

5. Respecting the Environment

5.1. Introduction

The Group's Companies continuously seek to minimize the environmental impacts along their respective supply chains as well as to promote more sustainable production and consumption practices.

The Environmental Management practised in the Group is defined in its Environmental Policy, available for consultation in the "Responsibility" area at www.jeronimomartins.pt.

Main Environmental Impacts

In 2015, the Group's Companies continued their efforts to reduce the environmental impacts resulting from:

- water and energy consumptions;
- waste production;
- atmospheric emissions and consumption of fossil fuels.

Environmental Audits

In 2015, 370 internal environmental audits were conducted on stores and Distribution Centres (DC) in Portugal and Poland to ensure their compliance with legal requirements and with the Group's internal Environmental Management procedures. This figure represents an increase of 59% compared to 2014. In Portugal, 314 internal environmental audits were carried out, while in Poland this figure amounted to 56 audits.

Corrective actions were defined whenever the score obtained in the audits was less than 100%.

Environmental Certification

The Environmental Management Systems implemented are based on the ISO 14001:2012 international standard. The Group has been constantly investing in the certification of its DC. In Portugal, the number of DC with this certification remained at four (Azambuja, Vila do Conde, Guardéiras and Algoz) out of a total of nine. In Poland, 13 of the 15 existing DC were awarded this certificate at the start of 2015.

In 2015, all the Polish DC renewed their certification for handling organic products, according to EC Regulation 834/2007.

In Poland, the head-office was once again awarded the "Green Office" certificate by the Environmental Partnership Foundation, a recognition that distinguishes organizations that implement measures in order to reduce their environmental impacts, such as energy efficiency solutions. In 2015, a reduction of 66,307 MWh in energy consumption was achieved in the building.

5.2. Biodiversity

The Group plays a role in protecting the biological diversity on which it depends, identifying opportunities for getting involved and engaging, whenever possible, other partners in the supply chain, such as the suppliers.

In the last five years, the assessment that we made of the risks linked to different ecosystem services has been based on the Ecosystem Services Review (ESR) methodology, proposed by the World Research Institute (WRI). Reviewed in 2014, 11 priority action areas are currently defined, promoting projects to support the Group's management systems and practice, namely:

- information management;
- training;
- partnerships with suppliers; and
- research and development.

Within the scope of the threats and opportunities identified, and following a study undertaken about the 10 most sold and relevant species of fish in terms of biomass for the Group in Portugal, a risk assessment was also carried out on the species of fish sold in Biedronka. These analyses carried out in Portugal and Poland showed that none of the species are at high risk, after considering aspects such as the level of stock exploitation, impacts on the ecosystems, traceability, the impacts on surrounding communities and working conditions.

With regard to farming, a manual was drawn up along with our partners to encourage sustainable farming practices, curb the loss of biodiversity and eliminate the existence of invasive species. This manual will be tested and validated in 2016 with Portuguese producers, enabling an alignment of training on sustainable farming practices and the future widespread use of the manual by the Group's suppliers.

5.3. Climate Change

Data from the Intergovernmental Panel on Climate Change³ show that climate change may impact farming productivity and, consequently, price stability and security of supply.

For this reason, the approach of the Group is focused on adopting responsible and proactive behaviour, as seen in the measures to reduce energy consumption and to minimise greenhouse gas emissions from logistics processes or from refrigeration gases, for example, as well as in promoting measures related to commodities which are associated with the risk of deforestation⁴.

³ Information published in 2014 in the 5th Assessment Report from the Intergovernmental Panel on Climate Change, available for public consultation at www.ipcc.ch/report/ar5/syr/.

⁴ To learn about our initiatives related to commodities, which are associated with the risk of deforestation, refer to sub-chapter 6 – "Sourcing Responsibly" in this chapter.

5.3.1. Carbon Footprint

In 2015⁵, within the entire Group, the carbon footprint was estimated at 1,100,969 equivalent tonnes of carbon dioxide (CO₂e), which shows an increase of 1.1% compared to 2014⁶, which is justified, mainly, by the Group's growth in the number of stores and Distribution Centres. On the other hand, the specific value decreased from 0.086 to 0.081 equivalent tonnes of carbon for every thousand euros of sales.

Carbon Footprint - Indicators	2015	2014	Δ2015/2014
Overall value (scope 1 & 2) – t CO ₂ e ⁷	1,100,906	*1,088,899	+1.1%
Specific value (scope 1 & 2) – t CO ₂ e/’000 €	0.081	*0.086	-5.8%

Carbon Footprint - Indicators	2015 (t CO ₂ e)	2014 (t CO ₂ e)	Δ2015/2014
Overall Carbon Footprint (scope 1 and 2)⁸			
• Distribution Portugal	261,921	*316,466	-17.2%
• Distribution Poland	815,770	*770,313	+5.9%
• Distribution Colombia	23,215	*2,120	+995.0%
Carbon Footprint (scope 1 – direct impacts)			
• Leakage of refrigeration gases	158,097	*222,585	-29.0%
• CO ₂ usage	16,646	-	-
• Fuel consumption	48,708	*44,625	+9.1%
• Light vehicle fleet	14,490	15,933	-9.1%
Carbon Footprint (scope 2 – indirect impacts)			
• Electricity consumption (location-based)	729,126	-	-
• Electricity consumption (market-based)	844,116	787,314	+7.2%
• Heating (location-based)	18,849	*18,442	+2.2%
Carbon Footprint (scope 3 – other indirect impacts)			
• Transport of goods to stores (Distribution)	141,304	*140,908	+0.3%
• Disposal of waste in landfills	18,852	47,431	-60.3%
• Organic waste composting	833	-	-
• Energy consumption in franchising stores	10,750	-	-
• Air travel by employees	1,631	2,007	-18.7%

* Corrected figures as a result of the external Carbon Footprint certification audit.

Notes: Calculation of the carbon footprint of the different activities is made using the three levels of the World Business Council for Sustainable Development (WBCSD) Greenhouse Gases Protocol method: direct, indirect and third party. The values presented take into account emission factors defined by the IPCC – Intergovernmental Panel on Climate Change (for refrigeration gases), by the Portuguese Directorate-General for Energy and Geology, by the Environmental Protection Agency and by the Krajowy Ośrodek Bilansowania i Zarządzania Emisjami (Polish Centre for Emission Balance and Management, for fuels and heating), by the International Energy Agency and by the suppliers (electricity) and in the Greenhouse Gases Protocol (air travel and waste). The emissions related to the area of Marketing, Representations and Restaurant Services and the Jerónimo Martins Agro-Food dairy products unit were not included (it is estimated that they represent less than 1% of total emissions).

5.3.2. Water and Energy Consumptions

The rationalization of water and energy consumptions is one of the Group's commitments in the fight against climate change, encouraging initiatives to minimize inefficiencies in the use of these resources and, as a result, safeguarding their future sustainability and also obtaining financial savings.

⁵ The Carbon Footprint values for the year 2015 were verified by Pricewaterhouse&Coopers consultancy firm, an external and independent body. The document concerning the process of certification is available in the "Responsibility" area at www.jeronimomartins.pt.

⁶ The overall and specific values for 2014 were reclassified compared to those reported in the 2014 Annual Report due to the external Carbon Footprint verification process. This process was carried out by Pricewaterhouse&Coopers.

⁷ Scope 2 emissions concern location-based (heating) and market-based (electricity) type emission factors, according to the table "Carbon Footprint – Indicators".

⁸ *Idem*.

The “Water and Energy Consumption Management Teams”, a project started in Portugal in 2011, achieved a reduction of these consumptions of 376,119 m³ and 16,564,720 kWh in these five years. This project, which is promoted through monthly challenges and internal benchmarking, has obtained an accumulated saving of over 2.4 million euros since its implementation.

The increases in the consumption of water and energy in Colombia are due to growth of around 65% in the number of stores compared to 2014. Also in Poland the increase of the number of infrastructures as well as the investment in Perishables products led to an overall increase in the consumption of water.

In Portugal, the increase recorded in energy and water consumptions was mainly due to the opening of new Pingo Doce stores.

Energy consumption

Total consumption	2015	2014	Δ2015/2014
Energy consumption			
• Absolute value – GJ	6,015,375	*6,204,792	-3.1%
• Specific value – GJ/’000 €	0.438	*0.488	-10.2%
Energy consumption per business unit			
• Distribution Portugal – GJ	1,859,034	*1,826,106	+1.8%
• Distribution Poland – GJ	4,053,998	*4,223,774	-4.0%
• Distribution Colombia – GJ	67,046	*33,523	+100.0%
• Others (estimate) – GJ	35,296	*39,156	-9.9%

*The 2014 figures were corrected as a result of the external Carbon Footprint certification audit.

Algoz Distribution Centre

After nearly two years of operations at the Algoz Distribution Centre, in the municipality of Silves and designed to supply the Southern region of Portugal, it is possible to see positive results with regard to energy consumptions.

In 2015, there was a reduction, compared to the same period of 2014, of 10.8%, which is equivalent to an energy consumption of 122 Portuguese households during one year.

Water consumption

Total consumption	2015	2014	Δ2015/2014
Water consumption			
• Absolute value – m³	2,257,890	*2,161,734	+4.4%
• Specific value – m³/’000	0.164	*0.170	-3.5%
Water consumption per business unit			
• Distribution Portugal – m³	1,583,033	*1,578,892	+0.3%
• Distribution Poland – m³	622,378	545,969	+14.0%
• Distribution Colombia – m³	39,230	23,584	+66.3%
• Others (estimate) – m³	13,249	*13,289	-0.3%

* The values of 2014 were corrected.

Renewable Energies

Technology	No. buildings	Energy saving/year	CO ₂ saving/year
Lamp posts powered by photovoltaic panels	1	72,000 kWh	36 t
Tubular solar light transporting system	19	119,397 kWh	59 t
Solar collectors to produce hot water used for heating water and/or in the air conditioning system	16	284,505 kWh	120 t
Passive air conditioning through the soil	11	1,159,378 kWh	395 t

Investment in renewable energies, which has resulted in increasing the number of buildings with tubular solar light transporting system, solar collectors to produce hot water and passive air conditioning systems through the soil, has enabled annual savings of over 1.56 million kWh, equivalent to approximately 65 thousand euros.

5.3.3. Reduction of Environmental Impacts Resulting from Logistics Processes

As part of our commitment to reducing the environmental impacts linked to the logistics processes throughout the value chain by minimising the consumption of raw materials and energy resources and reducing the amount of emissions and waste, the following actions were implemented in 2015:

Emissions in Distribution

- In Portugal, 65% of the goods transport vehicles complied with the Euro 5 requirements (197 vehicles) and Euro 6 requirements (18 vehicles). In Poland, 89% of the goods transport vehicles complied with the Euro 5 requirements (763 vehicles) and Euro 6 requirements (160 vehicles);
- In Poland, the first hybrid truck, Fuso Canter Eco Hybrids, part of Biedronka's exclusive fleet, is being tested (the first results show a reduction in fuel consumption). There are also two trucks in this fleet running on compressed natural gas, which has enabled a reduction in emissions of air pollutants;
- The backhauling operation in Poland (see box) entailed a total of 299,892 pallets collected, 160% more than in 2014, which resulted in a saving of 800,505 km and a reduction of 657 tonnes of CO₂ air emissions. In Portugal, this operation involved a volume of 218,189 pallets, leading to a saving of 3,364,369 km, thereby avoiding the emission of the equivalent of 2,923 tonnes of CO₂. This figure showed a 72% reduction in pallets collected compared to 2014.

Backhauling operation

Aware of the impact of its logistics activity, which is the heart of its distribution business, the Group has invested in measures to enhance efficiency in this area.

The backhauling operation is one of such measures, and consists of route optimization and load maximization, collecting empty pallets on return trips from its stores as well as the Group's suppliers.

In Portugal and Poland, this transaction has, since 2010, resulted in a volume of 2.17 million pallets collected, resulting in a saving of 30.7 million kilometres. The equivalent CO₂ emissions avoided correspond to 28,874 tonnes.

Reusable Packaging

In Portugal, the use of reusable plastic boxes in the Perishables and Dairy areas represented 14% of the total boxes handled, 0.4 p.p. less than in 2014. In Poland, a project to use reusable plastic boxes (around five thousand units) to package small electronic equipment was started. In Colombia, the use of reusable transportation boxes for bottled water (over three thousand units) began.

5.3.4. Management of Refrigeration Gases

The Group has been reinforcing the control of leaks, using more efficient technology and co-operating with service providers in the refrigerated and air-conditioned areas, with the aim of minimising the impact of these gases on climate change. Investments in natural refrigeration gases have been made both in Portugal and in Poland:

- in Poland, the 15 Biedronka DC have cooling systems installed with thermal roll-containers with CO₂ snow. In Portugal, the same system is in operation in the Algoz DC;
- cooling technologies are installed which run exclusively on CO₂ (three stores in Portugal and two DC in Poland);
- five DC (four in Portugal and one in Poland) have refrigerated warehouses (positive and/or negative cold) with systems running on ammonia combined with glycol;
- there are 101 stores in Portugal which have refrigeration systems using R-134A combined with glycol and one store has a cascade refrigeration system (R-134A combined with CO₂ gas);
- there are also 150 stores in Portugal which have freezers that use only propane;
- in Poland, the centralized refrigerator system for 700 stores uses the R407f refrigerant gas, replacing R404a, resulting in a reduction of over 50% in GWP⁹ and, therefore, causing less impact on global warming;
- in Poland, three trucks use CO₂ as a refrigerant gas and R404a gas has been replaced by R452a gas in 219 trucks (having a GWP almost 50% lower than the former).

5.3.5. Rationalisation of Paper Consumption

Throughout the year, projects were developed aimed at reducing paper consumption and promoting the use of paper from sustainably managed forest resources.

Some measures, such as electronic invoice management, enabled a saving of more than 6.5 million sheets of paper, i.e., a total of 778 trees.

In Poland, the paper used in the central offices is "European Ecolabel" certified and in Colombia, it is manufactured from cane sugar. In Portugal, the paper is Forest Stewardship Council (FSC) certified and comes from suppliers with ISO 14001 certification.

In Portugal and in Poland, the paper used for printing the banners' magazines is Programme for the Endorsement of Forest Certification (PEFC) certified or FSC and/or the companies producing it have ISO 14001 certification. This Annual Report will also be produced at printers with FSC certified paper.

⁹ GWP is the acronym for Global Warming Potential.

The paper used for brochures for the Pingo Doce banner is "European Ecolabel" or FSC or PEFC certified.

5.4. Waste Management

The awareness of employees, customers and surrounding communities regarding the prevention and minimization of waste generation, as well as its correct separation, aims to contribute to its recovery and the saving of natural resources.

Waste Recovery Rate

	2015	2014	Δ2015/2014
Distribution – Global	81.9%	82.5%	-0.6 p.p.
Distribution – Portugal	59.2%	58.2%	+1.0 p.p.
Distribution – Poland	88.5%	89.5%	-1.0 p.p.
Distribution – Colombia	85.2%	90.0%	-4.8 p.p.

The waste recovery rate was of 81.9%, a value that represents a decrease of 0.6 percentage points when compared to 2014.

5.4.1. Characterisation of Waste

In 2015, the Group produced 387,648 tonnes of waste, which represents an increase of 15% compared to 2014. This evolution was due to the growth of the store network.

Waste	Distribution Portugal (t)		Distribution Poland (t)		Distribution Colombia (t)	
	2015	2014	2015	2014	2015	2014
Cardboard and Paper	32,732	30,106	187,183	163,141	2,089	1,291
Plastic	2,262	2,178	8,583	8,133	126	82
Wood	248	509	1,804	2,079	26	-
Organic waste	3,888	3,880	64,344	56,757	-	-
Unsorted waste	41,552	34,680	34,406	27,212	214	131
Cooking Oil and Fats	221	141	-	-	-	-
Waste from Effluent Treatment	4,382	3,557	-	-	176	22
Hazardous Waste	16	8	13	35	-	-
Other Waste	1,492	775	1,891	2,268	-	-

5.4.2. Customer Waste Recovery

The following were the most important projects in 2015:

- the network of Pingo Doce recycling bins covered 359 stores, which was 90% of the store network;
- coffee capsules and lids/corks/bottle tops that were recovered, resulted in more than three thousand euros being given to charities;

- 96% of the Biedronka stores have recycling bins for the collection of small electrical appliances, fluorescent lamps and batteries;
- 99% of the Ara stores have recycling bins for battery collection.

In total, there was an increase in the number and type of recycling bins available for customers. For more detailed information, go to the "Responsibility" area at www.jeronimomartins.pt.

Waste Dropped Off by Customers in Recycling Bins at Stores

Waste (in tonnes)	2015	2014	Δ 2015/2014
PORTUGAL			
Batteries	22.47	23.12	-2.8%
WEEE ¹⁰ (including fluorescent light bulbs)	96.37	81.67	+18.0%
Used Cooking Oil	110.54	120.06	-7.9%
Printer ink cartridges	5.25	3.44	+52.6%
Capsules	72.57	37.20	+95.1%
Lids, Corks and Bottle Tops	8.89	4.92	+80.7%
POLAND			
Batteries	117.24	47.32	+147.8%
WEEE (including fluorescent light bulbs)	199.61	243.47	-18.0%
COLOMBIA			
Used batteries	0.08	0.43	-81.4%

In Portugal and in Poland, the increase in the collection of customer waste is, mainly, due to the investment made in installing recycling bins in Biedronka's and Pingo Doce's stores.

5.4.3. Ecodesign of Packaging

In collaboration with its suppliers, the Group has been working to improve the eco-efficiency of its packaging according to ecodesign strategies aimed at:

- reducing the environmental impact of the packaging of items sold by the banners, especially the Private Brands; and
- optimising the costs of production, transport and management of packaging waste.

Products encompassed	Portugal	Poland	Unit
Number of references	184	6	SKU*
Savings in packaging materials	2,411	21	t materials / year
Transport avoided	455	-	t CO ₂ e/ year
Packaging with FSC certification	15	-	SKU*

* SKU – Stock Keeping Unit.

¹⁰ WEEE - waste electrical and electronic equipment.

In Poland, all the boxes for packaging fruit and vegetables are made of recycled cardboard with FSC certification.

5.5. Eco-efficient Infrastructures

The Jerónimo Martins Group's Companies include environmental criteria in their projects for building or remodelling infrastructures, boosting positive impacts and minimising adverse ones.

Biedronka, Pingo Doce, Recheio and Ara have been implementing efficient control systems for chilling plants, more efficient technologies in terms of lighting (LED and skylights), refrigerated displays and freezers fitted with doors and covers and, in addition, automatic management systems for energy consumption, looking for a more rational use of the energy required.

Biedronka has 13 eco-stores, which include measures for reducing water and energy consumption and for managing waste.

In Portugal, at the Algoz Distribution Centre, all its facilities have been designed to work at high energy efficiency – Class A Energy Certification. All lighting of interior areas of buildings and outdoor areas uses a "LED" low energy type. In all areas fitted with natural lighting, there are sensors that enable the deactivation of artificial lighting when this is not necessary.

"Architecture with Energy" Prize

One of the Biedronka stores in the Kujawsko-Pomorskie region was awarded the "Architecture with Energy" prize in the "Public Building" category. This award aims to select the most energy-efficient buildings.

The contest was organized in partnership with the Tilia Association as part of a project entitled "Promotion of renewable energy sources and modern systems diversifying the sources and methods of their use as a protective measure for the natural environment".

The Polish Association of Architects and the Chamber of Architects of Poland were also involved in the development of the award.

5.6. Raising Employee and Consumer Awareness

Our Group's recognition of the central importance of individual and collective behaviour towards the better management of natural resources, emissions and waste led to the development of various awareness initiatives with our major related parties.

Employees:

- in 2015, another Sustainability Conference was held, aimed at the Group's senior management and strategic suppliers. This meeting brought together

- approximately 170 participants, who shared their experiences of innovative projects which have resulted in the efficient use of natural resources;
- publication of articles on environmental themes in the in-house magazine "A Nossa Gente" (Our People), which is distributed to all employees in Portugal. For example, under the International Energy Year, suggestions for saving energy were included. The stores and DC which performed best in reducing water and energy consumption over the same period and/or with lower consumption/m², were also disclosed. This magazine has a print run of 25,000 copies;
 - raising the awareness of the Group's managers in Portugal, Poland and Colombia on various topics related to environmental strategy, through the Corporate Responsibility digital newsletter "Seeds". This bi-monthly newsletter has a readership of over one thousand employees;
 - training sessions on best environmental management practices for employees carried out in Portugal, Poland and Colombia, with the number of training hours compared to 2014 increasing by 63%;
 - strengthening and periodic disclosure of best environmental practices for employees, particularly in the Pingo Doce and Recheio stores, through the documents "Informação de Negócio" (Business Information) and "Alerta Recheio" (Recheio Alert), and in the Biedronka DC, through presentations in communal staff areas;
 - launch of the "Let's Go Green" project in the Group's headquarters in Portugal, with the aim of fostering the adoption of more responsible practices in the use of energy, water and paper, within which the following initiatives were promoted:
 - monthly publication of newsletters with environmental content;
 - the holding of a paper chase to celebrate "World Environment Day" with a visit to the Monsanto Natural Park involving employees from head-office and their families (organized in partnership with the Liga Para a Protecção da Natureza – League for Nature Protection);
 - the holding of an internal workshop on Food Waste.

Customers and consumers:

- in-store campaigns carried out in Biedronka stores promoting the adoption of best environmental practices:
 - "Em Sintonia com a Natureza" (In Harmony with Nature), which made it possible to collect more than 14 thousand aluminium cans and approximately 17 thousand units of glass packaging;
 - campaign aimed at children, to consider suitable management of batteries and the risks arising from not disposing of them properly, carried out during picnics hosted by Caritas Polska which involved approximately 15 thousand children;
- texts showing historical data of the environmental protection carried out by the Company were published on the intranet in the context of the 20th anniversary of Biedronka;
- regular publication of articles against food waste and promoting environmental and social best practices in the "Sabe Bem" (Tastes Good) (bi-monthly circulation of 160 thousand copies), "Notícias Recheio" (Recheio News) (bi-monthly circulation of 40 thousand copies) and "Kropka TV" (weekly circulation of around 260 thousand copies) magazines, aimed at Pingo Doce, Recheio and Biedronka customers, respectively.

5.7. Partnerships and Support

The Group supported the following initiatives in Portugal, focused on restoring natural habitats and protecting biodiversity:

Institution	Project	Amount	Further information at
Oceanário de Lisboa (Lisbon Oceanarium)	Oceanário de Lisboa (Lisbon Oceanarium)	€ 100,000	www.oceanario.pt
Quercus	"SOS Pollinators" Campaign	€ 15,000	www.yesweb.pt/polinizadores
World Wildlife Fund (WWF)	"Green Heart of Cork"	€ 10,000	www.wwf.pt
Liga para a Protecção da Natureza (LPN)	ECOs-Locais	€ 10,000	www.lpn.pt
European Recycling Platform (ERP) – Portugal	"Geração Depositário"	€ 5,000	www.geracaodepositrao.abae.pt

In Portugal, in partnership with Quercus and as part of the "SOS Pollinators" campaign, leaflets were distributed to customers in the geographical area most affected by the Asian wasp (Northern region), stressing the importance of identifying and eliminating this species as a way of conserving bees. Approximately 200 thousand leaflets were produced and distributed in 99 Pingo Doce stores.

In January 2016, the Group awarded the 2015 "Jerónimo Martins-Green Project Awards Prize for Research and Development", with a value of 20 thousand euros. Together with the Green Project Awards Portugal, this sought to distinguish products or processes which have contributed to environmental, social and economically more sustainable solutions.