitigation measures</b>	<p>Futerra trains its personnel on all relevant aspects and demands the same from its feedstock suppliers.</p> <ul style="list-style-type: none"> <li>• Training records obligatory according to legislation and records of qualification are collected during supplier qualification process and checked during supplier inspections;</li> </ul>

	<ul style="list-style-type: none"> <li>• Training conducted by Futerra in several fields, including identification of key ecosystems, habitats and species biodiversity (annually and additionally based on the results of the plot assessments);</li> <li>• Training on best forest management practices.</li> <li>• Futerra performs supplier inspections: the training records, (new) workforce, and the hiring of specialists. The level of knowledge of personnel is inspected during site visits.</li> </ul>
<b>2.4.2 Fire fighting</b>	<b><i>The Biomass Producer has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately (CPET S7b).</i></b>
<b>Mitigation measures</b>	<p>On the above information specified risk is assessed on the fire management at forest level. Visual inspection of the plot before harvesting (checklists). Checked is if the plot was managed well on fire protection in the past.</p> <ul style="list-style-type: none"> <li>• Investigation of PMDFCI (Municipal Forest Fire Protection, Municipal de Defesa da Floresta Contra Incêndios);</li> <li>• Visual inspection of the plot before harvesting;</li> <li>• Implementation of forest fire fighting measures according to law;</li> <li>• Best forest practices;</li> <li>• Monitoring performance.</li> </ul>
<b>2.6.1</b>	<b><i>Appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions.</i></b>
<b>Mitigation measures</b>	<p>Such mechanisms play an important function as a safety net for sufficient performance on social and cultural aspects of Sustainable Forest Management and in complying with other indicators of SBP standard 1.</p> <ul style="list-style-type: none"> <li>• The aim is to solve grievances and disputes before the harvesting operations commence (or not to buy from the disputed plots).</li> <li>• Futerra makes clear to employees and stakeholders that any complaint or comment related to feedstock supply is taken very seriously, to ensure sufficient performance on legality and social aspects of Sustainable Forest Management.</li> <li>• Futerra has a complaint procedure and keeps records. The feedstock suppliers are also required (signed supplier declaration) to actively implement a complaint procedure and keep records.</li> <li>• Futerra monitors the harvesting operations of its feedstock suppliers and checks their records on Complaints and Comments. Proactive interviews with relevant stakeholders, such as land owners on submitted comments (orally and in writing), and assesses if complaints were dealt with sufficiently.</li> <li>• The results of the inspections have direct influence on the 'SBE program approved' status of feedstock suppliers.</li> </ul>
<b>2.8.1</b>	<b><i>The Biomass Producer has implemented appropriate control systems and procedures for verifying that appropriate safeguards are put in place to protect the health and safety of forest workers (CPET S12).</i></b>
<b>Mitigation measures</b>	<p>Futerra has a control system and adequate procedures on the health and safety of forest workers. Futerra demands the same from its feedstock suppliers and checks the health safety of harvesting personnel during its monitoring (administrative and field) inspections.</p> <ul style="list-style-type: none"> <li>• Supplier qualification process and inspections of the supplier's administration: <ul style="list-style-type: none"> <li>○ Insurances and aptitude forms;</li> <li>○ Social Security;</li> <li>○ Present workforce and training (new) personnel;</li> <li>○ Health and safety procedures;</li> <li>○ Training records and hiring of specialists;</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Records of Personal Protection Equipment (PPE) distribution;</li> <li>○ Records of machinery safety tools and equipment on documental register;</li> <li>○ Medical record for employment.</li> <li>● Field inspection supplier: <ul style="list-style-type: none"> <li>○ Protective equipment use;</li> <li>○ Medical kit;</li> <li>○ Fire extinguisher;</li> <li>○ Respect of safety distances;</li> </ul> </li> <li>● Level of knowledge of personnel.</li> </ul>
<b>2.9.1</b>	<b><i>Feedstock is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.</i></b>
<b>Mitigation measures</b>	<p>Wood from forests converted to plantations, as also wood lands that are converted to non-forest use are not considered SBP compliant.</p> <p>Wood from forests which are not managed according to best practices and which do not safeguard the carbon stocks above (regeneration of forests) and in the ground (degradation of grounds) are not considered SBP compliant. See also indicator 2.2.2. Non-compliance with this indicator can also result in not procuring the feedstock.</p> <ul style="list-style-type: none"> <li>● Desk assessment, monitoring, and identification – High-risk and ‘Important areas for carbon storage’;</li> <li>● Field inspections and possible adaptations of forest management plans;</li> <li>● Limitation of harvesting operations on ‘Important areas for carbon storage’.</li> </ul> <p>See also indicator 2.1.3.</p>

### ‘SBE approval’ of primary feedstock suppliers

Site inspections are conducted continuously to check operational performance on mitigation measures in practise. The feedstock suppliers need to show a high level of understanding of the SBP indicators.

Currently, the evaluations (check lists) before and during the forest operations are carried out together with Futerra. In the future, feedstock suppliers could be evaluating the forest stands before the operations commence themselves. Futerra will keep inspecting the performance during the operations.

Futerra’s evaluation of its feedstock suppliers, include:

- Checking performance of harvesting operations of feedstock suppliers;
- Awarding feedstock suppliers that comply with all SBP requirements the ‘SBE approved’ status;
- Continuous re-assessments of ‘SBE approved’ feedstock suppliers.

Futerra’s sampling and monitoring procedure applies to all feedstock suppliers, not only to the ‘SBE approved’ ones. As explained in the following subsection, Futerra, does not always accept feedstock coming from an SBE approved feedstock supplier as ‘SBE compliant’.

## Acceptance and determination of the feedstock

The practical implementation of the risk mitigation measures is a continuous process. Risks and mitigation measures need to be specified up to the level of practical operations. Important is the assessment of the plots prior to harvesting.

Steps taken to guarantee sustainable management:

- Studying publicly available information regarding the plots and their surroundings where harvesting operations are planned;
- Informing feedstock suppliers on found results on possible sustainability risks;
- Onsite assessment of the plots and their surroundings prior to harvesting, indication of the findings on a schematic map;
- Checking possible local interests and future land use plans;
- Evaluating the risks and possible impacts of the harvesting operations;
- Necessary adaptations to the operational plans are developed and proposed;
- Records are kept on the investigation of the plot and its surroundings and the performed measures.

Inspections include the harvesting activities of feedstock suppliers (field inspections) and the administration of the feedstock suppliers (sometimes office inspections).

Considering the situation in Portugal, not all feedstock provided by the SBE approved feedstock suppliers will automatically become SBP-compliant feedstock. There are factors beyond reach of the SBE approved feedstock suppliers (e.g. land owners can have interests that conflict with the SBE requirements).

Futerra does not categorise feedstock as compliant, when:

- The harvesting operations do not comply with the requirements on sustainability (SBP Standard 1);
- If future management of the land will not comply with the requirements on sustainability (SBP Standard 1), for example, because land conversion to urban use is planned

When serious violations of legal and/or sustainability aspects are encountered, the feedstock is not bought by Futerra. Minor violations of the SBP SBE indicators withhold volumes to be accepted as 'compliant feedstock', in that case the feedstock remains 'controlled material'.

## 9.2 Monitoring and outcomes

Regarding forestry in Portugal, Futerra and its suppliers are motivated to cooperate with the forest land owners to implement risk mitigation measures. The evaluations and inspections, together with the developed documents give the possibility to assess if the feedstock can be accepted as 'SBP compliant feedstock'.

Futerra constantly monitors its feedstock suppliers to see if they comply with the mitigation measures. The 'SBE program approved' status is re-evaluated every year and is directly withdrawn if a major non-conformity has been found.

Futerra continuously inspects all harvesting teams and feedstock suppliers. A selected group of suppliers has received guidance and trainings. The results of the monitoring system (including the effectiveness of the mitigation measures) were positive, however, because the company started operations only in the summer of 2019, only a small share of the feedstock could comply with the SBE program requirements as yet.

# 10 Detailed Findings for Indicators

Detailed findings for each Indicator are given in Annex 1.

# 11 Review of Report

## 11.1 Peer review

The report has taken into consideration the drafts of the SBP NRA for Portugal and was sent to a large stakeholder group for consultation. Therefore, a peer review was not necessary.

## 11.2 Public or additional reviews

The SBR and SBE was sent to a large group of stakeholders for review (more information in Chapter 6).



## 12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	Joana Crisostomo, Eng <sup>a</sup> Ambiente	SFM manager	
	Ana Castro, Eng <sup>a</sup> Ambiente	Certification Manager	
	Rens Hartkamp, PhD	Consultant	24.06.3029
	<b>Name</b>	<b>Title</b>	<b>Date</b>
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:	<i>João Paulo Baltazar</i>	Director	24.06.3029
	<b>Name</b>	<b>Title</b>	<b>Date</b>

## 13 Updates

Initial audit. Not applicable.

### 13.1 Significant changes in the Supply Base

Initial audit. Not applicable.

### 13.2 Effectiveness of previous mitigation measures

In the development process of the SBE, additions have been made to Futerra's procedures and evaluation tools. The measures were tested in practise. They proved to be effective.

### 13.3 New risk ratings and mitigation measures

Initial audit. Not applicable.

### 13.4 Actual figures for feedstock over the previous 12 months

Futerra started procurement of feedstock in the summer of 2019.

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

200,000 – 400,000 tonnes of feedstock.