

CDM PROJECT ACTIVITY MONITORING REPORT

MONITORING REPORT FORM (CDM-MR) * Version 01 - in effect as of: 28/09/2010

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<p align="center">MONITORING REPORT Version 01 - in effect as of 08 Aug 2011</p> <p align="center">LAGES METHANE AVOIDANCE PROJECT CDM Registration Reference Number: 0268 Monitoring Period: 5th Verification – 01 Jun 2009 – 31 May 2011</p>

SECTION A. General description of the project activity

A.1. Brief description of the project activity:

Lages Project's cogeneration facility is located in Lages, State of Santa Catarina, Brazil, whose economy is based on the wood industry using timber from planted forests. The Project is under operation since 23 December 2003 by Lages Bioenergética Ltda., a Special Purpose Company fully owned by Tractebel Energia S.A., specially constituted to build, operate and maintain the Lages Project. Detailed information about the Project is provided in the Project Design Document (PDD) Version 03, dated of February 2011, and other documents, which are available and can be downloaded from the UNFCCC website (<http://cdm.unfccc.int/Projects/DB/DNV-CUK1140180495.84/view>).

The Project is designed to avoid methane emissions from anaerobic digestion in stockpiles (biomass decay) through controlled combustion in a cogeneration process, which simultaneously generates electricity and thermal energy (steam) from the wood waste produced by several timber industries that would otherwise be disposed inadequately. The major project activity milestones are presented in the table below.

Date	Milestone
23 Dec 2003	Starting date of the Project
1 Nov 2004	Starting date of the crediting period
26 Jul 2005 – 24 Aug 2005	Period for public comments to the PDD in the UNFCCC website
25 Nov 2005	Brazilian Designated National Authority (DNA) issued the Letter of Approval (LoA) to the Project
14 Feb 2006	Project is validated by Det Norske Veritas (DNV)
24 Mar 2006 – 22 Apr 2006	Period for Executive Board comments
23 Apr 2006	Project is registered
20 Sep 2006	First CER issuance (277,768 CERs)
09 Oct 2007	Second CER issuance (274,958 CERs)
31 Aug 2009	Third CER issuance (247,668 CERs)
30 Mar 2011	PDD (Version 03) approved by CDM EB
03 Aug 2011	Completion of the completeness check for fourth CER request for issuance (157,914 CERs)

The emission reductions achieved over the designated monitoring period are **443,635 tonnes of CO₂e**.

A.2. Project Participants

Name of Party involved (*) ((host indicates a host Party))	Private and/or public entity(ies) project participants (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant
Brazil (host country)	<ul style="list-style-type: none"> • Lages Bioenergética Ltda. • Tractebel Energia S.A. 	No
Switzerland	<ul style="list-style-type: none"> • Bunge Emission Fund Limited 	No
Canada	<ul style="list-style-type: none"> • Government of Canada – Ministry of Foreign Affairs & International Trade 	Yes
Finland	<ul style="list-style-type: none"> • Fortum Corporation • Government of Finland – Ministry for Foreign Affairs of Finland, Fortum Corporation 	Yes
France	<ul style="list-style-type: none"> • GDF Suez 	No
Germany	<ul style="list-style-type: none"> • RWE Power AG 	No
Japan	<ul style="list-style-type: none"> • Chubu Electric Power Co., Inc. • Japan International Cooperation Agency (JICA) • Kyushu Electric Power Co., Inc. • MIT Carbon Fund Co., Ltd. • Mitsubishi Corporation • Shikoku Electric Power Co., Inc. • Tohoku Electric Power Co., Inc. • The Tokyo Electric Power Co., Inc. • The Chugoku Electric Power Co., Inc. 	No
Netherlands	<ul style="list-style-type: none"> • Electrabel N.V. • Netherlands' Ministry of Infrastructure and the Environment (IenM); • Netherlands' Ministry of Economic Affairs, Agriculture and Innovation (EL&I) 	No
Norway	<ul style="list-style-type: none"> • Norsk Hydro ASA • Government of Norway – Ministry of Foreign Affairs • Statoil ASA 	Yes
Sweden	<ul style="list-style-type: none"> • Government of Sweden – Swedish Energy Agency 	Yes
United Kingdom of Great Britain and Northern Ireland	<ul style="list-style-type: none"> • BP Alternative Energy International Ltd. • Deutsche Bank AG 	No

A.3. Location of the project activity:

Lages Project's cogeneration facility is located in Lages, State of Santa Catarina, Brazil under the following coordinates:

Latitude: 27°48'58" S

Longitude: 50°19'30" W

Elevation: 916 m

A.4. Technical description of the project

The objective of the Lages Project's cogeneration facility is to, simultaneously, provide electric and thermal energy (process steam) from the same primary energy source: biomass from the wasted wood not used by local timber industries before the project implantation. Since the Lages Project operation start in December 2003, these residues have been processed and used to produce steam and power avoiding methane emissions and soil and water pollution due to wood waste decomposition.

Figure 1 shows the cogeneration facility consisting of a boiler with a steam turbine, producing electricity and supplying steam to local wood industries and using the wood waste from local industries as a fuel.

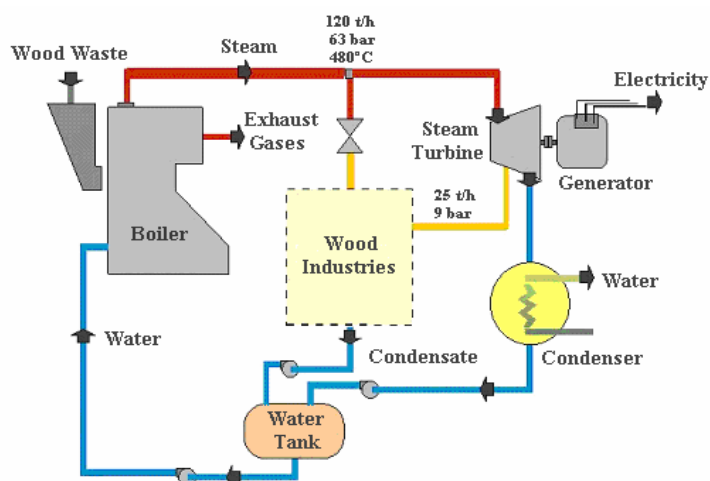


Figure 1 – Lages Project Schematics

The project was implemented as described in the PDD and consists of, a 120 ton/h steam flat pinhole grate boiler (AZ 200 MAX) with an efficiency output of up to 85%, manufactured by Dedini and fed with wood waste biomass. In the boiler, the biomass is controlled burnt generating thermal energy which is transferred to the water inlet for producing steam. The boiler also has a scrubber system installed in the stack to remove suspended particle matter. The steam produced has two purposes: powering a Siemens – Alstom 28 MW at 13.8 kV electric energy turbo-generator and supplying energy to industries for their production processes. The electrical energy produced is delivered to the plant substation and consequently to the transmission line to be distributed by the local distribution company.

The ash sludge from the scrubber was sent, until July 2008, to the landfill of the Jorge Lacerda Thermoelectric Power Plant in Capivari de Baixo municipality, 680 km way (round trip), and since August 2008 onwards, to other locations within the Lages Region, nearer to the project site.

The main features of the major plant equipments are presented bellow:

Equipment:	Boiler
Manufacturer:	Dedini Industrias de Base
Type:	Single pass, water tube, natural circulation, flat pinhole grate
Boiler Steam Production:	120 ton/h
Water Inlet:	110 °C
Operating Pressure	65 bar abs

Equipment:	Turbine
Manufacturer:	Siemens DDIT
Type:	Condensation turbine, Controlled Extraction
Nominal Power:	28 MW
Rotation:	6,800 rpm
Inlet Steam Flow:	120 ton/h
Inlet Steam Pressure:	63 bar abs
Inlet Steam Temperature:	480 °C
Extraction Pressure:	9 bar abs
Extraction Temperature:	237 °C
Outlet Steam Pressure:	0.12 bar abs

Equipment:	Generator
Manufacturer:	Alstom Power
Type:	(IEC) IM 7315
Nominal Power:	35,000 kVA
Nominal Voltage:	13,800 V, three-phase
Nominal Frequency:	60 Hz

A.5. Title, reference and version of the baseline and monitoring methodology applied to the project activity:

Title of project activity: “Lages Methane Avoidance Project”

UNFCCC reference number: 0268 Baseline and monitoring methodology: AMS-III.E. (Version 07)

A.5.1. Baseline methodology applied during the monitoring period:

The Project uses the Small-Scale Baseline Methodology AMS-III.E. (Version 07) entitled “Avoidance of methane production from biomass decay through controlled combustion”.

AMS-III.E. (Version 07) is applicable for Lages Project as it states that “The baseline scenario is the situation where, in the absence of the project activity, biomass or other organic matter is left to decay”. This accurately represents the baseline scenario in the case of Lages Project, as presented in the PDD. Furthermore, Lages Project directly emits less than 15 kilotonnes of carbon dioxide equivalent annually, as presented in the Section E.4

A.5.2. Monitoring methodology applied during the monitoring period:

The Project uses Small-Scale Monitoring Methodology AMS-III.E. (Version 07) entitled “Avoidance of methane production from biomass decay through controlled combustion”.

The AMS-III.E. (Version 07) is applicable to project activities which avoid the production of methane from biomass or other organic matter that would have otherwise been left to decay as a result of anthropogenic activity, which is the Lages Project case.

A.6. Registration date of the project activity:

UNFCCC registration date: 23 Apr 2006

Date of approval of the current Project Design Document (Version 03): 30 Mar 2011

A.7. Crediting period of the project activity and related information (start date and choice of crediting period):

The crediting period for this project activity is from 1 Nov 2004 to 31 Oct 2014 (fixed crediting period of 10 years).

A.8. Name of responsible person(s)/entity(ies):

Organization:	Tractebel Energia S.A.
Street/P.O.Box:	Rua Antônio Dib Mussi, 366
Building:	Tractebel Energia
City:	Florianópolis
State/Region:	Santa Catarina
Postfix/ZIP:	88015-110
Country:	Brazil
Telephone:	+55 48 3221-7000
FAX:	+55 48 3221-7000
E-Mail:	webmaster@tractebelenergia.com.br
URL:	www.tractebelenergia.com.br
Represented by:	
Title:	Commercial Manager
Salutation:	Mr.
Last Name:	Santos
Middle Name:	Mann dos
First Name:	Gabriel
Department:	Energy Commercialization
Mobile:	+55 48 9969-0365
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Personal E-Mail:	gabriel@tractebelenergia.com.br
Represented by:	
Title:	Plant Manager
Salutation:	Mr.
Last Name:	Neves
Middle Name:	Daian
First Name:	Márcio
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Mobile:	+55 49 9918-6634
Direct FAX:	+55 49 3221-4535
Direct tel:	+55 49 3221-4510
Personal E-Mail:	mneves@tractebelenergia.com.br

SECTION B. Implementation of the project activity
B.1. Implementation status of the project activity

The project has been in operation since 23 December 2003. During the conceptualization stages it envisaged the main suppliers of the wood waste to be the neighbouring wood industries of Battistella (38%) and Sofia (16%), and other distant suppliers on the open market (46%).

Since 2006 however, many wood industries in the Lages region that export their production have faced an economic crisis due to the devaluation of US dollars currency, resulting in the reduction or even interruption of their activities. This was the specific case for Sofia and Battistella wood industries, two of the main wood residues suppliers of the Lages Methane Avoidance Project. As a consequence, the wood waste supply from these two mills got reduced during the following years and during this monitoring period no biomass was supplied by Sofia or Battistella since both companies closed down its activities respectively in September 2007 and October 2008.

This situation has triggered, from 2008 onwards, an increasing demand of wood residues from the spot market in order to replace the biomass reduction from Battistella and Sofia and secure the project activity with the necessary amount of fuel to produce and deliver energy to the grid and therefore honour the PPAs signed with regional distribution companies.

In addition to that, the reduction in the available wood waste volumes caused by the USD devaluation, kept the Spot Market wood waste prices high and obliged the project developer to seek for other biomass residues suppliers. The result was the purchase of biomass residues from some more distant suppliers (since the lower wood waste prices from these suppliers compensates the higher transportation costs) and the acquisition of “toretas” (fine branches lower than 15cm diameter from pine reforested plantation) during the monitoring period.

Due to the aforementioned changes in market conditions and, therefore, the type of wood waste used by Lages, a Notification of Change in the PDD was sent to the Executive Board and approved on 30 March 2011. The revised PDD reported the additional use of fine branches smaller than 15 cm diameter (called “toretas”) as wood waste to generate the electricity to be delivered to the Brazilian grid and the steam to be supplied to local industries. Since the registered PDD did not envisage the use of this kind of wood waste, no methane avoidance has ever been claimed from the anaerobic digestion of this wood waste variety.

The revised PDD also recalculated the baseline emission reduction proportionally to the average use of the fine branches (“toretas”) and although, the fine branches were not considered in the determination of the baseline ($MCF=0$), the use of this biomass residues have been conservatively included in the calculation of project emissions without changing the estimations in the original PDD. The fraction of fine branches is not fixed for the crediting period and varies in accordance with market conditions (i.e.; availability of normal residues and price of the fine branches), however, an average of 10% of total waste consumption has been observed and used for recalculating the baseline emission reductions forecasted in the original PDD.

For instance, in the case that Sofia and Batistella recover their operations, as originally foreseen in the PDD, the fine branches might not to be used and the baseline emissions estimated in the registered PDD might be achieved again. In the mean time, the revised PDD also clarified that when both industries are not operating, the steam is used to produce electricity, which is sold to the local distribution company and/or to industrial clients.

B.2. Revision of the monitoring plan

The “Lages Methane Avoidance Project Monitoring Plan” was submitted on July 2005 to the DOE for validation. The document was revised on September 2005 based on clarifications and corrective actions requested by DNV. The Version 02 of the Monitoring Plan was validated along with the entire project activity on 14 February 2006 and has not been changed since that date.

B.3. Request for deviation applied to this monitoring period

Not applicable.

B.4. Notification or request of approval of changes

As already explained in the Section B.1, a Notification of Change in the PDD was sent to the Executive Board and approved on 30 Mar 2011.

SECTION C. Description of the monitoring system**C.1. Monitoring report:****C.1.1. Monitoring reports associated with this project activity:**

This is the fifth monitoring report associated with this project activity.

Report number	Monitoring period		Resulting emission reductions (tonnes of CO ₂ e)	Verifying DOE
	From	To		
01	1 Nov 2004	31 May 2006	277,768	DNV
02	1 Jun 2006	31 May 2007	274,958	DNV
03	1 Jun 2007	31 May 2008	247,668	DNV
04	1 Jun 2008	31 May 2009	157,914	DNV
05	1 Jun 2009	31 May 2011	443,635	DNV

C.1.2. Monitoring report period:

The period covered in this monitoring report is from 1 June 2009 to 31 May 2011. The monitoring report period is within the bounds of the crediting period noted in Section A.7. This monitoring report does not cover any period of time covered by a previous monitoring report.

C.2. Monitoring plan:**C.2.1. Development and appropriateness of the monitoring plan:**

The “Lages Methane Avoidance Project Monitoring Plan – Version 02” from September 2005 was developed based on the approved monitoring methodology AMS-III.E. (Version 07).

C.2.2. Implementation of the monitoring plan:

During the monitoring period identified in the Section C.1.2, the Project Entity implemented the validated Monitoring Plan that was part of the project documents audited by the Designated Operational Entity (DOE) during the validation process.

C.3. Data Collection Procedure

The key data monitored at the project activity is listed in Section D.3 of the PDD and in the Monitoring Plan. The project activity data was collected in accordance with the registered PDD and is shown in the

following items. All necessary evidences to verify these data have been presented to the DOE for verification.

C.3.1. Fuel – Amounts of wood waste (ID1, ID2, ID3 and ID4 of the PDD Section D.3):

To accurately calculate the emission reductions (ERs) from avoided methane emissions during the operation of the Lages Project, the amounts of wood waste consumed (QC_{biomass}) and purchased are monitored continuously and totalized on an annual basis. Each source of wood waste (Battistella, Sofia and Spot Market) is treated separately and the methane emissions avoided from each source are calculated using the small-scale methodology AMS-III.E. (Version 07) at the end of each calendar year and each monitoring period based on the characteristics of the wood waste supplier and the wood waste piles avoided through the use by Lages Project.

The amount of wood waste purchased from each supplier is measured¹ by two electronic scales that are installed in the power plant entrance. The amount of wood waste consumed by the Project is measured throughout a dynamic scale installed in the entrance of the combustion chamber of the boiler. These weighting devices are calibrated periodically by appropriated institutions.

In order to calculate the annual wood waste amount consumed (QC_{biomass}) from each source (Battistella, Sofia and Spot Market), the percentages of wood waste purchased from each source in a given month are applied to the total amount consumed in the respective month (which is measured accurately by the dynamic balance mentioned above) and the obtained values are totalized annually.

The wood waste amounts effectively treated under the Project (QT_{biomass}), which is used to calculate the baseline methane emissions, is calculated discounting the wood waste amounts previously consumed in the Battistella and Sofia old boilers, applying the discount factor of 1% due to spontaneous combustion in the Battistella pile. These values were validated by DNV and used in the registered PDD. Additionally, due to the “torete” consumption and considering that the degradation and methane generation from this wood waste when it is piled and left to decay occurs at a much lower rate than other wood waste, by conservativeness, the percentage of this wood waste purchased from each source (Battistella, Sofia and Spot Market) was applied as a discount factor over the wood waste amount treated under the Project.

C.3.2. Default values (ID5 of the PDD Section D.3):

All the parameters and emission factors used to calculate the emission reductions are available in the PDD and were previously validated by DNV during the validation process of the project activity. The values of these parameters and emission factors are annually verified to identify any changes.

C.3.3. On-site transportation (ID6 of the PDD Section D.3):

The volume of diesel oil used inside the Lages Project is monthly monitored through the invoices emitted by the supplier and stored (initial and final inventory) on site.

C.3.4. Off-site transportation (ID7 and ID8 of the PDD Section D.3):

The data about the round trip distance between the wood waste suppliers and the Lages Project site as well as the truck capacity of all active wood waste suppliers, required to calculate the emissions from the off-site transportation, are monitored throughout the supplier inventory and the wood waste supplying invoices.

¹ The weighting procedure is to weigh the truck on its way in, i.e. the truck with wood waste, and to weight the truck on its way out, i.e. the truck without wood waste. The difference between the weight values is the amount of wood waste delivered by a given supplier.

The round trip distance is measured once when the supplier is contracted and only monitored monthly to verify any change in the location of the wood waste supply site. If a change is verified then a new measurement is carried out.

The truck capacity is always measured because the wood waste supplied by every truck is weighed on the two electronic scales located at the Project entrance and the weighting ticket is annexed to the supplier invoice.

C.3.5. Ash transportation (ID9 and ID10 of the PDD Section D.3):

The data about the round trip distance between the Lages Project site and the ash disposal site as well as the capacity of the truck used for ash transportation were monitored throughout the ash beneficiary inventory and the ash delivering invoices.

This data is measured once at the time when ash is disposed and only monitored monthly to verify any change in the location of the disposal site. If a change is verified then a new measurement is carried out.

The truck capacity is always measured because the ash transported in every truck is weighed on the two electronic balances at the Project entrance and on the weighting ticket annexed to the delivering invoice.

C.3.6. Ash production (ID11 of the PDD Section D.3):

The amount of ash produced and transported by Lages Project, necessary to calculate the emission from ash transportation were monitored throughout the ash delivering invoices. All ash delivered is previously weighed on the two electronic balances at the Project entrance and on the weighting ticket annexed to the invoice.

SECTION D. Data and parameters

The key data monitored at the project activity are listed in the Section D.3 of the PDD and in the Monitoring Plan. The project activity data was collected in accordance with the registered PDD and is shown in the following items. All necessary evidences to verify this data have been presented to the DOE for verification.

D.1. Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors**Default Values (ID5 of the PDD Section D.3)**

All of the parameters and emission factors used to calculate the emission reductions are available in the PDD and were previously validated by DNV during the validation process of the project activity.

Data / Parameter:	MCF [N]
Data unit:	(fraction)
Description:	Methane correction factor
Source of data used:	IPCC ² , Volume 5, Chapter 3, Table 3.1, Page 3.14
Value(s):	0.8 (Battistella) 0.4 (Sofia) 0 or 0.4 (Spot Market)
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Baseline emission calculation
Additional comment:	Default value of 0.4 is applied to wood waste supplied by Sofia and Spot Market. MCF = 0 could be also considered when some varieties of wood waste (for instance residues composed of fine branches lower than 15cm diameter obtained from the regular thinning of planted <i>pinus</i> in the region, also called "torete"), is bought in the Spot Market to be used as a backup fuel. IPCC default value of 0.8 for unmanaged deep waste site (≥ 5 meters of depth) is applied to wood waste supplied by Battistella.

Data / Parameter:	DOC [O]
Data unit:	(fraction)
Description:	Degradable organic carbon
Source of data used:	IPCC ⁴ , Volume 5, Chapter 2, Table 2.5, Page 2.16
Value(s):	0.43
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Baseline emission calculation
Additional comment:	Waste is 100% compounded by wood. IPCC default value is applied.

Data / Parameter:	DOC_F [P]
Data unit:	(fraction)
Description:	Fraction DOC dissimilated to landfill gas
Source of data used:	IPCC ⁴ , Volume 5, Chapter 3, Page 3.13
Value(s):	0.5
Indicate what the data are	Baseline emission calculation

² 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

used for (Baseline/ Project/ Leakage emission calculations):	
Additional comment:	IPCC default value is applied.

Data / Parameter:	F [Q]
Data unit:	(fraction)
Description:	Fraction of CH ₄ in landfill gas
Source of data used:	IPCC ⁴ , Volume 5, Chapter 3, Page 3.15
Value(s):	0.5
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Baseline emission calculation
Additional comment:	IPCC default value is applied.

Data / Parameter:	Wood waste burned for own consumption
Data unit:	t/year
Description:	Wood waste amounts were consumed in the Battistella and Sofia old boilers before the Lages Project implementation.
Source of data used:	Suppliers
Value(s):	32,640 (Battistella) 14,400 (Sofia)
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Baseline emission calculation
Additional comment:	

Data / Parameter:	Discount factor due to spontaneous combustion in the pile [R]
Data unit:	(fraction)
Description:	Discount factor due to spontaneous combustion in the Battistella wood waste pile
Source of data used:	Estimation presented in the PDD
Value(s):	0.01 (Battistella)
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Baseline emission calculation
Additional comment:	This discount factor was assumed to be 1% of the wood waste amount that otherwise would be dumped and left to decay in the baseline scenario for Battistella, that is, the 1% of the difference between the consumed amount supplied by Battistella and what was previously burned in its old boilers to produce steam.

Data / Parameter:	E_{biomass} [S]
Data unit:	TJ/t
Description:	Energy content of biomass
Source of data used:	UNIPLAC
Value(s):	7.746E-3
Indicate what the data are used for (Baseline/	Project activity emission calculation

Project/ Leakage emission calculations):	
Additional comment:	Considered 1,850 kcal/kg (7,746 kJ/kg), which is default value to wood waste in the Lages region, according to values reported in the UNIPLAC study, and was the value validated in the PDD. This value is more conservative than that obtained from samples analyzed periodically in laboratory.

Data / Parameter:	CH₄bio_comb [T]
Data unit:	kgCH ₄ /TJ
Description:	CH ₄ emission factor for biomass and waste (which includes dung and agricultural, municipal and industrial wastes) combustion
Source of data used:	IPCC ⁴ , Volume 2, Chapter 2, Table 2.6, Page 2.25
Value(s):	11
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity emission calculation
Additional comment:	Default value according to AMS-III.E. Version 07 is 300 kgCH ₄ /TJ, which was based on general IPCC default value. However, 11 kgCH ₄ /TJ is used since this is the specific IPCC default value to wood waste boilers.

Data / Parameter:	N₂Obio_comb [U]
Data unit:	kgN ₂ O/TJ
Description:	N ₂ O emission factor for biomass and waste (which includes dung and agricultural, municipal and industrial wastes) combustion
Source of data used:	IPCC ⁴ , Volume 2, Chapter 2, Table 2.6, Page 2.25
Value(s):	7
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity emission calculation
Additional comment:	Default value according to AMS-III.E. Version 07 is 4 kgN ₂ O/TJ, which was based on IPCC default value. However, 7 kgN ₂ O/TJ is used since this is the specific IPCC default value to wood waste boilers.

Data / Parameter:	CH₄_GWP [V]
Data unit:	tCO ₂ e/tCH ₄
Description:	Global Warming Potential for CH ₄
Source of data used:	UNFCCC ³
Value(s):	21
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Baseline, Project activity and Leakage emission calculations
Additional comment:	Official value.

Data / Parameter:	N₂O_GWP [W]
Data unit:	tCO ₂ e/tN ₂ O

³ Climate Change 1995, The Science of Climate Change: Summary for Policymakers and Technical Summary of the Working Group I Report, pg. 22.

Description:	Global Warming Potential for N ₂ O
Source of data used:	UNFCCC ⁵
Value(s):	310
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity and Leakage emission calculations
Additional comment:	Official value.

Data / Parameter:	D_{diesel} [X]
Data unit:	t/l
Description:	Diesel oil density
Source of data used:	ANP
Value(s):	8.8E-4
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity emission calculation
Additional comment:	According to Portaria nº 15 of Jul 17 th , 2006 of the Brazilian Petroleum Agency (ANP) the value ranges 820–880 kg/m ³ . The value used is more conservative.

Data / Parameter:	VEF_CO₂ [Y]
Data unit:	a) kgCO ₂ /km b) kgCO ₂ /t
Description:	CO ₂ emission factor for trucks
Source of data used:	IPCC ⁴ , Table 1-32, Page 1.75
Value(s):	a) 1.097 b) 3,172.31
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity and Leakage emission calculations
Additional comment:	Default values for US heavy duty diesel vehicles, uncontrolled. These values are not presented in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Data / Parameter:	VEF_CH₄ [Z]
Data unit:	a) kgCH ₄ /km b) kgCH ₄ /t
Description:	CH ₄ emission factor for trucks
Source of data used:	IPCC ⁶ , Table 1-32, pg. 1.75
Value(s):	a) 6.0E-5 b) 0.18
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity and Leakage emission calculations
Additional comment:	Default values for US heavy duty diesel vehicles, uncontrolled. These values are more conservative than that presented in the 2006 IPCC Guidelines for National

⁴ Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual.

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	Greenhouse Gas Inventories.
Data / Parameter:	VEF_N₂O [AA]
Data unit:	a) kgN ₂ O/km b) kgN ₂ O/t
Description:	N ₂ O emission factor for trucks
Source of data used:	IPCC ⁶ , Table 1-32, pg. 1.75
Value(s):	a) 3.1E-5 b) 0.09
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations):	Project activity and Leakage emission calculations
Additional comment:	Default values for US heavy duty diesel vehicles, uncontrolled. These values are more conservative than that presented in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

D.2. Data and parameters monitored

Data / Parameter:	Fuel – Amount of wood waste combusted (ID 1)																																																																																																																																																																																																																																																																			
Data unit:	tonnes																																																																																																																																																																																																																																																																			
Description:	Amount of wood waste fed into the boiler and consumed by the Project																																																																																																																																																																																																																																																																			
Measured /Calculated /Default:	Measured																																																																																																																																																																																																																																																																			
Source of data:	Dynamic scale																																																																																																																																																																																																																																																																			
Value(s) of monitored parameter:	To accurately calculate the emission reductions (ERs) from avoided methane emissions during the operation of the Lages Project, the amounts of wood waste consumed ($QC_{biomass}$) and purchased are monitored continuously and totalized on an annual basis, as presented in the table below. Each source of wood waste (Battistella, Sofia and Spot Market) is treated separately and the methane emissions avoided from each source are calculated using the small-scale methodology AMS-III.E. (Version 07) at the end of each calendar year and each monitoring period based on the characteristics of the wood waste supplier and the wood waste piles avoided through the use by Lages Project. Additionally, the Annex 1 present the wood waste amounts consumed and purchased from each supplier during the monitoring period.																																																																																																																																																																																																																																																																			
<table><tr><th colspan="9">Fuel – Amounts of wood waste</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID1</th><th colspan="2">ID2</th><th colspan="2">ID3</th><th colspan="2">ID4</th></tr><tr><th>$QC_{biomass}$</th><th colspan="2">Purchased from Battistella</th><th colspan="2">Purchased from Sofia</th><th colspan="2">Purchased from Spot Market</th></tr><tr><th>(tonnes) [A]</th><th>(tonnes)</th><th>(%) [B]</th><th>(tonnes)</th><th>(%) [C]</th><th>(tonnes)</th><th>(%) [D]</th></tr><tr><td rowspan="8">2009</td><td>6</td><td>14,391.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>18,998.14</td><td>100.00%</td></tr><tr><td>7</td><td>16,391.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>17,787.99</td><td>100.00%</td></tr><tr><td>8</td><td>19,041.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>14,962.28</td><td>100.00%</td></tr><tr><td>9</td><td>9,849.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>11,430.09</td><td>100.00%</td></tr><tr><td>10</td><td>8,651.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>10,954.67</td><td>100.00%</td></tr><tr><td>11</td><td>14,746.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>12,741.38</td><td>100.00%</td></tr><tr><td>12</td><td>14,612.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>11,259.54</td><td>100.00%</td></tr><tr><td>Total</td><td>97,681.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>98,134.095</td><td>100.00%</td></tr><tr><td rowspan="13">2010</td><td>1</td><td>15,842.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>11,718.52</td><td>100.00%</td></tr><tr><td>2</td><td>15,250.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>11,722.12</td><td>100.00%</td></tr><tr><td>3</td><td>17,779.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>14,104.91</td><td>100.00%</td></tr><tr><td>4</td><td>15,048.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>13,939.99</td><td>100.00%</td></tr><tr><td>5</td><td>19,873.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>13,791.82</td><td>100.00%</td></tr><tr><td>6</td><td>19,569.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>15,043.30</td><td>100.00%</td></tr><tr><td>7</td><td>19,805.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>15,827.85</td><td>100.00%</td></tr><tr><td>8</td><td>14,567.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>17,411.23</td><td>100.00%</td></tr><tr><td>9</td><td>19,013.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>16,709.38</td><td>100.00%</td></tr><tr><td>10</td><td>28,702.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>17,338.05</td><td>100.00%</td></tr><tr><td>11</td><td>27,946.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>18,710.51</td><td>100.00%</td></tr><tr><td>12</td><td>15,476.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>18,061.96</td><td>100.00%</td></tr><tr><td>Total</td><td>228,870.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>184,379.635</td><td>100.00%</td></tr><tr><td rowspan="6">2011</td><td>1</td><td>17,939.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>15,338.30</td><td>100.00%</td></tr><tr><td>2</td><td>17,293.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>13,774.78</td><td>100.00%</td></tr><tr><td>3</td><td>15,095.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>16,164.22</td><td>100.00%</td></tr><tr><td>4</td><td>15,884.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>13,916.66</td><td>100.00%</td></tr><tr><td>5</td><td>17,230.00</td><td>0.00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>16,094.22</td><td>100.00%</td></tr><tr><td>Total</td><td>83,441.00</td><td>0:00</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>75,288.168</td><td>100.00%</td></tr></table>										Fuel – Amounts of wood waste									Year	Month	ID1	ID2		ID3		ID4		$QC_{biomass}$	Purchased from Battistella		Purchased from Sofia		Purchased from Spot Market		(tonnes) [A]	(tonnes)	(%) [B]	(tonnes)	(%) [C]	(tonnes)	(%) [D]	2009	6	14,391.00	0.00	0.00%	0.00	0.00%	18,998.14	100.00%	7	16,391.00	0.00	0.00%	0.00	0.00%	17,787.99	100.00%	8	19,041.00	0.00	0.00%	0.00	0.00%	14,962.28	100.00%	9	9,849.00	0.00	0.00%	0.00	0.00%	11,430.09	100.00%	10	8,651.00	0.00	0.00%	0.00	0.00%	10,954.67	100.00%	11	14,746.00	0.00	0.00%	0.00	0.00%	12,741.38	100.00%	12	14,612.00	0.00	0.00%	0.00	0.00%	11,259.54	100.00%	Total	97,681.00	0.00	0.00%	0.00	0.00%	98,134.095	100.00%	2010	1	15,842.00	0.00	0.00%	0.00	0.00%	11,718.52	100.00%	2	15,250.00	0.00	0.00%	0.00	0.00%	11,722.12	100.00%	3	17,779.00	0.00	0.00%	0.00	0.00%	14,104.91	100.00%	4	15,048.00	0.00	0.00%	0.00	0.00%	13,939.99	100.00%	5	19,873.00	0.00	0.00%	0.00	0.00%	13,791.82	100.00%	6	19,569.00	0.00	0.00%	0.00	0.00%	15,043.30	100.00%	7	19,805.00	0.00	0.00%	0.00	0.00%	15,827.85	100.00%	8	14,567.00	0.00	0.00%	0.00	0.00%	17,411.23	100.00%	9	19,013.00	0.00	0.00%	0.00	0.00%	16,709.38	100.00%	10	28,702.00	0.00	0.00%	0.00	0.00%	17,338.05	100.00%	11	27,946.00	0.00	0.00%	0.00	0.00%	18,710.51	100.00%	12	15,476.00	0.00	0.00%	0.00	0.00%	18,061.96	100.00%	Total	228,870.00	0.00	0.00%	0.00	0.00%	184,379.635	100.00%	2011	1	17,939.00	0.00	0.00%	0.00	0.00%	15,338.30	100.00%	2	17,293.00	0.00	0.00%	0.00	0.00%	13,774.78	100.00%	3	15,095.00	0.00	0.00%	0.00	0.00%	16,164.22	100.00%	4	15,884.00	0.00	0.00%	0.00	0.00%	13,916.66	100.00%	5	17,230.00	0.00	0.00%	0.00	0.00%	16,094.22	100.00%	Total	83,441.00	0:00	0.00%	0.00	0.00%	75,288.168	100.00%
Fuel – Amounts of wood waste																																																																																																																																																																																																																																																																				
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	As explained before at Session B.1 Sofia and Battistella closed down at September 2007 and October 2008 respectively, what justifies the non-existence of wood waste supply from these sources. As consequence, to substitute the biomass reduction from Battistella and Sofia, it was required a wood waste supply increasing from the many other Spot Market suppliers. In addition to that, as also explained at B.1 the PDD was revised considering the additional use of “toretes”, in this sense the table below presents the amount of biomass from this biomass variety purchased from each source (Battistella, Sofia and Spot Market).																																													
Fuel – Amounts of wood waste																																														
Year	Month	Purchased from Battistella			Purchased from Sofia			Purchased from Spot Market																																						
		Total Wood Waste Amount	“Torete” Amount		Total Wood Waste Amount	“Torete” Amount		Total Wood Waste Amount	“Torete” Amount																																					
		(tonnes)	(tonnes)	(%) [α]	(tonnes)	(tonnes)	(%) [β]	(tonnes)	(tonnes)	(%) [γ]																																				
2009	6 to 12	0.00	0.00	0.00%	0.00	0.00	0.00%	98,134.095	10,535.51	10.74%																																				
2010	1 to 12	0.00	0.00	0.00%	0.00	0.00	0.00%	184,379.635	14,876.93	8.07%																																				
2011	1 to 5	0.00	0.00	0.00%	0.00	0.00	0.00%	75,288.168	4,662.51	6.19%																																				
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline, Project activity and Leakage emission calculations																																													
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	<p>Type: The wood waste fed into the boiler is measured through dynamic scale at entrance and automatically register in the Lages/Tractebel Electronic Planning Production Control System.</p> <p>Accuracy class: The scale has accuracy of 99%, which complies with the maximum uncertainty of ± 1% defined by INMETRO.</p> <p>Calibration frequency: The calibration has been carried out annually. The PDD does not establish the calibration frequency. According to the general guidelines to SSC CDM methodologies, the calibration interval has to be a maximum of three years.</p> <p>Other information about the calibration of the dynamic scale installed in the entrance of the combustion chamber of the boiler and used to measure the amount of wood waste consumed by the Project is presented in the table below:</p> <table><tr><th>Scale Type</th><th>Scale Number</th><th>Calibration Certificate Number</th><th>Certifier</th><th>Date</th><th>Validity</th></tr><tr><td>Dynamic</td><td>3092000123</td><td>0080677</td><td>Toledo</td><td>06 May 2008</td><td>18 months</td></tr><tr><td>Dynamic</td><td>3092000123</td><td>0080839</td><td>Toledo</td><td>17 Jun 2009</td><td>18 months</td></tr><tr><td>Dynamic</td><td>3092000123</td><td>0064923</td><td>Toledo</td><td>14 Jan 2010</td><td>18 months</td></tr><tr><td>Dynamic</td><td>3092000123</td><td>0080925</td><td>Toledo</td><td>27 Jul 2010</td><td>18 months</td></tr><tr><td>Dynamic</td><td>3092000123</td><td>0081007</td><td>Toledo</td><td>30 May 2011</td><td>18 months</td></tr></table>										Scale Type	Scale Number	Calibration Certificate Number	Certifier	Date	Validity	Dynamic	3092000123	0080677	Toledo	06 May 2008	18 months	Dynamic	3092000123	0080839	Toledo	17 Jun 2009	18 months	Dynamic	3092000123	0064923	Toledo	14 Jan 2010	18 months	Dynamic	3092000123	0080925	Toledo	27 Jul 2010	18 months	Dynamic	3092000123	0081007	Toledo	30 May 2011	18 months
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Dynamic	3092000123	0081007	Toledo	30 May 2011	18 months																																									
Measuring/ Reading/ Recording frequency:	Measuring frequency: Continuously Reporting frequency: Monthly																																													

Calculation method (if applicable):

In order to calculate the annual wood waste amount consumed (QC_{biomass}) from each source (Battistella, Sofia and Spot Market) as presented in the table below, the percentages of wood waste purchased from each source in a given month are applied to the total amount consumed in the respective month (which is measured accurately by a dynamic balance installed in the entrance of the combustion chamber of the boiler) and the obtained values are totaled annually.

Fuel – Amounts of wood waste				
Year	Month	Battistella	Sofia	Spot Market
		QC_{biomass} [E=A*B]	QC_{biomass} [F=A*C]	QC_{biomass} [G=A*D]
		(ton)	(ton)	(ton)
2009	6 to 12	0.00	0.00	97,681.00
2010	1 to 12	0.00	0.00	228,870.00
2011	1 to 5	0.00	0.00	83,441.00

The wood waste amounts effectively treated under the Project (QT_{biomass}), which is used to calculate the baseline methane emissions, is calculated discounting the wood waste amounts were previously consumed in the Battistella and Sofia old boilers and applying the discount factor of 1% due to spontaneous combustion in the Battistella pile. These values were validated by DNV and used in the registered PDD. Additionally, due to the “torete” consumption and considering the degradation and methane generation from this wood waste when it is piled and left to decay occurs at a much lower rate than other wood waste, by conservativeness, the percentage of this wood waste purchased from each source (Battistella, Sofia and Spot Market) were applied as a discount factor over the wood waste amount treated under the Project, resulting in the values presented in the table below.

Fuel – Amounts of wood waste							
Year	Month	Battistella		Sofia		Spot Market	
		QT_{biomass} [H=(E-I-J)*(1- α)] ⁵	Wood waste burned for own consumption [I]	Wood waste burned spontaneously in the pile [J=R*(E-D)]	QT_{biomass} [K=(F-L)*(1- β)] ⁶	Wood waste burned for own consumption [L]	QT_{biomass} [M=G*(1- γ)]
		(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)
2009	6 to 12	0.00	19,040.00	0.00	0.00	8,400.00	87,194.14
2010	1 to 12	0.00	32,640.00	0.00	0.00	14,400.00	210,403.30
2011	1 to 5	0.00	13,600.00	0.00	0.00	6,000.00	78,273.59

⁵ Since the wood waste amount consumed (QC_{biomass}) from Battistella in 2009 (from June to December), 2010 (from January to December) and 2011 (from January to May) was lower than the wood waste amount previously consumed in the Battistella old boilers, the wood waste amount from Battistella effectively treated under the Project (QT_{biomass}) was considered zero. The wood waste amount consumed from Battistella was reduced due to the decrease in the Battistella activities and consequent close down in the period.

⁶ Since the wood waste amount consumed (QC_{biomass}) from Sofia in 2009 (from June to December), 2010 (from January to December) and 2011 (from January to May) was lower than the wood waste amount was previously consumed in the Sofia old boilers, the wood waste amount from Sofia effectively treated under the Project (QT_{biomass}) was considered zero. The wood waste amount consumed from Sofia was reduced due to the decrease in the Sofia activities in the period and consequent close down in the period.

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QA/QC procedures applied:	The reported data are compared with the data in the Lages/Tractebel Electronic Planning Production Control System and are cross checked with purchase receipts.																																																											
Data / Parameter:	Fuel – Amount of wood waste obtained from Battistella (ID 2)																																																											
Data unit:	tonnes																																																											
Description:	Amount of wood waste purchased from Battistella by the Project																																																											
Measured /Calculated /Default:	Measured																																																											
Source of data:	Electronic scale (way in – way out)																																																											
Value(s) of monitored parameter:	See same item in the parameter ID 1.																																																											
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline, Project activity and Leakage emission calculations																																																											
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	<p>Type: Entrance truck scales Toledo mod 820-J # 03077001101 and # 03077001100. Accuracy class: The accuracy is proper for truck and validated by INMETRO. Calibration frequency: Yearly. Other information about the calibration of the electronic scales installed in the power plant entrance to measure the amount of wood waste purchased from each supplier are presented in the table below. These equipments are used to monitor parameters ID2, ID3, ID4, ID8, ID10 an ID11 also.</p> <table><tr><th>Scale Type</th><th>Scale Number</th><th>Calibration Certificate Number</th><th>Certifier</th><th>Date</th><th>Validity</th></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>6340217</td><td>INMETRO</td><td>02 Oct 2008</td><td>18 months</td></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>1190475-6</td><td>INMETRO</td><td>03 Jul 2009</td><td>18 months</td></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>0080921</td><td>Toledo</td><td>12 May 2010</td><td>18 months</td></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>1152670-1</td><td>INMETRO</td><td>15 Jul 2010</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>6340216</td><td>INMETRO</td><td>02 Oct 2008</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>1190476-8</td><td>INMETRO</td><td>03 Jul 2009</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>0080922</td><td>Toledo</td><td>12 May 2010</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>1152669-5</td><td>INMETRO</td><td>15 Jul 2010</td><td>18 months</td></tr></table>						Scale Type	Scale Number	Calibration Certificate Number	Certifier	Date	Validity	Electronic (way in)	3077001100	6340217	INMETRO	02 Oct 2008	18 months	Electronic (way in)	3077001100	1190475-6	INMETRO	03 Jul 2009	18 months	Electronic (way in)	3077001100	0080921	Toledo	12 May 2010	18 months	Electronic (way in)	3077001100	1152670-1	INMETRO	15 Jul 2010	18 months	Electronic (way out)	3077001101	6340216	INMETRO	02 Oct 2008	18 months	Electronic (way out)	3077001101	1190476-8	INMETRO	03 Jul 2009	18 months	Electronic (way out)	3077001101	0080922	Toledo	12 May 2010	18 months	Electronic (way out)	3077001101	1152669-5	INMETRO	15 Jul 2010	18 months
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Measuring/ Reading/ Recording frequency:	Measuring frequency: Each truck Reporting frequency: Monthly																																																											
Calculation method (if applicable):	See same item in the parameter ID 1.																																																											
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System and cross checked with purchase receipts.																																																											

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Data / Parameter:	Fuel – Amount of wood waste obtained from Sofia (ID 3)
Data unit:	tonnes
Description:	Amount of wood waste purchased from Sofia by the Project
Measured /Calculated /Default:	Measured
Source of data:	Electronic scale (way in – way out)
Value(s) of monitored parameter:	See same item in the parameter ID 1.
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline, Project activity and Leakage emission calculations
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	See same item in the parameter ID 2
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each truck Reporting frequency: Monthly
Calculation method (if applicable):	See same item in the parameter ID 1.
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System and cross checked with purchase receipts

Data / Parameter:	Fuel – Amount of wood waste obtained from Spot Market (ID 4)
Data unit:	tonnes
Description:	Amount of wood waste purchased from Spot Market by the Project
Measured /Calculated /Default:	Measured
Source of data:	Electronic scale (way in – way out)
Value(s) of monitored parameter:	See same item in the parameter ID 1.
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline, Project activity and Leakage emission calculations
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	See same item in the parameter ID 2
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each truck Reporting frequency: Monthly
Calculation method (if applicable):	See same item in the parameter ID 1.
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System and cross checked with purchase receipts

Data / Parameter:	On-site transportation – Diesel oil purchase (ID 6)
Data unit:	litres
Description:	Amount of Diesel oil purchased by the Project and used on the on-site transportation
Measured /Calculated /Default:	Measured
Source of data:	Invoices and Diesel feed pump at internal gas station.

Value(s) of monitored parameter:	<p>The amount of diesel oil used inside the Lages Project was monthly monitored through the invoices emitted by the proper supplier and amounts already stored (initial and final inventory) and is presented in the table below.</p> <table><tr><th colspan="3">On-site transportation</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID6</th></tr><tr><th>Q^{diesel} [AB]</th></tr><tr><th>(litres)</th></tr><tr><td rowspan="8">2009</td><td>6</td><td>4,095.30</td></tr><tr><td>7</td><td>4,788.10</td></tr><tr><td>8</td><td>5,138.20</td></tr><tr><td>9</td><td>3,666.10</td></tr><tr><td>10</td><td>3,134.40</td></tr><tr><td>11</td><td>4,327.50</td></tr><tr><td>12</td><td>4,313.90</td></tr><tr><td>Total</td><td>29,463.50</td></tr><tr><td rowspan="13">2010</td><td>1</td><td>4,633.80</td></tr><tr><td>2</td><td>4,780.20</td></tr><tr><td>3</td><td>4,885.10</td></tr><tr><td>4</td><td>4,840.30</td></tr><tr><td>5</td><td>5,543.10</td></tr><tr><td>6</td><td>6,592.60</td></tr><tr><td>7</td><td>5,772.60</td></tr><tr><td>8</td><td>5,789.80</td></tr><tr><td>9</td><td>5,549.10</td></tr><tr><td>10</td><td>7,273.00</td></tr><tr><td>11</td><td>7,359.90</td></tr><tr><td>12</td><td>5,320.20</td></tr><tr><td>Total</td><td>68,339.70</td></tr><tr><td rowspan="6">2011</td><td>1</td><td>4,289.70</td></tr><tr><td>2</td><td>4,734.00</td></tr><tr><td>3</td><td>5,949.10</td></tr><tr><td>4</td><td>4,470.40</td></tr><tr><td>5</td><td>4,559.50</td></tr><tr><td>Total</td><td>24,002.70</td></tr></table>	On-site transportation			Year	Month	ID6	Q ^{diesel} [AB]	(litres)	2009	6	4,095.30	7	4,788.10	8	5,138.20	9	3,666.10	10	3,134.40	11	4,327.50	12	4,313.90	Total	29,463.50	2010	1	4,633.80	2	4,780.20	3	4,885.10	4	4,840.30	5	5,543.10	6	6,592.60	7	5,772.60	8	5,789.80	9	5,549.10	10	7,273.00	11	7,359.90	12	5,320.20	Total	68,339.70	2011	1	4,289.70	2	4,734.00	3	5,949.10	4	4,470.40	5	4,559.50	Total	24,002.70
On-site transportation																																																																		
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Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Project activity emission calculation																																																																	
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Type: Diesel feed pump at internal gas station. Accuracy class: It is registered daily for each equipment and accounted into the Lages/Tractebel Electronic Planning Production Control System. Calibration frequency: According to commercial regulation.																																																																	
Measuring/ Reading/ Recording frequency:	Measuring frequency: Daily Reporting frequency: Monthly																																																																	
Calculation method (if applicable):	Not applicable.																																																																	
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System and cross checked with purchase receipts.																																																																	

Data / Parameter:	Off-site transportation – Location of wood waste suppliers compared to Lages site (ID 7)																								
Data unit:	km																								
Description:	Weighted average round trip distance between the sites of the wood waste suppliers and Lages site.																								
Measured /Calculated /Default:	Measured																								
Source of data:	Wood waste invoices/receipts.																								
Value(s) of monitored parameter:	<p>The data about the round trip distance between the wood waste suppliers and the Lages Project site and the truck capacity were monitored and are presented in the tables of the Annex 1. The weighted average round trip distance and truck capacity of all active wood waste suppliers to Lages Project site which are necessary to calculate the emissions from the off-site transportation are presented below.</p> <table><tr><th colspan="4">Off-site transportation</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID7</th><th>ID8</th></tr><tr><th>AVD_{biomass} [AC]</th><th>TC_{biomass} [AD]</th></tr><tr><th>(km)</th><th>(tonnes)</th></tr><tr><td>2009</td><td>6 to 12</td><td>41.6</td><td>16.2</td></tr><tr><td>2010</td><td>1 to 12</td><td>23.6</td><td>16.8</td></tr><tr><td>2011</td><td>1 to 5</td><td>23.8</td><td>16.8</td></tr></table>	Off-site transportation				Year	Month	ID7	ID8	AVD _{biomass} [AC]	TC _{biomass} [AD]	(km)	(tonnes)	2009	6 to 12	41.6	16.2	2010	1 to 12	23.6	16.8	2011	1 to 5	23.8	16.8
Off-site transportation																									
Year	Month	ID7	ID8																						
		AVD _{biomass} [AC]	TC _{biomass} [AD]																						
		(km)	(tonnes)																						
2009	6 to 12	41.6	16.2																						
2010	1 to 12	23.6	16.8																						
2011	1 to 5	23.8	16.8																						
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Leakage emission calculation																								
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Not applicable.																								
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each purchase receipt, address on purchase receipts Reporting frequency: Monthly																								
Calculation method (if applicable):	Calculated the weighted average round trip distance of all active wood waste suppliers of Lages Project.																								
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System and cross checked with purchase receipts.																								

Data / Parameter:	Off-site transportation – Truck capacity (ID 8)
Data unit:	tonnes
Description:	Truck capacity of all active wood waste suppliers to Lages Project site.
Measured /Calculated /Default:	Measured
Source of data:	Electronic scale (way in – way out)

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Value(s) of monitored parameter:	<p>The data about the round trip distance between the wood waste suppliers and the Lages Project site and the truck capacity were monitored and are presented in the tables of the Annex 1. The weighted average round trip distance and truck capacity of all active wood waste suppliers to Lages Project site which are necessary to calculate the emissions from the off-site transportation are presented below.</p> <table><tr><th colspan="4">Off-site transportation</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID7</th><th>ID8</th></tr><tr><th>AVD_{biomass} [AC]</th><th>TC_{biomass} [AD]</th></tr><tr><th>(km)</th><th>(tonnes)</th></tr><tr><td>2009</td><td>6 to 12</td><td>41.6</td><td>16.2</td></tr><tr><td>2010</td><td>1 to 12</td><td>23.6</td><td>16.8</td></tr><tr><td>2011</td><td>1 to 5</td><td>23.8</td><td>16.8</td></tr></table>	Off-site transportation				Year	Month	ID7	ID8	AVD _{biomass} [AC]	TC _{biomass} [AD]	(km)	(tonnes)	2009	6 to 12	41.6	16.2	2010	1 to 12	23.6	16.8	2011	1 to 5	23.8	16.8																														
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Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Leakage emission calculation																																																						
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	<p>Type: Entrance truck scales Toledo mod 820-J # 03077001101 and # 03077001100. Accuracy class: The accuracy is proper for truck and validated by INMETRO. Calibration frequency: Yearly. Other information about the calibration of the electronic scales installed in the power plant entrance is presented in the table below. These equipments are used to monitor parameters ID2, ID3, ID4, ID10 an ID11 also.</p> <table><tr><th>Scale Type</th><th>Scale Number</th><th>Calibration Certificate Number</th><th>Certifier</th><th>Date</th><th>Validity</th></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>6340217</td><td>INMETRO</td><td>02 Oct 2008</td><td>18 months</td></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>1190475-6</td><td>INMETRO</td><td>03 Jul 2009</td><td>18 months</td></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>0080921</td><td>Toledo</td><td>12 May 2010</td><td>18 months</td></tr><tr><td>Electronic (way in)</td><td>3077001100</td><td>1152670-1</td><td>INMETRO</td><td>15 Jul 2010</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>6340216</td><td>INMETRO</td><td>02 Oct 2008</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>1190476-8</td><td>INMETRO</td><td>03 Jul 2009</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>0080922</td><td>Toledo</td><td>12 May 2010</td><td>18 months</td></tr><tr><td>Electronic (way out)</td><td>3077001101</td><td>1152669-5</td><td>INMETRO</td><td>15 Jul 2010</td><td>18 months</td></tr></table>	Scale Type	Scale Number	Calibration Certificate Number	Certifier	Date	Validity	Electronic (way in)	3077001100	6340217	INMETRO	02 Oct 2008	18 months	Electronic (way in)	3077001100	1190475-6	INMETRO	03 Jul 2009	18 months	Electronic (way in)	3077001100	0080921	Toledo	12 May 2010	18 months	Electronic (way in)	3077001100	1152670-1	INMETRO	15 Jul 2010	18 months	Electronic (way out)	3077001101	6340216	INMETRO	02 Oct 2008	18 months	Electronic (way out)	3077001101	1190476-8	INMETRO	03 Jul 2009	18 months	Electronic (way out)	3077001101	0080922	Toledo	12 May 2010	18 months	Electronic (way out)	3077001101	1152669-5	INMETRO	15 Jul 2010	18 months
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Electronic (way out)	3077001101	1152669-5	INMETRO	15 Jul 2010	18 months																																																		
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each transportation receipt. Reporting frequency: Monthly																																																						
Calculation method (if applicable):	The receipts of wood waste are registered at entrance of Lages, including the actual weight of each truck. The information from the Lages/Tractebel Electronic Planning Production Control System was used to calculate the weighted average truck capacity of all active wood waste suppliers of Lages Project.																																																						
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System.																																																						

Data / Parameter:	Ash transportation – Location of ash disposal site (ID 9)
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Data unit:	km																								
Description:	Weighted average round trip distance between the ash disposal sites and Lages site.																								
Measured /Calculated /Default:	Measured																								
Source of data:	Ash invoices/receipts.																								
Value(s) of monitored parameter:	<p>The data about the round trip distance between the Lages Project site and ash disposal sites and the truck capacity were monitored and are presented in the table below. During the monitoring period, the ash produced by the project activity was disposed at Lages Region aligned with the Environmental Agency approval, reducing the round trip distance and consequently greenhouse gas emissions from ash transportation in comparison with the previous monitoring reports. Until July 2008 the ash produced had been transported to Jorge Lacerda Thermoelectric Power Plant, in Capivari de Baixo municipality, State of Santa Catarina, to be disposed in an appropriate manner.</p> <table><tr><th colspan="4">Ash transportation</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID9</th><th>ID10</th></tr><tr><th>AVD_{ash} [AE]</th><th>TC_{ash} [AF]</th></tr><tr><th>(km)</th><th>(tonnes)</th></tr><tr><td>2009</td><td>6 to 12</td><td>77.0</td><td>18.2</td></tr><tr><td>2010</td><td>1 to 12</td><td>93.4</td><td>18.6</td></tr><tr><td>2011</td><td>1 to 5</td><td>66.9</td><td>16.3</td></tr></table>	Ash transportation				Year	Month	ID9	ID10	AVD _{ash} [AE]	TC _{ash} [AF]	(km)	(tonnes)	2009	6 to 12	77.0	18.2	2010	1 to 12	93.4	18.6	2011	1 to 5	66.9	16.3
Ash transportation																									
Year	Month	ID9	ID10																						
		AVD _{ash} [AE]	TC _{ash} [AF]																						
		(km)	(tonnes)																						
2009	6 to 12	77.0	18.2																						
2010	1 to 12	93.4	18.6																						
2011	1 to 5	66.9	16.3																						
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Leakage emission calculation																								
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Not applicable.																								
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each transport Reporting frequency: Monthly																								
Calculation method (if applicable):	Calculated the weighted average round trip distance between the ash disposal sites and Lages Project site.																								
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System																								

Data / Parameter:	Ash transportation – Truck capacity (ID 10)
Data unit:	tonnes
Description:	Capacity of the trucks transporting the ash produced in Lages Project site to the disposal sites.
Measured /Calculated /Default:	Measured
Source of data:	Electronic scale (way in – way out)

Value(s) of monitored parameter:	<p>The data about the round trip distance between the Lages Project site and ash disposal sites and the truck capacity were monitored and are presented in the table below. During the monitoring period, the ash produced by the project activity was disposed at Lages Region aligned with the Environmental Agency approval, reducing the round trip distance and consequently greenhouse gas emissions from ash transportation in comparison with the previous monitoring reports. Until July 2008 the ash produced had been transported to Jorge Lacerda Thermoelectric Power Plant, in Capivari de Baixo municipality, State of Santa Catarina, to be disposed in an appropriate manner.</p> <table><tr><th colspan="4">Ash transportation</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID9</th><th>ID10</th></tr><tr><th>AVD_{ash} [AE]</th><th>TC_{ash} [AF]</th></tr><tr><th>(km)</th><th>(tonnes)</th></tr><tr><td>2009</td><td>6 to 12</td><td>77.0</td><td>18.2</td></tr><tr><td>2010</td><td>1 to 12</td><td>93.4</td><td>18.6</td></tr><tr><td>2011</td><td>1 to 5</td><td>66.9</td><td>16.3</td></tr></table>	Ash transportation				Year	Month	ID9	ID10	AVD _{ash} [AE]	TC _{ash} [AF]	(km)	(tonnes)	2009	6 to 12	77.0	18.2	2010	1 to 12	93.4	18.6	2011	1 to 5	66.9	16.3
Ash transportation																									
Year	Month	ID9	ID10																						
		AVD _{ash} [AE]	TC _{ash} [AF]																						
		(km)	(tonnes)																						
2009	6 to 12	77.0	18.2																						
2010	1 to 12	93.4	18.6																						
2011	1 to 5	66.9	16.3																						
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Leakage emission calculation																								
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	See same item in the parameter ID 8																								
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each transportation receipt. Reporting frequency: Monthly																								
Calculation method (if applicable):	The ash transportation receipts are registered at exit of Lages facilities, including the actual weigh of each truck. The information from the Lages/Tractebel Electronic Planning Production Control System was used to calculate the weighted average truck capacity transporting ashes from Lages Project to the disposal sites.																								
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System.																								

Data / Parameter:	Ash production – Amount of ash produced (ID 11)
Data unit:	tonnes
Description:	Amount of ash produced in the Lages Project.
Measured /Calculated /Default:	Measured
Source of data:	Electronic scale (way in – way out)

Value(s) of monitored parameter:	<div>The amount of ash produced and transported by Lages Project was monthly monitored and is presented in the table below.</div> <table><tr><th colspan="3">Ash production</th></tr><tr><th rowspan="3">Year</th><th rowspan="3">Month</th><th>ID11</th></tr><tr><th>Q_{ash} [AG]</th></tr><tr><th>(tonnes)</th></tr><tr><td rowspan="8">2009</td><td>6</td><td>772.92</td></tr><tr><td>7</td><td>815.67</td></tr><tr><td>8</td><td>1,310.78</td></tr><tr><td>9</td><td>526.15</td></tr><tr><td>10</td><td>812.62</td></tr><tr><td>11</td><td>1,295.80</td></tr><tr><td>12</td><td>1,848.44</td></tr><tr><td>Total</td><td>7,382.38</td></tr><tr><td rowspan="13">2010</td><td>1</td><td>1,449.10</td></tr><tr><td>2</td><td>1,273.11</td></tr><tr><td>3</td><td>1,730.48</td></tr><tr><td>4</td><td>1,157.29</td></tr><tr><td>5</td><td>1,395.89</td></tr><tr><td>6</td><td>1,444.20</td></tr><tr><td>7</td><td>1,801.63</td></tr><tr><td>8</td><td>1,244.52</td></tr><tr><td>9</td><td>1,612.08</td></tr><tr><td>10</td><td>2,482.33</td></tr><tr><td>11</td><td>3,165.77</td></tr><tr><td>12</td><td>1,757.98</td></tr><tr><td>Total</td><td>20,514.38</td></tr><tr><td rowspan="6">2011</td><td>1</td><td>1,148.87</td></tr><tr><td>2</td><td>1,275.20</td></tr><tr><td>3</td><td>1,885.62</td></tr><tr><td>4</td><td>1,224.21</td></tr><tr><td>5</td><td>1,765.33</td></tr><tr><td>Total</td><td>7,299.23</td></tr></table>	Ash production			Year	Month	ID11	Q _{ash} [AG]	(tonnes)	2009	6	772.92	7	815.67	8	1,310.78	9	526.15	10	812.62	11	1,295.80	12	1,848.44	Total	7,382.38	2010	1	1,449.10	2	1,273.11	3	1,730.48	4	1,157.29	5	1,395.89	6	1,444.20	7	1,801.63	8	1,244.52	9	1,612.08	10	2,482.33	11	3,165.77	12	1,757.98	Total	20,514.38	2011	1	1,148.87	2	1,275.20	3	1,885.62	4	1,224.21	5	1,765.33	Total	7,299.23
Ash production																																																																		
Year	Month	ID11																																																																
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Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Leakage emission calculation																																																																	
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	See same item in the parameter ID 8																																																																	
Measuring/ Reading/ Recording frequency:	Measuring frequency: Each transport. All ash trucks are weighed and the weight is registered into the Lages/Tractebel Electronic Planning Production Control System Reporting frequency: Monthly																																																																	
Calculation method (if applicable):	Not applicable.																																																																	
QA/QC procedures applied:	The reported data was compared with the data in the Lages/Tractebel Electronic Planning Production Control System.																																																																	

CDM PROJECT ACTIVITY MONITORING REPORT

SECTION E. Emission reductions calculation

The equations presented in the AMS-III.E. methodology (Version 07) and in the PDD were used to determine the baseline emissions, project activity emissions, leakages and emission reductions during the monitoring period.

E.1. Baseline emissions calculation

The methane emission factor is calculated as follows:

$$CH_4_IPCC_{decay} = (MCF * DOC * DOC_F * F * 16/12)$$

where,

- $CH_4_IPCC_{decay}$: IPCC CH_4 emission factor for decaying biomass in the region of the project activity (t CH_4 /t);
- MCF: Methane correction factor (fraction);
- DOC: Degradable organic carbon (fraction);
- DOC_F : Fraction DOC dissimilated to landfill gas (fraction);
- F: Fraction of CH_4 in landfill gas (fraction).

The baseline methane emissions from biomass decay are calculated using the formulae below:

$$BE_y = QT_{biomass} * CH_4_IPCC_{decay} * CH_4_GWP$$

where,

- BE_y : Baseline methane emissions from biomass decay (tCO₂e);
- $QT_{biomass}$: Quantity of biomass treated under the project activity (t);
- CH_4_GWP : Global Warming Potential for CH_4 (tCO₂e/t CH_4).

The baseline emissions presented in the tables below were obtained when applying the monitored data to the equations presented above.

IPCC CH ₄ emission factor for decaying biomass (CH ₄ _IPCC _{decay})						
Wood waste suppliers	IPCC CH ₄ emission factor for decaying biomass (CH ₄ _IPCC _{decay}) [AH=N*O*P*Q*AI]	Methane correction factor (MCF) [N]	Degradable organic carbon (DOC) [O]	Fraction DOC dissimilated to landfill gas (DCOF) [P]	Fraction of CH ₄ in landfill gas (F) [Q]	16/12 [AI]
	(tCH ₄ /t)	(fraction)	(fraction)	(fraction)	(fraction)	(fraction)
Battistella	0.1147	0.8	0.43	0.5	0.5	1.33
Sofia	0.0573	0.4	0.43	0.5	0.5	1.33
Spot Market	0.0573	0.4	0.43	0.5	0.5	1.33

BATTISTELLA SUPPLY				
Baseline methane emissions from biomass decay (BE _y)				
Year	Baseline methane emissions from biomass decay (BE _y)	Quantity of biomass treated under the project activity* (QT _{biomass})	IPCC CH ₄ emission factor for decaying biomass (CH ₄ _IPCC _{decay})	GWP for CH ₄ (CH ₄ _GWP) [V]
	[AJ=H*AH*V]	[H]	[AH]	
	(tCO ₂ e/year)	(t/year)	(tCH ₄ /t)	(tCO ₂ e/tCH ₄)
Jun - Dec 2009	0	0.00	0.1147	21
Jan - Dec 2010	0	0.00	0.1147	21
Jan - May 2011	0	0.00	0.1147	21
Total	0	0.00	-	-

SOFIA SUPPLY				
Baseline methane emissions from biomass decay (BE _y)				
Year	Baseline methane emissions from biomass decay (BE _y)	Quantity of biomass treated under the project activity* (QT _{biomass})	IPCC CH ₄ emission factor for decaying biomass (CH ₄ _IPCC _{decay})	GWP for CH ₄ (CH ₄ _GWP) [V]
	[AK=K*AH*V]	[K]	[AH]	
	(tCO ₂ e/year)	(t/year)	(tCH ₄ /t)	(tCO ₂ e/tCH ₄)
Jun - Dec 2009	0	0.00	0.0573	21
Jan - Dec 2010	0	0.00	0.0573	21
Jan - May 2011	0	0.00	0.0573	21
Total	0	0.00	-	-

SPOT MARKET SUPPLY				
Baseline methane emissions from biomass decay (BE _y)				
Year	Baseline methane emissions from biomass decay (BE _y)	Quantity of biomass treated under the project activity* (QT _{biomass})	IPCC CH ₄ emission factor for decaying biomass (CH ₄ _IPCC _{decay})	GWP for CH ₄ (CH ₄ _GWP) [V]
	[AL=M*AH*V]	[M]	[AH]	
	(tCO ₂ e/year)	(t/year)	(tCH ₄ /t)	(tCO ₂ e/tCH ₄)
Jun - Dec 2009	104,982	87,194.14	0.0573	21
Jan - Dec 2010	253,326	210,403.30	0.0573	21
Jan - May 2011	94,241	78,273.59	0.0573	21
Total	452,549	375,871.03	-	-

Baseline methane emissions from biomass decay (BE _y)				
Year	Baseline methane emissions from biomass decay (BE _y)	Battistella Supply [AJ]	Sofia Supply [AK]	Spot Market Supply [AL]
	[AM=AJ+AK+AL]			
	(tCO ₂ e/year)	(tCO ₂ e/year)	(tCO ₂ e/year)	(tCO ₂ e/year)
Jun - Dec 2009	104,982	0	0	104,982
Jan - Dec 2010	253,326	0	0	253,326
Jan - May 2011	94,241	0	0	94,241
Total	452,549	0	0	452,549

E.2. Project emissions calculation

The emissions due to the project activity within the project boundary comprise:

- CH₄ emissions and N₂O emissions due to combustion of the wood waste (PE_y);
- CO₂, CH₄ and N₂O emissions due to on-site wood waste transportation.

The formulae presented in the AMS-III.E. (Version 07) to calculate the emissions of CH₄ and N₂O of the project activity considers only the emissions from the wood waste combustion as presented below:

$$PE_y = QC_{biomass} * E_{biomass} (CH_4_{bio_comb} * CH_4_GWP + N_2O_{bio_comb} * N_2O_GWP) / 10^6$$

where,

- PE_y: Project activity emissions (ktCO₂e);
- QC_{biomass}: Quantity of biomass consumed by the project activity (t);
- E_{biomass}: Energy content of biomass (TJ/t);

- CH₄bio_comb: CH₄ emission factor for biomass and waste (which includes dung and agricultural, municipal and industrial wastes) combustion (kgCH₄/TJ);
- CH₄_GWP: Global Warming Potential for CH₄ (tCO₂e/tCH₄);
- N₂Obio_comb: N₂O emission factor for biomass and waste (which includes dung and agricultural, municipal and industrial wastes) combustion (kgN₂O/TJ);
- N₂O_GWP: Global Warming Potential for N₂O (tCO₂e/tN₂O).

Emissions from on-site transportation (OT_GHG_y) are calculated using the following equation:

$$OT_GHG_y = Q_{diesel} * D_{diesel} * (VEF_CO_2 + VEF_CH_4 * CH_4_GWP + VEF_N_2O * N_2O_GWP) / 10^6$$

where,

- OT_GHG_y: Emissions from on-site transportation (ktCO₂e);
- Q_{diesel}: Diesel oil consumption (l);
- D_{diesel}: Diesel oil density (t/l);
- VEF_CO₂: CO₂ emission factor for trucks (kgCO₂/t);
- VEF_CH₄: CH₄ emission factor for trucks (kgCH₄/t);
- CH₄_GWP: Global Warming Potential for CH₄ (tCO₂e/tCH₄);
- VEF_N₂O: N₂O emission factor for trucks (kgN₂O/t);
- N₂O_GWP: Global Warming Potential for N₂O (tCO₂e/tN₂O).

The project activity emissions presented in the tables below were obtained when applying the monitored data to the equations presented above.

Project activity emissions (PE _y)							
Year	Project activity emissions (PE _y) [AN=A*S*(T*V+U*W)/10^6] (ktCO ₂ e/year)	Quantity of biomass consumed by project activity (QC _{biomass}) [A] (t/year)	Energy content of biomass (E _{biomass}) [S] (TJ/t)	CH ₄ emission factor for biomass and waste combustion (CH ₄ bio_comb) [T] (kgCH ₄ /TJ)	GWP for CH ₄ (CH ₄ _GWP) [V] (tCO ₂ e/t CH ₄)	N ₂ O emission factor for biomass and waste combustion (N ₂ Obio_comb) [U] (kgN ₂ O/TJ)	GWP for N ₂ O (N ₂ O_GWP) [W] (tCO ₂ e/tN ₂ O)
Jun - Dec 2009	1.817	97,681.00	7.746E-03	11	21	7	310
Jan - Dec 2010	4.257	228,870.00	7.746E-03	11	21	7	310
Jan - May 2011	1.552	83,441.00	7.746E-03	11	21	7	310
Total	7.625	409,992.00	-	-	-	-	-

Emissions from on-site transportation (OT_GHG _y)								
Year	Emissions from on-site transportation (OT_GHG _y) [AO=AB*X*(Y+Z*V+AA*W)/10^6] (ktCO ₂ e/year)	Diesel oil consumption (Q _{diesel}) [AB] (l/year)	Diesel oil density (D _{diesel}) [X] (t/l)	CO ₂ emission factor for trucks (VEF_CO ₂) [Y] (kgCO ₂ /t)	CH ₄ emission factor for trucks (VEF_CH ₄) [Z] (kgCH ₄ /t)	GWP for CH ₄ (CH ₄ _GWP) [V] (tCO ₂ e/tCH ₄)	N ₂ O emission factor for trucks (VEF_N ₂ O) [AA] (kgN ₂ O/t)	GWP for N ₂ O (N ₂ O_GWP) [W] (tCO ₂ e/tN ₂ O)
Jun - Dec 2009	0.083	29,463.50	8.80E-04	3,172.31	0.18	21	0.09	310
Jan - Dec 2010	0.193	68,339.70	8.80E-04	3,172.31	0.18	21	0.09	310
Jan - May 2011	0.068	24,002.70	8.80E-04	3,172.31	0.18	21	0.09	310
Total	0.343	121,805.90	-	-	-	-	-	-

E.3. Leakage calculation

The two sources of leakage are related to the off-site wood waste transportation and ash transportation that is produced in the wood waste combustion process.

Emissions from off-site wood waste transportation are calculated using the following equation:

$$BT_GHG_y = QC_{biomass}/TC_{biomass} * AVD_{biomass} * (VEF_CO_2 + VEF_CH_4 * CH_4_GWP + VEF_N_2O * N_2O_GWP) / 10^6$$

where,

- BT_GHG_y : Emission from off-site transportation (ktCO₂e);
- $QC_{biomass}$: Quantity of biomass consumed by project activity (t);
- $TC_{biomass}$: Truck average capacity for biomass transportation (t);
- $AVD_{biomass}$: Average round trip distance to biomass supply sites (km);
- VEF_CO_2 : CO₂ emission factor for trucks (kgCO₂/km);
- VEF_CH_4 : CH₄ emission factor for trucks (kgCH₄/km);
- CH_4_GWP : Global Warming Potential for CH₄ (tCO₂e/tCH₄);
- VEF_N_2O : N₂O emission factor for trucks (kgN₂O/km);
- N_2O_GWP : Global Warming Potential for N₂O (tCO₂e/tN₂O).

Emissions from ash transportation are calculated using the following equation:

$$AT_GHG_y = Q_{ash}/TC_{ash} * AVD_{ash} * (VEF_CO_2 + VEF_CH_4 * CH_4_GWP + VEF_N_2O * N_2O_GWP) / 10^6$$

where,

- AT_GHG_y : Emission from ash transportation (ktCO₂e);
- Q_{ash} : Quantity of ash produced by the project activity (t);
- TC_{ash} : Truck average capacity for ash transportation (t);
- AVD_{ash} : Round trip distance to disposal site (km);
- VEF_CO_2 : CO₂ emission factor for trucks (kgCO₂/km);
- VEF_CH_4 : CH₄ emission factor for trucks (kgCH₄/km);
- CH_4_GWP : Global Warming Potential for CH₄ (tCO₂e/tCH₄);
- VEF_N_2O : N₂O emission factor for trucks (kgN₂O/km);
- N_2O_GWP : Global Warming Potential for N₂O (tCO₂e/tN₂O).

Therefore, the leakage emissions (LE_y) are the sum of the emissions from off-site transportation (BT_GHG_y) and from ash transportation (AT_GHG_y):

$$LE_y = BT_GHG_y + AT_GHG_y$$

The leakage emissions presented in the tables below were obtained when applying the monitored data to the equations presented above.

Emissions from off-site transportation (BT_GHG _y)									
Year	Emissions from off-site transportation (BT_GHG _y) [AP=A/AD*AC*(Y+Z*V+AA*W)/10^6] (ktCO ₂ e/year)	Quantity of biomass consumed by project activity (QC _{biomass}) [A] (t/year)	Truck average capacity for biomass transportation* (TC _{biomass}) [AD] (t)	Average round trip distance to biomass supply sites* (AVD _{biomass}) [AC] (km)	CO ₂ emission factor for trucks (VEF_CO ₂) [Y] (kgCO ₂ /km)	CH ₄ emission factor for trucks (VEF_CH ₄) [Z] (kgCH ₄ /km)	GWP for CH ₄ (CH ₄ _GWP) [V] (tCO ₂ e/tCH ₄)	N ₂ O emission factor for trucks (VEF_N ₂ O) [AA] (kgN ₂ O/km)	GWP for N ₂ O (N ₂ O_GWP) [W] (tCO ₂ e/tN ₂ O)
Jun - Dec 2009	0.277	97,681.00	16.2	41.6	1.097	6.0E-05	21	3.1E-05	310
Jan - Dec 2010	0.356	228,870.00	16.8	23.6	1.097	6.0E-05	21	3.1E-05	310
Jan - May 2011	0.130	83,441.00	16.8	23.8	1.097	6.0E-05	21	3.1E-05	310
Total	0.763	409,992.00	-	-	-	-	-	-	-

Emissions from ash transportation (AT_GHG _y)									
Year	Emissions from ash transportation (AT_GHG _y) [AQ=AG/AF*AE*(Y+Z*V+AA*W)/10 ⁶] (ktCO ₂ e/year)	Quantity of ash produced by the project activity (Q _{ash}) [AG] (t/year)	Truck average capacity for ash transportation (TC _{ash}) [AF] (t)	Round trip distance to disposal site (AVD _{ash}) [AE] (km)	CO ₂ emission factor for trucks (VEF_CO ₂) [Y] (kgCO ₂ /km)	CH ₄ emission factor for trucks (VEF_CH ₄) [Z] (kgCH ₄ /km)	GWP for CH ₄ (CH ₄ _GWP) [V] (tCO ₂ e/tCH ₄)	N ₂ O emission factor for trucks (VEF_N ₂ O) [AA] (kgN ₂ O/km)	GWP for N ₂ O (N ₂ O_GWP) [W] (tCO ₂ e/tN ₂ O)
Jun - Dec 2009	0.035	7,382.38	18.2	77.0	1.097	6.0E-05	21	3.1E-05	310
Jan - Dec 2010	0.114	20,514.38	18.6	93.4	1.097	6.0E-05	21	3.1E-05	310
Jan - May 2011	0.033	7,299.23	16.3	66.9	1.097	6.0E-05	21	3.1E-05	310
Total	0.182	35,195.99	-	-	-	-	-	-	-

Leakage emissions (LE _y)			
Year	Leakage emissions (LE _y) [AR=AP+AQ] (ktCO ₂ e/year)	Emissions from off-site transportation (BT_GHG _y) [AP] (ktCO ₂ e/year)	Emissions from ash transportation (AT_GHG _y) [AO] (ktCO ₂ e/year)
Jun - Dec 2009	0.312	0.277	0.035
Jan - Dec 2010	0.470	0.356	0.114
Jan - May 2011	0.164	0.130	0.033
Total	0.946	0.763	0.182

E.4. Emission reductions calculation / table

E.4.1 Total project activity emissions equation:

As a small-scale project activity, Lages Project shall directly emit less than 15 ktonnes CO₂e/year, according AMS-III.E. (Version 07). The total project activity emissions (PE_{y_total}) are obtained by sum of PE_y with OT_GHG_y (from Section E.2) and with LE_y (from Section E.3):

$$PE_{y_total} = PE_y + OT_GHG_y + LE_y$$

The total project activity emissions presented in the table below were obtained when applying the values calculated in the Sections E.2 and E.3 to the equation presented above:

Total project activity emissions (PE _{y_total})				
Year	Total project activity emissions (PE _{y_total}) [AS=AN+AO+AR] (ktCO ₂ e/year)	Project activity emissions (PE _y) [AN] (ktCO ₂ e/year)	Emissions from on-site transportation (OT_GHG _y) [AO] (ktCO ₂ e/year)	Leakage emissions (LE _y) [AR] (ktCO ₂ e/year)
Jun - Dec 2009	2.212	1.817	0.083	0.312
Jan - Dec 2010	4.919	4.257	0.193	0.470
Jan - May 2011	1.783	1.552	0.068	0.164
Total	8.914	7.625	0.343	0.946

E.4.2. Emission reductions equations and calculation methods:

The emission reductions due to the project activity (ER_y) are obtained by the difference between BE_y (from Section E.1) and PE_{y_total} in tCO₂ (From Section E.4.1):

$$ER_y = BE_y - PE_{y_total}$$

The project activity emission reductions presented in the table below were obtained when applying the values calculated in the Sections E.1 and E.4.1 to the equation presented above.

Emission reductions due to the project activity (ER _y)			
Year	Emission reduction due to the project activity (ER _y) [AT=AM-AS]	Baseline methane emissions from biomass decay (BE _y) [AM]	Total project activity emissions (PE _{y, total}) [AS]
	(tCO ₂ e/year)	(tCO ₂ e/year)	(tCO ₂ e/year)
Jun - Dec 2009	102,770	104,982	2,212
Jan - Dec 2010	248,406	253,326	4,919
Jan - May 2011	92,458	94,241	1,783
Total	443,635	452,549	8,914

E.5. Comparison of actual emission reductions with estimates in the CDM-PDD

This section includes a comparison of actual values of the emission reductions achieved during the monitoring period with the estimations in the registered PDD.

Item	Values applied in ex-ante calculation of the registered CDM-PDD ⁷	Actual values reached during the monitoring period
Emission reductions (tCO₂e)	393,378	443,635

E.6. Remarks on difference from estimated value in the PDD

The emission reductions achieved over the designated monitoring period are **443,635 tonnes of CO₂e**.

This amount is around 13% higher than the 393,378 tonnes of CO₂e which were estimated to be reduced according to the PDD in the same period due to the higher load factor of the cogeneration plant during this period mainly in the second semester of 2010 and to a lower “torete” consumption, consequently treating a wood waste amount higher than that estimated in the PDD even with a lower emission factor due to reduced degradable organic carbon fraction dissimilated into landfill gas and higher degradable organic carbon in wood and wood production in IPCC2006 compared to IPCC1996.

History of the document

Version	Date	Nature of revision
01	EB 54, Annex 34 28 May 2010	Initial adoption.
Decision Class: Regulatory Document Type: Guideline, Form Business Function: Issuance		

⁷ The predicted amount is considering a two years verification period since it is the period being covered by this 5th monitoring report.

CDM PROJECT ACTIVITY MONITORING REPORT

Annex 1 – Wood waste by supplier

CONSUMED AMOUNTS IN 2009

Wood waste suppliers	Status (Active/Non- active)	Round trip distance to Lages Project (km) [AW]	Truck Capacity (tonnes) [AX]	Consumed wood waste amount (tonnes/month)												Total consumed amount (tonnes/year) [A]	Travels (un./year) [AY=A/AX]	Total travelled distance (km/year) [AZ=AW*AY]
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Lages region																		
Battistella	Inactive	2.0	14.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Sofia	Inactive	4.0	4.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adelia Tealdi	Active	90.0	13.8	0.00	0.00	0.00	0.00	0.00	0.00	11.47	12.47	0.00	0.00	0.00	0.00	0.00	23.94	2
Adelina Vieira dos Santos	Inactive	12.0	11.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adilson Tadeu Coelho	Inactive	60.0	6.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adriano Schweitzer da Silveira	Inactive	24.0	18.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Agro Comercial Zandonadi Ltda.	Active	200.0	16.1	0.00	0.00	0.00	0.00	0.00	0.00	105.39	196.40	89.30	0.00	0.00	0.00	0.00	391.09	24
Agro Florestal Paequerê	Active	80.0	16.6	0.00	0.00	0.00	0.00	0.00	0.00	280.86	580.87	346.69	0.00	0.00	0.00	0.00	1,208.43	73
Agroflorestal Serrana	Inactive	146.0	18.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Alceir de Jesus	Active	27.0	18.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.70	0.00	0.00	0.00	0.00	38.70	2
Alcides Inaldo Ramos Rosa	Inactive	27.0	9.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Aldo Silveira flores	Inactive	22.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Alexandre Coelho de Oliveira	Active	14.0	11.1	0.00	0.00	0.00	0.00	0.00	0.00	355.62	372.36	634.51	391.46	312.35	510.18	343.02	2,919.49	264
Altair Benício Luz	Inactive	120.0	10.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Anderson Chaves Pucci	Active	38.0	10.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.99	6.40	15.69	17.52	49.60	5
Antonio Amarante	Inactive	70.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Antonio Carlos de Liz Stefen	Inactive	30.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Antonio Ermar Garcia e/ou Maria Ilza G. G	Inactive	80.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Apretec Madeiras	Inactive	4.0	7.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Araupel	Inactive	160.0	30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Aristides Araujo	Inactive	10.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Arno Tillmann	Inactive	52.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Arno Volni Arruda	Inactive	52.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Benjamim Luiz Valentini	Inactive	80.0	15.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Biopine Madeiras Ltda	Active	160.0	25.3	0.00	0.00	0.00	0.00	0.00	0.00	162.20	95.79	71.28	46.34	132.02	0.00	20.65	528.27	21
Blue Forest Comercial Importadora LTDA	Inactive	5.0	13.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Boa Esperança Matriz	Active	50.0	13.0	0.00	0.00	0.00	0.00	0.00	0.00	773.73	1,088.95	868.12	728.14	765.93	1,319.80	1,114.99	6,659.66	512
Boa Esperança Paiquerê	Inactive	146.0	14.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Bonete Madeiras	Active	160.0	36.6	0.00	0.00	0.00	0.00	0.00	0.00	33.44	0.00	0.00	0.00	0.00	0.00	0.00	33.44	1
Brazilian Pine	Inactive	2.0	12.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Brazimoveis	Inactive	160.0	13.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Caratino Madeiras Ltda.	Inactive	420.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Celso Pedro Paese	Inactive	30.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Claudio Paes	Inactive	30.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Clesio Kauling	Inactive	70.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Clóvis Arruda Vieira	Active	50.0	16.3	0.00	0.00	0.00	0.00	0.00	0.00	25.25	125.28	132.07	0.00	13.26	91.52	38.57	425.95	26
Coesa Agroflorestal	Active	68.0	13.9	0.00	0.00	0.00	0.00	0.00	0.00	41.20	0.00	0.00	0.00	0.00	0.00	0.00	41.20	3
Comboni	Inactive	160.0	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Comércio de Madeira Beija Flor Ltda	Active	5.0	14.1	0.00	0.00	0.00	0.00	0.00	0.00	630.40	791.58	798.16	488.82	517.95	1,017.28	913.46	5,157.64	365
Cooperativa Agropecuária de Tubarão	Inactive	460.0	24.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Darley Pedro Martini	Inactive	80.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Delcize Maria Zanotto Della Giustina	Active	160.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	92.26	0.00	0.00	0.00	0.00	0.00	0.00	92.26	6
Diogo Jaques Ventorini	Inactive	120.0	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Dinda Ind. e Com. de Madeiras Ltda	Active	5.0	5.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	22.84	26.29	5

Dirlete Terezina Pereira	Inactive	52.0	16.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Domingos da Silva Martins	Active	30.0	21.0	0.00	0.00	0.00	0.00	0.00	201.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	201.69	10	289
Edemar Antonio Rosseto	Active	60.0	13.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.19	24.53	10.62	0.00	0.00	107.35	8	466	
Eder Roberto Monn	Inactive	70.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Edeschons	Inactive	5.0	4.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Extrapac	Inactive	10.0	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
F. Klann	Inactive	60.0	8.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Finance Comercial	Inactive	72.0	14.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Floko	Inactive	100.0	16.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Flora Pinus	Inactive	6.0	3.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Genilda Correa	Inactive	90.0	10.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Germirio Vargas	Inactive	10.0	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Gerson Coimbra de Figueiredo Filho	Active	60.0	17.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.46	0.00	0.00	0.00	14.46	1	50	
Getulio Alves de Oliveira	Active	85.0	16.0	0.00	0.00	0.00	0.00	0.00	44.17	46.13	93.87	36.26	23.32	65.96	0.00	309.70	19	1,645	
Gilberto Muniz Lima	Active	35.0	19.5	0.00	0.00	0.00	0.00	0.00	277.52	374.60	521.51	106.50	239.28	358.33	489.76	2,367.50	122	4,254	
Gilmar Guanabara	Inactive	112.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Gilmar Sasso Correia	Inactive	100.0	16.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
GR Biomassa Ltda	Inactive	1.0	22.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Incohaut Madeiras Ltda	Active	240.0	23.2	0.00	0.00	0.00	0.00	0.00	235.39	231.38	338.04	229.69	264.92	334.13	400.87	2,034.43	88	21,027	
Indupinho	Inactive	100.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Indusflora	Active	30.0	17.4	0.00	0.00	0.00	0.00	0.00	0.00	99.22	52.16	0.00	32.95	0.00	55.40	239.74	14	412	
Istelio José Souto-Maior Camargo	Inactive	8.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Ivo Agostineto	Inactive	3.0	13.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
J.A. Maines	Inactive	170.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Jacyr Jose tomazi	Active	140.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.37	0.00	0.00	0.00	40.01	79.38	5	761	
Jair Philippi	Active	170.0	24.4	0.00	0.00	0.00	0.00	0.00	811.41	968.08	1,341.05	911.74	809.07	1,018.09	555.63	6,415.09	263	44,706	
Jair Philippi Filho	Active	220.0	24.2	0.00	0.00	0.00	0.00	0.00	48.64	57.55	222.92	88.88	133.58	156.21	0.00	707.78	29	6,427	
Janderson	Inactive	16.0	12.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Jaquirana	Inactive	220.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
JJ Thomazi	Inactive	25.0	11.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
João Lima de Andrade	Inactive	90.0	14.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
João Luis Ronsoni	Active	80.0	16.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
João Raimundo colombo	Active	10.0	11.7	0.00	0.00	0.00	0.00	0.00	60.77	0.00	0.00	0.00	0.00	0.00	0.00	60.77	5	52	
Joaquim da Silva Pacheco	Active	80.0	14.9	0.00	0.00	0.00	0.00	0.00	464.34	606.17	670.69	319.27	280.69	485.18	228.74	3,055.07	205	16,417	
Jose Albanir Ferreira da Silva	Inactive	40.0	8.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
José Alexandre Coelho	Inactive	100.0	17.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Jose Altenir	Inactive	30.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Jose Canozio Alves Pereira	Active	150.0	14.6	0.00	0.00	0.00	0.00	0.00	49.15	30.94	51.62	11.87	53.04	12.18	83.80	292.59	20	3,015	
José de Souza	Inactive	60.0	8.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
José Mariano da Silva	Inactive	50.0	15.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Juliano Sérgio Lopes	Active	170.0	18.1	0.00	0.00	0.00	0.00	0.00	68.40	15.95	21.25	0.00	0.00	38.84	23.45	167.90	9	1,577	
Klabin	Inactive	84.0	28.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Laminadora Catarinense	Inactive	4.0	11.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.40	0.00	0.00	0.00	0.00	15.40	1	6	
Lopes	Inactive	100.0	14.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Lucemar Schmitz	Inactive	80.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Luiz Antonio Stimamiglio	Inactive	30.0	17.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Luiz Fernando Figueiredo	Inactive	3.0	13.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Mad. Nossa Senhora de Lourdes Ltda	Active	300.0	16.3	0.00	0.00	0.00	0.00	0.00	289.48	331.76	154.21	0.00	0.00	0.00	0.00	775.46	48	14,285	
Madbras	Inactive	40.0	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Madebampi	Active	10.0	13.8	0.00	0.00	0.00	0.00	0.00	153.95	273.68	256.87	146.67	163.81	240.86	259.57	1,495.42	108	1,084	
Madebins	Inactive	220.0	20.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Madeiraira Boa Parada	Active	70.0	13.8	0.00	0.00	0.00	0.00	0.00	35.16	40.33	37.29	41.89	22.23	30.41	50.74	258.06	19	1,313	
Madeiraira JJT Ltda	Inactive	60.0	27.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Madeiraira Lajes	Active	3.0	14.5	0.00	0.00	0.00	0.00	0.00	10.84	0.00	0.00	0.00	22.43	34.33	19.09	86.68	6	18	
Madeiraira Norte Pontealtense	Inactive	160.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Madeiraira Santa Paulina	Inactive	14.0	11.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Madeiraira Santa Rita	Inactive	14.0	11.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Madeiraira Trevo Ltda	Active	16.0	13.6	0.00	0.00	0.00	0.00	0.00	0.00	22.94	0.00	0.00	0.00	0.00	0.00	22.94	2	27	
Madepar	Active	4.0	13.3	0.00	0.00	0.00	0.00	0.00	346.36	147.07	401.87	0.00	0.00	0.00	0.00	895.30	67	268	

Magdalena Presser Einsfeld	Inactive	60.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Malke	Inactive	10.0	10.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Marcos Narciso Agostini	Active	110.0	17.4	0.00	0.00	0.00	0.00	0.00	0.00	64.23	76.91	92.47	12.08	48.83	83.11	99.98	477.60	27	3,021
Marcus Aristoteles Zilli	Inactive	170.0	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Martins	Inactive	16.0	8.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Mengatto	Active	5.0	15.5	0.00	0.00	0.00	0.00	0.00	0.00	91.36	103.01	0.00	0.00	0.00	0.00	0.00	194.37	13	63
Mercedes Webber dos Santos	Inactive	60.0	12.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
MJ Madeiras	Active	5.0	11.5	0.00	0.00	0.00	0.00	0.00	0.00	531.48	202.80	274.64	63.69	52.17	0.00	0.00	1,124.77	98	489
MS Madeiras Ltda	Active	160.0	26.6	0.00	0.00	0.00	0.00	0.00	0.00	288.34	491.80	794.68	385.10	514.46	592.08	571.89	3,638.34	137	21,878
Multiform	Active	2.0	18.0	0.00	0.00	0.00	0.00	0.00	0.00	5,064.11	5,807.97	7,560.63	4,080.11	2,408.26	5,479.59	5,996.00	36,396.68	2,022	4,044
Muniz & Padilha	Inactive	5.0	13.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Nelson Moraes de Camargo	Active	30.0	9.9	0.00	0.00	0.00	0.00	0.00	0.00	27.44	0.00	42.98	28.37	0.00	37.08	19.66	155.53	16	469
Neri Antonio Chiodelli Junior	Active	160.0	12.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.62	0.00	0.00	34.70	3	439
Nery Nunes de Carvalho	Active	100.0	13.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.32	0.00	13.52	12.17	0.00	19.17	58.17	4	437
Neuri A. Chiodelli	Inactive	160.0	16.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Neuri Carlos Telles	Inactive	88.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Neuza Bianchini Arruda	Inactive	90.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Nilton Sabatini	Inactive	20.0	8.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Nilvo Santo Crestani	Inactive	3.0	13.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
NP Madeiras	Active	180.0	15.7	0.00	0.00	0.00	0.00	0.00	0.00	13.45	0.00	0.00	0.00	13.03	0.00	0.00	26.48	2	303
Olimpio Antonio Candiago	Active	40.0	9.9	0.00	0.00	0.00	0.00	0.00	0.00	21.23	10.69	51.17	7.38	21.75	31.95	8.98	153.15	16	622
Olimpyo	Inactive	24.0	13.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Orestes Macedo da Luz	Inactive	55.0	12.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
P & P Móveis de Confeções Ltda	Active	5.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	547.62	825.50	741.13	489.65	588.83	878.97	1,051.82	5,123.52	341	1,703
Pandolfo	Active	3.0	10.9	0.00	0.00	0.00	0.00	0.00	0.00	656.10	820.56	923.52	738.07	658.72	1,080.73	1,314.80	6,192.50	567	1,701
Paulino Granzotto	Inactive	16.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Paulo Afonso Leal Narciso	Inactive	80.0	17.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Paulo Cesar da Costa	Inactive	40.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pedro de Quadra da Cruz	Active	150.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.27	214.20	90.67	385.14	26	3,888
Pinus Bom Jesus	Active	360.0	25.0	0.00	0.00	0.00	0.00	0.00	0.00	718.20	416.80	34.05	0.00	0.00	0.00	0.00	1,169.05	47	16,827
Pinus Forte	Inactive	3.0	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pinusbras	Inactive	5.0	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pisani	Active	18.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	109.21	293.48	281.09	53.72	154.08	211.75	149.29	1,252.61	84	1,518
Polese	Inactive	26.0	7.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Prefeitura de Lages	Active	14.0	14.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.89	18.43	53.32	4	50
Prime Timber	Active	220.0	17.6	0.00	0.00	0.00	0.00	0.00	0.00	305.89	449.82	382.47	0.00	0.00	0.00	0.00	1,138.18	65	14,221
Raul Antonio Favero	Active	150.0	16.3	0.00	0.00	0.00	0.00	0.00	0.00	38.29	33.60	25.02	104.79	36.79	20.09	168.93	427.51	26	3,940
Ravazin	Inactive	20.0	24.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Resíduos Bioenergia	Inactive	400.0	18.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Righez	Inactive	50.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
RP Madeiras Ind. e Com. Ltda	Active	30.0	15.5	0.00	0.00	0.00	0.00	0.00	0.00	199.34	274.41	387.57	247.45	182.68	314.15	326.63	1,932.22	125	3,750
Sart	Active	78.0	10.5	0.00	0.00	0.00	0.00	0.00	0.00	35.04	46.87	58.79	0.00	0.00	0.00	0.00	140.71	13	1,045
Sérgio Bochart	Inactive	58.0	15.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Sérgio Luiz Bogorni	Inactive	50.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Serraria Campos de Palmas S.A	Inactive	70.0	4.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Silvio Muinz Matos	Inactive	80.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Tributto	Inactive	30.0	12.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Turbina	Inactive	130.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
União Fosforeira	Inactive	150.0	13.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Valdeci Nunes de Carvalho	Active	60.0	14.1	0.00	0.00	0.00	0.00	0.00	0.00	10.78	0.00	0.00	0.00	0.00	0.00	0.00	10.78	1	46
Victorio Genuino Agostini	Inactive	30.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Vilmar Laudelino Ferreira	Inactive	66.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Vilso Isidoro	Inactive	40.0	15.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Wilson de souza Machado	Inactive	110.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Zilda Eliza Letti Pelizzaro	Active	120.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	59.80	13.94	100.56	28.59	61.49	34.96	97.66	397.01	28	3,358
Total				0.00	0.00	0.00	0.00	0.00	0.00	14,391.00	16,391.00	19,041.00	9,849.00	8,651.00	14,746.00	14,612.00	97,681	6,021	250,168

Weighted average round trip distance to Lages Project [AC=AZ/AY]

= 41.6 km

Weighted average truck capacity [AD=A/AY]

= 16.2 tonnes

PURCHASED AMOUNTS IN 2009

[illegible]

"Torete" amount purchased from Battistella	=	0.00 tonnes/year	Percentage of "Torete" in the wood waste purchased from Battistella	=	0.00%
"Torete" amount purchased from Sofia	=	0.00 tonnes/year	Percentage of "Torete" in the wood waste purchased from Sofia	=	0.00%
"Torete" amount purchased from Spot Market	=	10,535.51 tonnes/year	Percentage of "Torete" in the wood waste purchased from Spot Market	=	10.74%

CONSUMED AMOUNTS IN 2010

Wood waste suppliers	Status (Active/Non-active)	Round trip distance to Lages Project (km) [AW]	Truck Capacity (tonnes) [AX]	Consumed wood waste amount (tonnes/month)												Total consumed amount (tonnes/year) [A]	Travels (un./year) [AY=A/AX]	Total travelled distance (km/year) [AZ=AW*AY]
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Lages region																		
Battistella	Inactive	2.0	14.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Sofia	Inactive	4.0	4.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Adelia Tealdi	Active	90.0	13.8	0.00	0.00	20.96	16.71	47.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.76	6
Adelina Vieira dos Santos	Inactive	12.0	11.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Adilson Tadeu Coelho	Inactive	60.0	6.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Adriano Schweitzer da Silveira	Active	24.0	18.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.27	250.88	360.21	0.00	213.51	839.86	46	1,114
Agro Comercial Zandonadi Ltda.	Inactive	200.0	16.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Agro Florestal Paquerê	Inactive	80.0	16.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Agroflorestal Serrana	Inactive	146.0	18.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Alceir de Jesus	Inactive	27.0	18.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Alcides Inaldo Ramos Rosa	Inactive	27.0	9.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Aldo Silveira flores	Inactive	22.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Alexandre Coelho de Oliveira	Active	14.0	11.1	385.03	437.54	535.04	467.12	533.46	525.04	599.63	316.98	476.06	663.98	616.96	276.28	5,833.11	527	7,377
Altair Benício Luz	Inactive	120.0	10.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Anderson Chaves Pucci	Inactive	38.0	10.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Antonio Amarante	Inactive	70.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Antonio Carlos de Liz Stefen	Inactive	30.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Antonio Ermar Garcia e/ou Maria Ilza G. Garcia	Inactive	80.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Apretec Madeiras	Active	4.0	7.3	165.70	360.74	28.70	229.08	314.06	303.81	164.66	171.56	388.89	199.70	506.50	125.93	2,959.33	408	1,633
Araupel	Inactive	160.0	30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Aristides Araujo	Inactive	10.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Arno Tillmann	Inactive	52.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Arno Volni Arruda	Inactive	52.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Benjamin Luiz Valentini	Inactive	80.0	15.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Biopine Madeiras Ltda	Active	160.0	25.3	188.84	131.94	144.48	159.97	23.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	648.96	26	4,102
Blue Forest Comercial Importadora LTDA	Active	5.0	13.0	0.00	0.00	0.00	0.00	0.00	0.00	1,184.75	1,059.80	161.11	1,186.73	1,380.24	1,047.53	6,020.16	463	2,315
Boa Esperança Matriz	Active	50.0	13.0	1,231.93	1,456.39	1,275.57	1,247.58	2,029.98	2,439.15	1,897.45	1,380.58	1,627.07	2,231.70	2,518.69	1,262.43	20,598.51	1,584	79,200
Boa Esperança Paiquerê	Active	146.0	14.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.71	0.00	0.00	27.71	2	279
Bonete Madeiras	Inactive	160.0	36.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Brazilian Pine	Inactive	2.0	12.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Brazimoveis	Inactive	160.0	13.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Caratino Madeiras Ltda.	Inactive	420.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Celso Pedro Paese	Inactive	30.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Claudio Paes	Inactive	30.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Clesio Kauling	Inactive	70.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Clóvis Arruda Vieira	Active	50.0	16.3	56.24	16.83	31.76	30.59	0.00	0.00	18.64	0.00	0.00	0.00	0.00	0.00	154.07	9	472
Coesa Agroflorestal	Inactive	68.0	13.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Comboni	Inactive	160.0	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Comércio de Madeira Beija Flor Ltda	Active	5.0	14.1	878.44	908.84	1,193.87	894.30	945.82	670.65	363.02	0.00	0.00	0.00	0.00	0.00	5,854.93	414	2,072
Cooperativa Agropecuária de Tubarão	Inactive	460.0	24.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Darley Pedro Martini	Inactive	80.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Delcize Maria Zanotto Della Giustina	Inactive	160.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Diogo Jaques Ventorini	Active	120.0	6.2	10.11	0.00	23.71	34.42	42.03	25.91	38.70	20.87	41.21	36.22	43.82	21.23	338.25	55	6,562
Dinda Ind. e Com. de Madeiras Ltda	Active	5.0	5.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Dirlete Terezina Pereira	Inactive	52.0	16.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Domingos da Silva Martins	Inactive	30.0	21.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Edemar Antonio Rosseto	Active	60.0	13.8	0.00	0.00	0.00	0.00	95.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.52	7	415
Eder Roberto Monn	Inactive	70.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Edeschons	Inactive	5.0	4.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Extrapac	Inactive	10.0	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
F. Klann	Inactive	60.0	8.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Finance Comercial	Inactive	72.0	14.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Floko	Inactive	100.0	16.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

Flora Pinus	Inactive	6.0	3.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Genilda Correa	Inactive	90.0	10.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Germimo Vargas	Inactive	10.0	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Gerson Coimbra de Figueiredo Filho	Inactive	60.0	17.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Getulio Alves de Oliveira	Active	85.0	16.0	0.00	0.00	0.00	0.00	18.42	0.00	0.00	0.00	67.96	23.44	265.88	242.46	618.15	39	3,284	
Gilberto Muniz Lima	Active	35.0	19.5	413.67	381.51	306.07	29.39	0.00	122.57	489.74	449.89	486.56	618.40	367.14	601.59	4,266.53	219	7,666	
Gilmar Guanabara	Inactive	112.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Gilmar Sasso Correia	Inactive	100.0	16.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
GR Biomassa Ltda	Active	1.0	22.7	0.00	0.00	0.00	0.00	6,683.96	9,966.79	9,559.57	9,405.09	6,304.94	7,168.45	12,040.78	12,713.90	6,501.86	80,345.35	3,537	3,537
Incohaut Madeiras Ltda	Active	240.0	23.2	445.88	125.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	571.25	25	5,904
Indupinho	Inactive	100.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Indusflora	Active	30.0	17.4	14.13	0.00	0.00	30.44	0.00	9.68	47.60	17.77	0.00	0.00	0.00	0.00	0.00	119.62	7	206
Istelio José Souto-Maior Camargo	Inactive	8.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Ivo Agostineto	Inactive	3.0	13.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.60	98.64	144.78	282.02	21	62	
J.A. Maines	Inactive	170.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Jacyr Jose tomazi	Active	140.0	14.6	0.00	0.00	0.00	0.00	16.74	0.00	0.00	19.72	74.20	179.36	385.02	421.60	412.38	1,509.03	103	14,465
Jair Philippi	Active	170.0	24.4	1,108.58	858.62	956.62	916.98	1,336.91	772.97	705.74	423.89	484.45	1,025.29	865.82	288.98	9,744.85	399	67,911	
Jair Philippi Filho	Inactive	220.0	24.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Janderson	Inactive	16.0	12.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Jaquirana	Inactive	220.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
JJ Thomazi	Inactive	25.0	11.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
João Lima de Andrade	Inactive	90.0	14.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
João Luis Ronsoni	Active	80.0	16.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.12	120.88	216.75	24.39	0.00	418.13	25	1,998
João Raimundo colombo	Inactive	10.0	11.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Joaquim da Silva Pacheco	Inactive	80.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Jose Albanir Ferreira da Silva	Inactive	40.0	8.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
José Alexandre Coelho	Inactive	100.0	17.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Jose Altenir	Inactive	30.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Jose Canozio Alves Pereira	Active	150.0	14.6	24.10	0.00	78.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	102.76	7	1,059
José de Souza	Inactive	60.0	8.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
José Mariano da Silva	Inactive	50.0	15.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Juliano Sérgio Lopes	Active	170.0	18.1	100.04	0.00	39.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	139.45	8	1,310
Klabin	Inactive	84.0	28.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Laminadora Catarinense	Inactive	4.0	11.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Lopes	Inactive	100.0	14.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Lucemar Schmitz	Inactive	80.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Luiz Antonio Stimamiglio	Inactive	30.0	17.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Luiz Fernando Figueiredo	Inactive	3.0	13.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Mad. Nossa Senhora de Lourdes Ltda	Inactive	300.0	16.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Madbras	Inactive	40.0	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Madebampi	Active	10.0	13.8	274.44	183.62	159.02	97.53	41.71	15.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	771.34	56	559
Madebins	Inactive	220.0	20.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Madeiraira Boa Parada	Active	70.0	13.8	13.67	20.26	95.07	47.72	64.31	81.61	96.15	59.19	61.21	71.28	64.24	40.33	715.04	52	3,639	
Madeiraira JJT Ltda	Active	60.0	27.2	0.00	0.00	0.00	537.35	712.16	498.37	841.76	668.12	386.95	714.80	0.00	0.00	4,359.51	160	9,623	
Madeiraira Lajes	Active	3.0	14.5	19.24	19.80	0.00	17.15	65.76	115.42	95.05	102.01	86.26	95.58	107.26	23.23	746.77	52	155	
Madeiraira Norte Pontaltense	Inactive	160.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Madeiraira Santa Paulina	Inactive	14.0	11.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Madeiraira Santa Rita	Inactive	14.0	11.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Madeiraira Trevo Ltda	Active	16.0	13.6	0.00	115.41	178.42	95.56	97.49	155.18	103.46	94.67	116.88	119.74	50.68	21.11	1,148.60	84	1,349	
Madepar	Active	4.0	13.3	0.00	37.12	0.00	38.44	323.50	663.25	104.47	466.35	772.98	1,238.90	868.35	663.27	5,176.61	388	1,552	
Magdalena Presser Einsfeld	Inactive	60.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Malke	Inactive	10.0	10.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Marcos Narciso Agostini	Active	110.0	17.4	49.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.03	3	310	
Marcus Aristoteles Zilli	Inactive	170.0	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Martins	Inactive	16.0	8.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Mengatto	Inactive	5.0	15.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Mercedes Webber dos Santos	Inactive	60.0	12.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
MJ Madeiras	Inactive	5.0	11.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
MS Madeiras Ltda	Active	160.0	26.6	393.45	445.42	442.04	273.66	371.62	473.46	615.21	202.28	489.18	544.85	557.41	314.94	5,123.52	193	30,809	
Multiform	Active	2.0	18.0	6,890.95	6,986.32	8,545.73	277.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22,700.49	1,261	2,522	

Muniz & Padilha	Active	5.0	13.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	287.86	1,931.58	1,564.80	1,424.70	772.11	5,981.05	450	2,249	
Nelson Moraes de Camargo	Active	30.0	9.9	15.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.53	2	47	
Neri Antonio Chiodelli Junior	Inactive	160.0	12.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Nery Nunes de Carvalho	Active	100.0	13.3	0.00	20.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.71	2	155	
Neuri A. Chiodelli	Inactive	160.0	16.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Neuri Carlos Telles	Inactive	88.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Neuza Bianchini Arruda	Inactive	90.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Nilton Sabatini	Inactive	20.0	8.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Nilvo Santo Crestani	Active	3.0	13.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	267.14	210.00	0.00	477.14	35	105	
NP Madeiras	Active	180.0	15.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Olimpio Antonio Candiago	Active	40.0	9.9	18.82	9.52	28.35	7.26	9.91	0.00	22.21	12.16	8.11	73.10	42.81	23.38	255.65	26	1,038	
Olimpyo	Inactive	24.0	13.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Orestes Macedo da Luz	Inactive	55.0	12.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
P & P Móveis de Confeccões Ltda	Active	5.0	15.0	1,076.07	1,160.63	1,575.01	1,180.94	1,499.21	1,397.17	1,507.90	923.36	1,349.54	1,801.91	1,729.40	950.53	16,151.67	1,074	5,370	
Pandolfo	Active	3.0	10.9	1,338.95	1,065.44	1,348.27	947.88	619.60	890.29	729.11	694.93	1,166.53	1,123.83	1,140.06	695.54	11,760.43	1,077	3,230	
Paulino Granzotto	Inactive	16.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Paulo Afonso Leal Narciso	Inactive	80.0	17.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Paulo Cesar da Costa	Inactive	40.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Pedro de Quadra da Cruz	Active	150.0	14.9	0.00	66.99	22.30	132.72	23.82	177.68	145.62	14.43	18.51	0.00	0.00	0.00	602.08	41	6,079	
Pinus Bom Jesus	Active	360.0	25.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.50	0.00	0.00	0.00	17.50	1	252	
Pinus Forte	Inactive	3.0	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Pinusbras	Inactive	5.0	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Pisani	Active	18.0	14.9	169.36	93.86	114.51	131.85	143.66	101.27	148.53	85.98	217.91	368.96	422.09	239.16	2,237.15	151	2,711	
Polese	Inactive	26.0	7.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Prefeitura de Lages	Active	14.0	14.8	0.00	0.00	0.00	7.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.85	1	7	
Prime Timber	Inactive	220.0	17.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Raul Antonio Favero	Active	150.0	16.3	134.31	0.00	229.85	67.63	188.99	178.01	78.42	150.50	205.09	420.43	362.41	149.20	2,164.83	133	19,952	
Ravazin	Inactive	20.0	24.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Resíduos Bioenergia	Inactive	400.0	18.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Righez	Inactive	50.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
RP Madeiras Ind. e Com. Ltda	Active	30.0	15.5	425.49	286.69	391.15	303.51	375.84	392.93	382.39	290.58	338.03	492.18	568.41	301.66	4,548.87	294	8,829	
Sart	Inactive	78.0	10.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Sérgio Bochart	Inactive	58.0	15.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Sérgio Luiz Bogorni	Inactive	50.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Serraria Campos de Palmas S.A	Inactive	70.0	4.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Silvio Muinz Matos	Inactive	80.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Tributto	Inactive	30.0	12.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Turbina	Inactive	130.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
União Fosforeira	Inactive	150.0	13.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Valdeci Nunes de Carvalho	Inactive	60.0	14.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Victorio Genuino Agostini	Inactive	30.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Vilmar Laudelino Ferreira	Inactive	66.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Vilso Isidoro	Active	40.0	15.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	205.20	411.35	749.96	574.62	142.57	2,083.69	137	5,475	
Wilson de souza Machado	Inactive	110.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
Zilda Eliza Letti Pelizzaro	Active	120.0	14.2	0.00	60.43	14.42	107.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	182.59	13	1,544	
Total					15,842.00	15,250.00	17,779.00	15,048.00	19,873.00	19,569.00	19,805.00	14,567.00	19,013.00	28,702.00	27,946.00	15,476.00	228,870	13,620	321,059

Weighted average round trip distance to Lages Project [AC=AZ/AY]

= 23.6 km

Weighted average truck capacity [AD=A/AY]

= 16.8 tonnes

PURCHASED AMOUNTS IN 2010

Wood waste suppliers	Purchased wood waste amount (tonnes/month)																		Total purchased amount (tonnes/year)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec							
Battistella		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Sofia		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Adelia Tealdi	0.00	0.00%	0.00	0.00%	16.63	0.12%	15.48	0.11%	32.68	0.24%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	
Adelina Vieira dos Santos		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Adilson Tadeu Coelho		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Adriano Schweitzer da Silveira	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	18.25	0.10%	220.48	1.32%	217.59	1.38%	0.00%	
Agro Comercial Zandonadi Ltda.		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Agro Florestal Paquerê		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Agroflorestal Serrana		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Alecir de Jesus		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Alcides Inaldo Ramos Rosa		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Aldo Silveira flores		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Alexandre Coelho de Oliveira	284.81	2.43%	336.32	2.87%	424.47	3.01%	432.72	3.10%	370.22	2.68%	403.61	2.68%	479.21	3.03%	378.87	2.18%	418.38	2.50%	
Altair Benício Luz		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Anderson Chaves Pucci		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Antonio Amarante		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Antonio Carlos de Liz Stefan		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Antonio Ermar Garcia e/ou Maria Ilza G.		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Apretex Madeiras	122.57	1.05%	277.29	2.37%	22.77	0.16%	212.21	1.52%	217.96	1.58%	233.55	1.55%	131.59	0.83%	205.06	1.18%	341.77	2.05%	
Araupel		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Aristides Araújo		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Arno Tillmann		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Arno Volni Arrada		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Benjamin Luiz Valentini		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Biopine Madeiras Ltda	139.69	1.19%	101.42	0.87%	114.62	0.81%	148.19	1.06%	16.47	0.12%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	
Blue Forest Comercial Importadora LTDA	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	946.83	5.98%	1,266.73	7.28%	141.59	0.85%	716.87	4.13%	
Bou Esperança Matriz	911.27	7.78%	1,119.47	9.55%	1,011.97	7.17%	1,155.72	8.29%	1,408.80	10.21%	1,875.05	12.46%	1,516.41	9.58%	1,650.14	9.48%	1,429.93	8.56%	
Bou Esperança Paquerê	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.10%	0.00	0.00%	
Bonete Madeiras		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Brazilian Pine		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Brazimoveis		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Bratolino Madeiras Ltda.		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Celso Pedro Paese		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Claudio Paes		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Cleiso Kauling		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Clóvis Arruda Vieira	41.60	0.35%	12.94	0.11%	25.20	0.18%	28.34	0.20%	0.00	0.00%	0.00	0.00%	14.90	0.09%	0.00	0.00%	0.00	0.00%	
Coesa Agroflorestal		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Comboni		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Comércio de Madeira Beija Flor Ltda	649.79	5.54%	698.59	5.96%	947.15	6.72%	828.45	5.94%	656.40	4.76%	515.55	3.43%	290.12	1.83%	0.00	0.00%	0.00	0.00%	
Cooperativa Agropecuária de Tubarão		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Darley Pedro Martini		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Deleize Maria Zanotto Della Giustina		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Diogo Jaques Venturini	7.48	0.06%	0.00	0.00%	18.81	0.13%	31.89	0.23%	29.17	0.21%	19.92	0.13%	30.93	0.20%	24.94	0.14%	36.22	0.22%	
Dinda Ind. e Com. de Madeiras Ltda		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Dirlete Terezina Pereira		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Domingos da Silva Martins		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Edemar Antonio Rosseto	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	66.29	0.48%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	
Eder Roberto Monn		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Edeschons		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.		

"Torete" amount purchased from Battistella	=	0.00 tonnes/year	Percentage of "Torete" in the wood waste purchased from Battistella	=	0.00%
"Torete" amount purchased from Sofia	=	0.00 tonnes/year	Percentage of "Torete" in the wood waste purchased from Sofia	=	0.00%
"Torete" amount purchased from Spot Market	=	14,876.93 tonnes/year	Percentage of "Torete" in the wood waste purchased from Spot Market	=	8.07%

CONSUMED AMOUNTS IN 2011

Wood waste suppliers	Status (Active/Non- active)	Round trip distance to Lages Project (km) [AW]	Truck Capacity (tonnes) [AX]	Consumed wood waste amount (tonnes/month)												Total consumed amount (tonnes/year) [A]	Travels (un./year) [AY=A/AX]	Total travelled distance (km/year) [AZ=AW*AY]
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Battistella	Inactive	2.0	14.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Sofia	Inactive	4.0	4.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adelia Tealdi	Inactive	90.0	13.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adelina Vieira dos Santos	Inactive	12.0	11.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adilson Tadeu Coelho	Inactive	60.0	6.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Adriano Schweitzer da Silveira	Inactive	24.0	18.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Agro Comercial Zandonadi Ltda.	Inactive	200.0	16.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Agro Florestal Paequerê	Inactive	80.0	16.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Agroflorestal Serrana	Inactive	146.0	18.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Alceir de Jesus	Inactive	27.0	18.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Alcides Inaldo Ramos Rosa	Inactive	27.0	9.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Aldo Silveira flores	Inactive	22.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Alexandre Coelho de Oliveira	Active	14.0	11.1	447.57	494.61	372.90	370.43	329.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,015.13	182	2,549
Altair Benício Luz	Inactive	120.0	10.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Anderson Chaves Pucci	Inactive	38.0	10.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Antonio Amarante	Inactive	70.0	17.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Antonio Carlos de Liz Stefen	Inactive	30.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Antonio Ernar Garcia e/ou Maria Ilza G. Ga	Inactive	80.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Apretec Madeiras	Active	4.0	7.3	296.26	392.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	689.12	95	380
Araupel	Inactive	160.0	30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Aristides Araujo	Inactive	10.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Arno Tillmann	Inactive	52.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Arno Volni Arruda	Inactive	52.0	16.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Benjamin Luiz Valentini	Inactive	80.0	15.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Biopine Madeiras Ltda	Inactive	160.0	25.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Blue Forest Comercial Importadora LTDA	Active	5.0	13.0	1,128.25	1,369.16	1,115.19	1,139.94	1,226.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,978.92	460	2,300
Boa Esperança Matriz	Active	50.0	13.0	1,439.42	1,723.05	1,423.47	1,527.85	1,675.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,789.71	599	29,951
Boa Esperança Paiquerê	Inactive	146.0	14.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Bonete Madeiras	Inactive	160.0	36.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Brazilian Pine	Inactive	2.0	12.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Brazimoveis	Inactive	160.0	13.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Caratino Madeiras Ltda.	Inactive	420.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Celso Pedro Paese	Inactive	30.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Claudio Paes	Inactive	30.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Clesio Kauling	Inactive	70.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Clóvis Arruda Vieira	Inactive	50.0	16.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Coesa Agroflorestal	Inactive	68.0	13.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Comboni	Inactive	160.0	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Comércio de Madeira Beija Flor Ltda	Inactive	5.0	14.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Cooperativa Agropecuária de Tubarão	Inactive	460.0	24.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Darley Pedro Martini	Inactive	80.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Delcize Maria Zannotto Della Giustina	Inactive	160.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Dinda Ind. e Com. de Madeiras Ltda	Active	5.0	5.1	44.76	26.39	8.45	16.95	7.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	104.10	20	101
Diogo Jaques Ventrini	Inactive	120.0	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Dirlete Terezina Pereira	Inactive	52.0	16.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Domingos da Silva Martins	Inactive	30.0	21.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Edemar Antonio Rosseto	Inactive	60.0	13.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Eder Roberto Monn	Inactive	70.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Edeschons	Inactive	5.0	4.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Extrapac	Inactive	10.0	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
F. Klann	Inactive	60.0	8.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Finance Comercial	Inactive	72.0	14.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Floko	Inactive	100.0	16.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0

Muniz & Padilha	Active	5.0	13.3	1,067.01	966.67	868.53	599.74	780.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,282.18	322	1,610
Nelson Moraes de Camargo	Inactive	30.0	9.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Neri Antonio Chiodelli Junior	Inactive	160.0	12.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Nery Nunes de Carvalho	Inactive	100.0	13.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Neuri A. Chiodelli	Inactive	160.0	16.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Neuri Carlos Telles	Inactive	88.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Neuza Bianchini Arruda	Inactive	90.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Nilton Sabatini	Inactive	20.0	8.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Nilvo Santo Crestani	Active	3.0	13.6	146.53	0.00	82.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.25	17	51
NP Madeiras	Active	180.0	15.7	37.38	0.00	0.00	0.00	155.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	192.44	12	2,202
Olimpio Antonio Candiago	Active	40.0	9.9	17.27	0.00	16.40	9.72	8.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.21	5	212
Olimpyo	Inactive	24.0	13.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Orestes Macedo da Luz	Inactive	55.0	12.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
P & P Móveis de Confeções Ltda	Active	5.0	15.0	1,410.53	1,491.86	1,148.33	1,112.19	1,069.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,232.78	414	2,072
Pandolfo	Active	3.0	10.9	811.04	423.34	493.30	775.95	866.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,370.03	308	925
Paulino Granzotto	Inactive	16.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Paulo Afonso Leal Narciso	Inactive	80.0	17.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Paulo Cesar da Costa	Inactive	40.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pedro de Quadra da Cruz	Inactive	150.0	14.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pinus Bom Jesus	Inactive	360.0	25.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pinus Forte	Inactive	3.0	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pinusbras	Inactive	5.0	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Pisani	Active	18.0	14.9	204.42	313.97	166.47	67.00	97.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	849.29	57	1,029
Polese	Inactive	26.0	7.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Prefeitura de Lages	Active	14.0	14.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Prime Timber	Inactive	220.0	17.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Raul Antonio Favero	Active	150.0	16.3	125.62	161.82	120.37	167.74	225.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	800.65	49	7,379
Ravazin	Inactive	20.0	24.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Resíduos Bioenergia	Inactive	400.0	18.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Righez	Inactive	50.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
RP Madeiras Ind. e Com. Ltda	Active	30.0	15.5	384.47	354.15	363.62	377.91	381.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,861.94	120	3,614
Sart	Inactive	78.0	10.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Sérgio Bochart	Inactive	58.0	15.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Sérgio Luiz Bogorni	Inactive	50.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Serraria Campos de Palmas S.A	Inactive	70.0	4.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Silvio Muinz Matos	Inactive	80.0	15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Tributto	Inactive	30.0	12.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Turbina	Inactive	130.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
União Fosforeira	Inactive	150.0	13.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Valdeci Nunes de Carvalho	Inactive	60.0	14.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Victorio Genuino Agostini	Inactive	30.0	14.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Vilmar Laudelino Ferreira	Inactive	66.0	16.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Vilso Isidoro	Inactive	40.0	15.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Wilson de souza Machado	Inactive	110.0	15.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Zilda Eliza Letti Pelizzaro	Inactive	120.0	14.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Total				17,939.00	17,293.00	15,095.00	15,884.00	17,230.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83,441	4,956	117,707

Weighted average round trip distance to Lages Project [AC=AZ/AY]

= 23.8 km

Weighted average truck capacity [AD=A/AY]

= 16.8 tonnes

PURCHASED AMOUNTS IN 2011

Wood waste suppliers	Purchased wood waste amount (tonnes/month)												Total purchased amount (tonnes/year)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Battistella		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sofia		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adelia Tealdi		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adelina Vieira dos Santos		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adilson Tadeu Coelho		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adriano Schweizer da Silveira		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Agro Comercial Zandonadi Ltda.		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Agro Florestal Pacquerê		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Agroflorestal Serrana		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Alecir de Jesus		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aleides Inaldo Ramos Rosa		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aldo Silveira flores		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Alexandre Coelho de Oliveira	382.68	2.49%	393.98	2.86%	399.31	2.47%	324.55	2.33%	307.90	1.91%			1,808,424
Altair Benicio Luz		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Anderson Chaves Pucci		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Antonio Amarante		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Antonio Carlos de Liz Stiefen		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Antonio Emar Garcia e/ou Maria Ilza G. Garcia		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Apreto Madeiras	253.31	1.65%	312.93	2.27%	0.00	0.00	0.00	1.65%	0.00	0.00	0.00	0.00	566,242
Araupê		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aristides Araujo		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Arno Tillmann		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Arno Volni Arruda		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Benjamin Luiz Valentini		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Biopine Madeiras Ltda		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Blue Forest Comercial Importadora LTDA	964.68	6.29%	1,090.61	7.92%	1,194.18	7.39%	998.75	7.18%	1,145.54	7.12%			5,393,763
Boa Esperança Matriz	1,230.74	8.02%	1,372.50	9.96%	1,524.30	9.43%	1,338.61	9.62%	1,565.44	9.73%			7,031,599
Boa Esperança Pauquerê		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bonete Madeiras		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Brazilian Pine		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Brazimoveis		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Carauño Madeiras Ltda.		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Celso Pedro Paese		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Claudio Paes		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cleio Kailling		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Clóvis Arruda Vieira		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coesa Agroflorestal		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Comboni		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Comércio de Madeira Beija Flor Ltda		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cooperativa Agropecuária de Tubarão		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Darley Pedro Martini		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Delcize Maria Zanotto Della Giustina		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dinda Ind. e Com. de Madeiras Ltda	38.27	0.25%	21.02	0.15%	9.05	0.06%	14.85	0.11%	7.05	0.04%			90,240
Diogo Jaques Ventorini		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dirlete Terezina Pereira		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Domingos da Silva Martins		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Edemar Antonio Rosseto		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Eder Roberto Monn		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Edeschons		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Extrapac		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
F. Klann		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Finance Comercial		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Floko		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Flora Pinus		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Genilda Correa		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Germino Vargas		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gerson Coimbra de Figueiredo Filho		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Getulio Alves de Oliveira	47.20	0.31%	0.00	0.00%	0.00	0.00%	128.65	0.92%	0.00	0.00%			175,850
Gilberto Muniz Lima	413.32	2.69%	0.00	0.00%	310.77	1.92%	393.38	2.83%	233.84	1.45%			1,351,310
Gilmar Guanabara		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gilmar Sasso Correia		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
GR Biomassa Ltda	6,063.87	39.53%	5,671.91	41.18%	6,203.99	38.38%	5,579.81	40.09%	5,973.87	37.12%			29,493,450
Incohabit Madeiras Ltda		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Indupinho		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Indusflora		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Istelio José Souto-Maior Camargo		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ivo Agostinetto	27.60	0.18%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%			27,600
J.A. Maines		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Jacy Jose tomazi	306.36	2.00%	0.00	0.00%	311.30	1.93%	303.03	2.18%	204.19	1.27%			1,124,880
Jair Philippi	634.10	4.13%	414.94	3.01%	605.47	3.75%	462.63	3.32%	807.18	5.02%			2,924,320
Jair Philippi Filho		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Janderson		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Jaquirana		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
JJ Thomazi		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Jolo Lima de Andrade		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Jolo Luis Ronsoni	15.05	0.10%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%			15,050
Jolo Raimundo colombo		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Joaquim da Silva Pacheco		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Jose Alhanir Ferreira da Silva		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Jose Alexandre Coelho		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Jose Alhenir		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Jose Canozio Alves Pereira	0.00		0.00		0.00		0.00		31.62										0.000	0.00%
Jose de Souza		0.00%		0.00%		0.00%		0.00%		0.20%		0.00%		0.00%		0.00%		0.00%	31.620	0.04%
Jose Mariano da Silva		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Juliano Sérgio Lopes		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Klabin		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Laminadora Catarinense		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Lopes		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Lucemar Schmitz		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Luiz Antonio Simaniglio		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Luiz Fernando Figueiredo		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Mad. Nossa Senhora de Lourdes Ltda		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madbras		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madhebampi		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madebins		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madeira Boa Parada		0.00%	54.55		44.23		0.27%	42.26		0.30%		70.37		0.44%		0.00%		0.00%	211.410	0.28%
Madeira JTT Ltda	496.80	3.24%	405.61		498.67		3.09%	507.57		3.65%		996.47		6.19%		0.00%		0.00%	2,905.120	3.86%
Madeira Lajes		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madeira Norte Pontalense		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madeira Santa Paulina		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madeira Santa Rita		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Madeira Trevo Ltda	45.20	0.29%	0.00		0.00		0.00%	0.00		0.00%		0.00		0.00%		0.00%		0.00%	45.200	0.06%
Madepar	582.71	3.80%	717.17		1,087.96		6.73%	625.44		4.49%		830.68		5.16%		0.00%		0.00%	3,843.960	5.11%
Magdalena Presser Einstfeld		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Malke		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Marcos Narciso Agostini		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Marcus Aristoteles Zilli		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Martins		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Mengatto		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Mercedes Webber dos Santos		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
MJ Madeiras		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
MS Madeiras Ltda	241.64	1.58%	362.91		484.35		3.00%	472.10		3.39%		571.66		3.55%		0.00%		0.00%	2,132.660	2.83%
Multiform		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Muniz & Padilha	912.32	5.95%	770.00		930.05		5.75%	525.46		3.78%		728.80		4.53%		0.00%		0.00%	3,866.632	5.14%
Nelson Moraes de Camargo		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Neri Antonio Chiodelli Junior		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Nery Nunes de Carvalho		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Neuri A. Chiodelli		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Neuri Carlos Telles		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Neuza Bianchini Arruda		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Nilton Sabatini		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Nílvo Santo Crestani	125.29	0.82%	0.00		88.57		0.55%	0.00		0.00%		0.00		0.00%		0.00%		0.00%	213.860	0.28%
NP Madeiras	31.96	0.21%	0.00		0.00%		0.00%	0.00		0.00%		144.84		0.90%		0.00%		0.00%	176.800	0.23%
Olimpio Antonio Candiago	14.77	0.10%	0.00		17.56		0.11%	8.52		0.06%		8.23		0.05%		0.00%		0.00%	49.080	0.07%
Olimpio		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Orestes Macedo da Luz		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
P & P Móveis de Confecções Ltda	1,206.04	7.86%	1,188.34		1,229.67		7.61%	974.44		7.00%		999.34		6.21%		0.00%		0.00%	5,597.834	7.44%
Pandolfo	693.46	4.52%	337.21		528.24		3.27%	679.84		4.89%		809.30		5.03%		0.00%		0.00%	3,048.050	4.05%
Paulino Granzotto		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Paulo Afonso Leal Narciso		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Paulo Cesar da Costa		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Pedro de Quadra da Cruz		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Pinus Bom Jesus		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Pinus Forte		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Pinusbras		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Pisani	174.78	1.14%	250.09		178.26		1.10%	58.70		0.42%		91.02		0.57%		0.00%		0.00%	752.850	1.00%
Polese		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Prefeitura de Lages		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Prime Timber		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Raul Antonio Favero	107.41	0.70%	128.90		128.90		0.80%	146.96		1.06%		210.26		1.31%		0.00%		0.00%	722.430	0.96%
Ravazini		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Resíduos Bioenergia		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Righez		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
RP Madeiras Ind. e Com. Ltda	328.73	2.14%	282.10		389.38		2.41%	331.10		2.38%		356.62		2.22%		0.00%		0.00%	1,687.934	2.24%
Sart		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Sérgio Bochert		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Sérgio Luiz Bogorni		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Serraria Campos de Palmas S.A		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Silvio Muniz Matos		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Tributo		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Turbina		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
União Fosforeira		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Valdeci Nunes de Carvalho		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Victorio Genuino Agostini		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Vilmar Laudelino Ferreira		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Visio Isidoro		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Wilson de souza Machado		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Zilda Eliza Letti Pelizzaro		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	0.000	0.00%
Total	15,338.30	100.00%																		