Sustainable Biomass Program

Supply Base Report: Khronodefine Lda (AT Green)

www.sbp-cert.org

Completed in accordance with the Supply Base Report Template Version 1.3

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

Document history

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Contents

1 Overview

Producer name:	Khronodefine, Lda. (Legal entity name); Atgreen (brand name)
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Date report finalised:	21/Aug/2019
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Name of CB:	Control Union Certifications
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Weblink to Standard(s) used:	http://www.sustainablebiomasspartnership.org/documents
SBP Endorsed Regional Risk Assessment:	N/A
Weblink to SBE on Company website:	https://www.atgreen.pt/sbp

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

Atgreen, a wood pellet production company located in the city of Guarda in Portugal. Guarda is located in the center north of Portugal. Atgreen buys low-quality primary feedstock from dozens of suppliers and secondary feedstock from around 5 sawmills. Some feedstock suppliers are FSC certified but not all deliver the feedstock with an FSC claim. Primary feedstock accounts for approximately 99% of total feedstock supply (ca. 40% SBP-compliant primary feedstock, 59% SBP-controlled primary feedstock, 1% SBP-complaint secondary feedstock).

Atgreen has a production capacity of 180.000 tons of wood pellets a year. Considering the total amount of feedstock it processes, Atgreen shall be the largest company in the center northeast of Portugal, after a pulp and paper company. This activity contributes to the regional economy and to effective forest fire fighting – the main issue in Portuguese forestry today.

The supply base is Portugal.

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

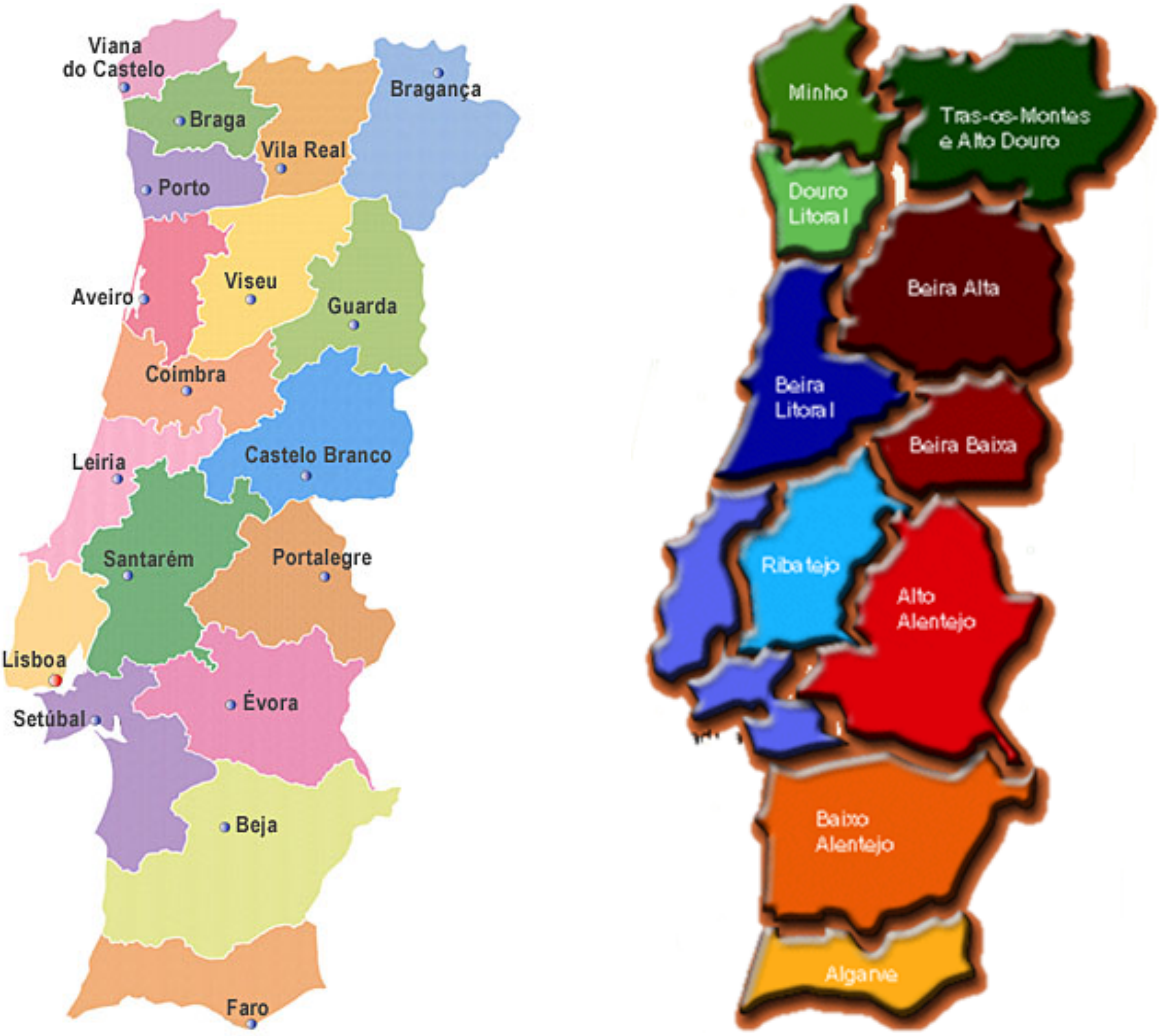
- Guarda
- Viseu;
- Coimbra;
- Castelo Branco;
- Portalegre
- Leiria;
- Santarém;
- Aveiro;
- Porto;
- Braga;
- Vila Real;
- Viana do Castelo;
- Bragança;

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

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

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

Figure 1. Regions of Portugal



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

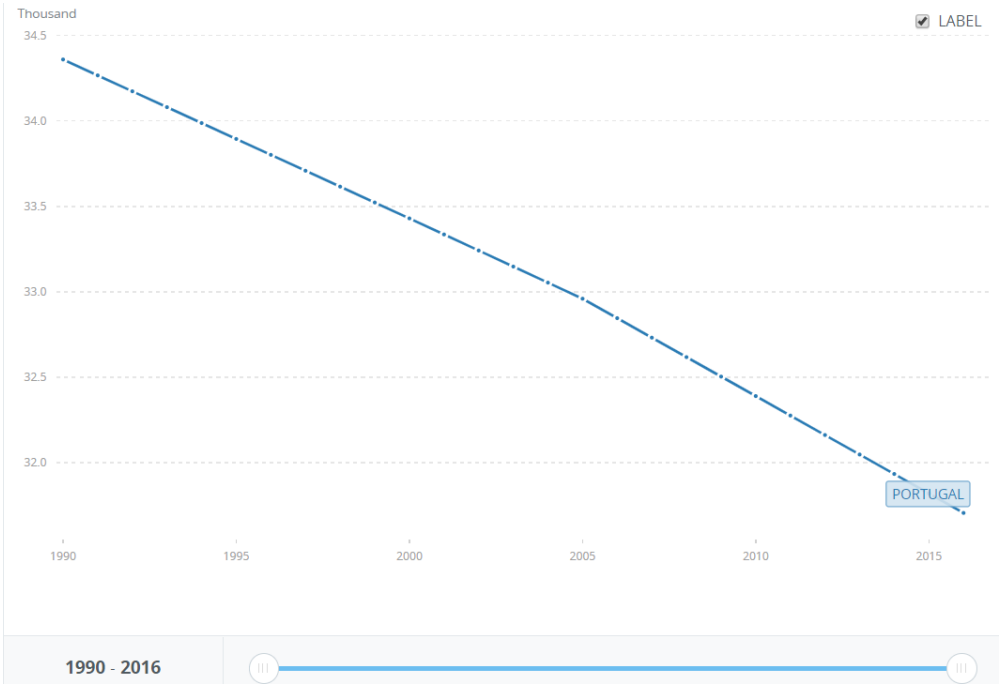
The following aspects related to forestry in Portugal are important to its sustainable management:

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

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

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

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



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

Figure 2: Tree species distribution

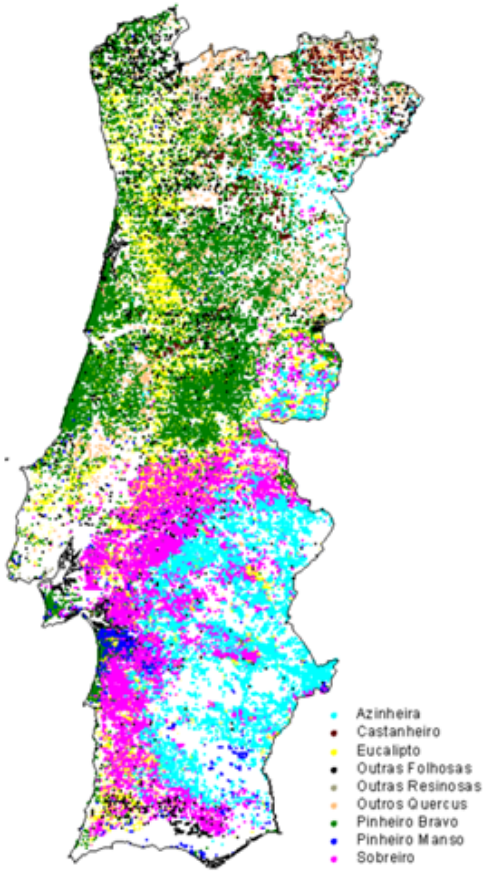
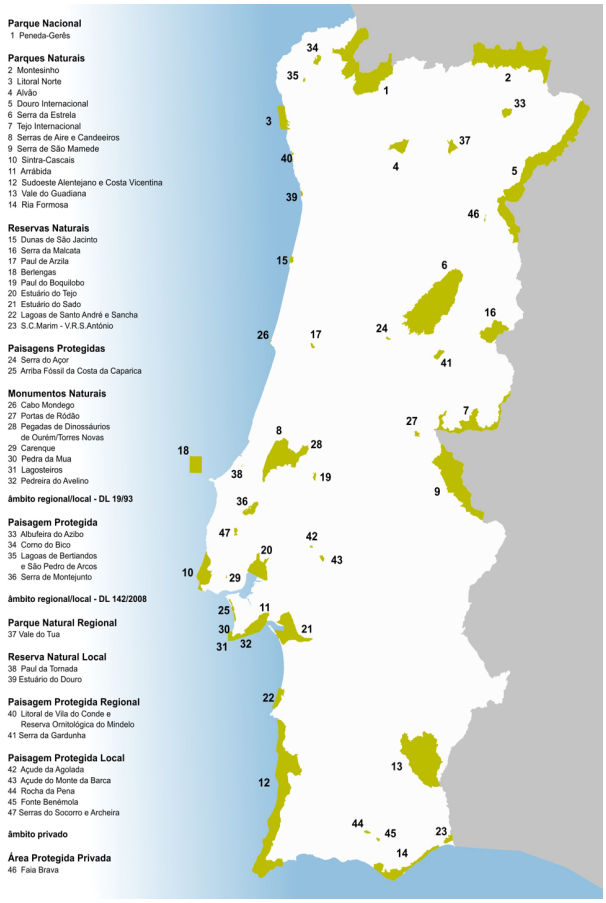


Figure 3: Protected areas



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

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

- Eucalypt (*Eucalyptus globulus and other spp.*), 26% of forest area.
  Originally from Tasmania, eucalypt 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 eucalypt stands.
- Maritime pine (*Pinus pinaster*), 23% of forest area.
  This species was chosen in the large afforestation campaigns carried out during the nineteenth century, due to its ability to adapt to poor and rocky soil. In addition, it regenerates easily. Its timber is widely used commercially;
- The cork oak (*Quercus suber*), 23% of forest area.

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

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

The national legislation of Portugal does list protected tree species, and, for example, it is forbidden to cut any cork oaks (*Quercus suber*), and holm oaks (*Quercus ilix / Quercus rotundifolia*; protective measures by Law 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) lists a considerable number of protected plants for Portugal. However, the list does not include any trees. The 'Red List' of the IUCN (International Union for Conservation of Nature and Natural Resources) indicates hundreds of plants for the continental territory of Portugal, but also does not include any trees either. Specialists reckon 49 of these plant species to the relevant ones for forestry.

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

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

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

2.2 Actions taken to promote certification amongst feedstock supplier

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

2.3 Final harvest sampling programme

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

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

From the tree species used by Atgreen only the maritime pine (*Pinus pinaster*) has a planned forest management period of more than 40 years, but Atgreen only uses low grade roundwood (co products). Eucalypt and Poplar are fast-growing tree species, which are to be cut before the age of 40 years.

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

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

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

<table>
<tr><td colspan="2">Suppliers of forest residues, burnt wood, etc.</td><td rowspan="2">Atgreen pellet plant
180 kton per year production capacity of wood pellets</td><td>Exports to the industrial market</td></tr>
<tr><td>Regional forest roundwood suppliers</td><td>Sawmills in the region supplying wood residues</td><td>Sales to medium sized applications</td></tr>
<tr><td>1</td><td>2</td><td>3</td><td>4</td></tr>
</table>

2.5 Quantification of the Supply Base

Supply Base

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;

e. Certified forest by scheme (ha): FSC: 434 thousand ha (2019)
PEFC 277 thousand ha (2019)

Feedstock

f. Total volume of Feedstock: 200,000 – 400,000 tonnes (estimation per year)

g. Volume of primary feedstock: 200,000 – 400,000 tonnes (estimation per year)

h. List percentage of primary feedstock (g), by the following categories.
- Certified to an SBP-approved Forest Management Scheme 0-19%
- Not certified to an SBP-approved Forest Management Scheme 80%-100%

i. List all species in primary feedstock, including scientific name
- Maritime pine *(Pinus pinaster)*
- Scots pine *(Pinus sylvestris)*
- Monterey pine *(Pinus radiata)*
- Austrian pine (*Pinus nigra)*
- Stone pine *(Pinus pinea)*
- Eucalypt *(Eucalyptus spp.);*
- Poplar *(Populus spp.).*
- Portuguese oak *(Quercus fagines)*
- Champion oak (*Quercus rubra)*
- *Weeping willow (Salix babylonica)*
- Acacia *(Acacia spp.)*
- Planes *(Platanus spp.)*
- Chestnuts *(Castanea spp.)*
- Ash *(Fraxinus spp.)*
- Alder *(Alnus spp.)*

j. Volume of primary feedstock from primary forest: None

k. List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP-approved Forest Management Schemes: *Not applicable*
- 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

l. Volume of secondary feedstock: specify origin and type:
0 – 200,000 m^3 of slabs and off-cuts. The wood originates from Portugal.

m. Volume of tertiary feedstock: specify origin and composition: None

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
☒	☐

Atgreen 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.

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

4 Supply Base Evaluation

4.1 Scope

The scope of this assessment covers Portugal.

The scope of the SBE includes:

- Primary feedstock that has been evaluated conform FSC Controlled Wood, or
- Primary feedstock that has been supplied with the FSC Controlled Wood claim.

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

Atgreen is being FSC certified and it will use the credit system and the FSC Controlled Wood evaluation method.

4.2 Justification

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

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

4.3 Results of Risk Assessment

Most indicators are assessed as low risk, mainly because:

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

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

Table 4.3: Risk Assessment Results of Atgreen

SBP Indicator	Indicators of specified risk Atgreen
1.2.1 for areas without cadastral data	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
	47% of the land area of Portugal has no Cadastral date. Moreover, the northern and central part of Portugal is characterised by hundred thousands of small private properties. The boundaries of these properties are sometimes disputable. Also the official registration of the property rights can be outdated. For practical reasons, landowners can decide to sell or transfer (inherit) parts of their property without registering the change to the government. Plots can be abandoned and the property rights can be unclear. Wood lands can also be impounded by the government.
2.1.1 HCV 1+3	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. The regional forest management plans are not obligatory for the holders of small forests and plantations. Species diversity, ecosystems and habitats are insufficiently protected considering the majority of the forest operations in the north and centre of Portugal. Small land owners and harvesting companies working on small plots do not need to draw attention to the organisations, websites and reports mentioned in the SBE in relation to this indicator. The parcels are normally simply clear cut. A threat to forests like forest fire is identified on maps, but is not addressed adequately by many forest owners. A lot of estates are not or poorly maintained. SEPNA forest guards do not check on this sufficiently.
2.1.2 HCV 1+3	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. Special attention Should be 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.
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 eucalypt 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, eucalypt 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 eucalypt plantations does not safeguard this issue sufficiently.
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.
	To most small owners no forest management plan applies, the regional 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.
	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.
	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.
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected.
	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.
	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.
	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.
2.4.2 Fire fighting	The Biomass Producer has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately.
	Considering the lack of an implementation of forest management plans and forest debris cleaning, the risk of forest fires is high. Fires are today the greatest perceived risk in the Portuguese forest sector. Biotic and abiotic risks are supported by disturbances affects. The forests and in particular the eucalypt plantations have to be manged according to best practises or the risk of forest fire is significant.
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.'
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.
	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: a. 2.1.3 (land conversion), and b. 2.2.2 (degradation of grounds). Data of different sources, for example the FAO, indicate a clear trend in decreasing forest area in Portugal of over 1% every 3 years the last 20 years or more. For example, the conversion of forests to urban use is significant. In total, the forest area decreased by 150 611 ha between 1995 and 2010, according to the ICNF.

4.4 Results of Supplier Verification Programme

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

4.5 Conclusion

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

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

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

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

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

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

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

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

5 Supply Base Evaluation Process

The Supply Base Evaluation (SBE) was performed by Rens Hartkamp, BiomassConsult, with assistance of Joana Carvalho, Atgreen's sustainability manager, engineer, with 10 years experience in the wood pellet industry. Rens Hartkamp (M.Sc. in forestry; Ph.D. in forestry economics) has around 20 years of experience in forest certification and 10 years in biomass certification. He has been active in benchmarking and developing criteria and indicators for biomass certification systems. In total, he assisted around 40 companies on SBP certification, some including SBEs in Portugal. He passed the SBP auditor exams in 2015.

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

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

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

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

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

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

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

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

6 Stakeholder Consultation

Over 100 stakeholders, including local NGOs, state institutions, government bodies, forest owners associations, academic and research institutions, and leading experts in nature conservation and forestry were contacted to give their input on Atgreen's SBR and SBE. These documents were publically available on Atgreen's website from 23 August to 22 September 2019.

6.1 Response to stakeholder comments

The stakeholder consultation did not result in any comments.

7 Overview of Initial Assessment of Risk

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

Legality Indicators	Initial Risk Rating		
	Specified	Low	Unspecified
1.1.1		X	
1.1.2		X[2)]	
1.1.3		X	
1.2.1	X[1)]		
1.3.1		X	
1.4.1		X[2)]	
1.5.1		X	
1.6.1		X	

Sustainability Indicators	Initial Risk Rating		
	Specified	Low	Unspecified
2.1.1	X[3)]		
2.1.2	X[3)]		
2.1.3	X[7)]		
2.2.1	X		
2.2.2	X		
2.2.3	X		
2.2.4	X		
2.2.5		X	
2.2.6	X		
2.2.7		X	
2.2.8		X	
2.2.9		X	
2.3.1		X	
2.3.2	X		
2.3.3		X	
2.4.1		X[4)]	
2.4.2	X[5)]		
2.4.3		X	
2.5.1		x	
2.5.2		x	
2.6.1	X[6)]		
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[7)]		
2.9.2		x	
2.10.1		x	

1) Specified risk for areas without cadastral data.
2) These legality indicators are low risk, nevertheless, Atgreen has procedures on verifying a few essential aspects.
3) HCV 1 and 3 are specified risk.

   Social and cultural aspects regarding Sustainable Forest Management are considered low risk but are checked during the evaluation of best practises.
4) This sustainability indicator is low risk, nevertheless, Atgreen does assess the possible impact of harvest operations on the forests and their surroundings (also considering local residents and entrepreneurs) during field inspections.
5) Specified risk on forest fire-fighting.
6) The mitigation measures of this indicator are important in reducing the risks related to all social aspects of sustainability.
7) Of importance is the negative trend in forest cover (and loss of carbon stocks) over the last 20 years, due to the conversion to agricultural and urban lands.

8 Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

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

8.2 Site visits

Not applicable.

8.3 Conclusions from the Supplier Verification Programme

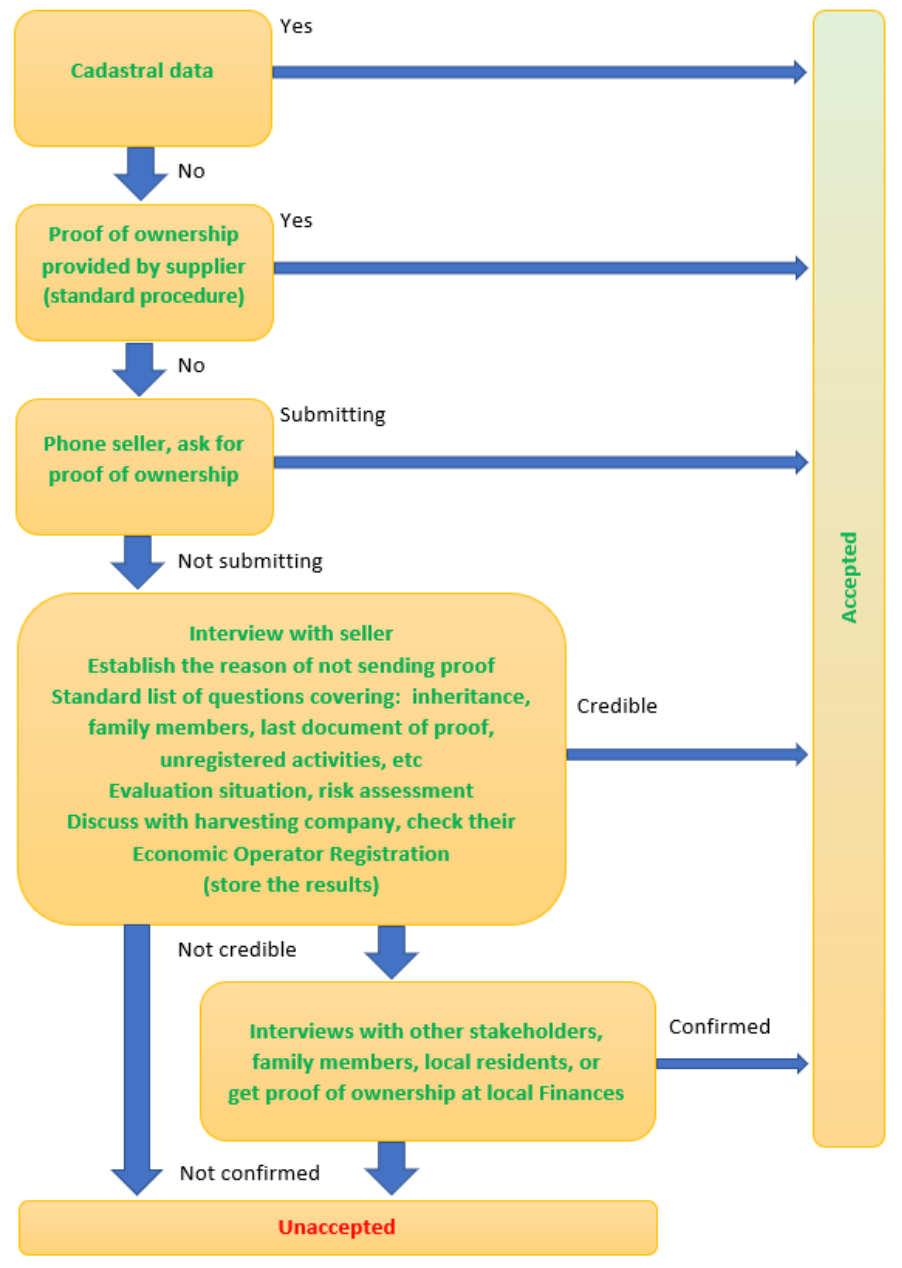
Not applicable.

9 Mitigation Measures

9.1 Mitigation measures

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

Table 9.1 Risk Mitgation Measeures Summary

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***
for areas without cadastral data **Mitigation measures**	Procedure for evaluating legality of ownership: 

	Atgreen does not buy wood from wood lands, of which the owner rights are unclear. Any unclarity/dispute concerning the ownership of the wood needs to be solved first. Considering forestry in the north of Portugal, the fact that there are little disputes / complaints does not guarantee the wood is legal / the seller is indeed the owner of all the plots harvested. For example, areas can become ownerless and abandoned and some could try to take advantage of the situation before the land is impounded by the government.
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.***
HCV 1 & 3 **Mitigation measures**	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. Atgreen identifies and maps areas with high conservation values (HCVs) before the harvest comences. HCV 1 and 3 were assessed to have a specified risk. Extra effort is needed to identify and map these values in practice on paper, regarding the forest plot. 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. Atgreen 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. Below the main sources of information, used to prepare the identification of these values for our harvesting teams. The forestry specialist evaluate every plot before the harvesting operations begins. Atgreen inspects the suppliers and harvesting areas.

	HCV 1 – Species diversity There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity. Species diversity is evaluated and recorded before harvesting operations commence. Caution and best practises are applied. Special attention is given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs). See also below, indicator 2.2.4 *Some information sources:* ➢ Classified areas: http://www.icnf.pt/portal/naturaclas/cart ➢ Protected area plans: http://www.icnf.pt/portal/naturaclas/ordgest/poap ➢ Endangered species: http://www.icnf.pt/portal/naturaclas/patrinatur/especies ➢ Endemic species: http://naturdata.com/index.php?option=com_content&view=article&id=78&Itemid=60 ➢ Digital mapping information from the Manual das Linhas Eléctricas [Manual of Electric Lines] (ICNB 2008) ➢ Important Bird Areas of Portugal at: http://ibas-terrestres.spea.pt/ ➢ Regional Forest Plans (PROF): http://www.icnf.pt/portal/florestas/profs **HCV 3 – Ecosystems and habitats** There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm ecosystems and habitats. In these situations, Atgreen demands to evaluate the environmental impacts (on Ecosystems and habitats) of the forest operations before the forest operations commence. Caution and best practises are applied. See also below, indicator 2.2.3. *Some information sources:* ➢ 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.
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.***
HCV 1 & 3 **Mitigation measures**	There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity, ecosystems and habitats. Species diversity is evaluated and recorded before harvesting operations commence. Special attention is given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs). Atgreen identifies and addresses potential threats to forests and other areas with high conservation values (HCVs). The control system for feedstock, which also includes regular inspections of suppliers, is duly implemented. Some HCV areas are designated as protected and classified areas at the national or EU level (Natura 2000). There are also smaller areas and biotopes important to biodiversity, which can be classified as priority species' habitats. 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 protected species, habitats and key ecosystems on the plot before harvesting; • Development of adaptions to the harvesting plans, if needed; • Harvesting according to best practices in sustainable forest management; See also below, indicator 2.2.4 and indicator 2.2.3.
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	Atgreen considers all pine stands as forests and eucalypt and poplar stands as plantations. Atgreen checks if forests have been changed to eucalypt or poplar plantations after 2008. When forest is converted to agricultural land or a plantation, or when land use change (conversion) is planned, the feedstock is not categorized as SBP compliant. When a eucalypt or poplar plantation are 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? This is dealt with in the Feedstock Supplier Declaration and addressed in the field operations checklist.
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	In case no forest plan is available (no PROF, PGF ZIF, PUB, SNAC, as well as no PEFC or FSC certification), or a plan is available but does not apply to a small holder, an additional assessment of environmental impacts is made and recorded before harvest. Special attention is given to plots smaller than the minimum threshold for the mandatory Forest Management Plan (PROF) and outside the SNAC. Before harvesting operations commence, the plot is visited and evaluated: • The possible economical, ecological and social impact of the forest operations, including its surroundings. Harvesting plans can be changed to avoid negative impacts; • Was the forest management conform the law in the past (has the forest been cleaned according to the law in the past); • Specific Plans for Forest Intervention (PEIF) are studied for specific measures for the intervention on forest areas with major biotic problems (e.g.: invasive species, plagues or diseases) or abiotic (e.g.: high risk of forest fire); • Potential impacts of operations on ecosystems and biodiversity are identified. Impacts inside and outside the area of operation are considered, for example downstream; • Impacts are monitored and monitoring results are used to improve operational practices. Indicators 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2 include relevant management measures which are checked.

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. Best forestry practises are applied. Best forestry practices apply: • Were needed, considering the soil and groundwater level, only selective cuttings and small clear cuts of maximally 5 ha are planned; • Regeneration focusses on tree species that maintain or improve soil quality; • Leave nutrients in the forests, mainly the green fraction of forest residues less or equal to 3 cm (on the other hand other forest residues need to be cleared to prevent forest fires. • Do not operate near-water areas. • Fertilization of the ground, when needed and possible. On dry locations selective cuttings are often preferable, because the ground gets less direct impact of the sun and the forest can maintain soil quality and regenerate naturally. 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	Atgreen 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.
	
	Steps in risk mitigation:
	• Training of suppliers, assessing and selecting 'SBE approved' suppliers;
	• 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	Atgreen monitors the harvesting operations of its feedstock suppliers. Best practices are required to comply with the SBE program requirements.
	• Desk assessment (before harvesting operations commence) of Important areas for watershed protection
	  ○ Cork oak and holm oak savannas located in areas with an aquifer recharge rate of over 175 mm/year
	  ○ Aquifers
	• The plots and the surroundings (hill slopes and streams) are inspected on:
	  ○ Runoff problems (regarding the landscape, onsite and in the surroundings);
	  ○ Groundwater level problems (too high or too low);
	  ○ Protection of riversides and (lake) coastlines;
	• In areas vulnerable to water damage, the maximal contiguous clear cut area is 5 ha;
	• Best forestry practices; Feedstock suppliers are trained to not contaminate ground water and to plan forest management operations that protect the soil, forest and surroundings from surface water runoff; Runoff of elements of fertilizers and pesticides into the surrounding environment.

2.3.2	***Adequate training is provided for all personnel, including employees and contractors (CPET S6d).***
Mitigation measures	Atgreen trains its personnel on all relevant aspects and demands the same from its feedstock suppliers. • Training records obligatory according to legislation and records of qualification are collected during supplier qualification process and checked during supplier inspections; • Training conducted by Atgreen in several fields, including identification of key ecosystems, habitats and species biodiversity (annually and additionally based on the results of the plot assessments); • Training on best forest management practices. • Atgreen performs supplier inspections: the training records, (new) workforce, and the hiring of specialists. The level of knowledge of personnel is inspected during site visits.
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).***
Fire fighting **Mitigation measures**	On the above information specified risk is assessed on the fire management at forest level. Visual inspection of the plot before harvesting (checklists). Checked is if the plot was managed well on fire protection in the past. • 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 according to law; • Best forest practices; • Monitoring performance.
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	Such mechanisms play an important function as a safety net for sufficient performance on social and cultural aspects of Sustainable Forest Management and in complying with other indicators of SBP standard 1. • The aim is to solve grievances and disputes before the harvesting operations commence (or not to buy from the disputed plots).

	• Atgreen makes clear to employees and stakeholders that any complaint or comment related to feedstock supply is taken very seriously, to ensure sufficient performance on legality and social aspects of Sustainable Forest Management. • Atgreen has a complaint procedure and keeps records. The feedstock suppliers are also required (signed supplier declaration) to actively implement a complaint procedure and keep records. • Atgreen monitors the harvesting operations of its feedstock suppliers and checks their records on Complaints and Comments. Proactive interviews with relevant stakeholders, such as land owners on submitted comments (orally and in writing), and assesses if complaints were dealt with sufficiently. • The results of the inspections 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	Atgreen has a control system and adequate procedures on the health and safety of forest workers. Atgreen 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. 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'. See also indicator 2.1.3.

9.2 Monitoring and outcomes

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

Atgreen continuously inspects its feedstock suppliers to see if they comply with the mitigation measures. The results of the monitoring system (including the effectiveness of the mitigation measures) were positive, however, because Atgreen will operations in September 2019 and therefore only a selected group of suppliers received guidance and trainings as yet. Suppliers that have proved to work excellently are accepted as 'SBE approved' suppliers. The 'SBE approved' status is however re-evaluated every year and is withdrawn whenever a major non-conformity is found.

Atgreen colletcs, amoung other things, the following documents:

- An advanced declaration of the supplier on cooperating on the SBE requirements;
- Operator Economic Registry (RIO) of the supplier and Non-Debt Statements;
- Verification that the bank account belongs to the supplier.

When the areas are acquired from the Portuguese State (public tender), the buyer signs a contract with ICNF. This contract includes the identification of the place, address, area, wood volume, penalties for non-compliance, among others. The execution of the contract will be supervised by ICNF technicians.

During the initial inspection of the forest plots a map is of the plot is drawn, indicating

- Boundary limits;
- Type and age of vegetation / species;
- Roads / access roads to operating locations;
- The results of the field inspection on basis of the checklists.

In addition to the general information collected, visits are conducted with the owner, his representative, or the harvesting company. Possible complaints and disputes related to land tenure rights, harvesting plot size, or forest management practices are indentified and recorded. Feedstock is not procured from any plots with unresolved issues.

SBE approval of primary feedstock suppliers

Site inspections are conducted continuously to check operational performance on mitigation measures in practise. The feedstock suppliers need to show a high level of understanding of the SBP indicators. The evaluations (check lists) before and during the forest operations are carried by the specialists of Atgreen.

Atgreen's evaluation of its feedstock suppliers, include:

- Checking performance of harvesting operations of feedstock suppliers;
- Awarding the 'SBE approved' status to suppliers that have proven compliance with all SBE requirements;
- Continuous re-assessments of 'SBE approved' status of feedstock suppliers.

The SBE approved status of the supplier, is a requirement for accepting feedstock as 'SBE compliant'. Atgreen, however, does not always accept feedstock coming from an 'SBE approved' feedstock supplier as 'SBE compliant'. The supplier still has to show compliance during the field inspections. Atgreen's 'SBE approved' suppliers are monitored every time, the ones in the process of probably becoming 'SBE approved' as well. Harvesting companies that are not yet considered as potential 'SBE approved' suppliers are monitored once in a while.

Acceptance and determination of the feedstock

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

Steps taken to guarantee sustainable management:

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

Inspections include the harvesting activities of feedstock suppliers (field inspections) and the administration of the feedstock suppliers (office inspections). Considering the situation in Portugal, not all feedstock provided by the 'SBE approved' feedstock suppliers automatically becomes SBP-compliant feedstock. There are factors the 'SBE approved' suppliers are responsible for, and those that are beyond their reach (for example, landowners can have interests that conflict with the SBE requirements).

Atgreen does not categorise feedstock as compliant, when:

- The harvesting operations do not comply with the SBP requirements on sustainability (Standard 1).
- Future management of the land does not comply with the SBP requirements on sustainability, for example, because land conversion to agricultural or urban use is planned.

10 Detailed Findings for Indicators

Table 10.1 The principal detailed findings for the indicators .See also Annex 1

1.1.1	**The Biomass Producer's Supply Base is defined and mapped.**
Low risk	The supply base is clearly defined, it is Portugal. Portugal has no disputed areas.
1.1.2	**Feedstock can be traced back to the defined Supply Base.**
Low risk	The origin can be found on basis of delivery documents for raw materials. Regarding pine, the felling phytosanitary manifest (NMP manifest) includes the identification of the area of forest felling. Delivery bills identify the origin of the transport, which are sufficiently accurate, as Atgreen obtains the primary material directly from the forests. These are possible to trace back to the origin. If the indicated area on the delivery bill is not the forest land itself, it is at least the Freguesia (minimum administrative division). In scope of this SBE are only primary feedstock deliveries. Forest Harvesting Companies register themselves on a digital platform managed by the Forest Authorities (ICNF). For all supplies, manifests are filled in and submitted to the General Management of Forest Resources. In Portugal, every transport that takes place in the supply chain needs is reported.
1.1.3	**The feedstock input profile is described and categorised by the mix of inputs.**
Low risk	Felling manifests and delivery documents require the operator/sender to identify delivered volumes, tree species (basic indication), and feedstock type. The supply chains are short; the delivered feedstock is checked and categorised. In scope of this SBE are only primary feedstock deliveries.
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***
Specified Risk for areas without cadastral data	In Portugal, around 97% of forest land is private (land owned by individuals, communities and companies). Most part of the protected and classified areas are located on private lands. There are no cadastral data available for 47% of all the lands, and the situation is difficult due to the very many landowners, who own very small forest parcels in Portugal. There are discrepancies between registered and actual ownership rights. Wood lands can also have been impounded by the government. For practical reasons landowners sometimes sell or transfer (inherited) parts of their property, without registering the change to the government. FSC certified wood harvesting companies gave examples where landowners tried to harvest more than was theirs. Such events, however, are normally dealt with between the stakeholders themselves and not brought to court. Many landowners live far away from their (inherited) forest plot and some do not know precisely where their land is located. This is a problem for harvesting companies. There is a specified risk, concerning the ownership of the land and the precise borders of the plot for areas without cadastral data.
Low risk for plots with cadastria data	The Real Estate Cadastre (Cadastro Predial), the Finances Matrix (Matriz das Finanças) and the Real Estate Registry (Registo Predial) constitute an inseparable part of the management of properties. The usual way to identify the properties is by the Real Estate registry (Caderneta Predrial), which is an extract or datasheet from the Real Estate Matrix of the Finances Department. The presence of the cadastral data make is very plausible that the ownership of the forest plot and the borders of the harvesting operations will be correct, and clear to all stakeholders.

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.***
Low risk	A harvesting notice (manifesto) is obligatory for all forestry products gathered for commercial use. It is submitted to the forest authorities (ICNF). The Portuguese Authority for ensuring implementation of the EUTR is Institute for Nature Conservation and Forests (ICNF). The enforcement authority is the National Republican Guard (GNR). From January 2015 to April 2016 ICNF has conducted 113 inspections with no contraventions. Also for the same period GNR has conducted 265 inspections with one contravention.
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.***
Low risk	In Portugal only the most common taxes (value added tax (VAT) and income taxes (IRS and IRC)) are applicable to timber harvesting, just as for any other economic activity. No payments for harvesting rights, nor duties, nor royalties apply. The payment of VAT is a simple requirement that is verified by both entities (seller and buyer). The fiscal authority Autoridade Tributária makes joint inspections on roads together with the GNR. No specific evidence of irregularities have been identified in relation to the payment of VAT and income taxes in the forest sector. It is commen practise in Portugal to check the Economic Operator Registration of companies, and the declarations of Non-Debt and Social Security. Atgreen only pays via the bank.
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.***
Low risk	There are no tree species in Portugal listed by CITES. Other species are protected and their living areas have been identified. Portugal has implemented CITES in legislation and online tools.
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.***
Low risk	In Portugal, there are no indigenous or other people in Portugal that claim traditional rights to lands, forests and other resources. There is also no ongoing (armed) conflict. Portugal scores well in several international indexes.
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.***
Specified Risk for HCV 1 & 3	HCV 1 – Species diversity Because of the main characteristics of forestry in Portugal, in which the forest plans and maps practically do not have to / are not considered by the small-holders. The scope of PROF, RNAP and SNAC are macro-scale assessments of the significant biodiversity values. The identification of precise HCV attributes might not fall under the scope of these assessments. Outside SNAC and RNAP, where less information is available, the risk is specified as well, because field work on finding the HCVs in practice is not conducted by the small-owners. HCV 3 – Ecosystems and habitats Because of the main characteristics of forestry in Portugal, an extra effort is required to identify and map these values. Internet sources, as well as the situation on the ground need to be studied.
Low risk for HCV 2, 4, 5, and 6	HCV 2 – Landscape-level ecosystems and mosaics have been sufficiently mapped. HCV 4 – Critical ecosystem services HCV 5 – Community needs HCV 6 – Cultural values

	There are no indigenous people in Portugal, but it is important to be open to the interests of the (local) population and social-economic functions of the forests and woodlands (including agricultural or municipal functions). Cultural features are identified and sufficient buffers are applied. Under control are the Rede Nacional de Áreas Protegidas (RNAP), National System of Classified Areas (SNAC), Important Bird and Biodiversity Areas (IBAs), and some other HCV areas designated as protected at the national or EU level (Natura 2000).
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.***
Specified Risk for HCV 1 & 3	HCV 1 – Species diversity Because of the main characteristics of forestry in Portugal, where many small-holders do not have to consider the recommendations stated in regional forestry plans and often clear-cut their forest stands or eucalypt plantations without considering ecosystems and habitats, there is a specified risk that forest operations on private and communitarian grounds not managed by ICNF could harm species diversity. Special attention should be given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs). HCV 3 – Ecosystems and habitats Because of the main characteristics of forestry in Portugal, there is a specified risk for damaging ecosystems and habitats in private and communitarian forest areas not managed by ICNF.
Low risk for HCV 2, 4, 5, and 6	HCV 2 – Landscape-level ecosystems and mosaics have been sufficiently mapped. HCV 4 – Critical ecosystem services HCV 5 – Community needs HCV 6 – Cultural values Threats to forests located in critical areas in river basins, such as floodplains and steep areas, are defined and mapped in REN-National Ecologic Reserve. Cultural values are broadly considered legally recognized and enforced. Following several surveys on the fragilized state of cork and holm oak stands, for example, there were developed various processes to improve forest management practices, which were launched by the involved companies. This includes a variety of contents and formats such as codes of good forest practices, but also pest and disease identification guides.
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.***
Specified Risk	Atgreen considers all pine stands as forests and eucalypt and poplar stands as plantations. Atgreen checks if forests have been converted to plantations after January 2008, or are being converted to plantations or other land use after current forest operations. Over the last decades, Portugal has a clear negative trend concerning land covered by forests and plantations. The conversion of forests to urban and agricultural use is significant. Land covered by eucalypt plantations has increased 13% from 1995 to 2010. They became the dominant type of frorests and plantations in Portugal. Pinus pinaster forests have decreased 27% (regarding the total surface) in the same period. The development of forest energy crops is officially not permitted in Portugal. Recent and old legislation tries to contain the expansion of eucalypt plantations, allowing new plantations only as compensation for areas previously occupied by eucalypt. However, there are no assurances, new eucalypt plantations from after January 2008 are not already maintained or harvested today. Moreover, forest fires result in instant harvesting of plantations, regardless of their age. Besides, poplar and other tree species can be plantations and the new law only covers eucalypt. In practise, it will sometimes be very difficult to determine if illegal conversion to eucalypt took place, because the tree species regenerates aggressively after forest fires. Any planting/replanting of forest species, independently of the area of intervention that alters the dominant species (including the conversion of natural forest to plantations) is subject to an authorization by ICNF.

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.***
Specified Risk	To most small owners and most of the forest lands, no forest management plan applies, the regional forest management plans apply only to plots above a certain size (from 25 ha to 100 ha, depending on the region). Forest management plans are, however, always obligatory for community-owned and public areas. Special attention needs to be given to plots smaller than the minimum threshold for the mandatory Forest Management Plan (PROF) and outside the SNAC. In exceptional cases forest owners do have a forest management plan. Environmental Impact Assessments are only required for large forest harvesting plots (>50 ha.); such operations are seldomly executed.
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).***
Specified Risk	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. The Portuguese forest sector sometimes performs poorly on practices regarding soil conservation, leading to a higher risk of erosion and to a degradation of soil productivity. This aspect is insufficiently dealt with in Portuguese forestry legislation. The majority of the forest plots are owned by small-holders, who are not obliged to study regional plans, nor do an environmental impact assessment. In the last half a century, the area of susceptibility to desertification clearly expanded in the mainland territory, moreover this problem is only increasing in severity. The FAO- Land Degradation Index for mainland Portugal (2000-2010) indicates that it has 32.6% degraded lands. Government policies have not prevented the expansion of commercial, intensive (eucalypt) plantations on sensitive soils, contributing to the expansion of decertified areas. Today, 63% of the mainland territory is classified as areas susceptible to desertification.
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).***
Specified Risk	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 outside Protected and Classified areas. In practise, landowners and harvesting companies often have little knowledge of key-habitats and about habitats that need to be conserved. The small landowners are not bound to forestry plans nor to much regulation on this point. The situation with many smallholders and the overall conservation status trends of habitats, as well as the number of attributes from which the conservation trends are unknown, imposes a risk to be assessed as specified.
2.2.4	***The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).***

Specified Risk	the protected areas and Natura 2000 sites covers 2.017.803 ha meaning 20.47% of the territory. All classified habitats, besides priority ones included on HCV, must be included in this indicator. Approximately 3 600 species of plants are found in Portugal, 69 taxa of terrestrial mammals, a total of 313 bird species (of which around 35% are threatened), and 17 amphibians and 34 reptile species. Some of the main threats to the biodiversity of Portugal include: destruction of habitats; pollution; overexploitation; invasive alien species; urbanization; and forest fires. Biodiversity is declining, some reasons are: • Only few regulations apply to small-holders and • The aggressive and exhaustive nature of eucalypt vegetations.
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.***
Low risk	In Portugal forest residues removal from forests is regulated – loggers and owners are responsible for residues removal according to fire and phytosanitary policies.
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).***
Specified Risk	Most forest harvesting operations are not bound to obligatory forest management plans or regulations due to their size. The minimal thresholds by law are 10 ha or more. 10 ha can be considered a large plot, regarding the populated and hilly countryside of Portugal. A clear-cut area of less than 10 ha can create runoff and erosion hazards. The landscape could create dangerous situations; residents could be living in the valley. Small-owners are not obliged to consider such risks. This risk applies to all private, and communitarian forest areas, which are not managed by ICNF. The 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 vegetation and not perform any mobilization of the soil.' This requirement always applies, regardless of the size of the forest harvesting plot.
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.***
Low risk	The authority on air quality is the Portuguese Environment Agency, law-enforcement is carried out by SEPNA (National Republican Guard) and Nature Guards and Vigilantes. Forest equipment must comply with EU directives about air pollution. Forest management activities are not considered to be a source of air pollution. Forest residues are however sometimes allowed to be burnt onsite (a permit is needed).
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).***
Low risk	EU Directive n.º2009/128/CE, of 21/10 and Law nº 26/2013 from 11 April deal with the use of agrochemicals. Seldom chemicals are used in Portuguese forests, their use are strictly restricted to a few possible cases. There are a few homologate products in use for the most important phytosanitary forest plagues and diseases. Pine processionary and the eucalypt snout beetle are exterminated with these chemicals, but in both cases also biologic methods are applied. The use of fertilisers is common in some business models, mainly related to eucalypt plantations.

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).***
Low risk	The legal framework for waste disposal is based on EU Directive n.º 2008/98/CE. The Portuguese Environment Agency is the main authority. Law-enforcement authorities like SEPNA (National Republican Guard) and Nature Guards and Vigilantes deal with waste disposal issues in practice. Municipal authorities can apply rules to implement applicable legislation. Waste disposal problems in Portugal exist, but are dealt with appropriately.
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.**
Low risk	The analyses of statistical information available (of 2010 and 2015) for average nett increment shows that actual harvesting volumes do not exceed sustainable levels. However, harvest levels are not justified by inventory and growth data in many cases at a forest level. At the stand level there are forest owners that harvest eucalypt stands before the appropriate harvesting time, not following the best practices and the silvicultural models defined by the PROF. New legislation limits the possibility to convert to eucalypt plantations, what improves the long-term economic viability of the sector.
2.3.2	***Adequate training is provided for all personnel, including employees and contractors (CPET S6d).***
Specified Risk	Despite legal requirements, Portugal still performs poorly on work safety. The National Strategy for Forests states that the focus on the professionalization and training is of key importance. A legal obligation is that every employee should obtain 35 hours of training per year. A centre 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. Authorities with specific jurisdiction for licensing and inspecting the provisions of health and safety at work legislation in Portugal are: ACT (Working Conditions Authority); DGS (General Directorate of Health); and ANPC (National Civil Protection Authority). ACT has developed a set of initiatives and training projects aimed at the forestry sector. The publication of ACT on occupational accidents does not show a trend of improvement yet. Information is not listed separately for the primary sector, there are no separate statistics on the forest sector.
2.3.3	**Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.**
Low risk	The biomass sector in Portugal is complementary with other wood industries, as it uses and processes only low quality wood and forest residues and secondary feedstock. The biomass producers create a market for these kinds of remaining forest and wood industry residues. This market makes forest thinning feasible, as also creates a market for cleaning eucalypt stands. Ever more people have a job at a biomass producer in Portugal, and the sector is pushing sustainability of the whole sector forward through strict and critical certification programs such as SBP. All these activities decrease the chance of forest fires, which are perceived as the greatest threat to local communities. Atgreen, in specific, contributes significantly to the local economy, as it is an exceptionally large production unit that makes even more low-grade forest residues usable for pellet production. Atgreen contributes to the increase in employment, directly (app. 50 jobs) and indirectly.
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).**

Low risk	Forest as a multifunctional space is of high value, whether commercially or in terms of the environmental services it offers. In Portugal there are various important forest areas in terms of protecting services by forest ecosystems, such as river basins and soil conservation. These areas are included in REN (National Ecological Reserve) and PROFs (Regional Forest Management Plans), which are mapped and available at the municipal level. This are useful tools identifying critical areas and contributing to the sustainability of services provided by forest ecosystems. In Portugal the 'health, vitality and other services provided by forest ecosystems' is in many cases of importance to the local population. Poor forest management can create a conflict of interests. Considering the available information in the PROFS and REN, as also the specified risk designations of other indicators, such as 2.2.2. (soil quality), 2.2.6 (erosion) and 2.6.1 (dispute management) this indicator is low risk.
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).***
Specified Risk for *Fire fighting*	The implementation of forest management plans is not obligatory for most forest plots and plantations. There are regulations on cleaning forest debris, in particular regarding eucalypt stands. However these are often not executed in full, nor well. Every year the population faces the devastating power of forest fires in Portugal. Poor management of eucalypt stands are one of the main reasons of the fires. The forests and in particular the eucalypt plantations are insufficiently managed to prevent forest fires. The biomass sector in general, and Atgreen in specific, create a market for low grade organic residues from forests and plantations. Recently the government has issued new laws on limiting the conversion of forests to eucalypt plantations and preventing forest fires, but law-enforcement on implementing regulations on cleaning forest debris and maintaining eucalypt plantations is insufficient.
Low risk for other natural processes	The government has in place obligatory mitigation measures against pests and diseases. 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 focuses mainly on Pinus pinaster (23% of all forest areas) but applies also to other host conifers (*Abies spp., Cedrus spp., Larix spp., Picea spp., Pinus spp, Pseudotsuga spp., Tsuga spp*) (8% of all forests). For these species there is obligation of previous communication of any felling and/or transportation of wood affected by a pest. The phytosanitary manifest on coniferous species is obligatory for all transports to commercial processing companies.
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).***
Low risk	Several sources confirm that unauthorized activities such as illegal logging, mining and encroachment are not a significant problem in Portugal. Small problems as illegal littering, loose dogs, unauthorized sport activities, theft of firewood or fruits, and poaching do occur, but several sources state that law-enforcement is sufficiently in place.
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).***
Low risk	97% of Portuguese forests are private property. 8% of the private forest are under communitarian management (Baldios) based in old customary and traditional tenure rights and regulated by a specific law.

	Customary rights consist of access to water sources established for a long time as practice, passage through private property that is used traditionally by a certain communities. Customary rights don't consist of collecting mushrooms, plants or pine cones in a property belonging to someone else. Article 348 of the Portuguese civil code deals with customary rights. In the case of community areas, specific legislation regulates rights of use of common forest areas (Lei dos Baldios). Hunting activities are also regulated by law (Lei nº 173/99). In line with the conclusions of the FSC CW NRA of 2018, Atgreen did not find any structural issues regarding customary rights in Portugal.
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.**
Low risk	There are no indigenous people in Portugal, nor minorities dependant on forests for their livelihood. No practical situations were found where basic needs of people were endangered by forestry operations.
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.***
Specified Risk	Considering the main and problematic characteristics of forestry in Portugal, this indicator needs an pro-active approach to perform sufficiently well on all social aspects related to sustainable forest management and best practices (although this topic is addressed in the general legal framework of Portugal in a formal way). The International Trade Union Confederation (IUTC) ranks Portugal has a country that has 'Regular violations of rights'. It is crucial to identify and solve local disputes before the harvesting operations (or e.g. forest fires) commence. Most harvesting companies working in the forest sector do not have complaint and comment procedures, nor keep records on such issues. Some (certified) companies, however, indicated they encounter and solve disputes reguarly.
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.***
Low risk	Portugal has ratified all eight fundamental ILO conventions. The status on the ILO website for all eight conventions is 'in force', which include 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. These rights are included in the Portuguese constitution (article 56) and labour law. International Trade Union Confederation (IUTC) ranks Portugal has a country that has 'Regular violations of rights'. The government and/or companies would be regularly interfering in collective labour rights. The IUTC indicates there are deficiencies in laws and certain practices which make the violations possible.' Atgreen, however, did not witness regular violations of rights in the forest sector till date. The situation in practise is improving and disputes related to work conditions are being resolved according to administrative procedures and labour legislation. Trade unions can help in such disputes.
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.**
Low risk	In general this is not an issue in forestry in Portugal, however, the FSC CW NRA of 2018, does quote sources on subtle forms of compulsory labour related to illegal labour and migration. However, it also confirms that the applicable legislation in Portugal covers all ILO Fundamental Principles and Rights at Work and that law-enforcement is being carried through.

2.7.3	**The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is not supplied using child labour.**
Low risk	Up-to-date information about child labour are scarce. In 2001, a study indicated 4,1% of the investigated children were affected by child labour (CNASTI). Half of these children were working in agriculture. The FSC CW NRA of 2018, citates several reliable sources indicating that a considerable percentage of children live below the poverty line in Portugal and that there is a risk of child labour in several sectors (but not in forestry). Atgreen considers this risk low, but looming, and does check the minimal age of young people active on the forest plots it inspects. In Portugal the minimum age for employment is 16 years. A minor of 16 cannot be employed, but in some cases exceptions are possible (by law).
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.**
Low risk	Protection against discrimination in labour is prohibited by the Portuguese constitution and the labour code. The authority directly involved in employment rights and conditions is the Work Conditions Authority (ACT) but other authorities are related to this topic as well, for example the Immigration and Borders Services (SEF), and the Social Security Services. Together with the GNR-Republican National Guard and PSP-Public Security Police, they inspect fair and legal employment.
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.**
Low risk	Payment and employment conditions are covered by the labour code. The framework in Portugal makes it possible that companies and employees have free access to the market; the employment conditions are competitive, but fair and meet, and normally exceed, minimum requirements. Law enforcement is checking labour conditions end the use of an illegal work force.
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).***
Specified Risk	Regardless of its legal requirements, Portugal still performs poorly on work safety. 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. Employees have obligatory annual internal and external training sessions (given by certified companies) on workers' safety and health. Many obligations have changed and private entities have started to develop courses for some activities of forest workers. The legal authority for work health and safety is ACT (Working Conditions Authority), which also has a law enforcement role. ACT has been actively involved in improving the level of awareness and competence over the last years.
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.***
Specified Risk	Ever since January 2008 and in total more than 20 years, data of different reliable sources, for example the FAO and ICNF, indicate a steady trend in decreasing forest area in Portugal of over 1% every 3 years. When forests are converted to other land use the carbon stock is lost. The conversion of forests to urban use is significant, for example. Forest owners can also choose to start an orchard.
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.**
Low risk	National Inventory data indicate that the forests of Portugal are a significant carbon sink, plagued, however by forest fires.

	The biomass sector creates a market for low-grade forest harvest residues. The activities of Atgreen stimulate the performance of timely thinnings, and timely cleaning of accumulated organic debris (of eucalypt stands). These operations stimulate the growth of forest stands and decrease the risk of fire. The feedstock does not come from riparian vegetations in wetlands.
2.10.1	**Genetically modified trees are not used.**
Low risk	Genetically modified trees are not being used in Portugal. There was one project with a genetically modified variant of a eucalipt tree species (*Eucalyptus globulus*) between 1997 – 2001. However, no interest for genetically modified trees has been witnessed ever since.

11 Review of Report

11.1 Peer review

The SBR and SBE has gone through and peer review by Tatiana Savelyeva.

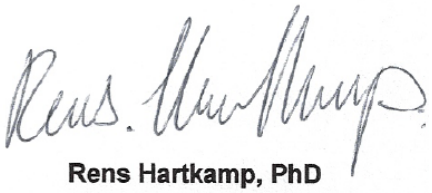
Tatiana Savelyeva has over four years of experience in SBP. She completed forestry engineering studies in Russia, Sweden, and Finland. Tatiana Savelyeva passed the SBP auditor exams in 2017. She prepared around 30 Biomass Producers, including SBE projects in Portugal and Spain.

Tatiana Savelyeva reviewed the SBR, SBE, and SBP procedures and inspection checklists. Improvements on the content were accepted and implemented. Some references were up-dated.

11.2 Public or additional reviews

The SBR and SBE were discussed and 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:	 Rens Hartkamp, PhD  Joana Carvalho, Eng.	Forestry and Certification Consultant Sustainability Manager	22.08.2019
	Name	Title	Date
The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.			
Report approved by:	João Luís Gonçalves, Dr.	Director	22.08.2019
	Name	Title	Date

13 Updates

Initial audit. Not applicable.

13.1 Significant changes in the Supply Base

Initial audit. Not applicable.

13.2 Effectiveness of previous mitigation measures

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

13.3 New risk ratings and mitigation measures

Initial audit. Not applicable.

13.4 Actual figures for feedstock over the previous 12 months

Atgreen starting procurement of feedstock September 2019.

13.5 Projected figures for feedstock over the next 12 months

200,000 – 400,000 tonnes of feedstock.

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 'Portugal', there are no issues related to the defining and mapping of the supply base. Despite the incomplete geometric cadastre of the rural realstate, 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.
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 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) is obligatory for all pine deliveries. 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 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. 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). 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). 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. The felling manifest, as well as the NMP manifest contain the following information: • Operator or service provider information • Localization of the feedstock until the freguesia (small village) level • Quantities harvested • Others 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).

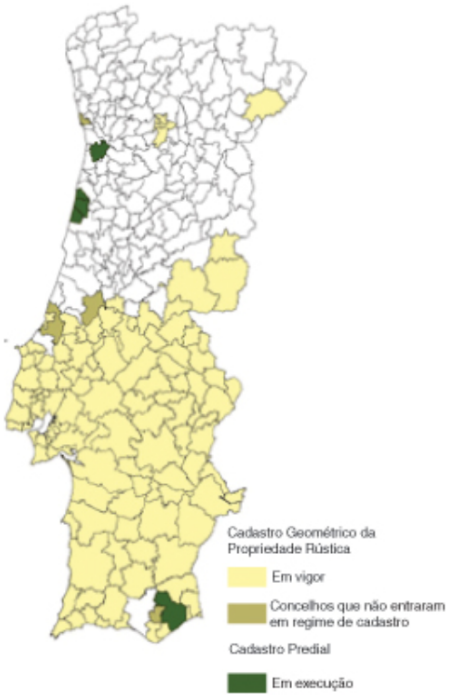
	Inspections from government are in place and operators must apply DDS to justify legality of timber. Regarding transportation, legal requirements include having the right and valid invoice or transport documentation are in place: • Regular invoice for trading operation or transport documentation or waybill, 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. Delivery documents of the raw material include its designation, its origin, identification of the suppliers, loggers, transport companies and used lorry. 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%) [Activity Report 2016]. 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. 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. As evidenced by the low Corruption Perception Index of Portugal (63) and the high level of law enforcement documents such as invoices and transport documents are considered reliable sources of information. A reported risk is that the Portuguese wood sector imports much pine raw material, mostly from Spain. Regarding the location, however, this is not actual, as it is not feasible to transport the low-value feedstock (forest maintenance residues) all the way from Spain.
Means of Verification	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. 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. 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).

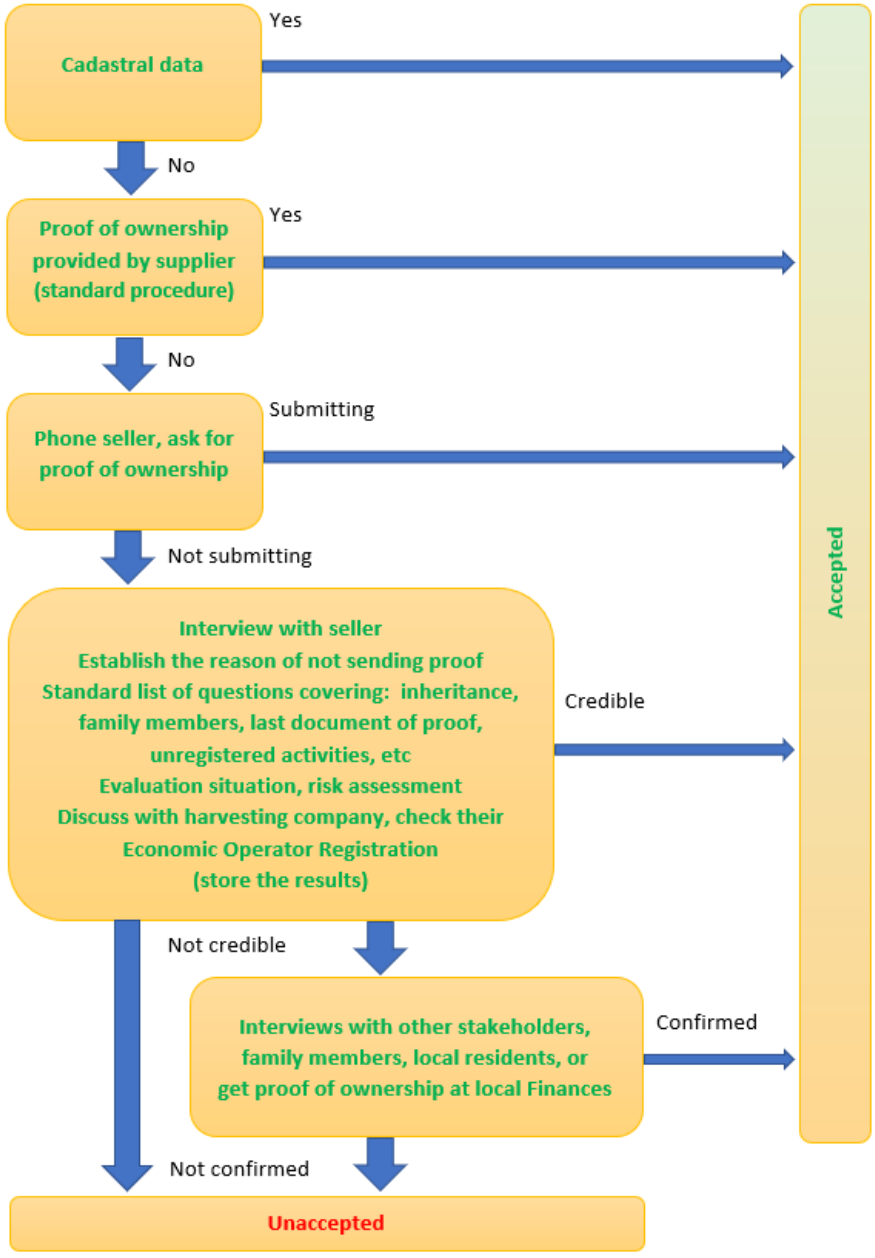
	Invoices, waybills, transport/shipping documents. Feedstock inputs, including species and volumes, are consistent with the defined Supply Base. Transport documentation and goods-in records are consistent with the defined scope of the SBE.
Evidence Reviewed	Delivery notes, felling manifests, invoices, among other legal documents. 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 or Mitigation Measure	No wood from wood suppliers without a valid company registration and delivery documentation indicating the place of harvest. In case of pine species the phytosanitary and felling 'Manifest' is the main document to determine the actual origin of the wood. The phytosanitary Manifest is obligatory before harvest and must be delivered together with the feedstock to the buyer. In case of other tree species the felling manifest and AT Guide are studied. In some specific cases, regarding the supply of certain tree species (not pine) from small properties, an additional effort needs to be done to obtain information regarding the precise location of the forestry operations. The supplier agrees to alert Atgreen, if it changes the source of the supply area. As a result, this control has made it possible to have a better understanding of the traceability of raw material. 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	Felling manifests and delivery documents require identification on delivered volumes, tree species (basic indication of pine, eucalypt, mixed broadleaved trees), and feedstock type. Since the supply chains are short, reliable information regarding the feedstock can be gathered in collaboration with the forest owners and other stakeholders. Accurate classification and description of feedstock type, tree species, and when required, the approximate proportion of roundwood from final felling is possible.

Means of Verification	Delivered felling manifest to Forest Authorities (ICNF) for Pinus pinaster used in industrial purposes Felling manifest and AT Guide Invoices Transport/shipping documents, waybills Feedstock input records Visual inspection
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**
Comment or Mitigation Measure	Checked in the forest and at the gate.

	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	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 neighbours. 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. Despite the difficulties and complexities concerning land tenure and management rights (mainly due to the absence of geometric information), no significant disputes about the issue were found in practise. Next to a lack of cadastral data on 47% of all lands, and the difficult situation of many landowners with small parcels in Portugal, for practical reasons landowners sometimes sell or transfer (inherit) parts of their property without registering the change to the government, because of the complexity. Therefor there are discrepancies between registered and actual ownership rights. Wood lands can also be impounded by the government (if the landowner has debts).

	Situação Cadastral - Portugal Continental 
Means of Verification	Availability of the cadastre: http://www.dgterritorio.pt/cadastro/cadastro_geometrico_da_propriedade_rustica__cgpr_/consultar_seccoes_cadastrais/ 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**
Comment or Mitigation Measure	Procedure for evaluating legality of ownership:  Atgreen does not buy wood from wood lands, of which the owner rights are unclear. Any unclarity/dispute concerning the ownership of the wood needs to be solved first. Considering forestry in the north of Portugal, the fact that there are little disputes / complaints does not guarantee the wood is legal / the seller is indeed the owner of all the plots harvested. For example, areas can become ownerless and abandoned and some could try to take advantage of the situation before the land is impounded by the government.

	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	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, submitted to forest authorities (ICNF) up to 30 days after the felling/extraction operation. 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. Forest harvesting companies register on a Digital Platform managed by the Forest Authorities (ICNF) http://www.icnf.pt/portal/florestas/fileiras/reg-op#reg. Atgreen has a 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 out and submitted to Direcção Geral dos Recursos Florestais (General Management of Forest Resources). For all species, Atgreen receives documents on every transport that takes place in the chain. 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 type of feedstock delivered, an indication of the tree species, 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. 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. Also for the same period GNR has conducted 265 inspections with one contravention.
Means of Verification	DDS Permits and manifests Operator registry and previous notification in cases of all conifers because of Nematode Pine Plan NMP. EUTR Operator Registry, and register in ICNF platform • 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 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; • 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**
Comment or Mitigation Measure	See 1.1.2, 1.2.1, and 1.4.1. The EUTR covers also wood placed on EU market from Portuguese forests.

	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 only taxes related to timber harvesting are applicable to all economic activities such as value added taxes (VAT) and income taxes (IRS and IRC). No payments for harvesting rights, nor duties apply. **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). No specific evidence of irregularity has been identified in relation to payment of VAT. 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. All suppliers have to comply with the laws in force, which are supervised by the Tax Authority and the ICNF.
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 Commercial 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**
Comment or Mitigation Measure	It is commen practise in Portugal to check the Economic Operator Registration of companies, and the declarations of Non-Debt and Social Security. Besides, Atgreen only pays via the bank. Any indication to tax debts or corruption, is sufficient reason to not cooperate with a raw material supplier.

	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 tree species in Portugal listed by CITES. Other species are protected and their living areas have been identified. Portugal has implemented CITES in legislation and online tools.
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**
Comment or Mitigation Measure	

	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 64 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 no indigenous or traditional people in Portugal that 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.
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**
Comment or Mitigation Measure	Atgreen is FSC certified and listens to the people living in the surroundings of the forest areas. Atgreen is always prepared to solve any problem in a pleasant way and respects people who make use of their (traditional) rights.

	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)
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 these 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 – Low Risk** 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 indicators 2.2.2, 2.2.3, 2.2.6, and 2.6.1. **HCV 6 – Low risk** Significant cultural features created intentionally by humans are identified and sufficient buffers are applied, since the criteria for identifying HCV 6 for Portugal are based on international or legal frameworks that already foresee the safeguards needed to protect/maintain the cultural values identified.
Means of Verification	• Field studies suppliers • Harvesting operation maps Atgreen and feedstock suppliers • Internet research • GIS maps of HCV areas. • Interviews • Priority Classified Habitat and species catalogue. FSC and PEFC certificate
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**
Comment or 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. Atgreen identifies and maps areas with high conservation values (HCVs) before the harvest comences. HCV 1 and 3 were assessed to have a specified risk. Extra effort is needed to identify and map these values in practice on paper, regarding the forest plot. 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. Atgreen 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. Below the main sources of information, used to prepare the identification of these values for our harvesting teams. The forestry specialist evaluate every plot before the harvesting operations begins. Atgreen inspects the suppliers and harvesting areas. **HCV 1 – Species diversity** There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity. Species diversity is evaluated and recorded before harvesting operations commence. Caution and best practises are applied. Special attention is given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs). See also below, indicator 2.2.4 *Some information sources:* ➢ Classified areas: http://www.icnf.pt/portal/naturaclas/cart ➢ Protected area plans: http://www.icnf.pt/portal/naturaclas/ordgest/poap ➢ Endangered species: http://www.icnf.pt/portal/naturaclas/patrinatur/especies

	➢ Endemic species: http://naturdata.com/index.php?option=com_content&view=article&id=78&Itemid=60 ➢ Digital mapping information from the Manual das Linhas Eléctricas [Manual of Electric Lines] (ICNB 2008) ➢ Important Bird Areas of Portugal at: http://ibas-terrestres.spea.pt/ ➢ Regional Forest Plans (PROF): http://www.icnf.pt/portal/florestas/profs **HCV 3 – Ecosystems and habitats** There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm ecosystems and habitats. In these situations, Atgreen demands to evaluate the environmental impacts (on Ecosystems and habitats) of the forest operations before the forest operations commence. Caution and best practises are applied. See also below, indicator 2.2.3. *Some information sources:* ➢ 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.

	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**

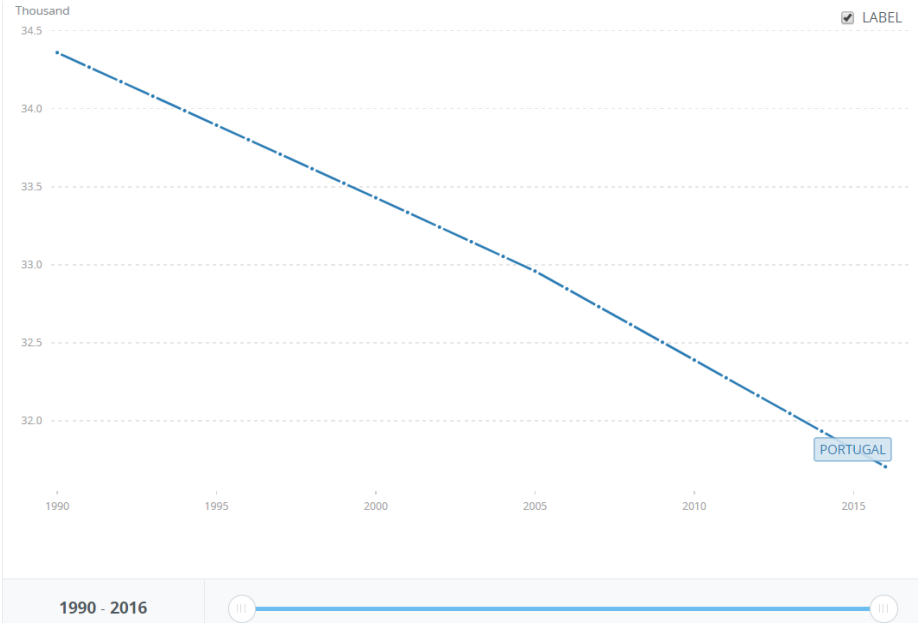
	The regulation implemented in Portugal on oak and holm trees and stands, includes a comprehensive legislative framework with a legal action planning and project but also cuttings protection. This legislation also meet forest management measures themselves related to intensity of exploitation, such as 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 fragilized 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. The habitats and species vulnerable to forestry operations are identified within the scope of Reed Natura2000 and Habitats and Birds Directive reports. **HCV 4 & HCV 5 – Low Risk**

	Threats to forests located in critical areas in river basins, such as floodplains and steep areas, and aquifers are defined and mapped in REN-National Ecologic Reserve. These threats include the conversion for forest plantations or non-forest uses, and are addressed at following indicator 2.1.3. 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 issues of lesser magnitude caused in private forests, arising from inadequate operations of harvesting and / or maintenance. These operations include 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 – Low Risk** The criteria for identifying HCV 6 for Portugal are based on international or legal frameworks that already foresee the safeguards needed to protect/maintain the cultural values identified. At the same time, it is considered that the values are legally recognized and enforced.
Means of Verification	Field Studies Suppliers 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 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 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 or Mitigation Measure	There is a specified risk that forest operations on private and communitarian grounds and public areas not managed by ICNF could harm species diversity, ecosystems and habitats. Species diversity is evaluated and recorded before harvesting operations commence. Special attention is given to the National System of Classified Areas (SNAC) and to the Important Bird and Biodiversity Areas (IBAs). Atgreen identifies and addresses potential threats to forests and other areas with high conservation values (HCVs). The control system for feedstock, which also includes regular inspections of suppliers, is duly implemented. Some HCV areas are designated as protected and classified areas at the national or EU level (Natura 2000). There are also smaller areas and biotopes important to biodiversity, which can be classified as priority species' habitats. 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 protected species, habitats and key ecosystems on the plot before harvesting; • Development of adaptions to the harvesting plans, if needed; • Harvesting according to best practices in sustainable forest management; See also below, indicator 2.2.4 and indicator 2.2.3.

	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	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. *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).* 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 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.

	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% • Naturally regenerated forest 75% • Planted forest 25%. 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 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 ICNF). Over the last decades, Portugal has a negative trend concerning forest area. The FAO published that the forest area of Portugal is decreasing (STATE OF THE WORLD'S FORESTS, 2016). Below a graphic from the website of the World Bank on the declining forestry area in Portugal from 1990 to 2016: 
Means of Verification	Forest owner and stakeholder interviews Field inspection DDS Historical maps and enquiries with stakeholders

	Regional, publicly available data from a credible third party Aerial photos
Evidence Reviewed	FAO STATE OF THE WORLD'S FORESTS, 2016 http://www.fao.org/3/a-i5588e.pdf 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 or Mitigation Measure	Atgreen considers all pine stands as forests and eucalyptus and poplar stands as plantations. Atgreen checks if forests have been changed to eucalyptus or poplar plantations after 2008. When forest is converted to agricultural land or a plantation, or when land use change (conversion) is planned, the feedstock is not categorized as SBP compliant.

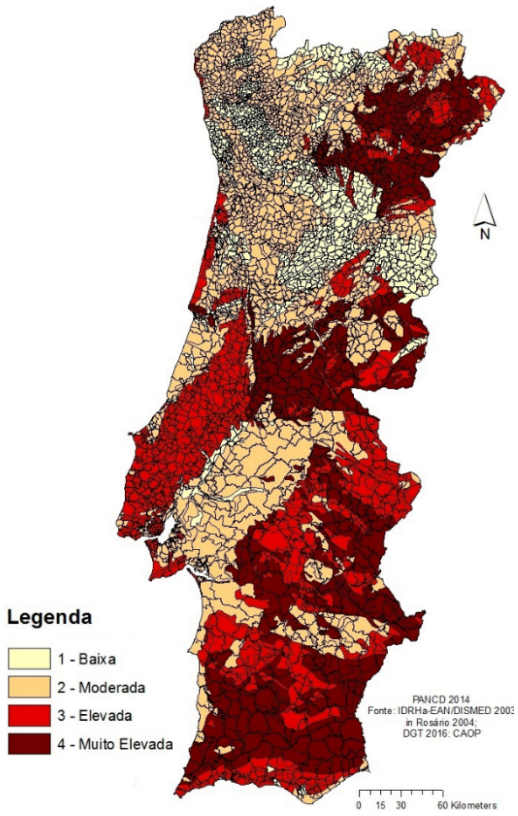
	When a eucalyptus or poplar plantation are cut, the history of the plantation is investigated: • The year of conversion to plantation (if it was converted after 2008). If needed, interviews with stakeholders and residents are taken and the plot is searched for tree stumps. • Was it a forest before being converted to plantation? This is dealt with in the Feedstock Supplier Declaration and addressed in the field operations checklist.

	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	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. 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. 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. 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. Larger scale activities are obliged to address impact assessment and monitoring such an evaluation of the risks and possible impacts of harvesting operations (EoR) 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 EoR 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.
Means of Verification	Availability and applicability of any kind of forest management plan (PROF, PGF ZIF, PUB, SNAC, as well as PEFC or FSC FM plans), Field Study harvesting plot and operations (check lists)

	Records of field inspections
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 or Mitigation Measure	In case no forest plan is available (no PROF, PGF ZIF, PUB, SNAC, as well as no PEFC or FSC certification), or a plan is available but does not apply to a small holder, an additional assessment of environmental impacts is made and recorded before harvest. Special attention is given to plots smaller than the minimum threshold for the mandatory Forest Management Plan (PROF) and outside the SNAC. Before harvesting operations commence, the plot is visited and evaluated: • The possible economical, ecological and social impact of the forest operations, including its surroundings. Harvesting plans can be changed to avoid negative impacts; • Was the forest management conform the lae in the past (has the forest been cleaned according to the law in the past); • Specific Plans for Forest Intervention (PEIF) are studied for specific measures for the intervention on forest areas with major biotic problems (e.g.: invasive species, plagues or diseases) or abiotic (e.g.: high risk of forest fire); • Potential impacts of operations on ecosystems and biodiversity are identified. Impacts inside and outside the area of operation are considered, for example downstream; • Impacts are monitored and monitoring results are used to improve operational practices.

	Indicators 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2 include relevant management measures which are checked.

	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	In nearly half the country there is a risk of degradation of (dry) soils due to previous land-use practices. This problem has existed for centuries and has now become worse due to climate change. The plantations of eucalypt need fertilisation or can deplete the soil. Soil quality also depends on the availability of fresh water. 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 Centre 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. 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. 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 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. The Portuguese forest sector often has bad practices regarding soil preparation, leading to a higher risk of erosion and also to a lower soil productivity. There is also a situation regarding soil protection that it is not settled in Portuguese legislation, since it is not mandatory to do environmental impact assessments before each operation, especially for small forest owners, so many times mitigation measures are not defined resulting in soil impacts. The ICNF website states regions with a certain risk level for decertification: 
Means of Verification	Information on internet is checked, e.g. maps from the 'Reserva Ecológica Nacional'. Check the availability of any kind of forest plan and study descriptions and proposed measures on soil protection. Field Study harvesting plot and operations (check lists) Erosion and desertification programs and maps (REN)
Evidence Reviewed	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 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 or Mitigation Measure	Before harvesting operations commence the plot is evaluated. Best forestry practises are applied. Best forestry practices apply: • Were needed, considering the soil and groundwater level, only selective cuttings and small clear cuts of maximally 5 ha are planned; • Regeneration focusses on tree species that maintain or improve soil quality; • Leave nutrients in the forests, mainly the green fraction of forest residues less or equal to 3 cm (on the other hand other forest residues need to be cleared to prevent forest fires. • Do not operate near-water areas. • Fertilization of the ground, when needed and possible. On dry locations selective cuttings are often preferable, because the ground gets less direct impact of the sun and the forest can maintain soil quality and regenerate naturally. 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	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 often have little knowledge of key-habitats and about habitats that need to be conserved. Portugal has identified the Nature 2000 areas (protected areas). There are no CITES tree species in our supply base. Remains of the forest ecosystems are 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.
Means of Verification	Information on internet is checked (e.g. Hotspot Areas for Biodiversity and Ecosystem Services). Check the availability of any kind of forest plan and study descriptions and proposed measures on key-ecosystems. Field Study harvesting plot and operations (check lists) Best forest management practices
Evidence Reviewed	See evidences reviewed listed at indicators 2.1.1 and 2.1.2, above. http://www.habeas-med.org/webgis/lizmap/www/index.php/view/map/?repository=habeas&project=habeas_2_0
Risk Rating	☐ **Low Risk** ☒ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Atgreen 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. Steps in risk mitigation: • Training of suppliers, assessing and selecting 'SBE approved' suppliers; • 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.

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	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 little rules apply and the aggressive nature of Eucalyptus vegetations puts biodiversity under pressure, and several sources reports its decline (e.g. IUCN, 2013) 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.*' All classified habitats, besides priority ones included on HCV, must be included in this indicator. 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.
Means of Verification	Information on internet is checked (e.g. Hotspot Areas for Biodiversity and Ecosystem Services). Check the availability of any kind of forest plan and study descriptions and proposed measures on key-ecosystems. Field Study harvesting plot and operations (check lists) Red Lists of CITES, IUCN and national legislation on protected species Best forest management practices See also 2.1.1, 2.1.2 and 2.2.3.
Evidence Reviewed	INTERNATIONAL UNION FOR CONSERVATION OF NATURE, May 2013: https://cmsdata.iucn.org/downloads/portugal_s_biodiversity_at_risk_fact_sheet_may_2013.pdf

	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 or Mitigation Measure	See Comment or Mitigation Measure of **2.2.3**

	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.
Means of Verification	Manifest Records of 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**
Comment or Mitigation Measure	

	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	The thresholds mentioned by law are 50 ha. and 10 ha. This are still very large areas regarding the populated and hilly countryside in Portugal. A clear-cut area of less than 10 ha can easily create runoff and erosion dangers to residents living down the hill.

	The small land owners are not obliged to take the risks to the surroundings into consideration. These risks can also be related to water lines. The landscape can create dangerous runoff issues. 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. 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, and communitarian 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. In Portugal there is the problem of illegal plantations where there is the risk in causing impacts in water resources, and also it is not mandatory by law to perform environmental impact assessments for small areas for each operation leading to a higher risk of causing impacts in water resources since mitigation measures are not defined. In order to prevent impacts on water resources resulting from forest activities, the biomass producer should control if there is a RJAAR for each new plantation, and should also demand an environmental impact assessment for every harvesting in order to prevent impacts on the water resources, resulting from these operations.
Means of Verification	Atgreen studies data (from publicly available information, researches and programs) for its harvesting teams on ground water, surface water and steams. Information on internet is checked (e.g. Hotspot Areas for Biodiversity and Ecosystem Services). Regional, publicly available data from a credible third parties Aerial photos / google maps. Check the availability of any kind of forest plan and study descriptions and proposed measures.

	Field Study harvesting plot and operations (check lists) Best forest management practices See also 2.1.1, 2.1.2 and 2.2.3.
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 or Mitigation Measure	Atgreen monitors the harvesting operations of its feedstock suppliers. Best practices are required to comply with the SBE program requirements.
	• Desk assessment (before harvesting operations commence) of Important areas for watershed protection
	  ○ Cork oak and holm oak savannas located in areas with an aquifer recharge rate of over 175 mm/year
	  ○ Aquifers
	• The plots and the surroundings (hill slopes and streams) are inspected on:
	  ○ Runoff problems (regarding the landscape, onsite and in the surroundings);
	  ○ Groundwater level problems (too high or too low);
	  ○ Protection of riversides and (lake) coastlines;
	• In areas vulnerable to water damage, the maximal contiguous clear cut area is 5 ha;
	• Best forestry practices; Feedstock suppliers are trained to not contaminate ground water and to plan forest management operations that protect the soil, forest and surroundings from surface water runoff; Runoff of elements of fertilizers and pesticides into the surrounding environment

	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 law-enforcement service organisations 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.
Means of Verification	Procedure 'Best practices regarding harvesting operations'. Supply contracts Check lists on feedstock suppliers and harvesting operations 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**
Comment or Mitigation Measure	

	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.
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 law-enforcement 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.
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** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Waste gathering and disposal is checked during the assessment of harvesting opperations.

	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	At the stand level there are some forest producers that harvest Eucalyptus stands before the appropriate harvesting time not following the best practices and the silvicultural models defined by the PROF for each region. This is a situation that happens due to several reasons, first because forest producers want revenue from the stands as fast as possible, and also because most of the time they do not have the appropriate knowledge to understand that the stand have not reached to the optimal production level. In fact there is a small window where a forest producer is allowed to harvest the Eucalyptus by law, but the stand has not reached its optimal production according to the correct silvicultural model yet. In order to prevent those situations to happen, biomass producers should ensure that forest producers follow the appropriate silvicultural models for Eucalyptus stands. 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: • Pinus Wilt Disease/Nemátodo-da-madeira-do-pinheiro pest have affected significantly to Pinus pinaster. • Fires continue to be a relevant problem in Portugal. • 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. • 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. The 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	In Portugal, health and safety at work is heavily regulated in accordance with point 3.4 of Annex C2, which covers all forestry and forestry-related activities, namely the requirements for group and individual protective equipment, the use/verification of forestry machinery and the use of plant protection products. Authorities with specific jurisdiction for licensing and inspecting the provisions of health and safety at work legislation in Portugal are: ACT (Working Conditions Authority); DGS (General Directorate of Health); and ANPC (National Civil Protection Authority). All companies must provide an annual report to the (Ministry for Solidarity and Social Security), which is registered in Annex D, with: • Quantity and severity of accidents at work and occupational diseases; • Training hours related to OSH (occupational safety and health); • Organization of OSH services; • Risk identification, assessment, and control; • Periodic and occasional aptitude tests. ACT has developed a set of initiatives and projects aimed at the forestry sector. These consist of awareness and training in the most significant risks in forestry. FSC Portugal and forestry stakeholders were involved in some of these initiative. Information is not listed separately for the primary sector, so there are no statistics available on the trend of accidents at work in forestry. The publication on the results of accidents does not show a clear trend of improvement yet. 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. A centre 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, always giving due and necessary attention to compliance with safety, hygiene and health at work.

	All our suppliers provide training and qualifications for the management of forestry machines. 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 Catalogue of Formations a new training on Forestry Machinery Technician not yet available. A legal obligation is that every employee should obtain 35 hours of training per year.
Means of Verification	Atgreen's monitoring procedure includes checklists on feedstock suppliers (officies) and harvesting operations.
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) Actividades ACT (ACT Activities Report) - http://www.act.gov.pt/(pt-PT)/CentroInformacao/Estatistica/Paginas/AcidentesdeTrabalhoMortais.aspx
Risk Rating	☐ **Low Risk** ☒ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Atgreen trains its personnel on all relevant aspects and demands the same from its feedstock suppliers. • Training records obligatory according to legislation and records of qualification are collected during supplier qualification process and checked during supplier inspections; • Training conducted by Atgreen in several fields, including identification of key ecosystems, habitats and species biodiversity (annually and additionally based on the results of the plot assessments); • Training on best forest management practices. • Atgreen performs supplier inspections: the training records, (new) workforce, and the hiring of specialists. The level of knowledge of personnel is inspected during site visits.

	Indicator
2.3.3	Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.
Finding	The biomass sector in Portugal is complementary with other wood industries, as it uses and processes only low quality wood and forest residues and secondary feedstock. The biomass producers create a market for these kinds of remaining forest and wood industry residues. This market makes forest thinning feasible, as also creates a market for cleaning eucalyptus stands. Ever more people have a job at a biomass producer in Portugal, and the sector is pushing sustainability of the whole sector forward through strict and critical certification programs such as SBP. All these activities decrease the chance of forest fires, which are perceived as the greatest threat to local communities. Atgreen, in specific, contributes significantly to the local economy, as it is an exceptionally large investment project and production unit and the production process use an innovative technology (torrefaction) that makes even more low-grade forest residues usable for pellet production. The technology also adds more value to the end product. Atgreen contributes to the increase in employment, directly (app. 50 jobs) and indirectly. 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.
Means of Verification	Data on Atgreen and the regional economy
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) 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	Forest as a multifunctional space is of high value, whether commercially or in terms of the environmental services it offers. In Portugal there are various important forest areas in terms of protecting services by forest ecosystems, such as river basins and soil conservation. These areas are included in REN (National Ecological Reserve) and PROFs (Regional Forest Management Plans), which are mapped and available at the municipal level. This are useful tools which identify these critical areas and contribute to the sustainability of services provided by forest ecosystems. In Portugal the 'health, vitality and other services provided by forest ecosystems' 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. Poor forest management can create a conflict of interests. For example, it takes only one dense forest stand to improve the perception of an area, if a certain industrial object needs to be covered up (visual pollution). Forests can be essential for: • Recreation in and around the forests; • Breaking hard winds and rainfall (roads and houses); • Hunting, fishing and gathering of berries and mushrooms; • Agriculture near the forests (this is of importance in Portugal); • A good impression of the surroundings; • Air quality, a buffer between motorways and urban areas.

	To address this point, the opinion of local residents and organisations about the quality of the forest management of the land owner, and the present harvesting and regeneration plans need to be taken into account. Small adjustments to a forestry plan can make a large difference. For example, not cutting an old tree with exceptional esthetical / recreational value. See also 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.6, 2.4.2, and especially 2.6.1.
Means of Verification	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 Monitoring results Experts consultations 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 or Mitigation Measure	Atgreen assesses the possible impacts of the harvest operations on the forest (including plantations), its surroundings and the population, during its visit to the plots. See also 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.6, and 2.4.2. Of importance to the social services of the forets indicator 2.6.1. is of importance. Considering the structure of forest ownership in northern part of Portugal, there are risks that certain services are harmed. In general, however, these risks are perceived as low, and indicator 2.6.1. ensures any complaints about planned forest operations are taken seriously.

	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	The implementation of forest management plans is not obligatory for most forest plots and plantations. There are regulations on cleaning forest debris, in particular regarding eucalyptus stands. However these are often not executed in full, nor well. Every year people face the devastating power of forest fires in Portugal. Poor management of eucalyptus stands are one of the main reasons of the fires. The forests and in particular the eucalyptus plantations are insufficiently managed to prevent forest fires. The biomass sector in general and Atgreen in specific create a market for low grade organic residues from forests and plantations. Recently the government has issued new laws on limiting the conversion of forests to eucalyptus plantations and preventing forest fires, but law-enforcement on implementing regulations on cleaning forest debris and maintaining eucalyptus plantations is insufficient. 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 this SBP requirement. 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. Fires are today the greatest perceived risk in the Portuguese forest sector. It can initiate 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), a forest management instrument to ensure sustainability at the landscape scale. July 2016 there were 179 ZIFs, covering 924 447 ha 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. Besides 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. Regarding the statistical information available for average annual growth (AMA) from IFN5 (2005) Pinus Wilt Disease/Nemátodo-da-madeira-do-pinheiro pest have affected significantly Pinus pinaster.

	Actions taken to fight pests: • Traps for NMP (Pine Wood Nematode (Bursaphelenchus xylophilus, and its vector the insect Monochamus galloprovincialis) • Use of net (cover) during transport of wood in the period insect vector NMP • Phytopharmaceutical application on the ground • Crushing of the same wood with no lead time of 2, 3 days. wood with symptoms. • Cleaning of all utensils and machinery used in the handling of woody material. • Application of good forest practices to avoid a spread of this pest.
Means of Verification	Check the availability of any kind of forest plan and study descriptions and proposed measures. Atgreen studies data (from publicly available information, researches and programs) for harvesting teams on risks and regulations regarding fires, pests and diseases. Aerial photos / google maps Field Study harvesting plot and operations (check lists) Best Management Practices
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 or Mitigation Measure	On the above information specified risk is assessed on the fire management at forest level. Visual inspection of the plot before harvesting (checklists). Checked is if the plot was managed well on fire protection in the past. • 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 according to law; • Best forest practices; • Monitoring performance.

	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	Several sources confirm that unauthorized activities such as illegal logging, mining and encroachment are not a significant problem in Portugal. Small problems as illegal littering, loose dogs, unauthorized sports, theft of firewood or fruits, and poaching occur. Most sources state that law-enforcement is sufficiently in place. Illegal and unauthorised activities in Portuguese forests generally have a limited economic or ecological impact. There are also some issues related to conversions, which can be catalogued under unauthorized activities (see 2.1.3).
Means of Verification	Records of field inspections Publicly available information (News and media)
Evidence Reviewed	FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239 ILLEGAL LOGGING PORTAL, Portugal (http://www.illegal-logging.info/regions/portugal) Transparency international, corruption perception index Portugal (https://www.transparency.org/country/#PRT) CIFOR fact sheet on illegal logging: https://www.cifor.org
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 (See also indicator 2.4.1). 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. There are no indigenous people in Portugal nor minorities dependant on forests for their livelihood. As most of the country forest is under private property civil code is applied which includes the following rights: to use; transform; exclude and defend including the rights to delimitation, prohibition and defense, return and compensation, sell. These rights are applied to the most part of forest resources and to all of the wood resources. Customary rights consist, as stated in the indicator description, as habitual, repeated and "normal" activities. This has to do with access to water sources established for a long time as practice, passage through private property that is used traditionally by a certain community. Customary rights don't consist on in the collection of mushrooms, plants or pine cones in a property belonging to a third party, unless this practice is perceived and seen by the community, as a traditional practice.

	The pine cones were of free use until forty years ago when it became private property. Another example is the game hunting which is still a public, but private entities can pay for a hunting concession to manage it. Conflicts may exist between land owners rights based on the private things defence 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. The customary right is described in article 348th of the Portuguese civil code. The interpretation of laws is described in 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	Field study (checklists). Customary use rights are identified and documented Appropriate mechanisms exist to resolve disputes (see 2.6.1)
Evidence Reviewed	FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239 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 or Mitigation Measure	By addressing sustainable forest management and making an extra effort on indicators 1.2.1, 2.4.1, and 2.6.1, Atgreen integrates respecting the interests of local people into its main procedures.

	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. There are no indigenous people in Portugal nor minorities dependant on forests for their livelihood.
Means of Verification	Appropriate mechanisms exist to resolve disputes (see 2.6.1)
Evidence Reviewed	Coelho, I.S. (2003) Propriedade da Terra e Política Florestal em Portugal (http://www.scielo.mec.pt/pdf/slu/v11n2/v11n2a05.pdf) FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239

Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	By addressing sustainable forest management and making an extra effort on indicators 1.2.1, 2.4.1, and 2.6.1, Atgreen integrates respecting the interests of local people into its main procedures.

	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	Such mechanisms play an important function as a safety net for sufficient performance on social and cultural aspects of Sustainable Forest Management and in complying with other indicators of SBP standard 1. • The aim is to solve grievances and disputes before the harvesting operations commence (or not to buy from the disputed plots). • Atgreen makes clear to employees and stakeholders that any complaint or comment related to feedstock supply is taken very seriously, to ensure sufficient performance on legality and social aspects of Sustainable Forest Management. • Atgreen has a complaint procedure and keeps records. The feedstock suppliers are also required (signed supplier declaration) to actively implement a complaint procedure and keep records. • Atgreen monitors the harvesting operations of its feedstock suppliers and checks their records on Complaints and Comments. Proactive interviews with relevant stakeholders, such as land owners on submitted comments (orally and in writing), and assesses if complaints were dealt with sufficiently. • The results of the inspections have direct influence on the 'SBE program approved' status of feedstock suppliers.
Means of Verification	Complaint procedure and log book Field and office inspections (checklists) Interviews with land owners, local residents Forest Best Management Practices
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 FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239
Risk Rating	☐ **Low Risk** ☒ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Atgreen takes seriously any complaint of any person or organisation considering harvesting operations. This also improves performance on respecting local interests. The aim is to track down and solve grievances and disputes before the harvesting operations commence. The feedstock suppliers are required to pro-actively implement a complaint procedure and keep records (which are checked). Such mechanisms play an important function as a safety net for sufficient performance on social and cultural aspects of Sustainable Forest Management and in complying with other indicators of SBP standard 1. • The aim is to solve grievances and disputes before the harvesting operations commence (or not to buy from the disputed plots).

	• Atgreen makes clear to employees and stakeholders that any complaint or comment related to feedstock supply is taken very seriously, to ensure sufficient performance on legality and social aspects of Sustainable Forest Management. • Atgreen has a complaint procedure and keeps complaint records of any stakeholder. The feedstock suppliers are also required (signed supplier declaration) to actively implement a complaint procedure and keep records. • Atgreen monitors the harvesting operations of its feedstock suppliers and checks their records on Complaints and Comments. Pro-active interviews with relevant stakeholders, such as land owners on submitted comments (orally and in writing), and assesses if complaints were dealt with sufficiently. • The results of the inspections are of direct importance to 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 ratified all eight fundamental ILO conventions. The status on the ILO website for all eight conventions is 'in force', which include 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. These rights are included in the Portuguese constitution (article 56) and labour law. 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. International Trade Union Confederation (IUTC) ranks Portugal has a country that has 'Regular violations of rights'. The government and/or companies would be regularly interfering in collective labour rights. There are deficiencies in laws and certain practices which make the violations possible.' 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.

Means of Verification	Portuguese constitution and other legislation Level of enforcement Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239 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 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%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**
Comment or Mitigation Measure	Although in general the risk is low, Atgreen acknowledges the issues addressed by the International Trade Union Confederation (IUTC) that ranks Portugal has a country with 'Regular violations of rights'. During field and supplier office inspections, Atgreen checks for possible indications of poor working conditions or unsolved conflicts. The risk specification of indicator 2.6.1 is also of importance for these issues.

	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	In general this is not an issue in forestry in Portugal, however, the FSC CW NRA of 2018, does quote information sources on subtle forms of compulsory labour related to illegal labour and migration, but it also confirms that the applicable legislation in Portugal covers all ILO Fundamental Principles and Rights at Work and that law-enforcement is being carried through. 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.
Means of Verification	Legislation Level of enforcement Regional, publicly available data from a credible third party Publicly available information (News and media)
Evidence Reviewed	FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239 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 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)
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Portugal has problems with illegal labour in the agricultural sector, but these problems were not detected in the forest sector (yet). Atgreen does pay attention to this point during the field inspections.

	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	The FSC CW NRA of 2018, citates several reliable sources indicating that a considerable percentage of children live below the poverty line in Portugal and that there is a risk of child labour in several sectors, but not in forestry. The risk is seen as low, but looming. 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 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.
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:** 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: FSC CW NRA 2018: https://ic.fsc.org/en/document-center/id/239 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**
Comment or Mitigation Measure	In Forestry this risk is considered low, but in other industries the risk of child labour has been confirmed. A large percentage of children live below the poverty level in Portugal, Atgreen is aware of this problem and pays attention to it during the field inspections.

	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**
Comment or Mitigation Measure	
	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 sound legal framework and law-enforcement in the country, and there are legal authorities to enforce legislation.
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**
Comment or Mitigation Measure	

	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	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.' 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. All employees of the company, have annual internal and external training (operations by certified companies) on workers' safety and health.
Means of Verification	Atgreen demands a control system and adequate procedures on the health and safety of forest workers from its feedstock suppliers and checks the health safety of harvesting personnel during its inspections. Atgreen's monitoring procedure includes checklists on feedstock suppliers and harvesting operations. Atgreen ensures: • Records of H& S procedures and Personal Protection Equipment distribution. • Records of machinery safety tools and equipments on original documental register.
Evidence	**Government sources** •Labour Conditions Authority-ACT (http://www.act.gov.pt/(pt-PT)/Paginas/default.aspx •Work accident statistics from ACT

Reviewed	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 •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** ☐ **Unspecified Risk at RA**

Comment or Mitigation Measure	Atgreen has a control system and adequate procedures on the health and safety of forest workers. Atgreen 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.

	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 carbon stocks in certain areas. This risk is more specifically related to the risks mentioned in the following indicators: a. 2.1.3 (land conversion); b. 2.2.2 (degradation of grounds). Forests owners can choose to start an orchard, governments can decide to extend the area of urban lands. This occurs regularly in Portugal. When forests are converted to other land use the carbon stock is lost. For example, the conversion of forests to urban use is significant (28 thousand ha). In total, the forest area decreased by 150 611 ha between 1995 and 2010, according to the ICNF. Recent data indicate that the trend of decreasing forest area is continuing till date.
Means of Verification	Internet research Field inpections Regional, publicly available data from a credible third party
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 or Mitigation Measure	Wood from forests converted to plantations, as also wood lands that are converted to non-forest use are not considered SBP compliant. 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". See also indicator 2.1.3. *Interpretation: The issue of reported decline of forest area (including plantations) is considered related to this indicator 2.9.1 and not indicator 2.9.2.*

	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. The feedstock harvesting done for gathering low quality wood and biomass can be considered to decrease the risk of forest fires and thus positively influences this indicator. National Inventory data indicate that the forests of Portugal are a significant carbon sink, plagued, however by forest fires. The commercial activities of Atgreen and the biomass sector in general stimulate the performance of timely thinnings, cleaning accumulated organic debris from eucalyptus stands, and using low grade forest harvest residues. This stimulates the growth of forest stands and decreases the risk of fire. The feedstock does not come from riparian vegetations in wetlands.
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**
Comment or Mitigation Measure	Atgreen ensures that feedstock does not come from riparian vegetation in wetlands and complies with legislation.

	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.
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**
Comment or Mitigation Measure	