SBP

Sustainable Biomass Program

Supply Base Report: Tec Pellets, Produção e Comercialização de Pellets, Lda.

Second Surveillance Audit

www.sbp-cert.org

Completed in accordance with the Supply Base Report Template Version 1.2

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

Document history

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1 Overview

Producer name:	Tec Pellets, Produção e Comercialização de Pellets, Lda.
Producer location:	Rua Padre Celestino Furtado, Nº 723, 4570-077 Balazar - Póvoa de Varzim
Geographic position:	41.389075 (41°23'20.7'N) latitude -8.612369 (8°36'44.5'W) longitude
Primary contact:	Ana Alves
Email:	ana.alves@tecpellets.pt
Company website:	www.tecpellets.pt
Date report finalised:	14/Sep/2018
Close of last CB audit:	20/Sep/2018
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.sbp-cert.org/documents

SBP Endorsed Regional Risk Assessment: N/A

Weblink to SBE on Company website: www.tecpellets.pt

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

2 Description of the Supply Base

2.1 General description

Supply Base of Tec Pellets

Tec Pellets is a pellet production company located in the village of Balazar in Portugal. Balazar is located to the north of Porto.

The present SBP reporting period is from 1 January 2017 to 31 December 2017. Statistics provided in this report are based on this period.

Tec Pellets buys low-grade forest residues and secondary feedstock from sawmills. Tec Pellets has its own harvesting teams but buys most of the primary feedstock from independent harvesting companies. To increase its procurement of FSC certified feedstock, Tec Pellets is sourcing primary feedstock from one supplier in Spain, and one supplier on the island of São Miguel (Azores, Portugal)..

The present Supply Base of Tec Pellets includes three sub-copes:

1. Continental Portugal (around 130 suppliers; of which 18 secondary feedstock suppliers);
2. Spain (1 supplier);
3. FSC certified forests (154,78 ha) on the island of São Miguel, Azores (1 supplier).

Firstly, Tec Pellets' souring activities are described (per sub-scope). Secondly, a general description of forestry characteristics per sub-scope are given.

Sub-scope 1: 'Continental Portugal'

The sub-scope 'Continental Portugal' is the only region that is investigated within Tec Pellet's SBP Supply Base Evaluation (SBE). The sub-scope 'Spain' and 'FSC certified forests on the island of São Miguel (154,78 ha)' are not included in the SBE.

Considering the total amount of feedstock (and the primary feedstock) it processes, Tec Pellets is the second largest company in the north of Portugal (after a pulp and paper company). Primary feedstock accounts for approximately 40 - 50% of total feedstock supply. Around 10 feedstock suppliers are FSC certified but not all deliver the feedstock with an FSC claim. Tec Pellets uses a small amount of feedstock from around 5 suppliers as biofuel for the drying process.

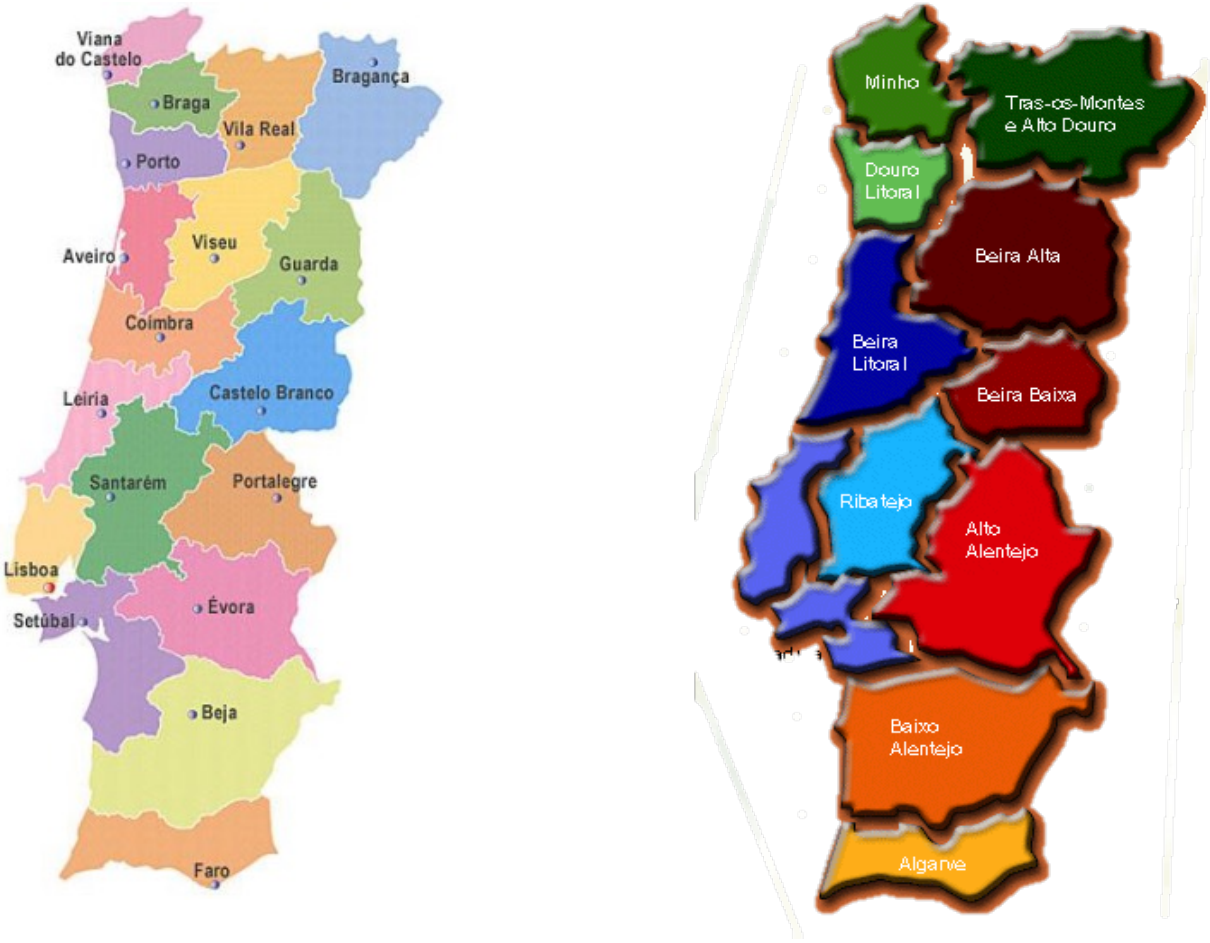
Although the Supply Base consists of whole continental Portugal, Tec Pellets is only using wood from the central and northern administrative regions of Portugal; more specifically wood from the following regions:

- Beira Litoral;
- Douro Litoral;
- Minho;
- Trás-os-Montes and Alto Douro (Figure 1).

Most landowners in these regions own small plots of only one or two ha. From these regions, Tec Pellets sources the following tree species:

- Maritime pine *(Pinus pinaster);*
- Eucalyptus *(Eucalyptus spp.);*
- Poplar *(Populus spp.).*

Figure 1. Regions of Portugal



Supply from Spain

Tec Pellets has one supplier of FSC certified wood residues in Spain. Wood supply bought from Spain is 'SBP-compliant Primary Feedstock'.

The supplier harvests only Poplar (Populus spp.), which is not a protected CITES or IUCN tree species. In Spain, there are approximately 105 000 ha of poplar plantations (ProPopulus, 2018). 40% of the plantations are public property (sub-branches of City Councils and Administration), and 60% are private ownership. The main region of harvest 'Castilla y León' holds around 70 000 ha of poplar plantations. Poplar is categorized as a species of fast growth (15 years).

The supplier is a saw mill. It provides primary feedstock in the form of wood chips. The saw mill processes around 70% of the poplar in Spain. These plantations are practically always clear cut. The saw mill is responsible for the regeneration of the plantations.

Other industries are comparable in size or larger, but use other tree species, mainly pine. The feedstock supplier holds the PEFC and FSC certificates, over half of its feedstock is certified. The company applies its FSC Controlled Wood evaluation procedure on the non-FSC certified volumes. It can deliver volumes with PEFC claim.

Supply from FSC certified forests (154,78 ha) on the island of São Miguel, Azores

Tec Pellets has one supplier of FSC certified wood on the Sau Miguel island. The feedstock is bought with the FSC 100% claim (total feedstock supply is 'SBP-compliant Primary Feedstock'). The supplier only produces woodchips.

The supplier is a saw mill. It harvests only Cryptomeria (Cryptomeria japonica), which is not a protected CITES or IUCN tree species. The saw mill is also one of the largest forest harvesting companies on the island. The supply base is an FSC certified forest of 154,78 ha, which is owned by the local government. The company does small clear cuts and is responsible for planting a new generation of Cryptomeria.

The sub-scope1: 'Continental 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;
- Lacking cadastral data (only 53% of the land), 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.

Figure 2: Tree species distribution

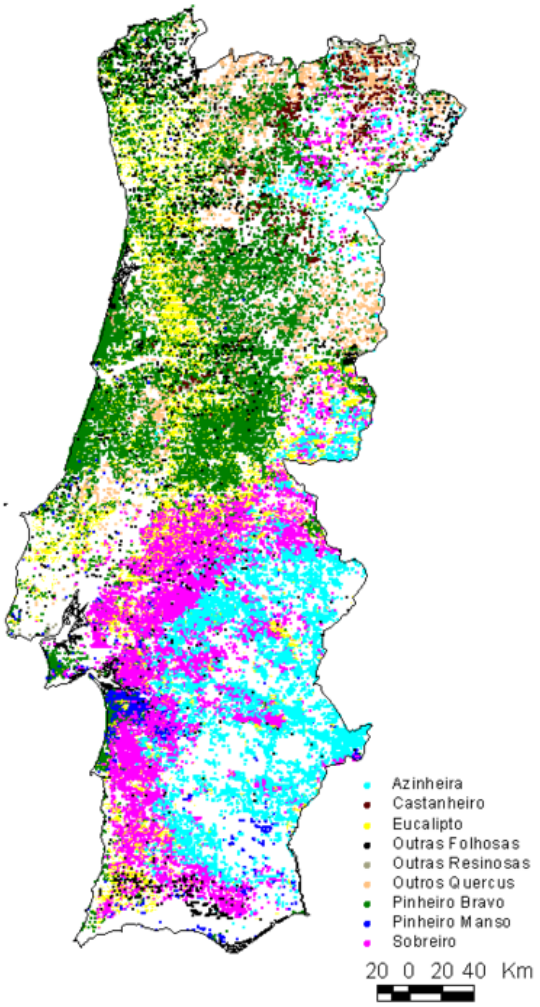
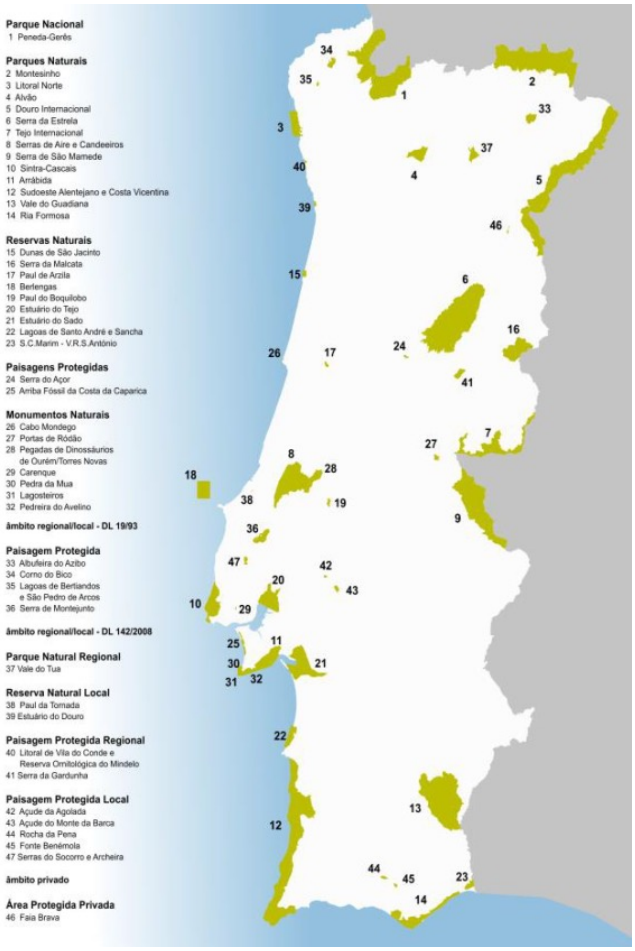


Figure 3: Protected areas



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 national forest and conservation authority is the Institute of Conservation of Nature and Forests (ICNF) 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) is engaged in the inspection of environmental issues and natural resources in all private and public areas.

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The felling phytosanitary manifest includes identification of the origin of the felling. Also, documentation for transportation identifies the origin of the transport which can be useful in case of direct transports to Tec pellets. 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. Considering the relatively positive Corruption Perception Index (2017) of Portugal (CPI 63) 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.
- Holm oak (Quercus rotundifolia), 11% of forest area.
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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 Nº.155/2004) and European holly (*Ilex aquifolium*; protected by Law Nº. 423/89).

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) does list a considerable number of protected plant species for Portugal, however, the list does not include any tree species. The 'Red List' of the IUCN (International Union for Conservation of Nature and Natural Resources) indicates hundreds of plant species for the continental territory of Portugal, but also does not include any tree species. 49 plant species are reckoned relevant regarding forest operations.

Climate change and the occurrence of extreme meteorological events has increased the phenomenon of forest fires, mainly medium and big fires (more than 100 ha), one of the largest perceived risks in the Portuguese forestry sector, incurring very high costs. 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 in 1999.

To derive maximum economic benefit, distribution of the three main forest species – maritime pine, eucalyptus and cork oak – is vertically integrated within the forestry industry, with maritime pine and eucalyptus being concentrated in timber-producing areas and cork oak in multifunctional areas.

Goods produced by way of forestry activities sustain an important and integrated industrial chain based on natural resources that in turn supports a strong export sector. Portugal, therefore, views forests and forestry products as an area of crucial importance to its economy. The forest sector has a significant impact on its GDP - higher than the European average. The forest sector represents almost 10% of the national export trade and 2% of the Gross Value Added. Forests are also the base of an economic sector which generates around 100 000 direct jobs (4% of the active population).

Sub-scope 2: 'Spain'

Spain has approximately 27,7 million ha of forests and wood lands, representing 56% of total land area. Of this area 18,0 million ha is considered 'Forested land' (36%) and 9,5 million (19%) falls in the category of 'Other wooded land'. Of the forested land, approximately 90% is considered seminatural; 10% are plantations. A small, but growing, proportion of these plantations consists primarily of introduced eucalypt species (580 thousand ha, representing 5% of the forested land in 2005) (FSC-CNRA-ESP V1-0).

Between 1970 and 2010 Spain's forest area increased by about 6,48 million ha. Between 1990 and 2010, growth was 4,4 million ha. With an average rate of 210 000 ha per year, Spain the fastest growing forest area in Europe.

In 2015, there were 194 000 ha FSC certified in Spain (29 FSC Forest Management certificates and 716 FSC chain of custody (COC) certificates). In 2017, there were 1 830 546 ha certified under PEFC (16 076 PEFC Forest Management certificates, and 1 115 PEFC CoC certificates).

According to the National Forest Inventories, over 80% of forests in Spain are composed of two or more tree species. The largest formation is made of holm oaks (which represents 15,3% of the tree covered area), followed by pastures and pine stands.

Average annual logging volume between the years 2000 and 2010 was 15,3 million cubic meters of barked wood, of which approximately 60% was coniferous and 40% deciduous. These logging rates account for a mere 1,5% of stock and 32% of the annual increment. In 2010, annual wood consumption was 27,7 million cubic meters. The main timber producing species are eucalyptus, maritime pine, radiata pine, scotch pine, and poplars.

There are four broad categories of forest type:

- The Mediterranean broadleaved forests (in the south-central region);
- The Mediterranean conifer forests (also found in the south-central region);
- The Atlantic forests, a group of mixed formations of beech, oak, chestnut, birch, etc;
- Plantations of mainly introduced tree species.

The Mediterranean nature that characterizes most of the country brings with it a great variety of forest ecosystems and an extraordinary wealth of flora, which means that Spanish forests have high biodiversity levels. The extraction of non-wood products is significant. The most significant products in economic terms are cork, fruit, biomass production for energy purposes, resins, grazing pastures, mushrooms, hunting and different plants.

The public administration of forests and forestry is divided among different jurisdictional levels in Spain:

- State General Administration;
- Autonomous Communities (AC) of which there are 17 covering all Spanish territory; and
- Local public bodies within each Autonomous Community.

Spanish forestlands are distributed between:

- Privately owned lands (70,9%);
- Local administrations (22,9%);
- The central and regional governments (6,2%)[Error! Bookmark not defined.].

Over two-thirds of the forests are private property, less than one third are under public ownership, and only a small proportion is owned by the state. Most public land is owned by local public corporations. Forest management is also shared among the different jurisdictional levels; there are State laws which include general regulations but most responsibility for the management of public forests falls at the level of the Autonomous Community. Wood harvesting is regulated by the Autonomous Community's forest agency. There are specific areas legislated mostly by the state (e.g. land tenure, tax payment, transports) but others for which each Autonomous Community have developed their own legislation, the content and provisions of which differs from one community to another (as with management and harvesting planning).

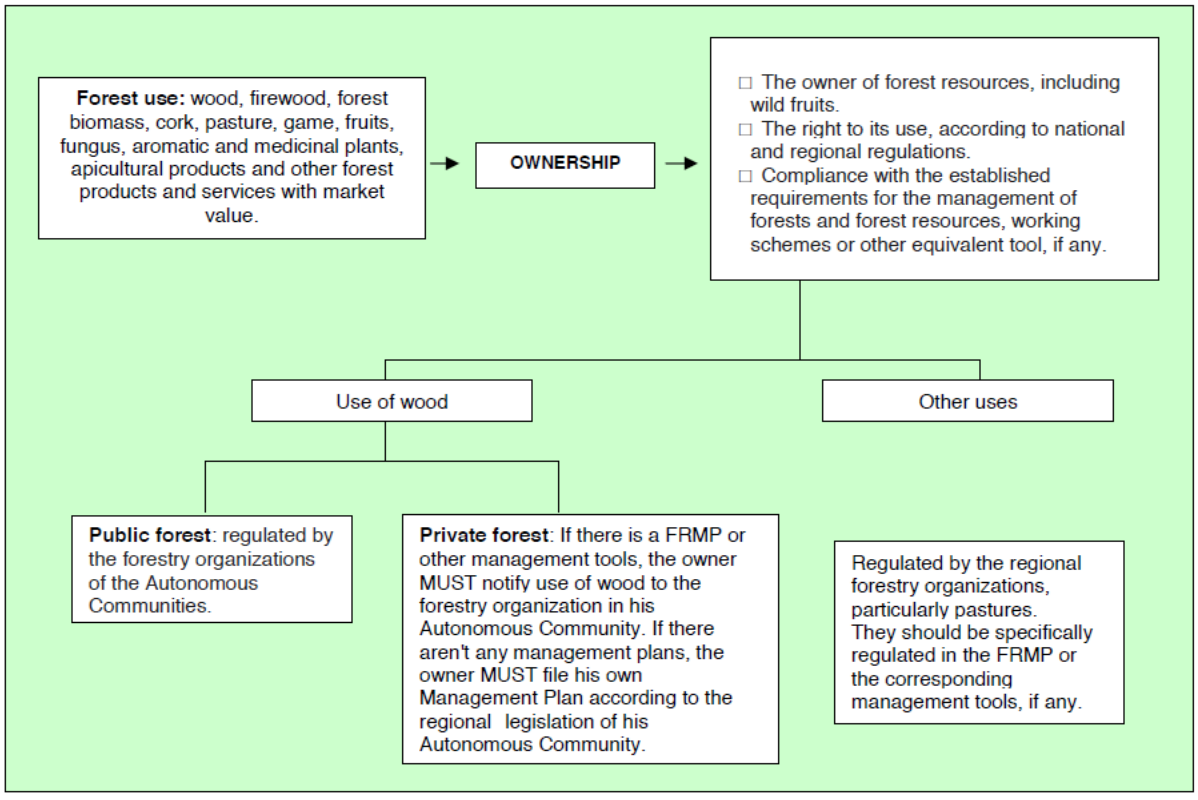
The size of forest lands depending on their ownership does not reflect great differences between those that belong to the State and those that belong to other public entities, with an average of 500 and 600 ha respectively, but there is a significant difference with privately owned forestlands, whose mean surface area scarcely covers 3 ha, clear indication of the extent of smallholdings still existing in the private forest sector (Spanish Forest Strategy).

The Spanish Forest Law (Law 43/2003) forms the legislative basis for forest management. Most Autonomous Communities have their own laws ('Ley de Montes') regulating the protection, management and harvesting of forests in their territory. Article 33 establishes the need for both public and private forests to have a Forest Management Plan, and a working scheme or other equivalent Management Instrument. These documents will be elaborated by the owner/title holder and must always be approved by the regional forestry organization. Multiple laws in each Autonomous Community regulate forestry and harvesting and the specific technical forest operating constraints

Any organisation that wishes to become certified in Spain must have a forest management plan with defined management goals, techniques and actions. Next to FSC, Spain has a PEFC Endorsed Forest Certification System, based on the national sustainable forest management regulation 'UNE 162 000'.

As stated in the Forest Act, forest management plans are obligatory for all public and private forests, except those that do not meet the minimum area each Autonomous Community determines.

Forest ownership and use in Spain:



The wood and furniture sectors are of significance to Spain's national economy, because of the large number of companies in represents (a total of 29 555), of which 16 160 companies are manufacturing furniture and 13 395 other wood-based products. The sector is also significant because of the employment it generates, with 147 000 employees, of which 85 200 correspond to the furniture sector (PEFC, 2017).

Sub-scope 3: 'FSC certified forests on the island of São Miguel (Azores; 154,78 ha)

The Autonomous Region of the Azores is one of the two autonomous regions of Portugal, an archipelago composed of nine volcanic islands in the North Atlantic Ocean about 1 360 km west of

continental Portugal, about 1 643 km west of Lisbon, in continental Portugal, about 1 507 km from the African coast, and about 1 925 km southeast of Newfoundland, Canada.

The archipelago is of volcanic origin and comprises 9 islands and several islets. The geographical position of Azores and its volcanic origin gave rise to a wide variety of ecosystems and landscapes. Some of the Azores' natural resources have been classified by UNESCO as biosphere reserves (i.e. Corvo, Flores and Graciosa).

São Miguel Island is the largest and most populous island in the Azores. The island covers 760 km^2 and has around 140 000 inhabitants, 45 000 people live in the main city: Ponta Delgada. This island is the seat of the regional government and consists of 6 municipalities.

The island is 65 km long and 16 km broad at its widest point, it is composed of two volcanic massifs separated by a low central ridge. There are some hot springs (caldeiras), generally located in the center of the island, in the area stretching from Povoação to Nordeste. The highest elevation on S. Miguel is the Pico da Vara at 1 103 meters. Lying at the eastern end of the island, it is the focus of a Special Protection Area containing the largest remnant of laurisilva forest on the island, which is home to the endemic and critically endangered bird, the Azores bullfinch.

As an autonomous region, the Azores has its own tax-raising powers and has the power to adopt the regional economic and social development plan and the regional budget and to participate in negotiations for international treaties and agreements that concern the region, including topics related to the environment and regional planning.

The region's economy is mostly based on services, with an important role in terms of employment played by the public administration, followed by the wholesale and retail trade, transport, accommodation and food-related service activities. There is a high dependence on family labour (about 80%). The forest is a determinant component of the landscape on the 9 islands. Covering about one-third of the territory, the Azorean forest supports a sector responsible for 1 400 jobs, generating an annual income of about 1,8 million euros by direct

sale of timber, and 10,9 million euros on the first wood process industries (website of the Azores Government, 2017).

The Azorean islands have a particular type of laurel forests, composed of mainly endemic evergreen tree and shrub species. The native forest in the Azores is characterised by a dense tree and shrub cover of small stature, closed canopy, extensive overlay of bryophytes, high levels of humidity and low understorey light.

The Azorean forest area has 12 698 ha of Japanese cedar (*Cryptomeria japonica*) pure and mixed plantations. About 4 500 ha of those are under Regional Government management, with 2 119 ha in São Miguel Island. According to the Forest Inventory of the Autonomous Zone of the Azores in 2007, cryptomeria is the second most represented tree species on the islands, about 26% in terms of forest area. 66% of all cryptomeria forest stands of the Azores are located on the island of São Miguel.

Forestry properties operated for economic purposes continue to be small, due to a shortage of land and the clear priority attributed to conservation, protection, planning and leisure. Sustainable growth, encouraging the sustainability of rural spaces and natural resources, by promoting the continued use and sustainable management of agricultural and forestry lands was set as one of the priorities (European Commission, Autonomous Region of the Azores: Action Plan 2014 – 2020).

Azores's territories have one single forest inventory (IFRAA for Azores). The Government of the Azores through the Regional Directorate for Forest Resources develops the Forest Inventory, which main objective is to generate graphical and numerical information on land use, as well as the assessment of wood material.

Table 3: Forest characteristics Autonomous Region of Azores (*FAO country report Portugal, 2010)*

Territory	**Category**	**Area (1000 ha)**	
Autonomous Region of Azores	Reference year		**2007**
	Primary forest		7.97
	Other naturally regenerated forest		30.12
	...of which of introduced species		28.66
	Planted forest		17.87
	...of which of introduced species		17.87
	Total		**56.0**

FSC certified forests on S. Miguel, Azores (154,78 ha of cryptomeria wood lands)

Most of the forest areas managed by forest agencies had forest management plans in 1990, 2000 and 2005 (planos de ordenamento, planos de arborização or planos de cortes). The autonomous regions of Azores and Madeira are initiating the regional forest plans process. These plans will define the legal and technical scope to be followed by the property-level forest management plans.

The Government of the Azores started in 2014 the active management of the forest areas under its responsibility, through the selection of areas for cutting and the definition of a series of operations and regulations to be met in the exploitation of this resource. In 2017, the Regional Secretariat for Agriculture and Forestry of the Azores launched a public tender for the sale of certified wood bearing the FSC claim and the reforestation of 154,78 ha of cutting areas. The cutting and reforestation areas covered by this tender are in Tronqueira Forest, Lomba de S. Pedro and Água Retorta, located in the forest perimeter of S. Miguel island, in the municipalities of Nordeste, Ribeira Grande and Povoação. The certified area is divided in lots of approximately 3-5 ha.

In this context, the FSC certificate, which currently distinguishes ‘Azores Cryptomeria’ enhances the competitiveness of this resource. Japanese Cryptomeria is one of the most represented species of forest production in the Azores, generating an annual turnover of 12 million euros ((website of the Azores Government, 2017).

2.2 Actions taken to promote certification amongst feedstock supplier

Tec Pellets, mainly through its Environmental Engineer, interacts directly with its suppliers, promotes the use of best forest practices, and encourages forest certification. Tec Pellets underlines the advantages and importance of forest certification to the wood sector in general, and to the pellet business in particular. Upon receipt of the feedstock, certified suppliers are rewarded through higher payments.

After FSC certification of Tec Pellets in September 2015, the company needed larger quantities of FSC certified wood. Tec Pellets has an ongoing program to help suppliers achieve forest certification, in exchange for long-term contracts.

Tec Pellets is determined to increase the use of FSC certified feedstock. In 2017, Tec Pellets has extended its scope to Spain and to the island of São Miguel to increase procurement of FSC certified wood resources.

2.3 Final harvest sampling programme

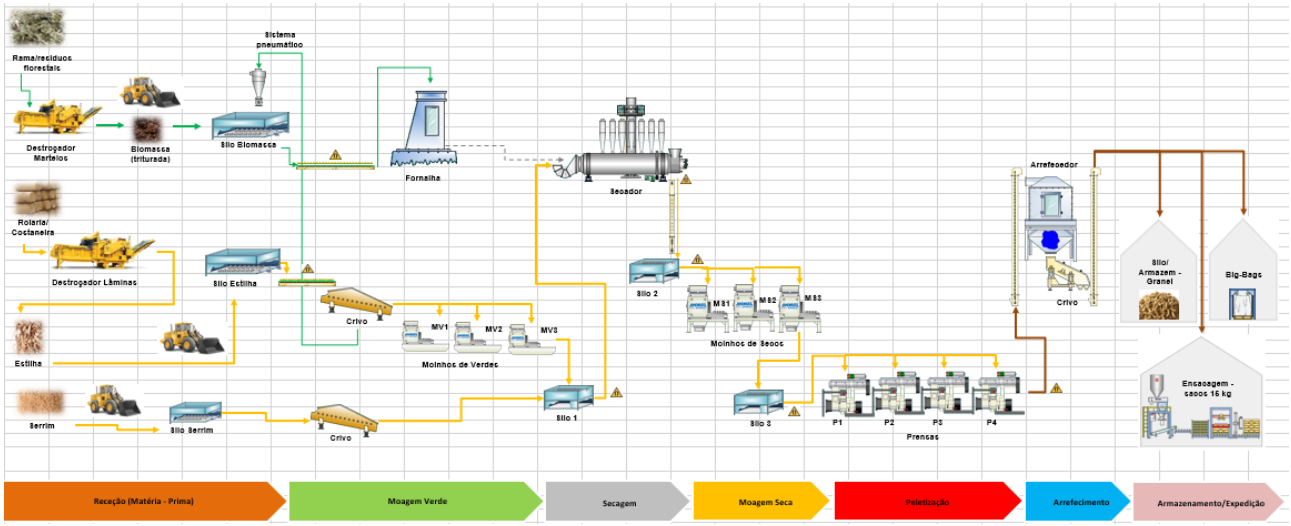
The harvesting operations are not performed for the production of wood pellets (no energy plantation); the tree stems are used by (sold to) other industries. Tec Pellets uses harvesting and woodworking residues (including small, low-grade tree stems).

From the tree species used by Tec Pellets only the maritime pine (*Pinus pinaster*) has a planned forest management period of more than 40 years. The Eucalyptus and Poplar, as also the Cryptomeria on the island of S. Miguel are all fast-growing tree species, which are to be cut before the age of 40 years.

Considering the final felling systems nearly 90% originates from clear cuts; over 10% from selective cuttings. A part of pine wood originates from maintenance operations (thinnings). Most clear cuts are small, around 2 ha, the largest clear cuts made are around 9 ha. In the north of Portugal clear cuts are restricted to maximally 10 ha. Reforestation is performed by the land owners.

The age of the forest is indicated on the ‘Manifesto de Corte ou Arranque de Arvores’, which is supplied with the feedstock. Tec Pellets examines the forest plots and their age before harvest.

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



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: 411 thousand ha (2018) PEFC 253 thousand ha (2017)

Sub-scope 2 'Spain'

a.	Total Supply Base area (ha):	18,4 million ha forested area (FAO, 2015) 27,7 million ha forest lands officially
b.	Tenure by type (ha):	Private: 19,6 million ha forest lands (71%) Public: 8,1 million ha forest lands (29%)
c.	Forest by type (ha):	Temperate Forest: 27,7 million ha forest lands
d.	Forest by management type (ha):	Managed natural: 15,5 million ha Plantations: 1,8 million ha; Of which poplar plantations: 105 000 ha
e.	Certified forest by scheme (ha):	FSC: 272 thousand ha (2018) PEFC: 2 153 thousand ha (2017)

Sub-scope 3 'FSC certified forests on São Miguel Island (Azores)'

a.	Total Supply Base area (ha):	154,78 ha
b.	Tenure by type (ha):	Private: 0,00 ha (0%) Public: 154,78 ha (100%)
c.	Forest by type (ha):	Temperate Forest: 154,78 ha (100%)
d.	Forest by management type (ha):	Plantations: 154,78 ha
e.	Certified forest by scheme (ha):	FSC: 154,78 ha (2017)

Feedstock

f. Total volume of feedstock: 0 – 200 000 tonnes
109 102,14 tonnes (in 2017)

g. Volume of primary feedstock: 0 – 200 000 tonnes
48 563,06 tonnes (in 2017)

- 33 429,10 tonnes wood logs
- 15 133,96 tonnes wood chips

Additionally, 55,90 tonnes of branches were used as fuel for the dryer (2017 data).

h. Percentage by categories of primary feedstock:
- Certified to an SBP-approved Forest Management Scheme: 0% (in 2016, but present in 2017)
- Not certified to an SBP-approved Forest Management Scheme: 100% (in 2016 all was FSC CW)

i. Species present in the primary feedstock:
- maritime pine (*Pinus pinaster*) (in 2017 and 2018)
- Eucalyptus (*Eucalyptus spp.*) (in 2017 and 2018)
- Poplar (*Populus spp.*) (in 2017 and 2018)
- Cryptomeria (*Cryptomeria japonica*) (since 2017)

j. Volume of primary feedstock from primary forest: None (0,00 m^3)

k. List percentage of primary feedstock from primary forest (j), by the following categories.
Subdivide by SBP-approved Forest Management Schemes:
- Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme
- Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme

Not applicable

l. Volume of secondary feedstock: 49 800,84 tonnes from sawmills (2017)
- 28 845,03 tonnes woodchips
- 10 754,22 tonnes sawdust
- 10 201,59 tonnes slab wood

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
☒	☐

Tec Pellets 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. Moreover, the risks to forestry in Portugal are limited and possible to mitigate.

Forest operations by the harvesting teams of Tec Pellets and by its feedstock suppliers, which are specialized wood harvesting companies, are based on national and international best practises. Tec Pellets and its suppliers are interested to obtain international recognition considering the quality and sustainability of forest operations and are motivated to cooperate with the many small forest land owners to implement risk mitigation measures, regarding forestry in Portugal in practise. The Supply Base Evaluation procedure also ensures active engagement with a diverse range of stakeholders.

4 Supply Base Evaluation

4.1 Scope

The scope of this assessment covers only sub-scope 1 ‘Continental Portugal’.

Regarding feedstock scouring by Tec Pellets, the focus of the SBE is on four regions in the centre and north of Portugal, namely:

- Beira Litoral;
- Douro Litoral;
- Minho;
- Trás-os-Montes and Alto Douro.

Tec Pellets is FSC certified, it uses the credit system and the FSC Controlled Wood evaluation method on uncertified incoming volumes.

The scope includes primary and secondary feedstock from Continental Portugal that is assessed FSC Controlled Wood by Tec Pellets, and volumes which have been bought with the FSC controlled wood claim.

4.2 Justification

The approach used during the Supply Base Evaluation process was as following:

- Gathering information. A desk review of publicly available information on these issues;
- Risk assessment. Every risk was assessed according to its impact and probability of occurrence;
- Management of the found specified risks (mitigation measures) and use of practical experience;
- Stakeholder consultation.

Tec Pellets has in place a sampling and 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. Tec Pellets has many years of experience in this field and knows its wood suppliers well.

4.3 Results of Risk Assessment

The risk assessment has been developed on basis of SBP Standards No1 and No2, version 1.0 of March 2015. Tec Pellets has assessed the risks related to each SBP indicator.

Tec Pellets has an in-depth understanding of the feedstock sourcing risks. Considering the scope of the Risk Assessment 'Continental Portugal' and the forest operations of Tec Pellets, most risks are low, mainly because:

a. Tec Pellets sources only *Pinus pinaster, Eucalyptus spp.,* and *Populus spp.*
b. A stable cultural, juridical, and economical balance in the forestry sector;
c. Low corruption in forestry (the Corruption Perception Index in Portugal is 63),

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, Tec Pellets can accurately 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.

Forest residues considered in this evaluation include material resulting from forest improvement operations, such as thinnings and prunings. These residues can include branches, tree-tops, and bark.

Tec Pellets agrees on practically all specified risks in both draft SBP NRAs, and addresses a few more. However, in practise, there is a large overlap in the causes of the specified risks and the means to mitigate them.

As a leading pellet producer in the north of Portugal, Tec Pellets has been monitoring its harvesting operations and those of its suppliers already for several years. Every indicator, for which Tec Pellets already had developed mitigation measures before the SBP Supply Base Evaluation, automatically obtained the 'specified risk' status.

Below the findings of two draft SBP National Risk Assessments and the results on Risk Assessment of Tec Pellets. The draft NRAs stated below were led by different teams.

Table 4.3: Risk Assessment Results of two draft SBP NRAs and of Tec Pellets

SBP Indicator	Risk Assessment Tec Pellets
1.1.2	Feedstock can be traced back to the defined Supply Base.
	Tec pellets does not buy any wood from wood suppliers without a valid company registration and delivery documentation indicating the place of harvest. The Due Diligence System and the internal procedure on the acquisition of feedstock called 'Procedimento para aquisição de matéria prima' state appropriate control systems. See also indicator 1.2.1 below.
1.2.1	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
	Tec Pellets does not buy any wood from wood suppliers without a valid company registration, nor from wood lands, of which the owner rights are disputed. Any dispute concerning the ownership of the wood needs to be solved first. Additional investigations are conducted by means of legal document research and extends to, for example, interviewing local stakeholders (owners of neighbouring wood lands) and local authorities, whenever: • Cadastral data are unavailable; • The land will be impounded by the government; • There are complaints about the owner, or the harvest operation. In these cases, the internal procedure 'Procedimento para aquisição de matéria prima' is activated. The Due Diligence System also states appropriate control systems.
2.1.1 HCV 1+3+4+5 +6	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.
	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. HCV 4 – Critical ecosystem services, HCV 5 – Community needs, and HCV 6 – Cultural values. Considering the small owners, there is no obligatory analysis of community needs, nor of conserving cultural values. Portugal has a rich cultural heritage. Small land owners could overlook these aspects. See next indicator 2.1.2. for more general information.
2.1.2 HCV 1+3+ 4+5+6	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.
	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). **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 situations, the supplier Tec Pellets demands to evaluate the environmental impacts of the forest operations (before the forest operations commence). Caution and best practises are applied. **HCV 4 – Critical ecosystem services & HCV 5 – Community needs** This is a specified the risk on private, communitarian, and public forest areas not managed by ICNF, subject to clear cutting at dimensions above to the maximum area indicated for each region by the Regional Forestry Management Plan (PROF). There are no indigenous people in Portugal, but in it is important to evaluate the interests of the (local) population and social-economic functions of the forests and woodlands. **HCV 6 – Cultural values** This is a seldom, but specified risk, but forest stand values related to cultural aspects could be overlooked.
2.1.3	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.
	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. 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. 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 6th 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. According to Tec Pellets, these land-use changes do not comply with SBE program requirements.

2.2.1	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.
	Sometimes no kind of forest plan is available for the plot. Additionally, to most small owners no forest management plans apply, the forest plans apply only to plots above a certain size.
2.2.2	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).
	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.
2.2.3	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).
	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. Publicly available information on the protection of key habitats and other identified ecological values are studied by Tec Pellets and transferred to its feedstock suppliers.
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
	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.
2.2.6	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).
	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 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.
2.3.2	Adequate training is provided for all personnel, including employees and contractors (CPET S6d).
	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.
2.4.1 (partly)	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).
	Although there is a specified risk for insufficient assessment of the impact of harvesting operations that replace (destroy) the existing forest ecosystem, nearly all risks are addressed by other indicators (with specified risk), such as indicators 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.6, 2.4.2, and 2.6.1. Tec Pellets underlines that these services can be of importance to the local population. Forests can be of importance to the environment around the forests, they can reduce the impact of extreme weather, and reduce the impact of air-pollution, and noise. For example, it takes only one dense forest stand to improve the perception of an area / to cover up 'visual pollution'. Forest (ecosystems) can be essential for: a. Breaking hard winds and rainfall (roads and houses); b. Recreation in and around the forests; c. Hunting, fishing and gathering of berries and mushrooms; d. Agriculture near the forests (this is of importance in Portugal).
2.4.2 (partly)	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).
	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. Only in case sustainable forest management has been implemented and the forest, and in particular the eucalyptus plantations have been manged according to best practises and legal requirements (cleaning along roads) the feedstock should considered in compliance with the SBP requirements.
2.5.1 (partly)	Legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest are identified, documented and respected (CPET S9).
	There are no indigenous people in Portugal. There is a specified risk that the rights of local communities could be violated (in relation to indicators 1.2.1 and 2.6.1). Abuse of fences, blocked roads, and inadequate signs can make the feedstock non-compliant to the requirements of the SBE program.
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.
	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.
2.8.1	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).
	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.' Tec Pellets has a rigorous control system and adequate procedures on the health and safety of forest workers. Tec Pellets (contractually) demands the same from its feedstock suppliers and checks the health safety of harvesting personnel during its monitoring inspections.
2.9.1 (partly)	Feedstock is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.
	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: 2.1.3 (land conversion), a. 2.2.2 (degradation of grounds), and b. 2.4.2 (fires and pests).

4.4 Results of Supplier Verification Program

Tec Pellets 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.

Tec Pellets checks relevant data and the performance of the harvesting teams. In this process, the risks and mitigation measures are being specified on an operational level, regarding the specific forest plot.

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 during the process of the SBP NRA. Already before the SBP NRA process these topics have been discussed in Portugal.

In general, there is a good understanding of the necessity of performing additional Risk Mitigating Measures (RMMs). Forest ownership in Portugal is fragmented, it is therefore clear to feedstock suppliers that they should address several forest management tasks, starting with an evaluation of ecological, economic and social impacts of their operational plans. The feedstock suppliers of Tec Pellets proved to be motivated to participate in the SBE program.

Tec Pellets is an FSC, PEFC and SBP certified pellet producer. At Tec Pellets all feedstock is at least FSC Controlled Wood. Because of the implementation of the FSC Controlled Wood and Due Diligence evaluations by Tec Pellets, several risk mitigation measures were already in place. For example, there is no rural geometric register in several regions of Portugal; Tec Pellets already had an internal procedure on the determination of the origin of primary feedstock.

Considering the discussion points on sustainability in Portugal today, Tec Pellets accepted practically all as 'specified risk'. In total 17 indicators were assessed to have a specified risk, of which 11 indicators fully, and 6 partly. The indication 'partly' was given for two reasons:

1) Not all subsections of the indicator were assessed to be 'specified risk'; or
2) By addressing one indicator, another was already dealt with. There is an overlap in the root causes of most sustainability risks.

Tec Pellets categorized one indicator (2.6.1) as specified risk (partly), because of its important function as a safety net for sufficient performance on other indicators in the long run.

In general, many specified risks were found during the SBP SBE; they are manageable, however. Forestry in Portugal has a long history and, in general, sustainability is respected. Corruption in Portugal is relatively low, what is validated by the CPI score of 62 points (2016).

The results of the risk analysis apply to all harvesting operations of Tec Pellets within the sub-scope 'Continental Portugal', as also to all its feedstock suppliers. Tec Pellets demands the same level of compliance from its feedstock suppliers, as from its harvesting teams. The feedstock suppliers are visited, checked and trained.

The harvesting teams and feedstock suppliers showing a high level of understanding of the SBP indicators in their evaluations and during their harvesting operations are selected as 'SBE program approved' suppliers. However, Tec Pellets does not categorise all feedstock coming from the SBE approved suppliers as 'SBP-compliant feedstock'. For example, Tec Pellets does not categorise feedstock to 'SBP-compliant feedstock', if the forest was insufficiently managed in the past or will be converted in the future.

5 Supply Base Evaluation Process

Development of the SBE

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

The Supply Base Evaluation Process started with taking the drafts of the NRA for Portugal into consideration, as also national legislation, national policies, and annual reports 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 the draft SBP National Risk Assessments (NRA) and compared it with Tec Pellets' own experience and procedures;
2) Compare the work on the NRAs to the experience and procedures Tec Pellets already developed on mitigating risks;
3) Develop the Risk Assessment and additional Risk Mitigation Measures (RMM) in cooperation with the suppliers of Tec Pellets (discussions on risks and analyses of non-conformities);
4) Incorporate the RMM in the procedures of Tec Pellets (adapt and develop procedures and check-lists related to feedstock procurement);
5) Train harvesting teams of Tec Pellets and of the most developed feedstock suppliers;
6) Evaluate the RMM during harvesting operations of feedstock suppliers in practise.

The Wood Supply Manager is a forestry specialist, who has been involved in wood procurement and field inspections for many years. He knows of the legal framework in forestry and a large local network of relevant contacts, which provides him with practical information on harvesting practices by feedstock suppliers.

Tec Pellets is member of the National Wood Pellet Association of Portugal 'ANPEB', which is involved in a project on the SBP National Risk Assessment (NRA) for Portugal. Tec Pellets has followed the development process of the SBP NRA as a stakeholder for more than a year. This ensured that the Sustainability Manager was up-to-date on all relevant discussions on sustainability in Portugal.

Tec Pellets and its feedstock suppliers have experience in forestry in Portugal and most risk mitigation measures were already in place. The documents stated below are regularly evaluated and improved, when possible. Relevant documents are:

- Signed declarations of feedstock suppliers;
- Procedure on the acquisition of feedstock. It avoids disputes between neighbouring land owners, if there could be risks (Procedimento para aquisição de matéria prima);
- Tec Pellets always demands the report 'Identification and Evaluation of Environmental Impact of harvesting operations' (Avaliação dos impactos ambientais);

- Tec Pellets Work Instruction in forestry (IT 04 - Exploração Florestal);
- Sampling and monitoring procedure on assessing:
- Assessment reports and checklists on:
    - Harvest operations (CL 01 - Checklist Forest Exploration Suppliers Rev.02);
    - Feedstock suppliers (CL 02 - Check List Documental Verification Suppliers Rev.02);
- Complaint procedures and journals;
- Contracts on wood procurement (wood on stem);
- FSC Controlled Wood supplier evaluations (at least once a year);
- Documentation accompanying feedstock supply (related to the FSC evaluation of Controlled Wood and verifying the origin of the wood).

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 direct email to different stakeholder categories: state institutions, local NGOs, authorities, government bodies, forest owners associations, academic and research institutions.

The risk assessment is being consulted with 47 stakeholders and leading experts in nature conservation and forestry. The stakeholder consultation was conducted September 2017.

6.1 Response to stakeholder comments

The stakeholder consultation resulted in one comment, stated below.

Contribution by stakeholder: SONAE Arauco
Sonae SGPS was informed of the consultation of the interested parties, within the scope of the certification process mentioned in the subject of this message. This information on the current consultation was transmitted to Sonae Arauco, which has operations to produce wooden panels in Portugal, as well as other associated activities. With this message, we would like to contribute to this consultation, presenting the perspective of Sonae Arauco on the supply of pine wood and pellet production in Portugal, and its impacts on the value chain of forestry, especially pine angry. Sonae Arauco was created in 2016, being a partnership between Sonae Indústria, a Portuguese company, and Arauco, a Chilean company. The attached file includes a set of introductory slides explaining in more detail the genesis of this partnership, generally describing the current presence of Sonae Arauco, both internationally and nationally. The remaining slides briefly describe Sonae Arauco's position on the sustainable use of forest resources, in this case based on pine wood and Portugal. In our view, the current use of pine wood in Portugal by pellet production plants for industrial use is not entirely sustainable and is based on incentives on the side of the buyer market of pellets, which totally distort the free market, harming competition with alternative forms of material valorisation of the same resources (these, not subsidized).
Response by Tec Pellets
Firstly, on behalf of Tec Pellets, we would like to thank SONAE Arauco for participating in our Stakeholder Consultation. In response to your contribution, we will focus on both crucial aspects of your comment: 1. Sustainability regarding the management of pine forests in Portugal Indicators:

- 2.1.3 (specified risk) 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;
- 2.3.1 (low risk) Analysis shows that feedstock harvesting does not exceed the long-term production capacity of the forest, avoids significant negative impacts on forest productivity and ensures long-term economic viability. Harvest levels are justified by inventory and growth data;
- 2.9.1 (specified risk) Biomass is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks;
- 2.9.2 (low risk) Analysis demonstrates that feedstock harvesting does not diminish the ability of the forest to act as an effective sink or store of carbon over the long term.

2. Biomass production and the local economy
   Indicator:
   - 2.3.3 (low risk) Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.

Response on the sustainability of pine forests issue

Tec Pellets (founded in 2013) does not contribute to the decrease of pine forests in Portugal. The problem of decreasing pine stands has been addressed in our report (Tec Pellets' SBE, pp. 26-48). In general, the forest area and carbon stock in Portugal show an upward trend; the main problem has been, conversion of pine to eucalyptus. Tec Pellets does not buy eucalyptus from wood lands, which have been converted after Jan. 2008.

Regarding the sustainable management of pine stands, forest stands are not harvested for pellet production, the valuable pine trees are used by other industries. Tec Pellets uses forest residues and low-grade tree stems up to max. 15 cm diameter.

The problem of declining pine stands is related to the interest of forest owners in Portugal to increase revenues. These revenues are generated by selling eucalyptus roundwood to other industries (the main product is not used for the production of industrial pellets). This is a national problem, which the government has started to address. The Minister Council from March 21st 2017, approved a law that blocks the expansion of the eucalyptus plantation area (SBE, p. 30).

Response on the local economy issue

According to the draft SBP national risk assessments, in which of several wood industries participated, criterion 2.3.3 was considered low risk. The use of low-grade feedstock categories for the production of industrial pellets was not seen as a problem to the local economy.

Your company mainly uses other feedstock categories, such as small logs and tertiary wood residues (which Tec Pellets does not use). There is still sufficient feedstock of the categories Tec Pellets uses available regionally.

Tec Pellets is prepared and interested to visit your company to discuss if there is an overlap of used feedstock categories between our companies and to find a way to optimize the utilization of low-grade wood stems of less than 15 cm diameter.

7 Overview of Initial Assessment of Risk

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

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
1.1.1		x	
1.1.2	x		
1.1.3		x	
1.2.1	x		
1.3.1		x	
1.4.1		x	
1.5.1		x	
1.6.1		x	
2.1.1	X[2]		
2.1.2	X[2]		
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	

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
2.3.1		x	
2.3.2	x		
2.3.3		x	
2.4.1	X[3]		
2.4.2	X[4]		
2.4.3		x	
2.5.1	x	x	
2.5.2		x	
2.6.1	x		
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		
2.9.2		x	
2.10.1		x	

1) These indicators are low risk; nevertheless, verification of the origin and legality of the feedstock is part of the standard procedures of Tec Pellets.

2) HCV 1, 3, 4, 5, and 6 are specified risk; HCV 2 is low risk. Social and cultural aspects regarding Sustainable Forest Management are considered during the evaluation of best practises.

3) The possible impacts of the harvest operations on the forest and its surroundings are assessed in front (also in relation to the interests of the local population, farmers, and people interested in recreation).

4) Specified risk regarding mainly the forest fire fighting aspect.

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.

1.1.2	***Feedstock can be traced back to the defined Supply Base.***
Mitigation measures	Tec pellets does not buy any wood from wood suppliers without a valid company registration and delivery documentation indicating the place of harvest. The Due Diligence System and the internal procedure on the acquisition of feedstock called 'Procedimento para aquisição de matéria prima' state appropriate control systems. See also indicator 1.2.1 below.
1.2.1	***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***
Mitigation measures	Tec Pellets does not buy any wood from wood suppliers without a valid company registration, nor from wood lands, of which the owner rights are disputed. Any dispute concerning the ownership of the feedstock needs to be solved first. Additional investigations are conducted by means of legal document research and extends to, for example, interviewing local stakeholders (owners of neighbouring wood lands) and local authorities, whenever: • Cadastral data are unavailable; • The land will be impounded by the government; • There are complaints about the land owner, or the harvest operation. In these cases, the internal procedure 'Procedimento para aquisição de matéria prima' is activated. Additionally, all suppliers must have an 'Economic operator registration'. Tec Pellets only accepts feedstock which is of clear origin, as stated on the delivery documents. The Wood Supply Manager knows all plots to be harvested or to be managed and knows in which regions there are no cadastral data / land records, this is the case in the 'cameras of the municipio'.
2.1.1	***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.***
Mitigation measures	Tec Pellets identifies and maps of areas with high conservation values (HCVs). HCV 1, 3, 4, 5 and 6 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. Tec Pellets (contractually) 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 were 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 adaptions to the harvesting plans, if needed; • Tec Pellets inspects the forest operations at the harvesting areas. Below the main sources of information, used to prepare the identification of these values for the harvesting teams. The feedstock suppliers evaluate every plot before the harvesting operations begin. Tec Pellets inspects the suppliers and harvesting areas. ***HCV 1 – Species diversity:*** ➢ 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 ➢ 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:*** ➢ Habitats Directive (2007-2012) ➢ Rede Natura 2000 database: http://www.icnf.pt/portal/naturaclas/rn2000 ➢ Important Bird Areas of Portugal at: http://ibas-terrestres.spea.pt/ ➢ Convention on Biological Diversity (CBD) via DL no. 21/93, dated 29 June ***HCV 4 – Critical ecosystem services & HCV 5 – Community needs:*** ➢ Habeas-Hotspot Areas for Biodiversity and Ecosystem Services http://www.habeas-med.org/webgis/pt_en/ ➢ Forests located in critical areas - defined and mapped in REN-National Ecological Reserve. ***HCV 6 – Cultural values:*** ➢ 15 sites in Portugal identified as World Heritage by UNESCO: http://www.patrimoniocultural.pt/pt/patrimonio/patrimonio-mundial/portugal

	➢ Sites proposed for Portugal under assessment by UNESCO: https://www.unescoportugal.mne.pt/pt/temas/proteger-o-nosso-patrimonio-e-promover-a-criatividade/patrimonio-mundial-em-portugal ➢ Classified groves the application report of the Habitas Directive (2007-2012) national legislation that identifies and protects outstanding grove (arboreta) (http://www.icnf.pt/portal/florestas/Arvores.qry?start:int=80&Distrito=&Concelho=&Freguesia=&Processo). ➢ Other cartographic information of HCV included on open GIS: http://www.habeas-med.org/webgis/pt_en/ and http://epic-webgis-portugal.isa.ulisboa.pt
2.1.2	***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.***
Mitigation measures	Tec Pellets identifies and addresses potential threats to forests and other areas with high conservation values (HCVs). HCV 1, 3, 4, and 6 were assessed to have a specified risk. 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. Steps taken: • Assessment, evaluation and 'SBE approval' of suppliers • Desk Assessment of possible impacts of harvesting operations, regarding Publicly available information from credible third parties; • Training of suppliers on identification of forests with HCVs, and methods to protect HCVs; • Identification and mapping of e.g. protected species, habitats and key ecosystems and objects of cultural significance on the plot before harvesting; • Development of adaptions to the harvesting plans, if needed; • Harvesting according to best practices in sustainable forest management; • Tec Pellets keeps records of field inspections and continuously evaluates the results of the feedstock suppliers. The feedstock suppliers evaluate every plot before the harvesting operations begin. Tec Pellets inspects the suppliers and harvesting. Tec Pellets keeps records of field inspections and monitoring results. 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. 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 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. See also below, indicator 2.2.3

	Clear cuts are reduced to the maximum size indicated in the PROFs, or even further, if the environmental aspects, such as hillslopes, require special attention. There are no indigenous people in Portugal, but it is important to evaluate the interests of the (local) population and social-economic functions of the forests and woodlands (including agricultural or municipal functions). See below, indicators 2.2.2, 2.2.3, 2.2.6, 2.4.1 and 2.5.1 (and 2.6.1 as 'safety net'). Values and objects related to cultural aspects could be overlooked. Tec Pellets strives to adapt its forest operations to respect recreational and cultural values related to the area. For example, by conserving old trees with special recreational value along pilgrim routes, or close to cultural sites. Tec Pellets does not acquire wood harvested from forest areas where traditional, community or legal rights are not respected. See also below, indicators 2.4.1, 2.5.1 (and 2.6.1 as 'safety net').

2.1.3	***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.***
Mitigation measures	When a eucalyptus or poplar plantation is cut the history of the plantation is investigated: • 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. • Was it a forest before being converted to plantation? • Will a plantation be established here after current operations? If land use change (conversion) is planned the feedstock cannot be accepted as SBP compliant. This is dealt with in the Feedstock Supplier Declaration and addressed in the field operations checklist. Tec Pellets always demands its 'Environmental Impact Assessment' (EIA), which covers these points.
2.2.1	***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.***
Mitigation measures	There is a specified risk on this point, mainly in case no forest plan is available (no PROF, PGF ZIF, PUB, SNAC, as well as no PEFC or FSC certification). Tec Pellets always demands its 'Environmental Impact Assessment' (EIA). The EIA evaluates: a. The possible economical, ecological and social impact of the forest operations including its surroundings. Harvesting operations can be changed to avoid negative impacts. b. The quality of the management (by the land owner) prior to harvesting and regeneration plan. Tec Pellets monitors the plots to be harvested intensively and checks the EIA of its feedstock suppliers and the performed Risk Mitigation Measures (RMM). Indicators 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2 include relevant management measures which are checked during the EIA.
2.2.2	***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).***
Mitigation measures	Before harvesting operations commence the plot is evaluated on this point and records are kept. Best forestry practises are applied. Maps can be obtained from 'Reserva Ecológica Nacional' (REN). Tec Pellets demands an 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. The Tec Pellets' EIA addresses the specified risk on soil degradation: best practices have to be applied (Tec Pellets' Internal Instruction on Best Management Practices IT-04). a. Low intensity of forestry, selective cuttings and small clear cuts of maximally 5 ha were needed considering the soil and groundwater level. b. Regeneration focusses on tree species that maintain or improve soil quality c. Leave nutrients in the forests, mainly the green fraction of forest residues (on the other hand other forest residues need to be cleared to prevent forest fires. d. Do not operate near-water areas.

	e. Fertilisation of the ground, when needed and possible. Poor soil quality can lead to erosion and other problems. Therefore, this indicator is related to indicator 2.2.6.
2.2.3 & 2.2.4	***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). &*** ***The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).***

Mitigation measures	Tec Pellets 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 all feedstock suppliers. Feedstock suppliers are trained to recognise key ecosystems and habitats.
	
	Most importantly, the feedstock suppliers inspect visually the harvesting plot and report on the results. Key ecosystems and habitats are indicated on the harvesting maps. Best practises are used to protect the high ecological values (internal document IT-04). The harvesting operations conserve these objects, mainly by not cutting the woodland or forest directly around them. In exceptional cases, low intensity harvesting operations are possible without damaging these objects.
	a. Study key ecosystems on the harvesting plot, conserve areas of ecological value
	b. Study flora and fauna at the harvesting plot, nests, breeding areas, anthills conserve protected tree species and habitats
	c. Do not operate near-water areas.
	
	Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the EIA of its suppliers (see also chapter 5 on 'SBE program approved feedstock suppliers').
	
	Steps taken:
	• Desk assessment (before harvesting operations commence) of key ecosystems and habitats:
	  ○ All classified areas: National Network of Protected Areas; Special Areas of Conservation (SAC); Special Protection Areas (SPA); Ramsar sites; Important Bird Areas (IBA);
	  ○ Priority habitats in Natura 2000 network;
	  ○ Areas where threatened species occur;
	  ○ Areas where endemic species of the Iberian Peninsula occur;
	  ○ Areas where seasonal concentrations of species occur;
	  ○ Large landscape level forests;
	  ○ Important areas for watershed protection;
	• Forest plot inspection prior harvesting;
	• Mapping of the harvesting plot, indicating key ecosystems, habitats and objects of importance to biodiversity; making photos prior to harvesting.
	• Best forestry practices, including measures to conserve and increase biodiversity (for example, standing dead wood.
	• Change of operational plan, if necessary.

2.2.6	***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).***
Mitigation measures	1) Tec Pellets studies data (from publicly available information, researches and programs) for its harvesting teams on ground water, surface water and steams (see above 2.1.1 on mapping and 2.1.2 on identifying and addressing potential threats, HCV 1 – Species diversity). This information is given to all feedstock suppliers. 2) 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. 3) The harvesting teams inspect visually the plot and the hill slopes and streams in the surroundings and report on the results. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. 4) Best practises are used (internal document IT-04). Best practices include forest management measures that protect the plot against too high or low ground water levels, and erosion (surface water moving to quick or too slow). Related to a too quick runoff of surface water, streams in the surroundings are considered. The landscape where the harvest operations are executed is considered, including hill slopes and streams that can overflood. In areas vulnerable to water damage, the maximal contiguous clear-cut area is 5 ha. 5) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the submitted EIAs (see also chapter 5 on 'SBE program approved feedstock suppliers'). These best practises are required to comply with the SBE program requirements. The best practices as stated in point 4, and the Environmental Impact Assessment in point 3, follow the 'ICNF Handbook for forest best practices': 'In areas surrounding the water lines the risk of erosion is often very high, since these are areas of concentration of rainwater runoff. In these bands (with a minimum width of 10 meters for each side, as stated in the legal definitions and conditions of legal limits (Decree-Law no. 468/71) a strict prevention of erosion phenomena shall be performed, and it is therefore essential to adopt measures to protect it, such as maintaining all or a significant part of the natural vegetation and not inflict harm to the soil.'
2.3.2	***Adequate training is provided for all personnel, including employees and contractors (CPET S6d).***
Mitigation measures	Tec Pellets trains its personnel on all relevant aspects and demands the same from its feedstock suppliers. During the feedstock supplier's office inspections of Tec Pellets, are checked: the training records, (new) workforce, and the hiring of specialists. The level of knowledge of personnel is inspected during site visits. Training by Tec Pellets, including identification of key ecosystems, habitats and species biodiversity (annually and additionally based on the results of the plot assessments).
2.4.1	***The Biomass Producer has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).***
Mitigation measures	1) Feedstock suppliers are trained to recognise health, vitality and other services provided by forest ecosystems.

	2) The harvesting teams inspect visually the plot and the surroundings and report on the results (make photos). Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, which addresses these environmental services. 3) Best practises are used (internal document IT-04). Many of the relevant risks are addressed by other indicators (with specified risk), such as indicators 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2. 4) The possible impacts of the harvest operations on the forest and its surroundings are assessed (before the harvesting operations commence), not only in relation to the environment, but also in relation to the interests of the local population, farmers, and people interested in recreation. 5) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the submitted EIAs (see also chapter 5 on 'SBE program approved feedstock suppliers'). It checks with stakeholders if there are any complaints (see also below 2.6.1).
2.4.2	***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).***
Mitigation measures	Visual inspections of the plots before harvesting (checklists). Checked is if the plot was managed well on fire protection in the past, if not, the feedstock is not considered compliant. • Investigation of PMDFCI (Municipal Forest Fire Protection, Municipal de Defesa da Floresta Contra Incêndios); • Visual inspection of the plot before harvesting; • Implementation of forest fire fighting measures; • Best forest practices; • Monitoring performance. Feedstock suppliers are trained to recognise poor forest management and on mitigation measures. The harvesting teams inspect visually the plot and make photos. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, in which this point is addressed.
2.5.1	***Legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest are identified, documented and respected (CPET S9).***
	1) Feedstock suppliers are trained to recognise possible issues with legal, customary and traditional tenure and use rights. 2) The harvesting teams inspect visually the plot, make photos and report on the results. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. This aspect is addressed. If the land area to be harvested is fenced, moreover, if it has been fenced recently, the opinion of residents is assessed. Abuse of fences, blocked roads, and inadequate signs makes the feedstock non-compliant the SBE program. 3) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the EIA of its suppliers (see also chapter 5 on 'SBE program approved feedstock suppliers'). By addressing sustainable forest management and making an extra effort on indicators 1.2.1 and 2.6.1, Tec Pellets integrates respecting the interests of local people into its main procedures. There are no indigenous people in Portugal nor minorities dependant on forests for their livelihood.

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.***
Mitigation measures	1) Tec Pellets actively prevents grievances and disputes to arise. The aim is to track down and solve grievances and disputes before the harvesting operations commence (or not to buy from the disputed plots). 2) Tec Pellets makes clear to the local population that any complaint or comment related to feedstock supply is taken very seriously (via website and other communications). Tec Pellets takes seriously any complaint of any person or organisation considering harvesting operations. This also ensures sufficient performance on respecting local interests (HCV 5) and cultural values (HCV 6). 3) Tec Pellets has a complaint procedure and keep records. The feedstock suppliers are also (contractually) required to actively implement a complaint procedure and keep records. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, in which the interests of local population are assessed. 4) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks their records on Complaints and Comments. It checks with relevant stakeholders, such as land owners, if no comments were submitted, or if the complaints were dealt with sufficiently. 5) The results of the inspections of Tec Pellets have direct influence on the 'SBE program approved' status of feedstock suppliers.
2.8.1	***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).***
Mitigation measures	Tec Pellets has a rigorous control system and adequate procedures on the health and safety of forest workers. Tec Pellets demands the same from its feedstock suppliers and checks the health safety of harvesting personnel during its monitoring (administrative and field) inspections. Supplier qualification process and inspections of the supplier's administration: • Insurances and aptitude forms; • Social Security; • Present workforce and training (new) personnel; • Health and safety procedures; • Training records and hiring of specialists; • Records of Personal Protection Equipment (PPE) distribution; • Records of machinery safety tools and equipment on documental register; • Medical record for employment. Field inspection supplier: • Protective equipment use; • Medical kit; • Fire extinguisher; • Respect of safety distances; • Level of knowledge of personnel.
2.9.1	***Feedstock is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.***
Mitigation measures	Wood from forests converted to plantations, as also wood lands that are converted to non-forest use are not considered SBP compliant. See also indicator 2.1.3.

	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. • Desk assessment, monitoring, and identification – High-risk and "Important areas for carbon storage"; • Field inspections and possible adaptions of forest management plans; • Limitation of harvesting operations on "Important areas for carbon storage".

Approval of harvesting teams and feedstock suppliers

Harvesting teams and feedstock suppliers are treated in the same way, they are assessed on their performance. Site visits are conducted nearly continuously to check operational performance and see how mitigation measures are implemented in practise. Tec Pellets checks the administration of suppliers (at their offices) of secondary residues and their feedstock suppliers once a month.

Tec Pellets' monitoring procedure includes 2 checklists:

1. Harvest operations (CL 01 - Checklist Forest Exploration Suppliers Rev.02);
2. Feedstock suppliers (CL 02 - Checklist Documental Verification Suppliers Rev.02).

Those harvesting teams and feedstock suppliers showing a high level of understanding of the SBP indicators in their evaluations and during their harvesting operations are selected as 'SBE program approved'. As described in the following subsection, Tec Pellets, however, does not categorise all feedstock coming from the SBE approved suppliers as 'SBP-compliant feedstock'.

Tec Pellets' procedures regarding its harvesting teams, feedstock suppliers and their harvesting operations, include:

- Training harvesting teams and feedstock suppliers;
- Checking performance of harvesting teams and feedstock suppliers;
- Selecting harvesting teams and feedstock suppliers that comply on the additional requirements to achieve 'SBP-compliant biomass';
- Withdrawal of the SBP SBE approval status whenever major non-conformances are found;
- Yearly training and re-evaluation of approved harvesting teams and feedstock suppliers.

Tec Pellets plans to 'SBE approve' its own harvesting teams and possible external feedstock suppliers, when they show excellent results on all risk mitigation procedures. Tec Pellets' Sampling and Monitoring procedure applies to all harvesting teams and feedstock suppliers (not only to the 'SBE approved' suppliers). It also includes the inspection of secondary suppliers. The feedstock suppliers of Tec Pellets' secondary feedstock suppliers are checked, in the same way as Tec Pellets' harvesting teams and suppliers of primary feedstock.

In practise, the feedstock suppliers work on 1 to 5 plots a year. Several harvesting operations can be planned per plot. All Tec Pellets harvesting teams and feedstock suppliers are initially trained and checked.

Implementation mitigation measures and acceptance of feedstock
The SBE was performed for the first time this year (2017). The practical implementation of the risk mitigation measures is a continuous process, because new plots are being prepared for harvesting operations all the time. Risks and mitigation measures need to be specified on the level of practical harvesting operations.

Most risk mitigations measures were already in place. To address all possible risks, additions were made to several of the procedures of Tec Pellets. Important is the assessment of the plots prior to harvesting.

Steps taken to guarantee sustainable management of wood lands:

- Studying publicly available and other information regarding the plots were harvesting operations are planned and their surroundings;
- Informing harvesting teams and feedstock suppliers on found results on possible risks
- Onsite assessment of the plots and their surroundings prior to harvesting, measures are taken when the possible risks related to the plot prove to be applicable; for example, when habitats are found;
- Evaluation of the risks and possible impacts of harvesting operations;
- Checking possible local interests, future plans regarding the land, and complaint management;
- Development of adaptions to the harvesting plans, if needed;
- Records are kept on the evaluation of risks, the investigation of the plot and its surroundings, and the performed measures.

Inspections of harvesting sites and feedstock suppliers include:

- The harvesting activities of harvesting teams and feedstock suppliers;
- The facilities and storages of primary and secondary feedstock suppliers;
- The administration of the primary and secondary feedstock suppliers;
- The harvesting activities of suppliers of secondary feedstock suppliers.

Considering the situation in Portugal, in which there are more than half a million forest owners, and most own only a few hectares of land, not all feedstock provided by the SBE approved feedstock suppliers will automatically become SBP-compliant feedstock. There are factors beyond the reach of the selected feedstock suppliers, for example, if an estate has been poorly managed by a land owner. Tec Pellets does not categorise feedstock as compliant, if the wood land was insufficiently managed in the past or will be converted in the future.

Tec Pellets does not categorise feedstock as compliant, when:

- Land owners have managed their wood lands insufficiently, prior to the harvesting operations;
- 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

Whenever major violations of the FSC Controlled Wood, or SBP SBE indicators are found, such as violation of HCVs, the feedstock is not bought (or excluded and not used) by Tec Pellets. Minor violations of the SBP SBE indicators withhold volumes to be accepted as ‘SBP-compliant biomass’.

9.2 Monitoring and outcomes

Tec Pellets and its suppliers prove to be motivated to cooperate with the many small forest land owners to implement risk mitigation measures, regarding forestry in Portugal in practise. The evaluations and inspections, together with the developed documents give to possibility to assess if the feedstock deserves the prestigious

claim of ‘SBP compliant feedstock’. By preparing information profoundly and by implementing best practices in harvesting operations, a substantial share of the feedstock can comply with the SBE program requirements.

The SBE program requirements are being implemented at all feedstock suppliers, but only a few will obtain the ‘SBE program approved’ status to date.

Tec Pellets constantly monitors its feedstock suppliers to see if they comply with the mitigation measures to which we prescribe them. Our Wood Supply Manager and forestry specialist monitors the suppliers on the ground. By only approving the best feedstock suppliers, Tec Pellets assures high-quality in performance and increases motivation between feedstock suppliers. Moreover the ‘SBE program approved’ status is re-evaluated every year and can be directly suspended or withdrawn if a medium of major non-conformity has been found. In the beginning all SBP-compliant supply will be monitored. If there is no doubt of good performance, this can go down to 80% of the plots per supplier. So, in the future 80% will be monitored.

Some of these implementations are being visible and evaluated by the specialist. All suppliers have a forestry guide and received internal guidance from Tec Pellets. All harvesting personnel have been instructed to respect the requirements of the guide. In the course and at the end of most forestry activities, the specialist of Tec Pellets checks on the ground if the work is going as planned. Tec Pellets makes audits to all feedstock suppliers.

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:	**Ana Alves**	**Quality Manager**	
	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:	**Avelino Reis**	**Director General**	
	Name	**Title**	**Date**

13 Updates

This is the second surveillance audit.

13.1 Significant changes in the Supply Base

No significant changes regarding last year's Supply Base.

13.2 Effectiveness of previous mitigation measures

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

Last year, a computer system has been developed and implemented to keep track of the documentation required for the SBE

13.3 New risk ratings and mitigation measures

No new risk ratings.

13.4 Actual figures for feedstock over the previous 12 months

109.102,14 tonnes of feedstock were used in pellet production during the last reference period (2017).

13.5 Projected figures for feedstock over the next 12 months

Tec Pellets expects to be using 120 000 tons of feedstock per year. Production is planned to increase to 70 000 tons of pellets per year. Tec Pellets has a production capacity of 100 000 tons a year.

Annex 1: Detailed Findings for Supply Base Evaluation Indicators

	Indicator
1.1.1	The Biomass Producer's Supply Base is defined and mapped.
Finding	The SBE scope is 'Continental Portugal', it is concluded that there is low risk in relation to the definition and mapping of the supply base. Despite the incomplete geometric cadastre of the rural real estate, maps are available, from several sources at an appropriate scale to define geographically the origin of the supply base. The information available from delivery notes, felling manifests, invoices, among other legal documents, which contain the origin of the raw material (county, village) serves as definition of the source which enables, supported on maps available, the mapping of the supply base. Tec Pellets receives nearly all pine, eucalyptus, poplar from a 60 km radius around the plant, by trucks/lorries. Unloading and transport documents of the raw material include its designation, its origin is legally documented (manifest), identification of the suppliers, loggers, transport companies and documentation of the lorries. This is described below in this document.
Means of Verification	Delivery notes, felling manifests, invoices, among other legal documents. • The scope is defined and justified; • Maps to the appropriate scale are available; • Key personnel demonstrate an understanding of the supply base
Evidence Reviewed	Delivery notes, felling manifests, invoices, among other legal documents. Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Inventario Florestal Nacional IFN5 (FloreStat_IFN5); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn5/rel-fin) Inventario Florestal Nacional IFN6, preliminary results (IFN6 - Resultados preliminares.pdf); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn6) Estatísticas Agrícolas 2015.xls, Instituto Nacional Estatística (https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=271434407&PUBLICACOESmodo=2) Decreto lei 16-2009 planos gestão florestal (https://dre.pt/application/dir/pdf1sdip/2009/01/00900/0026800273.pdf); ICNF portal (http://www.icnf.pt/portal/icnf/legisl/legislacao/2009/decreto-lei-n.o-16-2009-de-14-de-janeiro.-d.r.-n.o-9-serie-i) Normas Técnicas Planos Gestão Florestal (http://www.icnf.pt/portal/florestas/gf/pgf/resource/doc/manual/normas-tecn-PGF-AFN.pdf)
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
1.1.2	Feedstock can be traced back to the defined Supply Base.
Finding	The pellets are at least FSC CW and SBP-controlled biomass. Inspections from government are in place and operators must apply DDS to justify legality of timber. Tec Pellets executes an FSC CW Due Diligence system. Tec Pellets receives the document 'Manifesto' (a felling manifest is obligatory for all common commercial harvesting activities and shall be submitted to forest authorities (ICNF) up to 30 days after the felling operation) for all pine deliveries. We check the validity of these documents. The felling manifest, as well as the NMP (Pine Wood Nematode) manifest contain the following information: • Operator or service provider information • Localization of the feedstock until the freguesia (small village) level • Quantities harvested • Others In Portugal operators take steps to ensure the legality of their suppliers, which allow compliance with the requirements of forest legislation. For harvesting operations, law No. 174/88 of 17 May is followed. To start any operations in the forest, the document named Manifest is filled and submitted to Direcção Geral dos Recursos Florestais (General Management of Forest Resources). Legal requirements include having the right and valid invoice or transport documentation are in place: • Regular invoice for trading operation or transport documentation or waybill, or devolution note • In case of pine or conifers timber the transporter must have an Economic Operator Registry and a phytosanitary Manifest for each feeling (if one feelings is transported several times it is mandatory to copy the manifest for all the transportations). Information obtained from Centro Pinus (non-profit association for key players of Pine based industry), INE and others shows that pine wood consumption of timber industry in 2014 was 4,360,000 m3 (1,300,000 m3 saw mill industry, 30%; 300,000 m3 biomass, 7% and 1,400,000 m3 pellets, 32% and 1.360.000 other uses not relevant for pellets industry). However, in 2014 there was available only 2,247,000 m3 of pine wood from Mainland Portugal (Pinus pinaster). As an obvious conclusion a lot of imported pine comes into Portuguese timber industry in 2014, mostly from Spain. Similar situation occurs for Eucalyptus in pulp and paper industry, which low quality parts may be also used in biomass industry. Information from Annual Bulletin of CELPA (Paper Industry Association) states that in 2014 it was imported 45% of total eucalyptus wood procured by paper industry (2,415,000 m3 imported), in its vast majority round wood from Spain and at minor extent, chips from South America or Africa (usually FSC/PEFC certified or controlled). Based on the fact that relevant volumes of imported material come into Portugal annually it is noted that imported material it is not covered by this RRA.

	A felling manifest is obligatory for all common commercial harvesting activities and shall be submitted to forest authorities (ICNF) up to 30 days after the felling operation. A National Action Plan for Control of Pinus Wilt Disease/Nemátodo-da-madeira-do-pinheiro (NMP) (Bursaphelenchus xylophilus) and its vector insect Monochamus galloprovincialis is in place and there is an obligation of previous communication of any felling and/or transportation of wood affected by this disease. The document (phytosanitary manifest) must accompany material until the arrival to industrial processing facilities. This is mostly focused on Pinus pinaster (23% of forest area) main source for BP. Simultaneously, approval documentation is required for specific operations on cork and holm Oak including cutting and pruning, Holly cutting, and also premature cuttings of Eucalyptus, Pinus pinaster or riparian vegetation. Since 2013 and the introduction of the EUTR laws, operators are required to register their activities on a Digital Platform managed by forest authorities (ICNF). Inspections from government are in place and operators must apply DDS to justify legality of timber. Regarding transportation, legal requirements include having the right and valid invoice or transport documentation are in place: • Regular invoice for trading operation or transport documentation or waybill, or devolution note; • CRM on international transportation In the case of pine or conifers timber the transporter must have an Economic Operator Registry and a phytosanitary Manifest for each feeling (if one feeling is transported several times it is mandatory to copy the manifest for all the transportations). The issuance of required transport and sales documents is well understood and regulations are largely adhered to. Inspections are common at Portuguese roads and enforcement of regulations is considered adequate. Felling phytosanitary manifest (NMP manifest) includes identification of the origin of the felling. Also documentation for transportation identifies the origin of the transport which could be useful in case of direct transport to BP facilities and in any case is useful in the traceability of material. Both are the most common ways to trace back to origin even if the origin area is not the forest land itself but the freguesia (minimum administrative division) where forest land is included. Several public authorities, such as SEPNA (Department of National Guard responsible for environment surveillance), ASAE (National Authority for the Food and Economic Safety) and ICNF, organize regular surveillance activities to verify the compliance of forest operators and wood transportation companies with the dispositions of the National Action Plan for Control of Pinus Wilt Disease. In 2016, SEPNA inspected 24’535 vehicles carrying wood logs and pallets and identified 424 infractions (1,7%) from which 295 refer to the lack of NMP manifest (1,2%). There are systems in place to trace the feedstock primary origin back to the forest stand but it is possible to do so if there are elements in the manifests or transportation documents, which could be used in the cadastral system (as the article number and section) or geographic coordinates in areas without cadastral system.

	On the above background, the risk related to the traceability of feedstock back to the supply base is evaluated to be specified due to the lack of compliance of forest operators in delivering all the mandatory documents for every type of raw material delivered, specially, the felling manifest for species other than coniferous. The felling manifest plays an important role for hardwood raw material. In the case of coniferous raw material, the implementation of the phytosanitary felling manifest is widely spread and verified regularly by SEPNA and ASAE. Procedures to ensure the delivery of all mandatory documents shall be put in place.
Means of Verification	Delivery notes, felling manifests, invoices, among other legal documents. Copy of phytosanitary manifests (felling and/or transportation) for all conifers with geographic elements (cadastral and/or coordinates); Copy of delivered felling manifest to Forest Authorities (ICNF) for all commercial harvestings with geographic elements (cadastral and/or coordinates). Invoices, waybills, transport/shipping documents The existence of a strong legal framework in the region Feedstock inputs, including species and volumes, are consistent with the defined Supply Base; Transport documentation and goods-in records are consistent with the defined scope of the SBE.
Evidence Reviewed	Delivery notes, felling manifests, invoices, among other legal documents. The issuance of required transport and sales documents is well understood and regulations are largely adhered to. Inspections are common at Portuguese roads and enforcement of regulations is seen to be good. Felling phytosanitary manifest includes identification of the origin of the felling. Also documentation for transportation identifies the origin of the transport which could be useful in case of direct transport. For all other species, Tec Pellets receives documents on every transport that takes place in the chain from the raw material supplier to Tec Pellets. The transport documents state: the name and address of the operator and the sender or receiver, the name and quantity/volume of the shipped product, the place of provenance of the raw material and the date of the shipment. The person responsible for the purchase of the raw material is constantly accompanying the loggers and ensuring these issues. Tec Pellets also has the contract agreement that is made with the forest owner which defines the plots where to operate. This way, the harvest team is under the responsibility of Tec Pellets. To comply with all environmental legislation, the person responsible, our forestry specialist, also has a responsibility to comply with the law regarding Health and Safety. To inspect forest operations our forestry specialist uses a checklist with parameters on the environment, and safety and health at work Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Estatísticas Agrícolas 2015.xls, Instituto Nacional Estatística (https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=271434407&PUBLICACOESmodo=2) Boletim-Estatístico-da-Celpa-de-2014 (http://www.celpa.pt/wp-content/uploads/2016/09/Boletim_WEB_2015.pdf)

	Relatório-de-Caracterizacão-da-Fileira-Florestal-2014 (http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf) Cutting Permission in Law n.º 33/96, at 17/08 (article 7th) https://dre.pt/application/dir/pdf1sdip/1996/08/190A00/25682573.pdf Fileira do Pinho: desafios e oportunidades (centroPINUS_JoaoGonçalves dados fileira pinho 2014.pdf); Centro Pinus (http://www.centropinus.org/index.php?lingua=1) Decreto lei 123-2015 nematodo do Pinheiro (https://dre.pt/application/file/67649256); ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/ag-bn/nmp) Declaração Retificação n.º 38/2015 de 01/09 do Decreto lei 123-2015 nematodo do Pinheiro (https://dre.pt/application/file/70144398) Decreto lei 174-1988 manifesto corte (https://dre.pt/application/file/374768); ICNF portal(http://www.icnf.pt/portal/icnf/serv/formularios/manif/man-cort-arr-arvor) Registo de Operador de Madeira e Derivados ICNF portal (http://www.icnf.pt/portal/florestas/fileiras/reg-op) Decreto Lei 198/2012 de 24/08 FATURAS E OUTROS DOCUMENTOS COM RELEVÂNCIA FISCAL (http://info.portaldasfinancas.gov.pt/NR/rdonlyres/907FD2F4-9A9C-485D-8A99-FD164BF9FCEC/0/Decreto-Lei%20n%20_198_2012_24_08.pdf)
Risk Rating	☐**Low Risk** ☒**Specified Risk** ☐**Unspecified Risk at RA**
Comment / Mitigation Measure	Tec Pellets does not buy any wood from wood suppliers without a valid company registration and delivery documentation indicating the place of harvest. The Due Diligence System and the internal procedure on the acquisition of feedstock called 'Procedimento para aquisição de matéria prima' state appropriate control systems. See also indicator 1.2.1 below.

	Indicator
1.1.3	The feedstock input profile is described and categorised by the mix of inputs.
Finding	As described in previous indicators Primary Feedstock comes mainly from private properties.Tec Pellets has specialists visiting our suppliers and working on risk assessments and mitigation. By far most resources come directly from the forest. The Sawmills producing feedstock during timber processing, are sources of Secondary Feedstock. The main products provided from sawmill and other timber industry entities are sawdust and chips. We know the Sawmills we cooperate with well. Tec Pellets receives the 'Manifesto' and other legal documents on the origin of wood. Tec Pellets manages an FSC credit system and is SBP certified. Within the framework of our FSC company evaluation program we assess PEFC suppliers (before we start working with them). The evaluation can result in an FSC CW claim on the resources. There is no specific legislation regulating classification of wood/timber harvested in Portugal in terms of species, quantities or qualities. The fact that most of forests are productive and Eucalyptus, Pines and Cork Oak covers 78% of forest land, made that this issue is not perceived as a problem with national wood/timber. Industrial use of Eucalyptus and Pines ensure that they are adequate classified and measured. Felling manifests require identification of species and volumes and are obligatory for every forest species for industrial use. Since the supply chains are short, reliable information regarding the feedstock can be gathered in collaboration with the forest owners and other stakeholders the Wood Supply manager knows well, when necessary. Thus accurate classification and description of type, species, and categorization into roundwood and residual wood material, and when required, the approximate proportion of roundwood from final felling, in accordance with SBP requirements is possible for Biomass Producers.
Means of Verification	Copy of delivered felling manifest to Forest Authorities (ICNF) for Pinus pinaster used in industrial purposes Invoices Transport/shipping documents, waybills Feedstock input records: document ' STP.078.XX 00_Reg Mov Receção_mês'
Evidence Reviewed	Delivery notes, felling manifests, invoices, among other legal documents. Estrategia Nacional das Florestas (https://dre.pt/application/file/66432612); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Inventario Florestal Nacional IFN6, preliminary results (IFN6 - Resultados preliminares.pdf); ICNF portal Decreto lei 174-1988 manifesto corte (https://dre.pt/application/file/374768); ICNF portal(http://www.icnf.pt/portal/icnf/serv/formularios/manif/man-cort-arr-arvor)
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐**Unspecified Risk at RA**

	Indicator
1.2.1	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.
Finding	The Wood Supply Manager knows all plots to be harvested or to be managed and knows in which regions there are no cadastral data / land records, this is the case in the 'cameras of the municipio'. In Portugal, around 97% of forest land is private (including land owned by individuals, communities and corporations). This proportion means that the most part of protected and classified areas are also private lands. Forest land tenure is based on one document (Description of the Land Registry) but several documents are used on the ground level as transitory or incomplete evidence, as the Description on the Land Registry is not updated for all lands. There are, however, regions (53% of territory) where there is a geometric cadastral survey of rural lands (*Cadastro Geométrico da Propriedade Rústica*) and so there is consistency between spatial and numeric information (DL 172/95). held by tax offices (*matriz e secção da Caderneta Predial Rústica da repartição das finanças*). In regions where there is no rural geometric cadastre (47% of the territory), the land tenure documents are based only on descriptions of boundaries and communications with neighbors. In the case of Work Accidents, Theft and Forest Fires and after ascertaining the severity of the situation are contacted the competent entities, as well as the Department of Hygiene, Security of the company. In case of Failures or maintenance, the means are put on the ground in order to solve the situation. These means can be from the company itself or from the company representative of the equipment. In case of Complaint related to court, the person in charge of the company meets at the place of court with all parties involved (seller / claimant or other). When the facts are proven and all parties are heard, the responsible person decides to adjust the business according to what happened. The closing of the complaint can be done in two ways: • If the claimant understands the purchase, the remaining portion. That is, a new buying process is opened where one makes the acquisition of what was cut by lapse together with what is standing; • The claimant does not accept to sell the remaining portion. The wood cut is evaluated and paid to the owner considering the occurrence as a payment of damages to the owner. Land use rights and management practices are covered and need to be deemed low risk before the Manifest document is issued to allow forest harvesting. Tec Pellets does not get involved in issues that must be settled by the suppliers (loggers and forest owners) when they have to ask to the Portuguese Forestry Authorities the permission to harvest, i.e., when it is harvested such type of issues must be resolved.

	Despite the difficulties and complexities concerning land tenure and management rights (mainly due to the absence of geometric information), there is no significant evidence in Tec Pellets of disputes or disputes about the issue.
Means of Verification	Suppliers must have an 'Economic operator registration. Tec Pellets only accepts feedstock delivered with 'Manifest'. Tec Pellets also checks if the feedstock suppliers fulfil all fiscal and legal obligations. Document of Tec Pellets 'Procedimento para aquisição de matéria prima' Description on the Land Registry (Descrição na Conservatória do Registo Predial) Content certificate matrix article of tax office (Certidão de teor do artigo de Matriz da repartição de finanças) & land notebook (Caderneta predial) is the fiscal document which confirms taxes payment. Judicial final and unappealable decision (Sentença judicial transitada em julgado). Notarial deed (Escritura notarial). Forest Renting/leasing contract (Contrato de Arrendamento Florestal) For Collective or Comercial entities the extract from the commercial register (Certidão do Registo Comercial) to prove the specific responsibilities of owners/managers/presidents Purchase documents http://elearning.ipca.pt/1213/pluginfile.php/82971/mod_resource/content/1/sumarios_reais_11_12.pdf
Evidence Reviewed	**Government sources:** Constitution(*Constituição da República Portuguesa*) http://www.parlamento.pt/Legislacao/Documents/constpt2005.pdf Cadastre at Direção Geral do Território: http://www.dgterritorio.pt/cadastro/cadastro_geometrico_da_propriedade_rustica__cgpr_/consultar_seccoes_cadastrais/ **Non-Government sources** Transparency International's Corruption Perception Index 2014 at Transparency International - The global coalition against corruption – https://www.transparency.org/cpi2015/results Worldwide Governance Indicators Report at World bank: http://info.worldbank.org/governance/wgi/index.aspx#reports 'O cadastro e a propriedade rustica em Portugal';Fundação Francisco Manuel dos Santos e Rodrigo Sarmento de Beires, May/2013 (https://www.ffms.pt/upload/docs/o-cadastro-e-a-propriedade-rustica-em-portugal_ypUM5ASBAUmUpHUlgJtp0A.pdf) 'Cadastro a prédios rústicos e urbanos em Portugal custaria 700 ME'; Lusa-Última hora 27/03/2014 in Revista Visão: (http://visao.sapo.pt/lusa/cadastro-a-predios-rusticos-e-urbanos-em-portugal-custaria-700-me=f774740)
Risk Rating	☐**Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Mitigation Measure	Tec Pellets does not buy any wood from wood suppliers without a valid company registration, nor from wood lands, of which the owner rights are disputed. Any dispute concerning the ownership of the wood needs to be solved first. Additional investigations are conducted by means of legal document research and extends to, for example, interviewing local stakeholders (owners of neighbouring wood lands) and local authorities, whenever:

	• Cadastral data are unavailable; • The land will be impounded by the government; • There are complaints about the land owner, or the harvest operation. In these cases, the internal procedure 'Procedure on primary feedstock' is activated. The Due Diligence System and the 'Procedure on primary feedstock' state appropriate control systems. In cases with doubt, mostly due to absent cadastral data, Tec Pellets decides to double-check if there are no legal issues to the harvest operations. All suppliers must have an 'Economic operator registration'. Tec Pellets only accepts feedstock delivered with 'Manifest'. Tec Pellets also checks if the feedstock suppliers fulfil all fiscal and legal obligations. Tec Pellets applies an additional internal procedure on the acquisition of feedstock called: 'Procedimento para aquisição de matéria prima'. Feedstock given as compliant when the following requirements are met: • Identification of the plot / area (building permit) when possible; • Identification of the owner (citizen card); • Proof of the relationship between the seller and the land in question; • Mapping; • Formalization of the business through a purchase and sale agreement between the parties; • Invoice or self-invoice if the seller can not do it. In addition to the information collected, at least one site visit is always conducted with the owner or his representative, where information is taken about: • Type of vegetation / species; • Ground boundaries / Confrontations; • Accesses. This procedure also indicates the resolution of grievances and disputes, including those relating to tenure and land use rights to forest (or land) management practices and working conditions. Whenever any of the above occurs, the technical responsible is contacted and called to the location whenever necessary. If there are unsolved issues related to the feedstock the procurement does not take place.

	Indicator
1.3.1	The BP has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.
Finding	Forest biomass feedstock definition on Portuguese legislation is included on legal framework created both for dedicated energetic generation plants and for residues purposes. In the first

	case definition forest biomass, consists of the biodegradable fraction products, waste and residues from biologic origin from the forest or other plantations. For the residues purposes forest biomass is the vegetable matter from forestry and forestry waste, only including the material resulting from the improvement operations, including thinning and pruning, fuel management and harvesting of forest stands, as the branches, tree-tops, stumps, leaves, roots and bark. No permit is required for logging activities, including normal commercial silvicultural harvesting, final cuts and others. Only a harvesting written notice (manifesto) is obligatory for timber and cork for industrial use, and Tec Pellets submitted to forest authorities (ICNF) up to 30 days after the felling/extraction operation. Beside the specific operations listed above, a National Action Plan for Control of Pine Wilt Disease (NMP in PT) Bursaphelenchus xylophilus and its vector insect Monochamus galloprovincialis is in place. This mostly focuses in our case is Pinus pinaster (23% of all forest areas) but applies to all other host conifers (Abies spp., Cedrus spp., Larix spp., Picea spp., Pinus spp, Pseudotsuga spp., Tsuga spp) – with these species covering 8% of forests. For these species there is obligation of previous communication of any felling and/or transportation of wood affected by pest. This documentation (phytosanitary manifest) also must accompany material until the arrival to industrial processing facilities. Since the onset of the EUTR in 2013 enterprises classified as 'Operators' under the regulation. so we have been the register for our activities on a Digital Platform managed by the Forest Authorities (ICNF) http://www.icnf.pt/portal/florestas/fileiras/reg-op#reg. In addition to the register , the Tec Pellets have the due diligence system in place for each wood/timber acquisition, which includes procedures for access to information, risk assessment and risk mitigation. To start any operations in the forest, the document named Manifest is filled and submitted to Direcção Geral dos Recursos Florestais (General Management of Forest Resources). For all other species, Tec Pellets receives documents on every transport that takes place in the chain from the raw material supplier to Tec Pellets. The transport documents state: the name and address of the operator and the sender or receiver, the name and quantity/volume of the shipped product, the place of provenance of the raw material and the date of the shipment. The person responsible for the purchase of the raw material is constantly accompanying the loggers and ensuring these issues. Tec Pellets also has the contract agreement that is made with the forest owner which defines the plots where to operate. The Competent Authority in Portugal for ensuring implementation of the EUTR is Institute for Nature Conservation and Forests (ICNF). The enforcement authority is the National Republican Guard (GNR) which conducts enforcement according to ICNF procedures. Since the start of 2015 a far-reaching regime of inspections has begun. From January 2015 to April 2016 ICNF has conducted 113 inspections with no contraventions, included Tec Pellets. Also for the same period GNR has conducted 265 inspections with one contravention. As there is no permit required for ordinary forest harvesting, all attention is focused, in our case, on referred exceptional cases:

	• Conversion from forest to plantations for areas larger than 350 ha or other uses for areas greater than 50 ha; • The National Action Plan for Control of NMP (Pine Wood Nematode) applies to all conifers and includes a strict phytosanitary plan which requires up-front registration of all operators and notification to authorities, prior to commencement of harvesting, transport and processing of wood (some of cuttings detailed on Action Plan are obligatory).
Means of Verification	DDS; Manifest; Register our activitie in ICNF plataform; Written permit referring applicable legislation in all exceptional cases referred above; Operator registry and previous notification in cases of all conifers because of Nematode Pine Plan NMP; EUTR Operator Registry: • Information about the wood/timber products which shall include quality, quantity, the supplier, origin country, and conformity with national legislation; • Risk evaluation- of the illegality of the timber by operator of the supply chain, based on the collected information. • Risk minimization - by additional information, verifications if the evaluation reveals specified risks.
Evidence Reviewed	Cutting Permission in Law n.º 33/96, at 17/08 (article 7th) https://dre.pt/application/dir/pdf1sdip/1996/08/190A00/25682573.pdf Pinus Nematode: Dec.Retificação n.º 38/2015 de 01/09 DL 123/15, at 3/07 DL 95/2011, de 8/08 DL 154/05 6/09 Dec. n. 30-A/2011, de 7/10 Cuttings before mature of *Pinus pinaster* and *Eucaliptus:* DL173/88,17/05 Harvesting manifest: DL 174/88, 17/05 Municipal licenses of vegetation destruction: DL 139/89 High risk areas for harvesting: Desp. 17 282/2003 Operational cuttings on forest regime areas: Desp. 18355/2008 Environment law nº 19/14 de 14/04 DL 151-B/2013 de 31/10 https://dre.pt/application/file/513900 DL 49/05, de 24/02 DL 197/2005, de 8/11 Timber Operator Registry: DL76/2013 at 5/06 EUTR: DL nº76/2013 de 5/06 artºs 3º,8º at https://dre.pt/application/dir/pdf1sdip/2013/06/10800/0322203225.pdf

	(UE)Regulation n.º 995/2010 artºs 4º, 5º, 6º http://www.icnf.pt/portal/florestas/fileiras/resource/docs/reg/regulamento-995-2010 **Waste and residues laws** http://www.pgdlisboa.pt/leis/lei_mostra_articulado.php?nid=981&tabela=lei_velhas&nversao=4&so_miolo= **Energetic purposes forest biomass definition** https://dre.pt/application/conteudo/70064732 https://dre.pt/application/dir/pdf1sdip/2011/01/00600/0017300175.pdf **Government sources** • APA-Agência Portuguesa de Ambiente at http://apambiente.pt/index.php; • Municipalities at (http://www.cm-<NAME>.pt/); • SEPNA-Serviço da Protecção da Natureza e do Ambiente/GNR- Guarda Nacional Republicana at (http://www.gnr.pt/default.asp?do=5r20n/DF.zv55n1/Zv55n1) • Instituto da Conservação da Natureza e Florestas at page http://www.icnf.pt/portal/florestas/fileiras/reg-op; • ICNF Report:(http://www.icnf.pt/portal/florestas/fileiras/resource/docs/icnf-ruem) **Non-Government sources** • ANEFA - Associação Nacional de Empresas Florestais, Agrícolas e do Ambiente at: http://www.anefa.pt/•AIMMP • Associação das Indústrias de Madeira e Mobiliário de Portugal at: http://aimmp.pt/
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
1.4.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting, are complete and up to date.
Finding	In Portugal it is not applicable payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting such as stumpage fees and other volume based fees. Only taxes related to timber harvesting are applicable to all economic activities such as value added taxes (VAT) and income taxes (IRS and IRC). **VAT (IVA) taxes**: A normal tax rate of 23% VAT is applied to sale of wood. In special cases, a VAT reduction to 6% can be applied to the owner of 'standing wood' or 'standing stock sales'; or even VAT exemption if the owner is an agriculturalist or silviculturalist. Invoices must be issued by the seller, but self-invoicing by the buyer may occur in exceptional circumstances if some conditions are met (previous agreement, data conformity, etc). As no specific evidence of irregularity has been identified in relation to payment of VAT, this requirement is considered

	Low risk. The payment of VAT is a simple requisition that is easy to verify and legally undertake by both entities (seller and buyer). The exceptional regimes of reduced taxes or exemption are in place to include the cases of forest owners with special profiles as agriculturalist or silviculturalist. **Income taxes (IRS & IRC):** Income taxes are applied according to individual or collective fiscal laws. It was not found any specific evidence of irregularities about income taxes related to harvest companies. Fiscal Authorities are Autoridade Tributária, which makes join inspections on roads together with GNR- Guarda Nacional Republicana.
Means of Verification	Valid invoice/receipts Valid declaration of taxes non-debt IES_ Annual Declaration Proof of Annual declaration IRS/IRC Taxes Single Report
Evidence Reviewed	VAT Code CIVA: • DL n.º 102/2008, de 20/6: artº2º 1-a);artº9º 32)List I nº4. Anexo A- IV Individual Income Code to Singular Persons: • DL nº 442-A/88 artº4º nº3,nº4 Updated by Law nº67/2015, de 06/07 Preâ. nº9, artº3 nº1a);nº4; artº4º nº1, nº3 nº4 artº34º Comercial Income Code to collective entities • DLnº 442-B/88 Updated by Law n.º 2/2014 de 16/12, Law nº3/2014 de 16/12 & Law nº4/2014 de 16/12 artº1º, artº2º, artº 3º, artº18º-nº7 ; artº20º nº1 g) artº23º nº2 k) • Port. nº 55/2010 21/01 artº2º **Government sources** • Autoridade Tributária e Aduaneira at: https://www.portaldasfinancas.gov.pt/pt/home.action • Autoridade Tributária e Aduaneira: VAT Exemption and reduction at:http://info.portaldasfinancas.gov.pt/NR/rdonlyres/9A86386D-7EB8-447F-9EAC-CEB67C206BD2/0/INFORMA%C3%87%C3%83O.3526.pdf • Autoridade Tributária e Aduaneira: Self invoicing by the buyer: http://info.portaldasfinancas.gov.pt/NR/rdonlyres/A4FB3349-0071-47FC-97EC-ADE2061C094A/0/Informacao_5332.pdf Non-Government sources • ANEFA - Associação Nacional de Empresas Florestais, Agrícolas e do Ambiente at: http://www.anefa.pt/ • AIMMP– Associação das Indústrias de Madeira e Mobiliário de Portugal at: http://aimmp.pt/ • AIFF – Associação para a Competitividade da Indústria da Fileira Florestal at: http://www.aiff.org.pt/ • OCC-Ordem dos Contabilistas Certificados at http://www.otoc.pt/pt/a-ordem/
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
1.5.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is supplied in compliance with the requirements of CITES.
Finding	There are no trees in Portugal belonging to CITES annexes. Also it was not found any direct effect of harvesting or forest management over CITES listed species.
Means of Verification	List of purchased species
Evidence Reviewed	**Portuguese legislation:** • DL211/2009, 03/09, artº2º, artº4ºartº9º, artº13º • Port nº1225/2009 de 12/10 ; Portaria nº 1226/2009 de 12/10 • Port nº 7/2010 de 05/01 ; Port. 60/2012 de 19/03 **EU legislation:** • Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein, article 4, 5, 7, 8 (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1997R0338:20080411:EN:PDF) • Date of CITES application on EU: JOUE L 189, de 2015-07-17 • European Union page at: http://ec.europa.eu/environment/cites/pdf/trade_regulations/KH7707262PTC.pdf **CITES** • ICNF page: http://www.icnf.pt/portal/icnf/serv/formularios/cites • CITES Reports: https://cites.org/sites/default/files/reports/13-14Portugal.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
1.6.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that feedstock is not sourced from areas where there are violations of traditional or civil rights.
Finding	Portugal and Portuguese forest sector is not associated with violent armed conflict, including that which threatens national or regional security and/or linked to military control. The country is not covered by a UN security ban on exporting timber or any other international ban on timber export, also there are not individuals or entities involved in the forest sector that are facing UN sanctions. Portugal is well positioned at all international reports: • Corruption Perception Index scores 63 meaning low perceived level of corruption; • Worldwide Governance Indicators (WGI) from 73.3 to 84.13 (1-100points) The WGI report six aggregate governance indicators for over 200 countries and territories over the period 1996-2014, covering i) Voice and Accountability, ii) Political Stability and Absence of

	Violence/Terrorism, iii) Government Effectiveness, iv) Regulatory Quality, v) Rule of Law, and vi) Control of Corruption. On the other side Portugal (including human rights, illegal logging , forest and timber) is not listed in alarming reports or indexes such as: • Committee to Protect Journalists Impunity Index; • Human Rights Watch; • Global Witness • Chattham House • Amnesty International There are not indigenous or traditional people in Portugal that could claim traditional rights to lands, forests and other resources, based on long established custom or traditional occupation and use. This are potential issues that loggers and forest owners need to address when asking for a harvesting permission. This point is covered before the manifest document is issued. Tec Pellets is checking this document and ensuring they are buying from certified and licensed suppliers. Instead, there are rights to pass in public roads and ways, across the coast or rivers. In Portugal getting in forest lands is not considered invasion even on private properties, and it is common the use of wild products by communities (mushrooms, asparagus, snails, besides fishing on public waters). Tec Pellets is FSC certified and listens to the people living in the surroundings of the forest areas. Tec Pellets is always prepared to solve any problem in a pleasant way and respects people who make use of their (traditional) rights.
Means of Verification	Identity card of workers. Valid written contract. Obligatory insurance document. Updated document of social security payment IRS /IRC taxes - Relatório Único.
Evidence Reviewed	Transparency International http://www.transparency.org/cpi2015#map-container UN Sanctions List at: https://www.un.org/sc/suborg/en/sanctions/un-sc-consolidated-list World Bank: Worldwide Governance Indicators http://info.worldbank.org/governance/wgi/index.aspx#countryReports Committee to Protect Journalists https://www.cpj.org/reports/2014/04/impunity-index-getting-away-with-murder.php Human Rights Watch: http://www.hrw.org/world-report/2015 Global Witness: www.globalwitness.org Chattam House Illegal Logging Indicators Country Report Card http://www.illegal-logging.info Amnesty International: https://www.amnesty.org/en/documents/pol10/0001/2015/en/ Labour Code: Law n.º 7/09 12/02 cap I and updates like Lei 69/13, de 30/08 includes obligatory professional training (http://www.act.gov.pt/(ptPT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx Republic Assembly Resolution nº109/2012 de 08/08 art 6º (Convention 184 doesn't apply to industrial forest work) ILO Convention numbers 87, 98, 29, 105, 100, 101,129 e 138, 184 (http://dre.pt/util/getpdf.asp?s=diad&serie=1&iddr=2012.153&iddip=20121525

	Foreign workers: Law n.º 23/2007 at 04/07 artº59º 5a) and updates (http://www.pgdlisboa.pt/leis/lei_mostra_articulado.php?nid=920&tabela=leis&so_miolo Labour Conditions Authority-ACT http://www.act.gov.pt/(pt-PT)/Paginas/default.aspx. Ministry of Solidarity, Employment and Social Security http://www.portugal.gov.pt/pt/ministerios/mtsss.aspx Employment and Professional Training Institute at https://www.iefp.pt Ministery of Internal Administration http://www.portugal.gov.pt/pt/ministerios/mai/equipa.aspx Immigration And Boarders Services http://www.sef.pt/portal/V10/EN/aspx/page.aspx SETAA-Sindicato da Agriculture, Alimentação e Florestas: at http://www.setaa.pt/ UGT-União Geral de Trabalhadores at https://www.ugt.pt/ CGTP - Confederação Geral de Trabalhadores Portugueses at http://www.cgtp.pt/ ANEFA - Associação Nacional de Empresas Florestais, Agrícolas e do Ambiente at: http://www.anefa.pt/ UNAC - União da Floresta Mediterrânica http://www.unac.pt/ Forum Florestal- Estrutura Federativa da Floresta Portuguesa at http://forumflorestal.pt Forestis- Associação Florestal de Portugal http://www.forestis.pt/ FNAPF- Federação Nacional das Associações de Proprietários Florestais http://www.fnapf.pt/ Confagri-Confederação Nacional das Cooperativas Agrícolas e do Crédito Agrícola de Portugal, CCRL at http://www.confagri.pt/ CNA - Confederação Nacional de Agricultura at http://www.cna.pt/ CAP- Confederação dos Agricultores de Portugal http://www.cap.pt/ BALADI- Federação Nacional dos Baldios https://www.facebook.com/Federa%C3%A7%C3%A3o-Nacional-dos-Baldios-257792997725879/
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.1.1	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.
Finding	The important HCV areas critical to conservation are designated as protected and classified areas at national or EU level (Natura 2000), there are very likely a large number of smaller areas or biotopes important to biodiversity or as classified priority species and habitats could be unidentified. **HCV 1** – Species diversity: concentrations of biological diversity including endemic species, and rare, threatened, or endangered species that are significant at global, regional, or national levels. i) Classified areas: The total classified area protected by the Rede Nacional de Áreas Protegidas (RNAP) and the Rede Natura2000 covers around 20 per cent of Portugal's continental territory. Classified areas comprise RNAP protected areas, sites from the national list [which includes sites of community importance (SICs)] and the Zonas de Protecção Especial para Aves (ZPE) of the Natura 2000 network. Municipal protection areas must also be considered. Other classified areas are also protected by international

commitments agreed upon by the Portuguese state (e.g. Ramsar Convention sites, biogenetic reserves, biosphere reserves). Although not included in classified areas, other areas come under this umbrella, such as Important Bird Areas (IBAs), sites of international importance for the conservation of birds on a global scale. (http://www.icnf.pt/portal/naturaclas/cart).

ii) Endangered species according to the classification adopted by the International Union for the Conservation of Nature (IUCN) to endangered species:

- Critically endangered (CR)
- Endangered (EN)
- Vulnerable (VU).
- Protected species within the legal conservation instruments in force in Portugal

Relevant information:

- Habitat and Birds Directives;
- CITES
- Bern Convention
- Bonn Convention
- Red Book of Vertebrates from Portugal
- Red book and Atlas of Bryophytes
- http://www.icnf.pt/portal/naturaclas/patrinatur/especies

iii) Endemic species: The Mediterranean basin, in which Portugal is found, contains around 25,000 species of plants, of which 50 per cent are endemic to the region. Of almost 4,000 species of flora listed for Portugal (continental, Azores, and Madeira), around 450 are lusitanian endemisms (444 in total; 143 on the continent, plus 76 from the Azores, 158 from Madeira, and 67 from Macaronesia), and 346 are endemic to the Iberian Peninsula. 3,314 species of flora are listed for the continent, 1,006 in the Azores archipelago, and 1,233 in Madeira. This is the region that shelters the highest number of endemisms (species that do not exist elsewhere) – 157 in all. In the Azores the number reaches 78, while on the continent it is 150.

As for invertebrates, information is scarce, but there are statistics for insects: so far, 402 taxa have been registered (369 species and 33 subspecies) which are recognized as lusitanian endemisms.

iv) Critical seasonal use areas including critical areas of refuge, breeding or migration routes in Portuguese territory: Fauna species may use different types of habitat depending on their life cycle and the season. These habitats can be critical for their importance in the reproductive season or for the availability of food in certain seasons. This designation focuses on the importance of these areas for fauna.

Digital mapping information from the Manual das Linhas Eléctricas [Manual of Electric Lines] (ICNB 2008) is also used, for reference purposes only, as its scope is limited in this field. This identifies:

- Autumnal bird migration corridors in south-west Alentejo and the Vicentina coast;
- Zones of concentration and passage for steppe birds (great and little bustards);
- Reproduction areas for birds of prey with threatened status;

- Concentration of winter birds in wetlands;
- Shelters for bats, considered important at a national, regional, and local level.
- As for invertebrates, information is scarce, but there are statistics for insects: so far, 402 taxa have been registered (369 species and 33 subspecies) which are recognized as Lusitanian endemism.

HCV 2 – Landscape-level ecosystems and mosaics: Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

- Cork oak and holm oak formations occurring in Portugal in the heathlands of the Tagus and Sado (cork) and Guadiana Valley (oak) under the form of woodlands or montados.

HCV 3 – Ecosystems and habitats: rare, threatened, or endangered ecosystems, habitats or refugia

i) Habitats Directive (2007-2012)
Covers habitats listed in the Habitats Directive (Annex I) which, in the last national Habitats Directive report (2007–2012), were listed in categories (U1) – unfavourable inadequate – and (U2) – unfavourable bad.

ii) Natura 2000 database
Natura2000's sectorial plan is the main source of information used to identify habitats in classified areas. In the case of non-classified areas, the Habitats Directive implementation reports can be consulted for information on habitat conservation (favourable, unfavourable inadequate, unfavourable bad).

iii) Portugal approved its ratification of the Convention on Biological Diversity (CBD) via DL no. 21/93, dated 29 June, which became effective in our country on 21 March 1994. The Fifth National Report to CBD had as its main objective a review of implementation of the Convention and an assessment of how far we had come in achieving CBD objectives and the Aichi Biodiversity Targets contained in the Strategic Plan for Biodiversity 2011–2020. It also contributed to the development of the Global Biodiversity Outlook report and the review of the fulfilment of the EU Biodiversity Strategy for 2020. The report covers the state and tendencies of biodiversity and detected threats, reporting on actions taken towards fulfilling the Aichi Biodiversity Targets and finally sets out, based on experience, topics most deserving of attention in order to achieve a more adequate and broad-reaching implementation of the CBD's COP (Conference of Parties) decisions in Portugal.

HCV 4 – Critical ecosystem services: basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes. forests located in critical areas in river basins, such as floodplains and sloping areas, as defined and mapped in REN-National Ecological Reserve.

HCV 5 – Community needs: Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or indigenous peoples.

HCV 6 – Cultural values: sites, resources, habitats, and landscapes of global or national cultural, archaeological, or historical significance, and/or of critical cultural, ecological,

economic, or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or Indigenous Peoples.

i) World Heritage (UNESCO)
Sites identified as World Heritage by UNESCO. In Portugal there are 15 sites identified (http://www.patrimoniocultural.pt/pt/patrimonio/patrimonio-mundial/portugal or http://www.rpmp.pt/#!sitios/cihc) , of which only two are designated as outstanding natural landscapes ('Paisagem Cultural de Sintra', around 900ha, on the Portuguese mainland, and the 'Floresta Laurissilva na Madeira', on the island of Madeira, covering 15,000ha). The Iberian Risk Assessment also identified rocky landscapes such as the Vale de Foz Côa [Foz Côa Valley], the Douro slopes, and the landscape of Pico island, places that, analysed more closely, are not part of the forestry sector – see the results of the meeting of the working group for category 3 (5 July 2016).
Currently, there are other sites proposed for Portugal under assessment by UNESCO (https://www.unescoportugal.mne.pt/pt/temas/proteger-o-nosso-patrimonio-e-promover-a-criatividade/patrimonio-mundial-em-portugal . These are not yet included here.

ii) Cultural heritage (Law no. 107/2001, dated 8 September)
In Portugal there are specific governmental bodies to manage cultural heritage: the General Directorate of Cultural Heritage for the Portuguese Mainland (http://patrimoniocultural.pt/en/); Directorate of Services of Cultural Heritage for the Island of Madeira (http://cultura.madeira-edu.pt/agendacultural/CulturalHeritage/DSPC/tabid/939/language/en-US/Default.aspx); and the Regional Directorate of Culture for the Azores Islands (http://www.azores.gov.pt/Portal/en/entidades/srec-drcultura/?lang=en and http://www.iac-azores.org/). Among others, these bodies are responsible for: managing the architectural and archaeological built heritage in urban and rural areas, including conservation works in monuments under our care; managing the national museums, World Heritage monuments and museum collections; studying, researching, and disseminating heritage-related information; conserving and restoring movable heritage assets as well as researching, disseminating results, and raising awareness about heritage protection issues.

iii) Classified groves (Law no. 53/2012, dated 5 September)
Additionally, the NRA WG has also looked at national legislation that identifies and protects outstanding grove (arboreta) (http://www.icnf.pt/portal/florestas/Arvores.qry?start:int=80&Distrito=&Concelho=&Freguesia=&Processo).
The main source of information within this attribute is the application report of the Habitas Directive (2007-2012) as well as the description list of every habitat identified in the Annex 1 of Habitats Directive in Sectorial Plan of the Natura2000 network. Other cartographic information of HCV is included on open GIS like http://www.habeas-med.org/webgis/pt_en/ and http://epic-webgis-portugal.isa.ulisboa.pt.

Conclusion
HCV 1 – Specified risk
The scope of RNAP and SNAC is the assessment of large areas with significant biodiversity values, meaning that the identification of threats and pressures to attributes, as well as monitoring activities are, typically, performed at a macro scale. The identification of precise

	HCV attributes might not fall under the scope of these assessments, so specified risk is considered. Outside SNAC and RNAP, where less information is available, the risk is, thereby, specified. **HCV 2 – Low Risk** It is considered that HCV2 attributes are well identified and mapped. **HCV 3 – Specified Risk** Extra effort is needed to identify and map these values. Internet sources, as well as the situation on the ground need to be studied. See indicator 2.1.2. and 2.2.3 **HCV 4 + 5 – Specified risk** Extra effort is needed to identify and map these values. Internet sources, as well as the local situation need to be studied. This is a specified the risk on private, communitarian, and public forest areas not managed by ICNF, subject to clear cutting at dimensions above to the maximum area indicated for each region by the Regional Forestry Management Plan (PROF). There are no indigenous people in Portugal, but in it is important to evaluate the interests of the (local) population and social-economic functions of the forests and woodlands (including agricultural or municipal functions). Building fences around forests is most of the time undesirable. See indicators 2.2.2, 2.2.3, 2.2.6, 2.4.1 and 2.5.1 (and 2.6.1 as 'safety net') **HCV 6 – Specified risk** Extra effort is needed to identify and map these values. Internet sources, as well as the local situation needs to be studied. Portugal is a country with a long history and rich culture. There are for example several pilgrimage routes and locations of special cultural and religious value. Because 97% of the forest is in private property and the land owner could be uninterested to conserve cultural values, this aspects needs attention.
Means of Verification	• Tec Pellets's Enviromental Impact Assessment • Harvesting operation maps Tec Pellets and feedstock suppliers • Internet research • GIS maps of HCV areas. • Interviews • Priority Classified Habitat and species catalogue. • FSC and PEFC certificate The pellets are at FSC CW and SBP-controlled biomass. Our specialists check the harvesting areas and assure protected regions are not cut.
Evidence Reviewed	**Sources below (mitigation measures) and these:** HABEAS: http://www.habeas-med.org/webgis/pt_en/ http://www.icnf.pt/portal/florestas/profs SNAC Legislation https://dre.pt/application/file/70698029 RNAP: http://www.icnf.pt/portal/ap/ap

	National Conservation Plano of threatened Flora information http://www.icnf.pt/portal/naturaclas/patrinatur/conserv-flora-perigo Site characterization SIC e ZPE: http://www.icnf.pt/portal/naturaclas/rn2000/p-set/Plan-set-docs Data Base for fauna and flora specific plans: http://www.icnf.pt/portal/naturaclas/patrinatur/especies DRE: http://www.icnf.pt/portal/icnf/legisl/legislacao/2012/lei-n.o-53-2012-de-5-de-setembro.-d.-r.-n.o-172-serie-i http://www.icnf.pt/portal/florestas/profs/alt-minh http://www.icnf.pt/portal/florestas/profs/baix-minh http://www.icnf.pt/portal/florestas/profs/nordest http://www.icnf.pt/portal/florestas/profs/centr-lit http://www.icnf.pt/portal/florestas/profs/ampedv Reptile and amphibious of Portugal (2008): http://www.icnf.pt/portal/naturaclas/patrinatur/atlas-anfi-rept/anfibios Red book for Portuguese Vertebrates (2005): http://www.icnf.pt/portal/naturaclas/patrinatur/lvv Flora identification: http://www.icnf.pt/portal/naturaclas/rn2000/p-set/psrn-flora Electric wire line manual (ICNB 2008) http://www.icnf.pt/portal/naturaclas/ordgest/aa/resource/doc/man-infra-lin Law for natural values cadastre: Decree-Law n.º 242/2015 at 15/10 https://dre.pt/application/conteudo/70693924 Fresh water Fish National cartography: http://www.cartapiscicola.org/ Flora cartographic source: http://www.flora-on.pt/ Cartography (2015) http://webgis.spea.pt/AtlasAvesInvernantesMigradoras/ AIIF: http://www.aiff.org.pt/assets/ESTUDO_Prospetivo_-Sector-Florestal.pdf AIIF: http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf ICNF: http://www.icnf.pt/portal/florestas/ifn/resource/ficheiros/ifn/ifn6-res-prelimv1-1 Status & Trends in Sustainable Forest Management in Europe https://www.unece.org/fileadmin/DAM/publications/timber/Forest_Europe_report_2011_web.pdf ICNF: http://www.icnf.pt/portal/florestas/dfci/Resource/doc/rel/2013/relatorio-dfci-ap-2013 ICNF: http://www.icnf.pt/portal/florestas/dfci/relat/raa/resource/ficheiros/ree2012/rel-recup-inc-catraia-set-v5
Risk Rating	☐**Low Risk** ☒ **Specified Risk** ☐ **Unspecified Risk at RA**
Mitigation Measure	The control system for feedstock, which also includes regular inspections of suppliers, is duly implemented. 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 or EU level (Natura 2000). There are also smaller areas or biotopes important to biodiversity, or classified as priority species' habitats. Tec Pellets identifies and maps of areas with high conservation values (HCVs). HCV 1, 3, 4, 5, and 6 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.

	Below the main sources of information, used to prepare the identification of these values for our harvesting teams. The feedstock suppliers evaluate every plot before the harvesting operations begin. Tec Pellets inspects the suppliers and harvesting areas. ***HCV 1 – Species diversity:*** ➢ 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 ➢ 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:*** ➢ Habitats Directive (2007-2012) ➢ Rede Natura 2000 database: http://www.icnf.pt/portal/naturaclas/rn2000 ➢ Important Bird Areas of Portugal at: http://ibas-terrestres.spea.pt/ ➢ Convention on Biological Diversity (CBD) via DL no. 21/93, dated 29 June ***HCV 4 – Critical ecosystem services & HCV 5 – Community needs:*** ➢ Habeas-Hotspot Areas for Biodiversity and Ecosystem Services http://www.habeas-med.org/webgis/pt_en/ ➢ Forests located in critical areas - defined and mapped in REN-National Ecological Reserve. ***HCV 6 – Cultural values:*** ➢ 15 sites in Portugal identified as World Heritage by UNESCO: http://www.patrimoniocultural.pt/pt/patrimonio/patrimonio-mundial/portugal ➢ Sites proposed for Portugal under assessment by UNESCO: https://www.unescoportugal.mne.pt/pt/temas/proteger-o-nosso-patrimonio-e-promover-a-criatividade/patrimonio-mundial-em-portugal ➢ Classified groves the application report of the Habitas Directive (2007-2012) national legislation that identifies and protects outstanding grove (arboreta) (http://www.icnf.pt/portal/florestas/Arvores.qry?start:int=80&Distrito=&Concelho=&Freguesia=&Processo). ➢ Other cartographic information of HCV included on open GIS: http://www.habeas-med.org/webgis/pt_en/ and http://epic-webgis-portugal.isa.ulisboa.pt

	Indicator
2.1.2	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.

Finding	**HCV 1 – Specified Risk** The scope of RNAP and SNAC is the assessment of large areas with significant biodiversity values, meaning that the identification of threats and pressures to attributes, as well as monitoring activities are, typically, performed at a macro scale. The identification of precise HCV attributes might not fall under the scope of these assessments, so specified risk is considered. Outside SNAC and RNAP, where less information is available, the risk is, thereby, specified. Several legal instruments protect areas of significant biological diversity: planos de ordenamento de áreas protegidas (POAP), planos regionais de ordenamento florestal (PROF), planos directores municipais [town planning] (PDM), plano de gestão florestal (PGF), and, in the case of classified areas, a programa de gestão da biodiversidade [biodiversity management programme] (PGB). Regarding the establishment of projects and programmes aiming to enhance the conservation status of HCV, the LIFE Programme has facilitated the development of a series of projects in Portugal (http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.getDocs), many of which permit contracts with owners as good conservation management practice, support and awareness-raising for owners and schools, and also vertical signs of species' territorial areas. A series of documents is also produced, from simple brochures to manuals of good practice (an example being the conservation manual for the Bonelli's eagle and the good forestry and hunting practice manual). Some projects include action plans for species conservation. Most projects have as their objective the conservation of potential HCV 1 species, being carried out by Natura2000 Network. Some NGOs, such as Sociedade Portuguesa para o Estudo das Aves (SPEA) [Portuguese Society for the Study of Birds]), have formed working groups to monitor species, such as the Bonelli's eagle working group (GTAB) and the night birds working group (GTAN). Furthermore, various good practice manuals, leaflets and other relevant information sources are available in the public domain, published by different institutions. **HCV2 – Low risk** The regulation implemented in Portugal on oak and holm trees and stands, includes a comprehensive legislative framework with a legal action planning and project but also cuttings protection. This legislation also meet forest management measures themselves related to intensity of exploitation, such as the stripping and pruning. This regulation is relatively well established and disclosed have being assimilated by the various agents involved as owners, managers, and operators. Also the planned forest management and the proper certification of sustainable forest management expanded in Portugal in recent years is currently counting about 236 000 hectares certified forests entering the cork and holm oak species (is not robust statistics on the certified specific area with cork oak stands). Following several surveys on the fragilised state of cork and holm oak stands, there were also developed various processes to improve forest management practices, which were disclosed by the various entities involved. This includes a variety of contents and formats such as codes of good cork forest practices but also pest and disease identification guides. More recent investment lines have been created supported by EU grants to assist owners and managers in pest monitoring of cork and holm oak stands (Operation 8.1.3 - Prevention of forest against

	biotic and abiotic agents) and for health recovery and restoration of forest stands of cork oak (Operation 8.1.4 - forest Restoration affected by biotic and abiotic agents or catastrophic events). The most current detailed results achieved by management and improvement actions on forest stands of are not fully known, since the full values of the last national inventory (IFN6) are still missing, however it is known that the class of 'wooded area with cork oak' had an increase of 6% from 1995 to 2010, and holm oak has decreased 3% in the same period. **HCV 3 – Specified risk** Information about threats of management activities to this designation can be found in ICNF information, namely in the sectorial plan of Natura2000 and in the Third National Application Report of the Habitats Directive (2007–2012). Portugal publishes graphics of threats to Portuguese habitats and species (Continent+Azores+Madeira) http://www.icnf.pt/portal/naturaclas/rn2000/resource/docs/rel-nac-07-12/docs/nat-summ-pt, as required by arts. 12 and 17 of the report. The Natura 2000 network database was updated in 2015 and it contains relevant information about the assessment of each habitat for each Common Importance Site. Furthermore, Portugal approved its ratification of the Convention on Biological Diversity (CBD) via DL no. 21/93, June 29th, which became effective on 21 March 1994. The Fifth National Report to CBD had as its main objective a review of implementation of the Convention and an assessment of how far we had come in achieving CBD objectives and the Aichi Biodiversity Targets contained in the Strategic Plan for Biodiversity 2011–2020. It also contributed to the development of the Global Biodiversity Outlook report and the review of the fulfilment of the EU Biodiversity Strategy for 2020. The report covers the state and tendencies of biodiversity and detected threats, reporting on actions taken towards fulfilling the Aichi Biodiversity Targets and finally sets out, based on experience, topics most deserving of attention in order to achieve a more adequate and broad-reaching implementation of the CBD's COP (Conference of Parties) decisions in Portugal. The vertebrate species identified as threatened are listed and described in the Redbook of Vertebrates from Portugal. Similar assessment has been done for Bryophytes in the Redbook of Bryophytes. A study aimed to identified and list the threatened flora is being develop at this moment. **HCV 4 & HCV 5 – Specified Risk** There are threats to forests located in critical areas in river basins, such as floodplains and steep areas, and aquifers as defined and mapped in REN-National Ecologic Reserve. Many of these threats include the conversion for forest plantations or other non-forest uses, and are addressed at following indicator 2.1.3. It has been identified very negative effects as a consequence of large forest fires on the river basin, affecting qualitative and quantitative hydrological flows in the following periods. In such cases the forest authorities (ICNF) develop and promote specific plans for the recovery of burned areas with precise information on the destinations of the timber. There are also threats of lesser magnitude caused in private forests, arising from inadequate operations of harvesting and / or maintenance. These operations include tools, interventions and inadequate intensity to the sensitivity of soils and vegetation in these critical areas to the protection of floods. However, the reduced scale of the most forest operations contributes to the reduction of the magnitude of the identified risks.

	HCV 6 – Specified Risk This is a seldom but specified risk. Portugal is a country with a long history and rich culture. There are for example several pilgrimage routes and locations of special cultural and religious value. Because 97% of the forest is in private property and the land owner could be uninterested to conserve cultural values, this aspects needs attention. Forest stand values related to these routes and locations could be overlooked. Tec Pellets strives to adapt its forest operations to respect recreational and cultural values related to the area.
Means of Verification	Tec Pellets's Enviromental Impact Assessment FSC or PEFC Forest management certificate public reports Forest Management plan as PGF, PUB, PEIF Regional, publicly available data from credible third parties FSC Supplier audit Records of Tec Pellets´ field inspections
Evidence Reviewed	*Bugalho, M. 2011 'Interpretação Nacional das Florestas de Alto Valor de Conservação' Documento de base Trabalhos realizados pelo GT IN FAVC do FSC Portugal* HABEAS: http://www.habeas-med.org/webgis/pt_en/ LEAF_EPICWebGiSPortugal: http://epic-webgis-portugal.isa.ulisboa.pt/maps/epic?format=image/png;%20mode=8bit&startExtent=-1523000,4400000,-143668,5180000 SNAC : Legislation https://dre.pt/application/file/70698029 RNAP: http://www.icnf.pt/portal/ap/ap Rede Natura 2000: http://www.icnf.pt/portal/naturaclas/rn2000 Important Bird Areas of Portugal at : http://ibas-terrestres.spea.pt Site characterization SIC e ZPE: http://www.icnf.pt/portal/naturaclas/rn2000/p-set/Plan-set-docs Cartography : http://www.icnf.pt/portal/naturaclas/cart Protected area plans: http://www.icnf.pt/portal/naturaclas/ordgest/poap Data Base for fauna and flora specific plans: http://www.icnf.pt/portal/naturaclas/patrinatur/especies Red book for Portuguese Vertebrates (2005): http://www.icnf.pt/portal/naturaclas/patrinatur/lvv Nesting and wintering Bird Atlas on Portugal (2008): ND online Cartography (2015) http://webgis.spea.pt/AtlasAvesInvernantesMigradoras/ Reptile and amphibious of Portugal (2008): http://www.icnf.pt/portal/naturaclas/patrinatur/atlas-anfi-rept/anfibios Fresh water Fish National cartography : http://www.cartapiscicola.org/# Flora identification: http://www.icnf.pt/portal/naturaclas/rn2000/p-set/psrn-flora Flora cartographic source: http://www.flora-on.pt/ National Conservation Plano of threatened Flora information http://www.icnf.pt/portal/naturaclas/patrinatur/conserv-flora-perigo http://naturdata.com/index.php?option=com_content&view=article&id=78&Itemid=60 Electric wire line manual (ICNB 2008) http://www.icnf.pt/portal/naturaclas/ordgest/aa/resource/doc/man-infra-lin Regional Forest Plans (PROF): http://www.icnf.pt/portal/florestas/profs AIIF : http://www.aiff.org.pt/assets/ESTUDO_Prospetivo_-Sector-Florestal.pdf AIIF: http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf ICNF: http://www.icnf.pt/portal/florestas/ifn/resource/ficheiros/ifn/ifn6-res-prelimv1-1

	UNECE:https://www.unece.org/fileadmin/DAM/publications/timber/Forest_Europe_report_2011_web.pdf ICNF: http://www.icnf.pt/portal/florestas/dfci/Resource/doc/rel/2013/relatorio-dfci-ap-2013 ICNF: http://www.icnf.pt/portal/florestas/dfci/relat/raa/resource/ficheiros/ree2012/rel-recup-inc-catraia-set-v5 ICNF http://www.icnf.pt/portal/florestas/dfci/relat/raa/resource/ficheiros/rel-tec/picoes-rel-tecn WILDER: http://www.wilder.pt/historias/pedida-actualizacao-de-lei-com-16-anos-sobre-especies-invasoras/ QUERCUS: http://www.quercus.pt/comunicados/2009/maio/924-especies-invasoras-continuam-sem-controlo UNECE https://www.unece.org/fileadmin/DAM/publications/timber/Forest_Europe_report_2011_web.pdf Good Forest Practices http://www.icnf.pt/portal/florestas/gf/documentos-tecnicos/resource/doc/Boas-Praticas-Florestais.pdf Martins M.J & Cerdeira, J.O. (2009) do Departamento de Matemática do Instituto Superior de Agronomia. Referências R Core Development Team, 2009, R: A Language and Environment for Statistical Computing. Vienna, Austria, R Foundation for Statistical Computing; & Autoridade Florestal Nacional, 2010, Florestat – Aplicação para a Consulta dos Resultados do 5º Inventário Florestal Nacional. in Habeas - Habeas-Hotspot Areas for Biodiversity and Ecosystem Services http://www.habeas-med.org/webgis/pt_en/ APFC: http://www.apfc.pt/xms/files/Eventos/Projetos_APFC_para_a_sanidade.pdf INIAV: http://www.iniav.pt/fotos/gca/livro_causas_doc_sintese_1369127896.pdf ICNF: http://www.icnf.pt/portal/florestas/foflo/pdr2020/resource/doc/Areas-rrc-v-final.pdf Planos de Gestão Florestal de areas públicas: http://www.icnf.pt/portal/florestas/gf/pgf/publicitacoes/encerradas Autoridade Florestal Nacional, 2010, Florestat – Aplicação para a Consulta dos Resultados do 5º Inventário Florestal Nacional. Disponível em http://www.icnf.pt/portal/florestas/ifn/ifn5/rel-fin ICNF http://www.icnf.pt/portal/florestas/dfci/relat/raa/resource/ficheiros/ree2012/rel-recup-inc-catraia-set-v5 PANCD https://dre.pt/application/file/65985917 PDR2020 http://www.pdr-2020.pt/site/O-PDR2020/Arquitetura/Area-3-Ambiente-Eficiencia-no-Uso-dos-Recursos-e-Clima/Medida-7-Agricultura-e-Recursos-Naturais/Acao-7.11-Investimentos-nao-produtivos/Operacao-7.11.1-Investimentos-nao-produtivos Fundo Florestal Permanente: http://www.icnf.pt/portal/icnf/noticias/gloablnews/fundo-florestal-permanente-ffp Alves, A. M., Pereira, J. S., Correia, A. V., 2012. *Silvicultura - A gestão dos ecossistemas florestais.* Fundação Calouste Gulbenkian. Capítulo 5 'Condenação de Aprígio Santo', Comunicado - s, 23/02/12 at Almargem-Associação de Defesa do Património Cultural e Ambiental do Algarve https://www.facebook.com/associacaoalmargem/notes 'Abate de sobreiros na Zona de Protecção Especial do Estuário de Tejo em Benavente' 19/06/2014, Quercus - Associação Nacional de Conservação da Natureza at (http://www.quercus.pt/comunicados-floresta/644-2014/3708-abate-de-sobreiros-na-zona-de-proteccao-especial-do-estuario-de-tejo-em-benavente); 'Zona de Proteção Especial do Estuário do Tejo ameaçada por novas áreas turísticas' 22/05/2014, Quercus - Associação Nacional de Conservação da Natureza at

	(http://www.quercus.pt/comunicados-floresta/644-2014/3652-zona-de-protecao-especial-do-estuario-do-tejo-ameacada-por-novas-areas-turisticas); Acescimo http://acrescimoapif.blogspot.pt/2012/08/porque-ardem-as-florestas-em-portugal.html Lourenço, L e Outros (2011) Causas de incêndios florestais em Portugal continental. Análise estatística da investigação efetuada no último quindénio (1996 a 2010) QUERCUS http://www.quercus.pt/comunicados/2015/agosto/4419-politicas-publicas-desajustadas-favorecem-incendios 'Butwell condenada por crime contra a Natureza e desobediência qualificada na Ria de Alvor' Rodrigues, E. 11/07/2015 at Sulinformação http://www.sulinformacao.pt/2015/07/butwell-condenada-por-crime-contra-a-natureza-e-desobediencia-qualificada-ria-de-alvor/.
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	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 or EU level (Natura 2000). There are also smaller areas or biotopes important to biodiversity, or classified as priority species' habitats. Tec Pellets identifies and addresses potential threats to forests and other areas with high conservation values (HCVs). HCV 1, 3, 4, 5 and 6 were assessed to have a specified risk. Tec Pellets (contractually) ensures: • mapping of the harvesting plot, • owner rights, • harvesting according to the technical rules sustainable forest management, • best silvicultural practices, respecting environmental and safety rules, • cleaning of waste from plantations • tree species (no genetically modified trees) The feedstock suppliers evaluate every plot before the harvesting operations begin. Tec Pellets inspects the suppliers and harvesting. Tec Pellets keeps records of field inspections and monitoring results. ***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 ***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 situations,

	the supplier Tec Pellets 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. The forest specialist of Tec Pellets checks the environmental assessment and does field inspections. The checks and inspections are recorded. See also below, indicator 2.2.3 ***HCV 4 – Critical ecosystem services & HCV 5 – Community needs*** This is a specified the risk on private, communitarian, and public forest areas not managed by ICNF, subject to clear cutting at dimensions above to the maximum area indicated for each region by the Regional Forestry Management Plan (PROF). This point is evaluated and recorded before the forest operations commence. Caution and best practises are applied. Clear cuts are reduced to the maximum size indicated in the PROFs, or even further, if the environmental aspects, such as hillslopes, require special attention. There are no indigenous people in Portugal, but in it is important to evaluate the interests of the (local) population and social-economic functions of the forests and woodlands (including agricultural or municipal functions). Building fences around forests is most of the time undesirable. See below, indicators 2.2.2, 2.2.3, 2.2.6, 2.4.1 and 2.5.1 (and 2.6.1 as 'safety net'). ***HCV 6 – Cultural values*** This is a seldom but specified risk. Forest stand values related to cultural aspects could be overlooked. Tec Pellets strives to adapt its forest operations to respect recreational and cultural values related to the area. For example, by conserving old trees with special recreational value along pilgrim routes, or close to cultural sites. Tec Pellets does not acquire wood harvested from forest areas where traditional, community or legal rights are not respected See also below, indicators 2.4.1, 2.5.1 (and 2.6.1 as 'safety net').

	Indicator
2.1.3	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.
Finding	Portugal's forest is marked by its recent origins and by heavy human intervention. In a general way, the portuguese forest is recent. In Europe, Portugal is the country in which the transition from deforestation to reforestation occurred most rapidly: forest cover, which was between 4 and 7 per cent in 1870, grew in one century to cover more than 30 per cent of the continental territory. The definition of natural forest, as defined in the FSC forest management standard for Portugal (approved by FSC on 18 February 2016) is: forest areas where many of the principal characteristics and key elements of native ecosystems such as complexity, structure, soil properties, and biodiversity are present, and where all or most of the trees are indigenous species. Natural forests can include forest areas where forestry or other intervention is characterized by a combination of natural regeneration and artificial regeneration, composed of

	local indigenous species and in which many of the characteristics of natural forests are present. Natural forests do not include: • Areas where the vegetation is not dominated by trees; • Areas that were not previously forested; • Areas that do not yet contain many of the characteristics and elements of native ecosystems. *Hence, the majority of the present forest cover have developed from afforestation activities of Pinus Pinaster and Eucalyptus Globulus. Thereby, forest areas considered as primary forest, as is published by FAO, account for around 0.8% of overall forest cover.* *Furthermore, the overall dynamics of the Portuguese forest cover is not promoted or supported by the demand of biomass. Simultaneously, the development of forest energy crops is not permitted in Portugal, through several legislation limitations, namely the mandatory previous authorization for premature final cut of eucalyptus stands (Law-decree nº173/88 from May 17th), regulations for the introduction and environmental control of non-indigenous species (Law-decree nº565/99 from December 21st) and mainly the mandatory previous authorization for afforestation and reforestation activities using short rotation crops (Law-decree nº175/88 from May 17th).* We can also conclude that the remains of the forest ecosystems that would have survived this destruction will be concentrated in the Fundamental Nature Conservation Network (RFCN) (defined by Decree-Law no. 142/2008, amended by Decree-Law no. 242/2015 dated 15 October) and made up of the Sistema Nacional de Áreas Classificadas [National Classified Areas System], which incorporates the central areas of nature conservation and biodiversity: i) RNAP; ii) SICs and ZPEs of the Natura2000 network; iii) any other areas classified under the umbrella of international commitments agreed upon by the Portuguese state; and areas of continuity: i) REN; ii) RAN iii) DPH (public hydric domains), safeguarded by the respective legal regulations. FAO's Global Forest Resources Assessment of 2010 [2] shows the following data regarding Portuguese forest area: • 37% of areas are defined as permanent forest • 20% of the forest is within protected areas • Primary forest only represents 1% • Other naturally regenerated forest just 75% • Planted forest 25%. Altering land cover in the protected areas is prohibited by Article 43 of Decree-Law no. 242/2015, as is the disturbance or destruction of threatened species and their habitats, under Article 44. As far as conversion to forest plantations is concerned, the provisions of Decree-Law no. 96/2013, 19 July, apply to the whole of the continental territory. This establishes the legal framework, for the whole of the continental territory, to which actions of afforestation and reforestation of forest species (RJAAR) are subject. However, any planting/replanting of forest species, independently of the area of intervention, that alters the dominant species previously

	installed (including the conversion of natural forest to plantations) is subject to advance authorization by the ICNF. It's important to highlight that the article nº9 of RJAAR defines that if an intervention area is situated inside the National Ecologic Reserve, a consult must be addressed to the CCDR as well as the related municipality. The article nº10 defines the factors that should be taken into account in the decision making process including protection of forest against forest fires, hydric related issues, biodiversity and habitat protection, among others. There are 135 Forest Producers Organizations registered on ICNF data base [3], whose offer multiple services, such as the preparation and implementation of Forest Management Plan, creation and management of Forest Intervention Zones, promotion of forest best practices, management of forest intervention teams, among others. As far as conversion that is not for agriculture or forestry is concerned, Decree-Law no. 139/89 is applicable to all Portuguese territory, and establishes protection measures for natural landscape, arable soil, and plant cover. These actions are subject to prior licensing by the municipal council. There is also specific protection legislation for: • Cork and holm oak (D-L no. 169/2001, amended by D-L no. 155/2004 of 30 June); • Riparian vegetation (Law 58/2005 and Law 54/2005); • Holly (Decree-Law no. 423/89). The latest RJAAR informative application note [3] summarizes the main points in this legal regime, including that actions of afforestation and reforestation are to be authorized by the ICNF, approved for public funding support programmes, decided upon by environmental impact reviews or environmental incidence assessments, and authorized or carried out by the ICNF, in properties managed by the same. 15% of the reforestation activities comprising the change of species, in the period of assessment, consisted on Pinus Pinaster converted to Eucalyptus. 4% of the referenced activities comprise the plantation of Eucalyptus on areas occupied by other, non-specified, species. The Minister Council from March 21st 2017, approved a law proposal that reviews the Legal Regime of the Arborization and Reforestation Actions [RJAAR] blocking the expansion of the eucalyptus plantation area, allowing new plantations only as compensation for areas previously occupied by eucalyptus and currently abandoned, being mandatory that the areas of previously occupied by this species shall be cleaned and in condition to be used for another agricultural or forestry activity. Risk Conclusion: Specified risk. • Conversion of forest cover is possible in Portugal, although previous authorization by ICNF is mandatory. • Several legal mechanisms and monitoring practices are put in place in order to control forestry activities in sensitive areas, comprising protected tree species. • The exotic tree species most relevant in Portugal is the Eucalyptus Globulus as is described above. The area of Eucalyptus settlements is constrained and thereby, conversions from other species will not be possible. • The change of land use is limited.

Means of Verification	Tec Pellets's Enviromental Impact Assessment Tec Pellets DDS FSC manual CW Vendor Audit' report cdr04
Evidence Reviewed	ICNF -Ações de arborização e rearborização. Principais indicadores (outubro de 2013 a janeiro de 2016) Nota informativa n.º 4: http://www.icnf.pt/portal/florestas/arboriz/resource/docs/not-info/RJAAR-nota-informativa-n4-jan2016.pdf ICNF, 2013. IFN6 – Áreas dos usos do solo e das espécies florestais de Portugal continental. Resultados preliminares. [pdf], 34 pp, Instituto da Conservação da Natureza e das Florestas. Lisboa. http://www.icnf.pt/portal/florestas/ifn/resource/ficheiros/ifn/ifn6-res-prelimv1-1 'Abate de centenas de azinheiras e sobreiros para instalação de olival intensivo', 2006 Quercus - Associação Nacional de Conservação da Natureza at: http://www.quercus.pt/comunicados/2006/outubro/1650-abate-de-centenas-de-azinheiras-e-sobreiros-para-instalacao-de-olival-intensivo 'Obras no terreno continuam após abate ilegal de azinheiras promovido por empresários espanhóis para plantação de olival intensivo' 25/09/2008 Direcção Nacional da Quercus – Associação Nacional de Conservação da Natureza & Núcleo Regional de Beja/Évora http://www.quercus.pt/contactos/341-comunicados/2008/setembro/1222-obras-no-terreno-continuam-apos-abate-ilegal-de-azinheiras-promovido-por-empresarios-espanhois-para-plantacao-de-olival-intensivo Natural Forest Area change 2010-2015 Map at Global Forest Resources Assessments-FAO - Food and Agriculture Organization of the United Nations at http://www.fao.org/forest-resources-assessment/current-assessment/maps-and-figures/en/ Forest Change - GIS/Map in Global Forest Watch at: http://www.globalforestwatch.org/map/5/39.60/-8.50/PRT/grayscale/loss,forestgain?begin=2001-01-01&end=2014-12-30&threshold=30 **Legislation:** Conversion from natural *Quercus suber* and *Quercus rotundifolia* to other land uses: DL 169/2001, de 25/05 Artº 2º https://dre.pt/application/dir/pdf1sdip/2001/05/121A00/30533059.pdf) updated by DL155/2004, 30/06 https://dre.pt/application/dir/pdf1sdip/2004/06/152A00/39673968.pdf Conversion inside Protected and Classified areas: DL142/2008 at 24/07 Artº 43º https://dre.pt/application/dir/pdf1sdip/2008/07/14200/0459604611.PDF DL 49/05 24/02 https://dre.pt/application/dir/pdf1sdip/2005/02/039A00/16701708.pdf Destruction of natural riparian vegetation: Law 58/2005 29/12; Law 54/2005,at 15/11 (Artº 25º) https://dre.pt/application/dir/pdf1sdip/2005/11/219A00/65206525.pdf Conversion from natural Ilex aquifolium DL 423/89, 4/12 (Artº 1) https://dre.pt/application/dir/pdf1sdip/1989/12/27800/52915292.pdf Conversion from natural landscapes and hillside/slope erosion: DL 139/89 28/04 artº1 http://www.icnf.pt/portal/icnf/faqs/arbor/dl139-89 Conversion by deforestation above 50ha (10ha in Sensitive Areas) or for reforestation with fast growth forest species on areas above 350ha (or 70 ha in sensitive areas) DL 151-B/2013 Artº 1º

	https://dre.pt/application/dir/pdf1sdip/2013/10/21102/0000600031.pdf
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	Tec Pellets considers all pine stands as forests and eucalyptus and Poplar stands as plantations. Tec Pellets checks if forests have been changed to (eucalyptus) or Poplar plantations after 2008. When a eucalyptus or and Poplar plantation is cut the history of the plantation is investigated. First the age of the plantation is determined. If could be form after Jan. 2008, the land owner and/or residents are questioned and the plot is searched for old tree stumps. The results are reported in the EIA. Tec Pellets always demands its 'Environmental Impact Assessment' (EIA), which covers these points. The fulfilment of the EIA is fixed in the Feedstock Supplier Declaration and is contractually binging. Tec Pellets checks the EIA of its suppliers and inspects harvesting plots.

	Indicator
2.2.1	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.
Finding	Most environmental legal requirements relating to forestry planning activities are included in Portugal's forestry legislation. In the administrative process of forest planning or forestation projects, the competent entities are centrally consulted by the national forest authority (ICNF). Management Plans including Forest Intervention Zone (ZIF), Community Use Area Plan (PUB) and Intervention Special Plan (PEIF) have been in place since 2000, and (to 2013) cover about 44% of Portuguese forest area. In private areas, forest plans are mandatory for all forest areas greater than a certain area (from 25 ha to 100ha, depending on the region); however lack of this requirement has not resulted in any known penalties. In public areas, forest plans are obligatory for all areas (state forest, municipalities, etc.); however numbers from 2012 indicate that only 43% of these forests have the PGF. As of 2015, it is an objective of the forest authority ICNF that 100% of its areas should have a PGF by 2017 (for all public areas). In communitarian forests plans are obligatory for all areas however 2015 data show that Forest Plans (PUB) are in place in only 60% of cases. Forest Management Plans should include identification of most part of potential impacts and measures to minimize them. However, it is not a specific tool used to monitor environmental impacts, on FMU Management Plans. Instead there are the Regional Forest Plan covering all country which contains the most part of recommendations and tools to address forest impacts. Regional Forest Management Plans (PROF's) include monitoring specifications related to sustainability of forest resources, detailing all biotic and abiotic factors but also soils, and a list of potential impacts. Best practices are included for each forest management program.

	First generation PROF's were approved ten years ago, and they are all in a revision, being expected to be approved soon. No clear cuts are allowed, sustainable and best practices are mandatory by the authorities, specially under Portuguese Natura 2000 law. The national nature conservation system is based on legal protection regimes (such as The National network of protected areas, Natura 2000 network, etc.), which limits the activities allowed in these areas. There is also an inspection authority, SEPNA, and a strong system of protection (effective protected áreas and legislation) in place. Even so Tec Pellets is concerned and the Manager of the Certificate or the Responsible of Reception carries out audits to suppliers (Beginning of the year or part 1 of the process) by documenting them in the 'CW Vendor Audit' report cdr04. The procedures are in document 'Tec Pellets DDS and FSC manual' (please see attached). The supplier agrees to alert Tec Pellets, if it changes the source of the supply área. As a result, this control has made it possible to have a better understanding of all the traceability of raw material and this is reflected in the fact that there are no problems with suppliers, raw materials or land disputes. Larger scale activities are obliged to address a legal impact assessment and monitoring processes so an Environmental Impact Assessments must be done to conversions above 50 ha or reforestations with fast growth species above 350 ha. These figures are lower when they occur inside Sensitive Areas (Protected, Classified and Monumental Areas), where it is obligatory to have this approved EIA if conversion to non-forest uses involves an area greater than 10 ha or forestation/ reforestation is taking place with fast-growing forest species covering over 70 ha. In case no forest plan is available (no PROF, PGF ZIF, PUB, SNAC, as well as no PEFC or FSC certification) an additional assessment of environmental impacts is made and recorded before harvest. Tec Pellets always demands an 'Environmental Impact Assessment'. Therefor it is concluded that the impact assessment is covered by various tools and it is considered as specified risk.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Manifest Regional Forest Plan (PROF) Tec Pellets DDS FSC manual CW Vendor Audit' report cdr04 Records of Tec Pellets field inspections SNAC framework Environmental Impact Assessment
Evidence Reviewed	**Government sources** Instituto da Conservação da Natureza e Florestas at http://www.icnf.pt/portal APA-Agência Portuguesa de Ambiente at http://apambiente.pt/index.php Municipalities at (http://www.cm-<NAME>.pt/) Alvaiazere Municipalitie forest regulation includes clearcutting fellings: http://ftp.cm-alvaiazere.pt/regulamentos/Regulamento_florestal.pdf **Non-Government sources** Quercus - Associação Nacional de Conservação da Natureza at

	http://www.quercus.pt/ LPN-Liga para a Protecção da Natureza at http://www.lpn.pt GEOTA - Grupo de Estudos de Ordenamento do Território e Ambiente at http://www.geota.pt/scid/geotawebpage Greenpeace International at http://www.greenpeace.org/international/en/ World Wildlife Fund -Portugal at: http://www.wwf.pt/ **Legislation:** National Ecological Reserve DL 239/12 at 2/11 artº20ºnº1 e) EIA DL 151-B/2013 de 31/10 artº 1º nº3 b) Anexo II https://dre.pt/application/dir/pdf1sdip/2013/10/21102/0000600031.pdf DLnº 47/2014, 24/03 31/10 DLnº 179/2015, 27/08 artº2º Environment Law Lei de Bases de Política do Ambiente: Lei n.º 19/14 de 14/04 artº10ºd) DL nº49/05, de 24/02 artº20º DL 197/2005, de 8/11 artº 1º, nº3 b) e nº4, Machinery NP 1948, de 1994 Forest Equipament Chainsaw: NP 2761, de 1988 NP EN 13525:2005+A2:2009 Forest fire areas: DL nº55/2007, de 12/03 artº1º Lei n.º 54/91, de 8/08 DL nº34/99, de 5/02 artº1º Ministry Council Resolution nº 5/2006, de 18/01
Risk Rating	☐**Low Risk** ☒**Specified Risk** ☐**Unspecified Risk at RA**
Comment / Mitigation Measure	There is a specified risk on this point, mainly in case no forest plan is available (no PROF, PGF ZIF, PUB, SNAC, as well as no PEFC or FSC certification). Tec Pellets always demands its 'Environmental Impact Assessment' (EIA). The EIA evaluates: • The possible economical, ecological and social impact of the forest operations including its surroundings. Harvesting operations can be changed to avoid negative impacts. • The quality of the management (by the land owner) prior to harvesting and regeneration plan. Indicators 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2 include relevant management measures which are checked during the EIA. Tec Pellets monitors the plots to be harvested intensively and checks the EIA of its feedstock suppliers and the performed Risk Mitigation Measures. Tec Pellets does not classify all feedstock coming from the 'SBE approved suppliers' as 'SBP-compliant feedstock'. For example, if an estate has been poorly managed by a forest owner in the past, or does not comply with the SBE requirements on forest regeneration, Tec Pellets does not upgrade feedstock to 'SBP-compliant feedstock'.

	Indicator
2.2.2	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).
Finding	Soil quality in Portugal has not a positive evolution since historic times as the major part of Mediterranean region. Following FAO. 2013. State of Mediterranean Forests. Rome. http://www.fao.org/docrep/017/i3226e/i3226e.pdf '(…)45 percent of European soil is degraded and depleted of organic matter and noted that the problem was particularly pressing in the Mediterranean region. Degradation can involve erosion, settling, the loss of organic matter, salinization, landslides, the loss of soil biodiversity, acidification, desertification and subsidence. All these problems could be exacerbated by climate change. (…) Figure 1.24 shows that there were considerable differences between countries, with losses of arable land greater than 25 percent in Croatia, Malta, Portugal and The former Yugoslav Republic of Macedonia. From 1992 to 2009. At national level, following Desertification Convention 5.1 Desertification Susceptibility (https://dre.pt/application/file/65985917): for Portugal, it can be concluded that, in the last half a century, the area of susceptibility to desertification clearly expanded in the mainland territory particularly in the period 1970-2000, and then for the 1980-2010 series, and is even more relevant as expansion for the 2000-2010 series, which corresponds to the most recent period analysed, with annual droughts particularly severe. It is known, therefore, that aridity, then susceptibility to desertification, affected, in the last three decades (1980-2010), 58% of the territory of the Continent, when in the series of 1960-1990 this affectation was of 36%, being included in this context mainly the areas of the South and the Interior Center and North. In the climatic series of the last decade, about 63% of the mainland territory is classified as areas susceptible to desertification. FAO- Land Degradation Index — LDI, developed for mainland Portugal (2000-2010) states that the national territory has 32.6% degraded lands and 60.3% are included in the fair to good condition. Lands and soils that accumulate biomass over time are about 67,8% but static trends were observed in 30,8% of territory and 1,5% have a regression on land quality. Later on, Forest Services used aridity index to produce the susceptible map of desertification, indicating priority areas for EU forest grants for forestation projects. The results of this FAO study, among others, where used to create National Program Against Desertification, which is adopted, among others by Regional Forest Plans, defining forest procedures for spaces for carbon sink and other for energetic use of biomass. The private and public Forest Management Plans should adopt these designations and procedures on their implemented management practices and procedures. Specifically on forest soils it is recognized the problem of nutrient and carbon exportation due to harvesting and residues removal in a significant part of the country which is affected by erosion and desertification problems Although there is a broad consensus over soils fragility in much of the country, policies that contribute decisively to the conservation and improvement of soil quality in Portugal have not been implemented on the last decades. These implemented forest policies have not prevented the installation and exploitation of commercial timber forest stands including plantations of

	intensive softwood and hardwood plantations in sensitive soils with erosion risks contributing to expand the susceptible areas to desertification. The legal and regulatory framework includes restrictions and safeguards for soil use and mobilization operations with particular emphasis on sensitive, steep and near-water areas (called the National Ecological Reserve). However, as shown by above cited studies and data, reality at ground level does not reflect the application of these restrictions. Also forest residues removal from the field is regulated in Portugal, so loggers and owners have some legal obligations, related with both fire and phytosanitary policies. These obligations are depending on species, areas, seasons and regions. Process of forest residue treatment is commonly included on Best Practices but also on wood supply contracts, and forest land leasing. According to the available information, it is considered that on small size forest properties risk is low, as small scale also reduces the threats and risks involved with soil operations. Therefore, and using a precautionary approach, it is considereed specified risk for soil quality of sourcing biomass feedstock on: • forest lands located on desertification susceptible area according to Forest Services (ICNF) cartography and • with size above minimum size required for Forest Management Plan.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Manifest Evaluation of environmental impacts Erosion and desertification programs and maps (REN)
Evidence Reviewed	National System for Forest Fire Prevention: Harvesting temperate forests reduces soil carbon http://ec.europa.eu/environment/integration/research/newsalert/pdf/23si6_en.pdf Susceptible areas to desertification map: http://www.icnf.pt/portal/naturaclas/ei/unccd-PT/pancd/o-pancd-2014-2020/pdr-2020-areas-susceptiveis-e-nao-susceptiveis-a-desertificacao ICNF http://www.icnf.pt/portal/florestas/dfci/relat/raa/resource/ficheiros/ree2012/rel-recup-inc-catraia-set-v5 PANCD https://dre.pt/application/file/65985917 Reserva Ecológica Nacional https://dre.pt/application/dir/pdf1sdip/2012/11/21200/0630806346.pdf Kirkby, M.J., Jones, R.J.A., et all (2004). Pan-European Soil Erosion Risk Assessment: The PESERA Map, Version 1 October 2003. Explanation of Special Publication Ispra 2004 No.73 (S.P.I.04.73) . European Soil Bureau Research Report No.16, EUR 21176, 18pp. and 1 map in ISO B1 format. Office for Official Publications of the European Communities, Luxembourg. European Soil Portal, 2013, http://eusoils.jrc.ec.europa.eu/ESDB_Archive/eusoils_docs/esb_rr/n16_ThePeseraMapBkLet52.pdf Good Forest Practices http://www.icnf.pt/portal/florestas/gf/documentos-tecnicos/resource/doc/Boas-Praticas-Florestais.pdf LEAF: Epic WebGis Portugal: http://epic-webgis-portugal.isa.ulisboa.pt/maps/epic?format=image/png;%20mode=8bit&startExtent=-1523000,4400000,-143668,5180000

	Pinus Nematode: Dec.Retificação n.º 38/2015 de 01/09 DL 123/15, at 3/07 DL 95/2011, de 8/08 DL 154/05 6/09 Dec. n. 30-A/2011, de 7/10 Madeira.M , Fabião A., Páscoa F., Magalhães M., Cameira,M , Ribeiro C. (2009) Carbon and nutrient amounts in aboveground biomass, understory and soil in a pine stand chronosequence, http://www.scielo.mec.pt/pdf/rca/v32n2/v32n2a15.pdf Madeira, M. (2015) Thirty years of research on soil quality in forest systems under Mediterranean conditions. Trends and future. http://www.repository.utl.pt/bitstream/10400.5/9277/1/REP-M.Madeira-Spanish%20j.S.C..pdf Magalhães, M., Cameira M., Pato, Santos R. & Bandeira, J (2011) Residual forest biomass: effects of removal on soil quality http://www.scielo.mec.pt/scielo.php?script=sci_arttext&pid=S0871-018X2011000200019
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	Before harvesting operations commence the plot is evaluated on this point and records are kept. Best forestry practises are applied. Maps can be obtained from 'Reserva Ecológica Nacional' (REN). Tec Pellets demands an 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. The Tec Pellets' EIA addresses the specified risk on soil degradation: best practices have to be applied (Tec Pellets' Internal Instruction on Best Management Practices IT-04). • Low intensity of forestry, selective cuttings and small clear cuts of maximally 5 ha were needed considering the soil and groundwater level. • Regeneration focusses on tree species that maintain or improve soil quality • Leave nutrients in the forests, mainly the green fraction of forest residues (on the other hand other forest residues need to be cleared to prevent forest fires. • Do not operate near-water areas (called the National Ecological Reserve) For example, on dry locations (elevated grounds or on slopes) selective cuttings are required, because the ground gets less direct impact of the sun and the forest and (natural) regeneration can maintain soil quality. On other locations (small) clear cuts can sometimes have the advantage that several kinds of broadleaved trees regenerate naturally, what improves soil quality. After clear cuts, the groundwater level can rise, what sometimes is an advantage. Tec Pellets checks the EIA of its suppliers. Poor soil quality can lead to erosion and other problems. Therefore, this indicator is related to indicator 2.2.6.

	Indicator
2.2.3	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).
Finding	Our pellets are FSC and SBP certified. Our forest specialist studies the environmental aspects of the forest harvest and ensures endangered species are not used and protected. Portuguese authorities have listings as well on-theground agents to ensure compliance with legislation, specially protected areas (natura 2000 law) and FSC/PEFC areas. Portugal has identified the Nature 2000 areas (protected areas) and PROF regions and they have a FSC Controlled Wood low risk assessment. There are no CITES tree species in our supply base. In Portugal, key ecosystems and habitats occur mostly in Protected areas and in Classified Areas (Natura 2000). The overlap of classified areas over protected areas is approximately 1/3 of the total, which means that approximately 2/3 of classified areas are not included on protected areas of the National Network of Protected Areas. Also there are key ecosystems and habitats occurring outside Protected and Classified areas.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Supply contracts DDS Tec Pellets FSC manual
Evidence Reviewed	See evidences reviewed listed at indicators 2.1.1 and 2.1.2, above.
Risk Rating	☐**Low Risk** ☒**Specified Risk** ☐**Unspecified Risk at RA**
Comment / Mitigation Measure	Tec Pellets 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 all feedstock suppliers. Feedstock suppliers are trained to recognise key ecosystems and habitats. Most importantly, the feedstock suppliers inspect visually the harvesting plot and report on the results. Key ecosystems and habitats are indicated on the harvesting maps. Best practises are used to protect the high ecological values (internal document IT-04). The harvesting operations conserve these objects, mainly by not cutting the woodland or forest directly around them. In exceptional cases, low intensity harvesting operations are possible without damaging these objects. • Study key ecosystems on the harvesting plot, conserve areas of ecological value • Study flora and fauna at the harvesting plot, nests, breeding areas, antshills conserve protected tree species and habitats • Do not operate near-water areas (called the National Ecological Reserve) Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the EIA of its suppliers.

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	Biodiversity is included on fundamental environmental law on its article 10th (Law 19/2014 14/04) and is fully covered by biodiversity and nature conservation legal framework. In Continental Portugal the protected areas and Natura 2000 sites covers 2.017.803 ha meaning 20.47% of the territory. As on Convention on Biological Diversity: '*Portugal's National Biodiversity Strategic Action Plan NBSAP was based on the following ten guiding principles: an overall higher level of protection; the sustainable use of biological resources; prevention; precaution; recuperation; responsibility; integration; participation; international cooperation and decentralization. The NBSAP then lists 10 fundamental strategies that form the basis of their action plan, which include: to promote scientific research and knowledge of local patrimony; to enhance the National Protected Areas Network; to promote the valorisation of the protected areas, and ensure the conservation of all social, cultural and natural components; ensure conservation and valorisation of areas within the Natura 2000 Network; implement, across the entire national territory, actions specific to the conservation and management of species and habitats of particular interest; integrate conservation and sustainable use principles into national and regional policies and laws; reinforce cooperation between all levels of administration; promote education and formation in conservation fields; ensure public education, awareness and sensitization; and strengthen international cooperation.*' (...) About 3,600 species of plants occur in Portugal. There are 69 taxa of terrestrial mammals, a total of 313 bird species, of which around 35% are threatened in some ways, and 17 amphibian and 34 reptile species that occur 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. It is considered that a significant part of biodiversity is covered and detailed by indicators 2.1.1 and 2.1.2, for which low risk was not reached in this risk assessment. All classified habitats, besides priority ones included on HCV, must be included in this indicator.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Evidences of described in the 2.1.1, 2.1.2 and 2.2.3.
Evidence Reviewed	Fundamental Environmental Law n.º 19/2014 of 14/04 : http://www.icnf.pt/portal/icnf/legisl/legislacao/2014/lei-n-o-19-2014-de-14-de-abril-d-r-n-o-73-serie-i Dec -Law.nº 142/2008, of 24/07 https://dre.pt/application/file/70698029 Convention on biological diversity: https://www.cbd.int/countries/profile/default.shtml?country=pt#nbsap (see also evidence reviewed at indicators 2.1.1 and 2.1.2)
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**

Comment / Mitigation Measure	6) Tec Pellets prepares (publicly available) data on biodiversity researches and programs, red lists of Portugal, CITES, etc (see above 2.1.1 on mapping and 2.1.2 on identifying and addressing potential threats, HCV 1 – Species diversity). This information is given to all feedstock suppliers. 7) Feedstock suppliers are trained to recognise the protected biodiversity and how to conserve them. These species are often related (it can be indicator species) to key ecosystems which need conserved (previous indicator). 8) The harvesting teams inspect visually the plot, make photos and report on the results. Endangered flora and fauna are indicated on the harvesting maps. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. 9) Best practises are used (internal document IT-04). Best practices include measures to conserve and increase biodiversity (for example, standing dead wood, prescribed burning and other disturbances improving the conditions for endangered species flora and fauna). **10)** Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the EIA of its suppliers.

	Indicator
2.2.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the process of residue removal minimises harm to ecosystems.
Finding	For soil matters related with residue removal see indicator 2.2.2. In Portugal forest residues removal from forests is regulated so loggers and owners have some legal obligations, related with both fire and phytosanitary policies. The manifest document informs that the executing company is responsible for residues removal. In addition, this document refers to the destination / location where the wood will be treated Based on the available information this indicator is considered low risk.
Means of Verification	Manifest Records of Tec Pellets field inspections
Evidence Reviewed	National System for Forest Fire Prevention: https://dre.pt/application/dir/pdf1sdip/2006/06/123A00/45864599.pdf Good Forest Practices http://www.icnf.pt/portal/florestas/gf/documentos-tecnicos/resource/doc/Boas-Praticas-Florestais.pdf Pinus Wilt Disease: • Dec.Retif. n.º 38/2015 de 01/09 • DL 123/15, at 3/07 • DL 95/2011, de 8/08 • DL 154/05 6/09 • Dec. n. 30-A/2011, de 7/10 See also evidences listed on 2.2.2
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.2.6	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).
Finding	Tec Pellets considers the landscape where the harvest operations are executed, including hill slopes and streams that can overflood and demands the same from its feedstock suppliers. Clear cutting (of several ha) is avoided in areas where all conditions are at high risk for soil erosion. In these cases, is followed the ICNF Handbook for forest best practices: 'In the areas surrounding the water lines the risk of erosion is often very high, since these are areas of concentration of rainwater runoff. In these bands (with a minimum width of 10 meters for each side, as stated in the legal definitions and conditions of legal limits (Decree-Law no. 468/71, of 5 November) a strict prevention of erosion phenomena shall be performed, and it is therefore essential to adopt measures to protect it, such as maintaining all or a significant part of the natural vegetation and not inflict harm to the soil.' These best practises are required to comply with the requirements of SBE program. Water legal framework includes water law and national and hydrographical basin plans, being Portuguese Environment Agency the national authority. Other authorities like SEPNA (National Republican Guard) and Nature Guards and Vigilantes, also have competencies of water resources inspection actions. Tec Pellets has never been penalized by any of these entities because it never operates on water lines. National Ecological Reservation is a territory classification of sensitive areas for 'ecosystem services' where water issues are addressed, and some restrictions are in place to prevent negative impacts in slopes, valleys and other sensible situations. Every forest projects and plans must comply with this regulation, and they should be in place, for example in projected soil preparation techniques. The risk is applied to all private, communitarian, and public forest areas which are not managed by ICNF. ICNF Handbook for forest best practices defines: 'In the areas surrounding the water lines the risk of erosion is often very high, since these are areas of concentration of rainwater runoff. In these bands (with a minimum width of 10 meters for each side, as stated in the legal definitions and conditions of legal limits (Decree-Law no. 468/71, of 5 November) a strict prevention of erosion phenomena shall be performed, and it is therefore essential to adopt measures to protect it, such as maintaining all or a significant part of the spontaneous vegetation and not perform any mobilization of the soil.' Usually prevented by legal and regulatory framework, however in Portuguese implemented legislation there is not a clear and effective legal tool over all territory, being exceptions the Northern regions, where 10 hectares is defined as the maximum clearcuttings area as defined on Regional Forest Plans. Also some Municipalities may have municipal regulations about clearcutting fellings. So it is considered there are specified risks that feedstock is sourced from forests when clear cuttings are done over a specific size area. This specific area is defined regionally by each

	Regional Forest Plan (PROF), as the maximum clearcutting area or the size of even aged monoespecific forest stand. However, our suppliers never intervene in water zones. This is confirmed by our forestry specialist who is constantly on the ground to accompany our suppliers. This is considered a specific risk.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Internet research GIS maps of HCV areas Regional, publicly available data from a credible third party as FSC and PEFC reports Game management plans Regional Forest Plans Forest Operating Procedures Publicly available information on the protection of the values identified Aerial photos Assessment at an operational level of measures designed to minimise impacts on the values identified Erosion and desertification programs and maps FSC Manual DDS Tec Pellets
Evidence Reviewed	**Law:** Dec-Law n.º 130/2012 22/06 https://dre.pt/application/dir/pdf1sdip/2012/06/12000/0310903139.pdf National Water Plan: http://www.apambiente.pt/?ref=16&subref=7&sub2ref=9&sub3ref=833 Hydrographical basin Plans http://www.apambiente.pt/?ref=16&subref=7&sub2ref=9&sub3ref=834#pgbh-tabela Reserva Ecológica Nacional Law: https://dre.pt/application/dir/pdf1sdip/2012/11/21200/0630806346.pdf See also evidences listed on indicators 2.1.1, 2.1.2, 2.1.3, 2.2.1 and 2.2.2
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	1) Tec Pellets studies data (from publicly available information, researches and programs) for its harvesting teams on ground water, surface water and steams (see above 2.1.1 on mapping and 2.1.2 on identifying and addressing potential threats, HCV 1 – Species diversity). This information is given to all feedstock suppliers. 2) 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. 3) The harvesting teams inspect visually the plot and the hill slopes and streams in the surroundings and report on the results. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. 4) Best practises are used (internal document IT-04). Best practices include forest management measures that protect the plot against too high or low ground water levels, and erosion (surface water moving to quick or too slow). Related to a too quick runoff of

	surface water, streams in the surroundings are considered. The landscape where the harvest operations are executed is considered, including hill slopes and streams that can overflood. In areas vulnerable to water damage, the maximal contiguous clear cut area is 5 ha. 5) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the submitted EIAs. These best practises are required to comply with the SBE program requirements. The best practices as stated in point 4, and the Environmental Impact Assessment in point 3, follow the 'ICNF Handbook for forest best practices': 'In areas surrounding the water lines the risk of erosion is often very high, since these are areas of concentration of rainwater runoff. In these bands (with a minimum width of 10 meters for each side, as stated in the legal definitions and conditions of legal limits (Decree-Law no. 468/71, of 5 November) a strict prevention of erosion phenomena shall be performed, and it is therefore essential to adopt measures to protect it, such as maintaining all or a significant part of the natural vegetation and not inflict harm to the soil.'

	Indicator
2.2.7	The Biomass Producer has implemented appropriate control systems and procedures for verifying that air quality is not adversely affected by forest management activities.
Finding	Air legal framework includes air law and national air quality plan, being Portuguese Environment Agency the national authority. Other police authorities like SEPNA (National Republican Guard) and Nature Guards and Vigilantes, also have competencies of air pollution inspection actions. Generally, forests are considered the best use of soil compared with other land use possibilities and forest management activities are not known in the country as to cause air pollution. Major negative impacts from forests are due to forest fires which are not considered management activities. Burning forest residues at the forest site as the traditional way is prevented with forest feedstock sourcing for biomass legal framework in force at high fire hazard periods. Forest equipment must comply with EU directives about air pollution. The forestry equipment is checked by our forestry specialist. There is a checklist of a number of parameters, from operating conditions, safety, cleaning and leaks. Based on available information the requirements included in this indicator are considered low risk.
Means of Verification	Forest Best Management Practices (IT-04) Supply contracts Check list 'Exploração florestal' Assessment at an operational level of measures designed to minimise impacts on the values identified Publicly available information on the protection of air quality as APA website. Regional, publicly available data from a credible third party The existence of a strong legal framework in the region

Evidence Reviewed	Environmental Laws : Law n.º 19/14 de 14/04 artº10ºd) • DL nº49/05, de 24/02 artº20º • DL 197/2005, de 8/11 artº 1º, nº3 b) e nº4, Decree-Law n.º 102/2010 of 23/09 https://dre.pt/application/dir/pdf1sdip/2010/09/18600/0417704205.pdf **Machinery** • NP 1948, de 1994 • NP 2761, de 1988 • NP EN 13525:2005+A2:2009
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.2.8	The Biomass Producer has implemented appropriate control systems and procedures for verifying that there is controlled and appropriate use of chemicals, and that Integrated Pest Management (IPM) is implemented wherever possible in forest management activities (CPET S5c).
Finding	The legal framework for agrochemicals use is the Law nº 26/2013 from April 11th which applies to Portuguese context the EU Directive n.º2009/128/CE, of 21/10. Fertilisers are prescribed on some forest management systems like installation period or forest plantations, but the intensity of this use is very low according to every perspective. The implementation of this law had a very positive impact on use of agrochemicals, and included the needing of accredited training, and records (quantities, disposals, etc) to all the involved people. The use of chemicals on Portuguese forests is not common and it is very restricted to a few cases because, among others, there are few homologate products applying to the most important phitosanitary forest plagues and diseases. In this exceptional cases are pine processionary (Thaumetopoea pityocampa) and the eucalyptus snout beetle (Gonipterus platensis), but in both cases there are also other biologic and genetic measures. Based on available information the requirements included in this indicator are considered low risk.
Means of Verification	Existing legislation Level of enforcement Assessment at an operational level of measures designed to minimize impacts on the values identified Monitoring record
Evidence Reviewed	Law n.º 26/2013 de 11 /04: https://dre.pt/application/file/260367 Pine processionary official Plan: http://www.icnf.pt/portal/florestas/prag-doe/resource/doc/proc/proc-florest-2015.pdf Eucalyptus snout beetle official plan: http://www.icnf.pt/portal/florestas/prag-doe/ag-bn/gorg-eucal

Risk Rating	☒**Low Risk**	☐ **Specified Risk**	☐ **Unspecified Risk at RA**

	Indicator
2.2.9	The Biomass Producer has implemented appropriate control systems and procedures for verifying that methods of waste disposal minimise negative impacts on forest ecosystems (CPET S5d).
Finding	The legal framework for waste disposal is based on a recent law which applies to Portuguese context the EU Directive n.º 2008/98/CE. Portuguese Environment Agency is the national authority but other police authorities like SEPNA (National Republican Guard) and Nature Guards and Vigilantes, also have competencies of waste disposal. Also municipal authorities can apply municipal rules to implement applicable legislation. Waste disposal on forest lands exist in Portugal and it affects both private and public lands. But as it is illegal in the country there are efforts made by private ours suppliers and authorities to collect the waste and send it to final legal destination. Some of the measures used by owners include fencing of their lands, sign installation against waste disposal and formalizing complaints to authorities in case of illegal waste disposal. Based on available information the requirements included in this indicator are considered low risk.
Means of Verification	Existing legislation; Level of enforcement; Regional Best Management Practices
Evidence Reviewed	Waste Management and Planning Official page: https://www.apambiente.pt/index.php?ref=16&subref=84 Decree-Law n.º 73/2011 de 17/06: https://www.apambiente.pt/_zdata/Politicas/Residuos/DL_73_2011_DQR.pdf Waste National Management Plan: file:///C:/Users/imobi_000/Downloads/Projeto_PNGR_2011-2020.pdf European Waste Statistical: http://ec.europa.eu/eurostat/statistics-explained/index.php/Waste_statistics/pt
Risk Rating	☒**Low Risk** ☐ **Specified Risk** x☐ **Unspecified Risk at RA**	

	Indicator
2.3.1	Analysis shows that feedstock harvesting does not exceed the long-term production capacity of the forest, avoids significant negative impacts on forest productivity and ensures long-term economic viability. Harvest levels are justified by inventory and growth data.
Finding	Statistical information on National Forest Inventory is fully available from IFN5 (2005) and preliminary results from IFN6 (2010). Preliminary results from IFN6 (2010) for main species in pellet production show that:

	Total forest area in Mainland Portugal is 3,154,800 has of which 2,972,356 has correspond to forested area. • **Eucalyptus** plantations are larger Portuguese forests. Forest cover with Eucalyptus has increase 13% from 1995 to 2010 (over 90,000 has in the period to a total surface of 812,000 has in 2010; 755,355 has on forested areas) mostly on areas converted from Pinus pinaster (70,000 has in the period). Pinus Wilt Disease/Nemátodo-do-pinheiro pest, fires and economic motivations can be behind it. • **Pinus pinaster** forests have decrease significantly from 1995 to 2010: 27% on total surface (263,000 has in the period to a total surface of 713,000 has in 2010; 624,248 has on forested areas). 163,000 has was converted to open land, mostly related to Pinus Wilt Disease/Nemátodo-do-pinheiro pest and fires and 70,000 has to Eucalyptus plantations, which can also include economic motivations. Represents the majority of inputs in BP feedstock. Analysing statistical information available for average annual growth (AMA) from IFN5 (2005) show for Mainland Portugal: **On *Eucalyptus*** an average annual growth of 4,375,000 m3/year based on 2005 inventory data. Currently the value will be significantly higher. Eucalyptus wood from Portugal consumption in 2014 was 5,400,000 m3 (CELPA data). Eucalyptus is fast growing specie, over 12 years, with one and only cut on the period: final clear cut. So harvesting does not compromise long-term production of the forest. **On *Pinus pinaster*** an average annual growth of 3,650,000 m3/year based on 2005 inventory data. Currently the value will be lower. Pinus pinaster wood from Portugal harvested in 2014 was 2,247,000 m3 (Centro Pinus data). So Pinus pinaster wood available from Portugal in under AMA. On the analysis it is relevant also to take into account that: **1**. Pinus Wilt Disease/Nemátodo-da-madeira-do-pinheiro pest have affected significantly to *Pinus pinaster*. **2. Fires continue to be a relevant problem in Portugal.** **3.** Data from CentroPinus states that pine wood consumption of timber industry in 2014 was 4,360,000 m3, with a relevant data a 1,400,000 m3 for pellets, 32% of total. Also 32% of pine wood used by CentroPinus partners was imported in 2014. Percentage of imported pine wood used in 2006 was 3%. So lack of pine wood from Portugal is being covered with importations, mainly from Spain. **4.** Data from CELPA states that Eucalyptus consumption of pulp and paper industry in 2014 was 7,800,000 m3 (4,980,000 m3 in 2005), of which 2,415,000 m3 were imported, mainly from Spain. So all above information shows that actual harvesting volume does not exceed sustainable values and compromises long-term economic viability of stands. Thus the risk for this indicator has been assessed as Low. Although harvest levels are not justified by inventory and growth data in many cases at a forest level.
Means of Verification	Volume and growth data and yield calculations, and Operational Practice indicate that biomass feedstock harvesting rates avoid significant negative impacts on forest productivity and long-term economic viability.

Evidence Reviewed	Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Estatísticas Agrícolas 2015.xls, Instituto Nacional Estatística (https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=271434407&PUBLICACOESmodo=2) Inventario Florestal Nacional IFN5 (FloreStat_IFN5); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn5/rel-fin) Inventario Florestal Nacional IFN6, preliminary results (IFN6 - Resultados preliminares.pdf); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn6) Boletim-Estatístico-da-Celpa-de-2014 (http://www.celpa.pt/wp content/uploads/2016/09/Boletim_WEB_2015.pdf) Relatório-de-Caracterizacão-da-Fileira-Florestal-2014 (http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf) Fileira do Pinho: desafios e oportunidades (centroPINUS_JoaoGonçalves dados fileira pinho 2014.pdf); Centro Pinus (http://www.centropinus.org/index.php?lingua=1) Decreto lei 16-2009 planos gestão florestal (https://dre.pt/application/dir/pdf1sdip/2009/01/00900/0026800273.pdf) ; ICNF portal (http://www.icnf.pt/portal/icnf/legisl/legislacao/2009/decreto-lei-n.o-16-2009-de-14-de-janeiro.-d.r.-n.o-9-serie-i) Normas Tecnicas Planos Gestão Florestal, ICNF portal (http://www.icnf.pt/portal/florestas/gf/pgf/resource/doc/manual/normas-tecn-PGF-AFN.pdf)
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.3.2	Adequate training is provided for all personnel, including employees and contractors (CPET S6d).
Finding	Tec Pellets have two forestry specialists. One of them is educated in Health and Labor Safety. Both have a university degree of the Operations Center and Forest Techniques (COTF), a center for forestry professional training under the direct management of the ICNF and has as main objective the training and professional enhancement, with special emphasis with regard to forestry operations. He has a decision power in forestry operations, use of machines, methods and techniques used, alawys giving due and necessary atention to comliance with safety, hygiene and health at work. All our suppliers provide training and qualifications for the management of forestry machines. NOTE**:** Portugal is a country with an old tradition on forests activities. University education is provided on the technical side with several colleges in the country. There are specific courses for field machinery operators but it is planned to be updated on the National Catalog of Formations a new training on Forestry Machinery Technician not yet available. Under this information the indicator is assessed as specified risk.
Means of Verification	Records of Tec Pellets field and company inspections Qualifications of employees at Tec Pellets Suplliers

	Training course Existing legislation Level of enforcement Tec Pellets' monitoring procedure includes 2 checklists: • Feedstock suppliers (EN PT 01 - Check List auditoria a fornecedores); • Harvest operations (EN CL 01 - Checklist Forest Exploration Suppliers).
Evidence Reviewed	Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) (http://www.icnf.pt/portal/florestas/gf/cotf); (http://www.icnf.pt/portal/florestas/gf/cotf/o-q-e) ; (http://www.icnf.pt/portal/florestas/gf/cotf/formacao)
Risk Rating	☐ **Low Risk** ☒ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	Tec Pellets trains its personnel on all relevant aspects and demands the same from its feedstock suppliers. This is not always covered sufficiently by legislation. During the feedstock supplier's office inspections of Tec Pellets, are checked: the training records, (new) workforce, and the hiring of specialists. The level of knowledge of personnel is inspected during site visits. Tec Pellets' monitoring procedure includes 2 checklists: • Feedstock suppliers (EN PT 01 - Check List auditoria a fornecedores); • Harvest operations (EN CL 01 - Checklist Forest Exploration Suppliers).

	Indicator
2.3.3	Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.
Finding	At the regional and local level, Tec Pellets is one of the largest companies contributing to the increase in employment. We have our teams and teams from our suppliers. The Tec Pellets contributes a lot to local employment with qualified professionals. Statistic for forest sector in total, shown that value added of forest production in Portugal is 1,193 million euro (M€) in 2014, with a sustained growth over last years. Also 2014 forestry goods production have an estimation of 878.25 M€ of which wood for energy is 55.38 M€ (6%). Data from INE 2012 states that 91% of Portuguese forest sector enterprises have from 1 to 10 workers. Forest industries employ 78,000 people (12% of all Portuguese processing industry, 1.7% of Portuguese employed population) of which 10,600 work on logging companies and 20,800 on wood industry. Also annual turnover of forest sector industries was in 2012 over 7,392 M€ (2,497.6 M€ wood and furniture industry, 1,320.4 M€ cork industry and 3,574.6 M€ pulp and paper industry), representing 10% of all Portuguese processing industry. Despite the recent crisis, the forest sector has maintained its contribution, in macroeconomic terms, in terms of added value.

	Biomass/Feedstock with origin in Portuguese forest is supplied through domestic supply chains to BP's so economic impact related to feedstock chain from the forest, transportation, processing and BP is local. Also it is mainly complementary with other wood industries as use on their processes low quality wood (which previously it was not exploited or it was burned) or wastes from industrial processes. With all of these considerations we can conclude that biomass production contributes positively to local economy and thus the indicator has been assessed as low.
Means of Verification	Data on Tec Pellets and the regional economy
Evidence Reviewed	Tec Pellets employment http://expresso.sapo.pt/economia/2016-09-19-Tec-Pellets-investe-31-milhoes-na-Povoa-do-Varzim Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Estatísticas Agrícolas 2015.xls, Instituto Nacional Estatística (https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=271434407&PUBLICACOESmodo=2) Relatório-de-Caracterizacão-da-Fileira-Florestal-2014 (http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf) Fileira do Pinho: desafios e oportunidades (centroPINUS_JoaoGonçalves dados fileira pinho 2014.pdf); Centro Pinus (http://www.centropinus.org/index.php?lingua=1)
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.4.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).
Finding	Although there is a specified risk for insufficient assessment of the impact of harvesting operations that replace (destroy) the existing forest ecosystem, nearly all risks are addressed by other indicators (with specified risk), such as indicators 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.6, 2.4.2, and 2.6.1. In addition to measures taken to comply with the specified risks of other indicators, to comply with indicator 2.4.1 the possible impacts of the harvest operations on the forest and its surroundings are assessed (before the harvesting operations commence), not only in relation to the environment, but also in relation to the interests of the local population, farmers, and people interested in recreation. In the NRAs are highlighted the 'health, vitality and other services provided by forest ecosystems' to the forest ecosystems. Tec Pellets underlines that these services can be of importance to the local population. Forests can be of importance to the environment around the forests, they can reduce the impact of extreme weather, and reduce the impact of air-

	pollution, and noise. For example, it takes only one dense forest stand to improve the perception of an area / to cover up 'visual pollution'. Forest (ecosystems) can be essential for: • Breaking hard winds and rainfall (roads and houses); • Recreation in and around the forests; • Hunting, fishing and gathering of berries and mushrooms; • Agriculture near the forests (this is of importance in Portugal). The indicator need to be assessed as specified risk for health and vitality of forests ecosystems.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Manifest Overall evaluation of potential impacts of operations on forest ecosystem health and vitality Assessment of potential impacts at operational level and of measures to minimise impacts Regional Best Management Practices Supply contracts Interviews with local people
Evidence Reviewed	Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) UNECE, Forest Europe report 2011 (https://www.unece.org/fileadmin/DAM/publications/timber/Forest_Europe_report_2011_web.pdf) Programa Operacional de Sanidade Florestal, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/posf) Fitossanidade florestal. Divulgação e informação, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/divulg) Programas de Monitorização e Controlo de Pragas e Doenças, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/resource/img/apr-progr-monit-c-pragas-e-d/view) Medias Controlo Nemátodo-da-Madeira-do-Pinheiro_03_2015, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/resource/doc/divul/apresentacoes/2015-03-12/NMP_03_2015.pdf) Inventario Florestal Nacional IFN5 (FloreStat_IFN5); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn5/rel-fin) Inventario Florestal Nacional IFN6, preliminary results (IFN6 - Resultados preliminares.pdf); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn6) Relatório-de-Caracterizacão-da-Fileira-Florestal-2014 (http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf) Quercus NGO Manifesto da Quercus pelas florestas (http://www.quercus.pt/documentos-floresta/2955-manifesto-da-quercus-pela-florestas)
Risk Rating	☐ **Low Risk** ☒ **Specified Risk** ☐ **Unspecified Risk at RA**

Comment / Mitigation Measure	6) Feedstock suppliers are trained to recognise health, vitality and other services provided by forest ecosystems. 7) The harvesting teams inspect visually the plot and the surroundings and report on the results (make photos). Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, which addresses these environmental services. Best practises are used (internal document IT-04). Many of the relevant risks are addressed by other indicators (with specified risk), such as indicators 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2. 8) The possible impacts of the harvest operations on the forest and its surroundings are assessed (before the harvesting operations commence), not only in relation to the environment, but also in relation to the interests of the local population, farmers, and people interested in recreation. Tec Pellets underlines that these services can be of importance to the local population. Forests can be of importance to the environment around the forests, they can reduce the impact of extreme weather, and reduce the impact of air and 'visual' pollution, as well as noise. Forest services that need to be considered: a. Breaking hard winds and rainfall (regarding roads and houses); b. Recreation in and around the forests; c. Hunting, fishing and gathering of berries and mushrooms; d. Agriculture near the forests (this is of importance in Portugal). 9) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the submitted EIAs. It checks with stakeholders if there are any complaints (see also below 2.6.1).

	Indicator
2.4.2	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).
Finding	Pests, diseases and fires are today the greatest perceived risks in the Portuguese forest sector. As stated in previous indicator biotic and abiotic risks are supported by disturbances affect in 2011 24% of the forest area, generated by a regressive vicious cycle that combines fire, 'seca', pests, diseases and invasive species. The national program for forest fire protection (PNDFCI) establishes various levels (national, regional, municipal and local) in order to create a network of forest fire prevention (primary and secondary on public level and tertiary on forest owner level). This system aims to compartmentalize extensive woodlands and contribute to the containment and firefighting. The identification of these elements is defined in the various plans in force particularly in the Forestry Management Regional Plans (PROF) and Forest Defense Municipal Plans Against Fires (PMDFCI), which also define the responsibilities for its implementation on field. In terms of forest owners are defined in Forest Management Plans and related (PEIF, PUB). Private forest lands can be grouped into Forest Intervention Areas (ZIFs), forest policy instrument to ensure efficient management of forests at the landscape scale and the consistent application of public support for forestry development. ZIFs are continuous land area, with a

	majority of forest areas, subject to a Forest Management Plan and a Defense Plan for Forest and managed by a single entity. Until July 2016 they are constituted 179 ZIF, covering 924,447 hectares of territory. One of the objectives of ZIFs is to reduce the conditions of ignition and fire spread implementing on the field planned measures. Field implementation of planned measures is uneven in Portugal. Also fires are the greatest perceived risks in the Portuguese forest sector as it recognized by public administration. On the above information specified risk is assessed on the fire management at forest level There are enforcement and monitoring on the performance of our part: harvest, transporters and warehouses. Every step need of official document.
Means of Verification	Tec Pellets's Enviromental Impact Assessment Regional Best Management Practices Supply contracts Assessment of potential impacts at operational level and of measures to minimise impacts Regional, publicly available data from a credible third party The existence of a strong legal framework in the region
Evidence Reviewed	Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Programa Operacional de Sanidade Florestal, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/posf) Fitossanidade florestal. Divulgação e informação, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/divulg) Programas de Monitorização e Controlo de Pragas e Doenças, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/resource/img/apr-progr-monit-c-pragas-e-d/view) Medias Controlo Nemátodo-da-Madeira-do-Pinheiro_03_2015, ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/resource/doc/divul/apresentacoes/2015-03-12/NMP_03_2015.pdf) Decreto lei 123-2015 nematodo do Pinheiro (https://dre.pt/application/file/67649256) ; ICNF portal (http://www.icnf.pt/portal/florestas/prag-doe/ag-bn/nmp) Declaração Retificação n.º 38/2015 de 01/09 (https://dre.pt/application/file/70144398) Inventario Florestal Nacional IFN5 (FloreStat_IFN5); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn5/rel-fin) Inventario Florestal Nacional IFN6, preliminary results (IFN6 - Resultados preliminares.pdf); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn6) Plano Nacional de Defesa da Floresta Contra Incêndios (https://dre.pt/application/dir/pdf1sdip/2006/05/102B00/35113559.pdf); ICNF portal (http://www.icnf.pt/portal/florestas/dfci/planos/PNDFCI) Zonas de Intervenção Florestal, ICNF portal (http://www.icnf.pt/portal/florestas/gf/zif/sit-ger-inf) Relatório-de-Caracterizacão-da-Fileira-Florestal-2014 (http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf)
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	1) Tec Pellets studies data (from publicly available information, researches and programs) for harvesting teams on risks and regulations regarding fires, pests and diseases. This information is given to all feedstock suppliers.

	2) Feedstock suppliers are trained to recognise poor forest management and on mitigation measures. 3) The harvesting teams inspect visually the plot and make photos. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, in which this point is addressed. Feedstock suppliers inspect if the plot was managed well on these points, if not, the feedstock is not considered compliant to the SBE program (will not become SBP-compliant feedstock). 4) Best practises are used by the harvesting teams (internal document IT-04) regarding management of fires, pests and diseases. These include: c. Traps for NMP (Pine Wood Nematode (Bursaphelenchus xylophilus, and its vector the insect Monochamus galloprovincialis) d. Use of net (cover) during transport of wood in the period insect vector NMP e. Phytopharmaceutical application on the ground f. Crushing of the same wood with no lead time of 2, 3 days. wood with symptoms. g. Ensure that all suppliers have an economic operator registration. h. Tec Pellets only accept the raw material with the manifest. i. Cleaning of all utensils and machinery used in the handling of woody material. j. Application of good forest practices to avoid a spread of this pest. 5) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the submitted EIAs. Sufficient management by the forest owner, and best practises by the harvesting teams are required to comply with the SBE program requirements.

	Indicator
2.4.3	The Biomass Producer has implemented appropriate control systems and procedures for verifying that there is adequate protection of the forest from unauthorised activities, such as illegal logging, mining and encroachment (CPETS7c).
Finding	Unauthorized activities such as illegal logging, mining and encroachment are not a significant problem in Portugal. There are low scale problems as illegal littering, loose dogs, unauthorized sports, theft of firewood, wood or fruits, poaching. Illegal or unauthorised activities in Portuguese forests generally have limited economic or biological impact. There are also some problems related to Conversion which can be catalogued under unauthorized activities but they are described in its corresponding indicator (2.1.3). The indicator has been assessed as low.
Means of Verification	Records of Tec Pellets field inspections Publicly available information (News and media)
Evidence Reviewed	ILLEGAL LOGGING PORTAL, Portugal (http://www.illegal-logging.info/regions/portugal) Transparency international, corruption perception index Portugal (https://www.transparency.org/country/#PRT)
Risk Rating	☒**Low Risk** ☐ **Specified Risk** **x** ☐ **Unspecified Risk at RA**

	Indicator
2.5.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest are identified, documented and respected (CPET S9).
Finding	97% of Portuguese forests are private. Approximated number of private owners in Portugal is over 500,000. 8% of private forest are under communitarian management (Baldios) based in old customary and traditional tenure and rights and regulated by specific law. As most of the country forest is under private property civil code is applied which includes the following rights: • - to use; • - to transform; • - to exclude and defend including the rights to delimitation, prohibition and defense. • - to return and compensation; • - to sale. These rights are applied to the most part of forest resources and to all of the wood resources. The customary rights include the right to entry inside forest properties, and even the recollection of private natural resources of free use like mushrooms or aromatic plants. This customary right does not include licensed fenced properties for catlle or big game hunting zones.

	Car circulation is limited to public use roads and/or public domain waters and other specific situations. Over the years, legislation about private things of free use became regulated and some of them of private use. Several situations may happen, for example the pine cones were of free use until forty years ago when it became private. Another example is the game hunting which is still a public thing but private entities can pay for a hunting concession to manage it. The rights of recollection of mushrooms, aromatic and medicinal plants still have a lack in legislation as 2009 Forest Code was revoked on 2012. This Code was giving more rights for these natural resources to land owners. Conflicts may exist between land owners rights based on the private things defense against the customary rights of accessing and free use recollection, as no specific legislation was updated about this issue. These conflicts may become more relevant where resources are easy to steal, like pine cones or other NTFP-Non Timber Forest Products. In the ground situations of use and abuse of fences and inadequate signs are common, including closed gates. In those situations, it is believed that customary rights are not respected, and there is a specified risk on this indicator. This specified risk doesn't include the licensed catle parks or big game hunting areas. The customary right is described in the article 348th of the Portuguese civil code. The interpretation of laws is described in the article 9th of the Portuguese civil code. In the case of community areas, specific legislation regulates rights of use of common forest areas. (Lei dos Baldios)
Means of Verification	Tec Pellets demands its 'Environmental Impact Assessment' Customary use rights are identified and documented Appropriate Tec Pellets mechanisms exist to resolve disputes
Evidence Reviewed	Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Lei nº 68-93 Baldios (http://www.proder.pt/ResourcesUser/Legisla%C3%A7%C3%A3o/Nacional/Lein%C2%BA68-93.pdf) Coelho, I.S. (2003) Propriedade da Terra e Política Florestal em Portugal (http://www.scielo.mec.pt/pdf/slu/v11n2/v11n2a05.pdf) Dec-Law n.º 254/2009 of 24/09 (http://www.proder.pt/ResourcesUser/Legisla%C3%A7%C3%A3o/Nacional/Decreto-Lein%C2%BA254-2009.pdf) Law n.º 12/2012 of 13/03 (https://dre.pt/application/dir/pdf1sdip/2012/03/05200/0110301103.pdf) Port. n.o 247/2001 of 22/03 (https://dre.pt/application/dir/pdf1sdip/2001/03/069B00/16111612.pdf)
Risk Rating	☐ **Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	1) Feedstock suppliers are trained to recognise possible issues with legal, customary and traditional tenure and use rights.

	2) The harvesting teams inspect visually the plot, make photos and report on the results. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers. This aspect is addressed. If the land area to be harvested is fenced, moreover, if it has been fenced recently, the opinion of residents is assessed. Abuse of fences, blocked roads, and inadequate signs makes the feedstock non-compliant the SBE program. 3) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks the EIA of its suppliers. There are no indigenous people in Portugal nor minorities dependant on forests for their livelihood. There is a specified risk that the rights of local communities could be violated, but it is an exceptional one. By addressing sustainable forest management and the indicators 1.2.1 and 2.6.1, Tec Pellets integrates respecting the interests of local people into its procedures. If the land area to be harvested is fenced, moreover, if it has been recently fenced, the opinion of residents is assessed. Abuse of fences, blocked roads, and inadequate signs makes the feedstock non-compliant to the requirements of the SBE program. In Portugal entering private forest lands is not considered an invasion and the use of wild products is common practise.

	Indicator		
2.5.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that production of feedstock does not endanger food, water supply or subsistence means of communities, where the use of this specific feedstock or water is essential for the fulfilment of basic needs.		
Finding	Subsistence needs for local communities are assessed as being not applicable for Portugal. Based on the above, it is concluded that there is a low risk of non-compliance with the requirement.		
Means of Verification			
Evidence Reviewed			
Risk Rating	☒ **Low Risk**	☐ **Specified Risk**	☐ **Unspecified Risk at RA**

	Indicator
2.6.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that 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.

Finding	Although this risk is addressed in the general legal framework of Portugal, Tec Pellets is of the opinion that this indicator needs additional attention as a 'safety net', in order to perform well on other indicators, which are categorised 'specified risk'. Because of the very large number of land owners with extremely small forested properties in Portugal, and, for example, the lack of cadastral in some regions of the country, Tec Pellets actively prevents grievances and disputes to arise. The aim is to track down and solve grievances and disputes before the harvesting operations commence. The procedures assess the work of Tec's harvesting teams and feedstock suppliers. The feedstock suppliers are also required to actively implement a complaint procedure and keep records (which are checked). Tec Pellets takes seriously any complaint of any person or organisation considering harvesting operations. This also improves performance on respecting local interests (HCV 5) and cultural values (HCV 6). Grievances and disputes, including those relating to tenure and use rights, forest management practices and work conditions in Portugal are regulated by laws. Legal framework includes the Portuguese Constitution, the Labour Code and other specific regulations. The detailed procedures, duties and responsibilities of involved persons are defined in both legislation and other legal regulations. Legislation and justice system provides a route for appeal should people or companies be dissatisfied with the outcome of the dispute resolution process. Land tenure and use rights are object of Civil Code, being land tenure included on private property rights on Constitution article 62th. These rights include communitarian forests and also Forest Renting/leasing contracts. Disputes about forest management practices would involve forest authorities ICNF on both public and private forests. Specific forest management practices should be included on renting and forest services contracts as harvesting contracts. The disputes related to work conditions shall be resolved according to administrative procedures and labour legislation. Trade unions may help in disputes over work conditions. Tec Pellets have an internal procedure for resolving grievances and disputes 'aquisiçao de materia prima': Firstly our specialist need to collect this information: • Identification of the plot / area (building permit); • Identification of the owner (citizen card); • Proof of the relationship between the seller and the land in question; • Mapping; • Formalization of the business through a purchase and sale agreement between the parties; • Invoice or self-invoice if the seller can not do it.

	In addition to the information collected, at least one site visit is always conducted with the owner or his representative, where information is taken about: • Type of vegetation / species; • Ground boundaries / Confrontations; • Accesses. This procedure also indicates the resolution of grievances and disputes, including those relating to tenure and land use rights to forest (or land) management practices and working conditions. Whenever any of the above occurs, the technical responsible is contacted and called to the location whenever necessary. In the case of Work Accidents, Theft and Forest Fires and after ascertaining the severity of the situation are contacted the competent entities, as well as the Department of Hygiene, Security of the company. In case of Failures or maintenance, the means are put on the ground in order to solve the situation. These means can be from the company itself or from the company representative of the equipment. In case of Complaint related to court, the person in charge of the company meets at the place of court with all parties involved (seller / claimant or other). When the facts are proven and all parties are heard, the responsible person decides to adjust the business according to what happened. The closing of the complaint can be done in two ways: • If the claimant understands the purchase, the remaining portion. That is, a new buying process is opened where one makes the acquisition of what was cut by lapse together with what is standing; • The claimant does not accept to sell the remaining portion. The wood cut is evaluated and paid to the owner considering the occurrence as a payment of damages to the owner.
Means of Verification	Tec Pellets' 'Procedimento para aquisição de matéria prima' Existing legal systems Level of enforcement Forest Best Management Practices Renting and harvesting contracts
Evidence Reviewed	Labour Code: Law n.º 7/09 12/02 (http://www.act.gov.pt/(pt-PT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx Portuguese Constitution Civil Code: http://www.pgdlisboa.pt/leis/lei_mostra_articulado.php?nid=775&tabela=leis
Risk Rating	☐**Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	Although this risk is addressed in the general legal framework of Portugal, Tec Pellets is of the opinion that this indicator needs additional attention as a safety net, in order to perform well on other indicators, which are categorised 'specified risk'. Because of the very large number of land owners with extremely small forested properties in Portugal, and, for example, the lack of cadastral in some regions of the country, Tec Pellets actively prevents grievances and disputes to arise. The aim is to track down and solve grievances and disputes before the harvesting operations commence.

	1) Tec Pellets actively prevents grievances and disputes to arise. The aim is to track down and solve grievances and disputes before the harvesting operations commence (or not to buy from the disputed plots). 2) Tec Pellets makes clear to the local population that any complaint or comment related to feedstock supply is taken very seriously (via website and other communications). Tec Pellets takes seriously any complaint of any person or organisation considering harvesting operations. This also ensures sufficient performance on respecting local interests (HCV 5) and cultural values (HCV 6). 3) Tec Pellets has a complaint procedure and keep records. The feedstock suppliers are also (contractually) required to actively implement a complaint procedure and keep records. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, in which the interests of local population are assessed. 4) Tec Pellets monitors the harvesting operations of its feedstock suppliers and checks their records on Complaints and Comments. It checks with relevant stakeholders, such as land owners, if no comments were submitted, or if the complaints were dealt with sufficiently. 5) The results of the inspections of Tec Pellets have direct influence on the 'SBE program approved' status of feedstock suppliers.

	Indicator
2.7.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that Freedom of Association and the effective recognition of the right to collective bargaining are respected.
Finding	Portugal has signed the ILO fundamental conventions, which includes the C87 Freedom of Association and Protection of the Right to Organize Convention (1948) on 1977th and C98 Right to Organize and Collective Bargaining Convention (1949) on 1964. This right is in cluded on Portuguese constitution on article 56. Most part of working activities is covered by an annual working collective convention, which includes the forest sector. International Trade Union Confederation (IUTC) ranks 139 countries against 97 internationally recognised indicators to assess where workers' rights are best protected, in law and in practice. Portugal has a rating of 3, from 1 to 5+, in the ITUC Global Rights Index 2014. This score is given for countries where: (There are) 'Regular violation 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.' Authority directly involved on employment rights and conditions is Work Conditions Authority (ACT) but for many reasons other authorities are related to the issue, as Immigration and Borders Services (SEF) social security services or even tax services. All of them can make inspections to different issues related to work, with the joining of policies authorities as GNR-Republican National Guard and PSP-Public Security Police.

	ACT has strategic Plans for Agriculture and Forest activities and also does integrated inspections with Spanish authorities for agriculture and forestry activities. Recently one notice state that ACT bought a drone to help agriculture and forestry inspections. Inspective activities of ACT and SEF result on penalties or suspensions when illegal situations are found. It wasn't found law violations identified on the right of freedom of association and collective bargaining in Portuguese forest sector. According to the available information this indicator is classified as low risk.
Means of Verification	Legislation Level of enforcement Portuguese constitution Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	Agriculture, Food and Forest Union: http://www.setaa.pt/index.php/Geral/ Boletim do Trabalho e Emprego: http://bte.gep.msess.gov.pt/ ; http://bte.gep.msess.gov.pt/completos/2016/bte4_2016.pd f WWW.ILO: http://www.ilo.org/dyn/normlex/en/f?p=1000:13100:0::NO::P13100_COMMENT_ID,P13100_LANG_CODE:3253858,en:NO Overview of ILO convention ratifications by Portugal: http://www.ilo.org/public/portugue/region/eurpro/lisbon/html/portugal_convencoes_numero_pt.htm ITUC Global RIGhTs Index The woRld's woRsT CoUnTRIes foR workers: http://www.ituc-csi.org/IMG/pdf/survey_ra_2014_eng_v2.pdf Labor Code• Law n.º 7/09 12/02 and updates like L69/13, de 30/08 includes collective convention http://www.act.gov.pt/(pt-PT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx Portuguese Constitution **Government sources:** SEF Statistical Annual reports: http://sefstat.sef.pt/relatorios.aspx SEF Inspective news about forest sector: http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=7018 http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=6802 ACT Annual Reports: http://www.act.gov.pt/(pt-PT)/SobreACT/DocumentosOrientadores/RelatorioActividades/Paginas/default.aspx News about ACT inspective work including forest: http://www.act.gov.pt/(pt-PT) /Itens/Noticias/Paginas/ACTeInspe%C3%A7%C3%A3odoTrabalhodeEspanhaema%C3%A7%C3%B5esco njuntas.aspx http://sol.sapo.pt/artigo/500544/utilizacao-de-drones-pela-inspeccao-geral-do-trabalho-gera-polemica ACT Strategic Plan for Agriculture and Forestry Activities: http://www.act.gov.pt/(pt-PT) /Campanhas/Campanhasrealizadas/Trabalho_Agricola_Florestal/Documents/Relat%C3%B

	3rio%20-%20Plano%20a%C3%A7%C3%A3o%20setor%20agr%C3%ADcola%20e%20florestal.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.7.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using any form of compulsory labour.
Finding	Portugal has ratified the convention against forced labour (nº29) in 1956. Portuguese legislation is applied against any form of compulsory labour in accordance with Article 160 of the Criminal Code, one who offers, gives, servicemen, calls accepts, transports, harbours or receives a person for the purpose of exploitation, including sexual exploitation, labour exploitation, begging, slavery, harvest organs or other exploitation by criminal activities and he / she has abused the authority resulting from a hierarchical relationship of dependency (whether financial, family or work related) is punished with imprisonment of three to ten years. Source: § (Article 160 of Decree-Law No. 400/82 Penal Code amended by Law No. 59/2007 and Law No. 60/2013) International Trade Union Confederation (IUTC) ranks 139 countries against 97 internationally recognised indicators to assess where workers' rights are best protected, in law and in practice. Portugal has a rating of 3, from 1 to 5+, in the ITUC Global Rights Index 2014. This score is given for countries where: (There are) 'Regular violation 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.' Some cases of compulsory labour were found on agriculture activities on recent years, and same data is available about those cases on Observatory on Traffic in Human Beings Reports. Authority directly involved on employment rights and conditions is Work Conditions Authority (ACT) but for many reasons other authorities are related to the issue, as Immigration and Borders Services (SEF) social security services or even tax services. All of them can make inspections to different issues related to work, with the joining of policies authorities as GNR-Republican National Guard and PSP-Public Security Police. ACT has strategic Plans for Agriculture and Forest activities and also does integrated inspections with Spanish authorities for agriculture and forestry activities. Recently one notice state that ACT bought a drone to help agriculture and forestry inspections. Inspective activities of ACT and SEF result on penalties or suspensions when illegal situations are found. Nevertheless, in forestry there wasn't found any evidence confirming the existence of risks of compulsory and/or forced labour in Portugal. According to the available information this indicator is classified as low risk.
Means of Verification	Legislation Level of enforcement

	Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	III National Plan to Prevent and Combat Trafficking in Human Beings 2014-2017 at http://www.igualdade.gov.pt/images/stories/documentos/legislacao/legislacao/Planos_Nacionais/2014-2017-iii-pnpc-tsh-en.pdf Observatory on Traffic in Human Beings: http://www.otsh.mai.gov.pt/Recursos/Pages/default.aspx Reports of Observatory on Traffic in Human Beings: 2015 ; 2014 ; 2013; 2012 ; 2011 Overview of ILO convention ratifications by Portugal: http://www.ilo.org/public/portugue/region/eurpro/lisbon/html/portugal_convencoes_numero_pt.htm ITUC Global RIGhTs Index The woRld's woRsT CoUnTRIes foR workers: http://www.ituc-csi.org/IMG/pdf/survey_ra_2014_eng_v2.pdf **Government sources:** SEF Statistical Annual reports: http://sefstat.sef.pt/relatorios.aspx SEF Inspective news about forest sector: http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=7018 http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=6802 ACT Annual Reports: http://www.act.gov.pt/(pt-PT)/SobreACT/DocumentosOrientadores/RelatorioActividades/Paginas/default.aspx News about ACT inspective work including forest: http://www.act.gov.pt/(pt-PT) /Itens/Noticias/Paginas/ACTeInspe%C3%A7%C3%A3odoTrabalhodeEspanhaema%C3%A7%C3%B5esconjuntas.aspx http://sol.sapo.pt/artigo/500544/utilizacao-de-drones-pela-inspeccao-geral-do-trabalho-gera-polemica ACT Strategic Plan for Agriculture and Forestry Activities: http://www.act.gov.pt/(pt-PT) /Campanhas/Campanhasrealizadas/Trabalho_Agricola_Florestal/Documents/Relat%C3%B3rio%20-%20Plano%20a%C3%A7%C3%A3o%20setor%20agr%C3%ADcola%20e%20florestal.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.7.3	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is not supplied using child labour.
Finding	In Portugal the minimum age for employment is 16 years. A minor of 16-year-old can't be used to carry out a paid activity delivered with autonomy unless he / she has completed compulsory education or is enrolled and attending secondary education, and is a work light. This light work should consist of simple tasks and is not likely to adversely affect the

	physical integrity, safety and health, school attendance, or their, moral, psychological, intellectual and cultural physical well-being. (Art.le 66-83 of the Labour Code) 2009. Portugal has ratified Minimum Age Convention (1973) C138 in 1989th and the convention C182 Worst Forms of Child Labour Convention (1999) on 2000th. International Trade Union Confederation (IUTC) ranks 139 countries against 97 internationally recognised indicators to assess where workers' rights are best protected, in law and in practice. Portugal has a rating of 3, from 1 to 5+, in the ITUC Global Rights Index 2014. This score is given for countries where: (There are) 'Regular violation 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.' UNICEF report 2012 'Measuring Child Poverty was rating 14,7% of Portuguese children below 16 years age as below 'poverty line'. Robust data about child labour are not recent, as the last official inquiry report is from 2001, and the results were not positive as 4,1% of children of the study were affected by child labour (CNASTI), with half of this proportion related to agriculture. 2015: FSC Portugal CNRA report states 'Despite evidence of some (remaining) cases of child labour, there is evidence that this problem is not structural nor of large size. No evidence found of cases of child labour in the forest sector. The national CWRA explicitly mentions 'child labour in the forest sector in Portugal is very low'. There is evidence that the number of minors working illegally is rather insignificant. Authority directly involved on employment rights and conditions is Work Conditions Authority (ACT) but for many reasons other authorities are related to the issue, as Immigration and Borders Services (SEF) social security services or even tax services. All of them can make inspections to different issues related to work, with the joining of policies authorities as GNR-Republican National Guard and PSP-Public Security Police. ACT has strategic Plans for Agriculture and Forest activities and also does integrated inspections with Spanish authorities for agriculture and forestry activities. Recently one notice state that ACT bought a drone to help agriculture and forestry inspections. Inspective activities of ACT and SEF result on penalties or suspensions when illegal situations are found. Based on the available information it wasn't found any evidence confirming the existence of risks of child labour in forestry in Portugal.
Means of Verification	Tec Pellets and Tec Pellets supllers work contracts Existing legislation Level of enforcement Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	**Legislation:** Labor Code•:Law n.º 7/09 from 12/02 http://www.act.gov.pt/(pt-PT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx Law n.º 47/2012, de 29/08 at http://www.cnasti.pt/cnasti/documentos/1403451265.pdf Decree Republic President 28/2000 1/06 at http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/conv_182.pdf Republic Assembly Resolution 11/98 at http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/conv_138.pdf **Government sources:**

	SEF Statistical Annual reports: http://sefstat.sef.pt/relatorios.aspx SEF Inspective news about forest sector: http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=7018 http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=6802 ACT Annual Reports: http://www.act.gov.pt/(pt-PT)/SobreACT/DocumentosOrientadores/RelatorioActividades/Paginas/default.aspx News about ACT inspective work including forest: http://www.act.gov.pt/(pt-PT)/Itens/Noticias/Paginas/ACTeInspe%C3%A7%C3%A3odoTrabalhodeEspanhaema%C3%A7%C3%B5esconjuntas.aspx http://sol.sapo.pt/artigo/500544/utilizacao-de-drones-pela-inspeccao-geral-do-trabalho-gera-polemica ACT Strategic Plan for Agriculture and Forestry Activities: http://www.act.gov.pt/(pt-PT)/Campanhas/Campanhasrealizadas/Trabalho_Agricola_Florestal/Documents/Relat%C3%B3rio%20-%20Plano%20a%C3%A7%C3%A3o%20setor%20agr%C3%ADcola%20e%20florestal.pdf **Other Sources:** Overview of ILO convention ratifications by Portugal: http://www.ilo.org/public/portugue/region/eurpro/lisbon/html/portugal_convencoes_numero_pt.htm Social characterization of aggregates Portuguese Family with Children in School Age http://www.cnasti.pt/cnasti/documentos/1403450788.pdf UNICEF Innocenti Research Centre (2012), 'Measuring Child Poverty: New league tables of child poverty in the world's rich countries', Innocenti Report Card 10, UNICEF Innocenti Research Centre, Florence at ITUC Global RIGhTs Index The woRld's woRsT CoUnTRIes foR workers: http://www.ituc-csi.org/IMG/pdf/survey_ra_2014_eng_v2.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.7.4	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using labour which is discriminated against in respect of employment and occupation.
Finding	Protection against discrimination in labour is included in Portuguese constitution (Article 55th), and labour code. Portugal has ratified ILO convention about discrimination on work and career C111 (1958) on year 1959th. Also convention about equal remuneration C100 was ratified on year 1966th. Portugal is well positioned at majority of international reports: • Corruption Perception Index scores 63 meaning low perceived level of corruption;

	• Worldwide Governance Indicators (WGI) from 73.3 to 84.13 (1-100points) • The WGI report six aggregate governance indicators for over 200 countries and territories over the period 1996-2014, covering i) Voice and Accountability, ii) Political Stability and Absence of Violence/Terrorism, iii) Government Effectiveness, iv) Regulatory Quality, v) Rule of Law, and vi) Control of Corruption. • Free country on press, net, political rights and civil liberties. On the other side Portugal (including human rights, illegal logging , forest and timber) is not listed in alarming reports or indexes such as: • Committee to Protect Journalists Impunity Index; • Human Rights Watch; • Global Witness • Chatham House • Amnesty International Some observations were found about women discrimination on jobs and remuneration and gender pay gap (*see below Direct Request (CEACR) - adopted 2014, published 104th ILC session (2015) Equal Remuneration Convention, 1951 (No. 100) – Portugal).* Also discrimination episodes were found against Roma and LGB (see below *Amnesty International 2014/2015 report The State of the World's Human Rights)* but not related to work activities. Authority directly involved on employment rights and conditions is Work Conditions Authority (ACT) but for many reasons other authorities are related to the issue, as Immigration and Borders Services (SEF) social security services or even tax services. All of them can make inspections to different issues related to work, with the joining of policies authorities as GNR-Republican National Guard and PSP-Public Security Police. ACT has strategic Plans for Agriculture and Forest activities and also does integrated inspections with Spanish authorities for agriculture and forestry activities. Recently one notice state that ACT bought a drone to help agriculture and forestry inspections. Inspective activities of ACT and SEF result on penalties or suspensions when illegal situations are found. Based on the available information, it wasn't found any evidence that confirms the existence of risks of discrimination against in respect of employment and occupation in forestry in Portugal.
Means of Verification	Existing legislation Level of enforcement Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	**Legislation:** •Portuguese Constitution •Labor Code•:Law n.º 7/09 from 12/02 http://www.act.gov.pt/(pt-PT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx •Dec-Law 42520/1959 23/09 at http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/conv_111.pdf •Dec-Law 47 302/1966 on 04/11 at

	http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/conv_100.pdf **Other sources:** •Transparency International http://www.transparency.org/cpi2015#map-container •UN Sanctions List at: https://www.un.org/sc/suborg/en/sanctions/un-sc-consolidated-list •World Bank: Worldwide Governance Indicators http://info.worldbank.org/governance/wgi/index.aspx#countryReports •Freedom house: https://freedomhouse.org/report/freedom-world/freedom-world-2016 •Committee to Protect Journalists https://www.cpj.org/reports/2014/04/impunity-index-getting-away-with-murder.php •Human Rights Watch: http://www.hrw.org/world-report/2015 •Global Witness: www.globalwitness.org Chattam House Illegal Logging Indicators Country Report Card http://www.illegal-logging.info •Amnesty International 2014/2015 report: https://www.amnesty.org/en/documents/pol10/0001/2015/en/ •Direct Request (CEACR) - adopted 2014, published 104th ILC session (2015) Equal Remuneration Convention, 1951 (No. 100) – Portugal http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:13100:0::NO::P13100_COMMENT_ID:3186668 •Overview of ILO convention ratifications by Portugal: http://www.ilo.org/public/portugue/region/eurpro/lisbon/html/portugal_convencoes_numero_pt.htm SEF Statistical Annual reports: http://sefstat.sef.pt/relatorios.aspx SEF Inspective news about forest sector: http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=7018 http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=6802 ACT Annual Reports: http://www.act.gov.pt/(pt-PT)/SobreACT/DocumentosOrientadores/RelatorioActividades/Paginas/default.aspx News about ACT inspective work including forest: http://www.act.gov.pt/(pt-PT)/Itens/Noticias/Paginas/ACTeInspe%C3%A7%C3%A3odoTrabalhodeEspanhaema%C3%A7%C3%B5esconjuntas.aspx http://sol.sapo.pt/artigo/500544/utilizacao-de-drones-pela-inspeccao-geral-do-trabalho-gera-polemica ACT Strategic Plan for Agriculture and Forestry Activities: http://www.act.gov.pt/(pt-PT)/Campanhas/Campanhasrealizadas/Trabalho_Agricola_Florestal/Documents/Relat%C3%B3rio%20-%20Plano%20a%C3%A7%C3%A3o%20setor%20agr%C3%ADcola%20e%20florestal.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.7.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is supplied using labour where the pay and employment conditions are fair and meet, or exceed, minimum requirements.
Finding	Minimum wage is included in Portuguese constitution (Article 59th), and labour code. Portugal has ratified ILO convention about minimum wage C131 (1970) on year 1981th. Also convention about salary protection C95 was ratified on year 1981th. Payment and employment conditions are included and are updated on labour code. Authority directly involved on employment conditions is Work Conditions Authority (ACT) but for many reasons other authorities are related to the issue, as Immigration and Borders Services (SEF) social security services or even tax services. All of them can make inspections to different issues related to work, with the joining of policies authorities as GNR-Republican National Guard and PSP-Public Security Police. ACT has strategic Plans for Agriculture and Forest activities and also does integrated inspections with Spanish authorities for agriculture and forestry activities. Recently one notice state that ACT bought a drone to help agriculture and forestry inspections. Inspective activities of ACT and SEF result on penalties or suspensions when illegal situations are found. According to the available information about employment conditions, there is a legal framework in the country, and there are legal authorities to enforce legislation. So it is considered that Portugal has low risk that pay and employment conditions are not fair and doesn't meet, or exceed, minimum requirements.
Means of Verification	Work contracts Existing legislation Level of enforcement Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	**Legislation:** •Portuguese Constitution •Labor Code •Law n.º 7/09 from 12/02 http://www.act.gov.pt/(pt-PT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx Dec-Law: 77/81 on 19/06 at http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/conv_131.pdf Dec-Law: 88/81 on 14/07 at http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/conv_95.pdf **Government sources:** SEF Statistical Annual reports: http://sefstat.sef.pt/relatorios.aspx SEF Inspective news about forest sector: http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=7018 http://www.sef.pt/portal/v10/PT/aspx/noticias/Noticias_Detalhe.aspx?id_linha=6802 ACT Annual Reports:

	http://www.act.gov.pt/(pt-PT)/SobreACT/DocumentosOrientadores/RelatorioActividades/Paginas/default.aspx News about ACT inspective work including forest: http://www.act.gov.pt/(pt-PT)/Itens/Noticias/Paginas/ACTeInspe%C3%A7%C3%A3odoTrabalhodeEspanhaema%C3%A7%C3%B5esconjuntas.aspx http://sol.sapo.pt/artigo/500544/utilizacao-de-drones-pela-inspeccao-geral-do-trabalho-gera-polemica ACT Strategic Plan for Agriculture and Forestry Activities: http://www.act.gov.pt/(pt-PT)/Campanhas/Campanhasrealizadas/Trabalho_Agricola_Florestal/Documents/Relat%C3%B3rio%20-%20Plano%20a%C3%A7%C3%A3o%20setor%20agr%C3%ADcola%20e%20florestal.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.8.1	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).
Finding	Tec Pellets has a rigorous control system and adequate procedures on the health and safety of forest workers. Tec Pellets (contractually) demands the same from its feedstock suppliers and checks the health safety of harvesting personnel during its monitoring inspections. Portugal has ratified convention ILO 184 on 2012, about agriculture health and safety in agriculture which includes forestry activities with exception of industrial forest harvesting. ILO forestry H & S code includes some of forestry activities on 'high risk operations' such as climbing above 3m, but in Portuguese legislation any forestry activity is included on legal list of 'High Risk Activity'. Work legislation aims to create a safe and healthy work environment at all times in accordance with society's technical and social development. Historically, a risk under this category has been present based on a low level of compliance with the requirements for accreditation and/or professional training. In recent years, many obligations have changed and private entities have started to develop courses for some activities of forest workers (for example for chainsaw, machinery or phytopharmaceuticals users). Legal authority for work health and safety is ACT (Working Conditions Authority), who as an inspective role on the ground. ACT promoted the development of the Strategic Action Plan for Agriculture, livestock and Forestry sectors from 2012 to 2015 producing the assessment report for this initiative (see report). From the execution of this plan 6 informative leaflets were produced as well as 8 instruments for the application of the respective law framework (checklists). The plan involved the participation of several social partners as well as public partners which can be

	consulted in the report. An estimate of 9000 employers and employees were reached throughout the development of this plan as well as 560 associative managers and technicians. The plan also comprised an inspective component materialized on 1700 inspections over 3 years reaching to 10 000 workers. Tec Pellets have a specialist in hygiene and safety at work. This specialist has a responsibility to evaluate all situations that compromise workers. Also all employees of the company, including the forestry specialist, have annual internal and external training (operations by certified companies) on workers' safety and health. The personal protective equipment is also delivered to all employees and is sensitive. It also has internal and external formations in forestry machinery and works in height. The tec pellets uses high quality equipment for better management and safety of the work. International Trade Union Confederation (IUTC) ranks 139 countries against 97 internationally recognised indicators to assess where workers' rights are best protected, in law and in practice. Portugal has a rating of 3, from 1 to 5+, in the ITUC Global Rights Index 2014. This score is given for countries where: (There are) 'Regular violation 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.'
Means of Verification	Tec Pellets' monitoring procedure includes 2 checklists: • Feedstock suppliers (EN PT 01 Check List auditoria a fornecedores); • Harvest operations (EN CL 01 - Checklist Forest Exploration Suppliers). Tec Pellets ensures: • Accredited professional courses (chainsaws, machinery operator, phytopharmaceuticals applicator) card and/or specific certificates of training sessions. • Records of H& S procedures and Personal Protection Equipment distribution by the organization. • Record of machinery safety tools and equipments on original documental register.
Evidence Reviewed	**Government sources** •Labour Conditions Authority-ACT (http://www.act.gov.pt/(pt-PT)/Paginas/default.aspx •Work accident statistics from ACT http://www.act.gov.pt/(pt-PT)/CentroInformacao/Estatistica/Paginas/AcidentesdeTrabalhoGraves.aspx (http://www.act.gov.pt/(pt-PT)/CentroInformacao/Estatistica/Paginas/AcidentesdeTrabalhoMortais.aspx http://www.act.gov.pt/(pt-PT)/crc/PublicacoesElectronicas/Documents/RelatorioAtividadesPromocaoSegurancaSaudeTrabalho2015.pdf •General Direccion of Social Security : http://www.seg-social.pt/dgss-direccao-geral-da-seguranca-social •Employment and Professional Training Institute at (https://www.iefp.pt/)

	Strategy and Planning Cabinet: http://www.gep.msess.gov.pt/estatistica/acidentes/index.php **Non-Government sources** Safety and health in the European forestry sector – The impact of more open markets and of increased regulation: http://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_160880.pdf Guidelines for labour inspection in forestry: http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/normativeinstrument/wcms_107610.pdf Code of Practice: Safety and Health in forestry work: http://www.ilo.org/wcmsp5/groups/public/@ed_protect/@protrav/@safework/documents/normativeinstrument/wcms_107793.pdf ITUC Global RIGhTs Index The woRld's woRsT CoUnTRIes foR workers: http://www.ituc-csi.org/IMG/pdf/survey_ra_2014_eng_v2.pdf •SETAA-Sindicato da Agriculture, Alimentação e Florestas: at http://www.setaa.pt/ •UGT-União Geral de Trabalhadores at https://www.ugt.pt/ •CGTP - Confederação Geral de Trabalhadores Portugueses at http://www.cgtp.pt/ **Legislation** Labor Code• Código do Trabalho :Lei n.º 7/09 12/02 artº127º i) http://www.act.gov.pt/(pt-PT)/Legislacao/Codigodotrabalhoatualizado/Paginas/default.aspx •Resolução da Assembleia da República nº109/2012 de 08/08 art 6º (Convention 184 doesn't apply to industrial forest work) http://dre.pt/util/getpdf.asp?s=diad&serie=1&iddr=2012.153&iddip=20121525 •Aviso n.º 6/2014. 01/09 https://dre.pt/util/getpdf.asp?s=diad&serie=1&iddr=2014.6&iddip=20140033 •Law nº 3/2014 from 28/01 https://dre.pt/application/dir/pdf1sdip/2014/01/01900/0055400591.pdf •DLnº441/91, de 14/11capIII • DL nº133/99, de 21/04 artº1º • DL nº26/94, de 1/02 artº3º •Lei n.º 98/2009, de 04/09 artº7º •DLnº 128/93, de 22/04 artº1º • Port. 988/93, de 06/10; • DL nº141/95, de 14/06 artº5º •Portaria n.º 1456-A/95, de 11/10; artº2º • DL nº331/93 de 25/09, artº4º DLnº 330/93, de 25/09 artº4º • DL 182/2006, de 6/09 , artº4º • NP 2761:1988 Law 102/2009 10/09 :http://www.dgpj.mj.pt/sections/leis-da-justica/pdf-ult2/lei-n-102-2009-de-10- de/downloadFile/file/lei_102.2009.pdf?nocache=1252570336.84 High Risk Works and Activities: http://www.act.gov.pt/(pt-PT)/PromocaoSST/RegulacaoServicosSST/Documents/anexos/CAE_20%2005%202014.pdf •Health and Safety Guide for Agroforestry works: http://www.act.gov.pt/(pt-PT)/Itens/Noticias/Documents/Seguran%C3%A7a%20e%20Saude%20no%20Trabalho%20no%20Setor%20Agro-Florestal.pdf
Risk Rating	☐ **Low Risk** ☒**Specified Risk** x☐ **Unspecified Risk at RA**

Comment / Mitigation Measure	Tec Pellets has a rigorous control system and adequate procedures on the health and safety of forest workers. Tec Pellets (contractually) demands the same from its feedstock suppliers and checks the health safety of harvesting personnel during its monitoring inspections. During the feedstock supplier's office inspections of Tec Pellets are checked: the training records, workforce, and the hiring of specialists in forest security. Protective equipment (according to the applicable law) and knowledge of personnel is inspected during site visits. Tec Pellets' monitoring procedure includes 2 checklists: • Feedstock suppliers (EN PT 01 Check List auditoria a fornecedores); • Harvest operations (EN CL 01 - Checklist Forest Exploration Suppliers). Tec Pellets ensures: • Accredited professional courses (chainsaws, machinery operator, phytopharmaceuticals applicator) card and/or specific certificates of training sessions. • Records of H& S procedures and Personal Protection Equipment distribution by the organization. • Record of machinery safety tools and equipments on original documental register.

	Indicator
2.9.1	Biomass is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.
Finding	There is a specified risk of reducing high carbon stocks, but it is not a high one, and by addressing sustainable forest management and the above-mentioned indicators and risks, this indicator is adequately addressed. Considering the positive general trend of carbon accumulation by forests in Portugal, this risk has a regional to local (exceptional) character and is more specifically related to the risks mentioned in the following indicators: c. 2.1.3 (land conversion), d. 2.2.2 (degradation of grounds), and e. 2.4.2 (fires and pests). According to the National Inventory Report on Greenhouse Gases 1995-2015 developed by Portuguese Environment Agency (APA), Portuguese forest acted as a carbon sink in the period of the study with a net carbon sequester of 753.2 Gigagrams. The high carbon stocks are considered to be in wetlands, peatlands (no forested areas related) and old mature forests stands. Information regarding wetlands in Portugal states that as usual in the region they are threatened ecosystems even when they are protected. Portugal currently has 1.8% of its territory occupied by wetlands, 79% of which is protected by the Ramsar Convention, covering this protection figure of 31 sites (about 132,487 hectares). 82% of habitats related to wetlands are degraded. Epic WebGis Portugal provides geographical information about wetlands.

	In the revised information one relevant risks is associated to forestry: cutting of riparian vegetation so specified risk needs to be assessed on this issue. Tec Pellets ensure that feedstock does not come from riparian vegetation in wetlands complies with legislation (felling license) and do not affect to carbon stocks. There is an increase of pine areas around the plant in the last decade (Portuguese Forest Inventory) i.e., around the region where Tec operates and its suppliers harvest from, there was an increase of forested areas, both Pine and Eucalyptus. The consumption of Tec Pellets is mainly of wood from the pine species. Forest fires are a big risk in Portugal, which can have a devastating effect on forest carbon. Thinning activities and use of end of life timber by Tec has positive effects on mitigating this risk.
Means of Verification	Tec Pellets' 'Environmental Impact Assessment' (EIA) Maps, WebPages Procedures Regional, publicly available data from a credible third party The existence of a strong legal framework in the region Felling license
Evidence Reviewed	HABEaS -Hotspot Areas for Biodiversity and Ecosystem Services; important areas for carbon storage (http://www.habeas-med.org/webgis/pt_en/) Epic WebGis Portugal (http://epic-webgis-portugal.isa.ulisboa.pt/) Quercus NGO (http://www.quercus.pt/comunicados/2011/fevereiro/522-zonas-humidas-continuam-ameacadas-em-portugal) Quercus NGO (http://www.quercus.pt/comunicados-floresta/593-2013/2982-corte-de-sobreiros-em-santa-maria-da-feira-para-construcao-de-novo-parque-empresarial) , (http://www.quercus.pt/comunicados/2014/junho/3707-abate-de-sobreiros-na-zona-de-proteccao-especial-do-estuario-de-tejo-em-benavente) ; (http://www.quercus.pt/comunicados/2012/setembro/43-abate-ilegal-de-centenas-sobreiros-e-carvalhos-portugueses-no-parque-natural-do-sudoeste-alentejano-e-costa-vicentina) ICNF habitat 7140; peatlands/turfeiras (http://www.icnf.pt/portal/naturaclas/rn2000/resource/docs/rn-plan-set/hab/hab-7140) ICNF habitat 9230; oak forests (http://www.icnf.pt/portal/naturaclas/rn2000/resource/docs/rn-plan-set/hab/hab-9230) A distribuição do Carvalho Portugués (http://naturlink.pt/article.aspx?menuid=3&cid=1145&bl=1&viewall=true) MedWet Mediterranean wetlands initiative (http://medwet.org/aboutwetlands/) Inventario Florestal Nacional IFN5 (FloreStat_IFN5); ICNF portal (http://www.icnf.pt/portal/florestas/ifn/ifn5/rel-fin) Inventario Florestal Nacional IFN6, preliminary results (IFN6 - Resultados preliminares.pdf); ICNF portal Law 58/2005 29/12; Law 54/2005, at 15/11 (Artº 25º) Titularidade dos recursos hídricos (https://dre.pt/application/dir/pdf1sdip/2005/11/219A00/65206525.pdf)
Risk Rating	☐**Low Risk** ☒**Specified Risk** ☐ **Unspecified Risk at RA**
Comment / Mitigation Measure	There is a specified risk of reducing high carbon stocks, but it is not a high one, and by addressing sustainable forest management and the above-mentioned indicators and risks, this indicator is adequately addressed.

	1) Tec Pellets studies data (from publicly available information, researches and programs) for its harvesting teams on aspects that can decrease the carbon stock. This information is given to all feedstock suppliers. 2) Feedstock suppliers are trained to recognise areas where carbon stocks have decreased. 3) The harvesting teams inspect visually the plot and make photos on for example recent drainage of fertile but moist lands. Tec Pellets demands its 'Environmental Impact Assessment' (EIA) from all feedstock suppliers, which includes this point. 4) Tec Pellets checks plots and the submitted EIAs.

	Indicator
2.9.2	Analysis demonstrates that feedstock harvesting does not diminish the capability of the forest to act as an effective sink or store of carbon over the long term.
Finding	It was found on information reviewed that according to National Inventory (APA, I.P., 2014), from 1990 to 2012 forests are a net carbon sink, with annual sequestration values ranging between -11 MtCO eq and -18 MtCO eq. However on its 2015 report it is stated the negative impact of forest fires *(..) Estimates of emissions and sinks from land use change and forestry category show that this category has changed from being a net emitter in 1990 (1.8 Mt CO2 eq.) to a carbon sink in 1992. This situation was again reverted in the years 2003 and 2005 due to the severe forest wildfires events registered in these years. In 2013 this sector represents a sequester of -9.4 Mt CO2e..* Questions regarding forest fires are addressed at indicators 2.4.1 and 2.4.2. Under this information this indicator can be assessed al low risk.
Means of Verification	Results of analysis Regional, publicly available data from a credible third party The existence of a strong legal framework in the region. Interviews with experts
Evidence Reviewed	Estrategia Nacional das Florestas (RCM n.º 6-B/2015 - Diário da República n.º 24/2015, 1º Suplemento, Série I de 2015-02-04); ICNF portal (http://www.icnf.pt/portal/icnf/docref/enf) Relatório-de-Caracterizacão-da-Fileira-Florestal-2014(http://www.aiff.org.pt/assets/Relatorio-de-Caracterizacao-da-Fileira-Florestal-2014-160p-CAPA-3-spread....pdf) Portuguese National Inventory Report on Greenhouse Gases 1990 – 2013 http://www.apambiente.pt/_zdata/Inventario/NIR_global_20151030_UNFCCC.pdf
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

	Indicator
2.10.1	Genetically modified trees are not used.
Finding	In Portugal there is not a specific legal framework for GMO trees, but for all vascular plants. This legislation doesn't prohibit commercial use of GMO plants which is legal in the country since 1999. However, only corn (maize) is cultivated (around 6% of the total production). It hasn't been found any recent trial of GM trees in the country. Only related notice was from 1997 when Stora Enso trialed a modified variety of Eucalyptus globulus, which was concluded on 2001. The company (Stora Enso) is no longer in Portugal, but is still an industrial global pulp and paper player with interests in GMO. A low risk conclusion is justified because it was not evidenced interest for GMO use in the forestry sector.
Means of Verification	List of species used. EU Register of authorised GMOs http://ec.europa.eu/food/dyna/gm_register/index_en.cfm
Evidence Reviewed	•DL 55/2015 at 17/04 http://apambiente.pt/_zdata/Politicas/MGM/DL%2055_2015.pdf •DL 72/2003 de 10/04 (http://apambiente.pt/_zdata/Politicas/OGM/DL_72_2003.pdf •APA-Agência Portuguesa de Ambiente at webpage: http://apambiente.pt/index.php?ref=16&subref=85&sub2ref=430 •DGAV- Direcção Geral de Alimentação e Veternária webpage: http://www.dgv.min-agricultura.pt/portal/page/portal/DGV/genericos?generico=3665233&cboui=3665233 •Plataforma Transgénicos Fora at http://stopogm.net/ensaios •EU Register of authorised GMOs http://ec.europa.eu/food/dyna/gm_register/index_en.cfm •Global Forest Registry: http://www.globalforestregistry.org/
Risk Rating	☒**Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**