

# 7

## Adapting to the environmental needs of our surroundings

STRATEGIC LINE 1:  
Minimising environmental impact

STRATEGIC LINE 7:  
Promoting and systematising dialogue channels

### SUMMARY OF INDICATORS

Reduction of greenhouse gas emissions by **12%** in relation to turnover

**4.7%** of consolidated net profit is invested in the environment

**94%** of turnover is covered by an established environmental management system

Policy	Main features	Examples of best practices in 2010
Minimising environmental impact	Environmental management	Smart Cities Second year of the Environmental Forum on Airports "Paquet Vert": public-private partnership in France to support the environment
	Our response to climate change	Mobility Plan 2011-2014 Motorway carbon footprint Energy Saving and Efficiency Plan Smart Cities
	Waste and wastewater management	Waste storage and management on the AP-7 motorway Water treatment facilities The ecosaba areas
	Biodiversity management	Landscape integration in areas affected by the extension of the AP-6 motorway in the municipality of El Espinar Protection of biodiversity in French motorways The airports and their habitats
	Noise management	Noise observatory on motorways Airports and noise management
	Extending our environmental commitment	"Espai Terra": the environment as seen from your living room Aristos widens its horizons

## Policy

**abertis's** main objective through its commitment to the environment is to increase the percentage of business under an established environmental management system, in accordance with the ISO 14001 standard to improve management and minimise the environmental impact of its activities.

## Results

**abertis's** environmental management is an essential part of its business activity, as regards both the identification of new risks and business opportunities, as well as the mitigation of environmental impact.

The Group has consolidated its commitment to environmental management, having spent a total of EUR 31 million on environmental investments and expenditure, representing 4.7% of its consolidated net profit. The increase compared to the previous year is due to specific actions carried out on extended sections of French motorways.

An environmental management system allows companies to identify their most significant environmental concerns and ensure ongoing improvement of the system that will coordinate implementation of action plans, objectives and their evaluation.

Currently, 94% of turnover included in this report is covered by an established environmental management system, a figure that

remains unchanged with respect to the previous year; however, the wider scope of this report means that the turnover covered by the established environmental management system has actually increased with respect to the previous year.

In 2010, the Bolivia, United Kingdom and Orlando airports continued implementing environmental management systems. Meanwhile, **saba** Chile and Coslada 1 implemented the same process, while **avasa** has received certification of its system.

Level of certification: ISO 14001		2008	2009	2010
Central services	<b>serviabertis</b>	✓	✓	✓
	<b>abertis foundation</b>	✓	✓	✓
Motorways	Spanish Motorways <sup>(1)</sup>	→	✓	✓
	French Motorways <sup>(2)</sup>	✓	✓	✓
Telecommunications	<b>abertis telecom</b>	✓	✓	✓
Airports	<b>tbi</b> <sup>(3)</sup>	✓	✓	✓
Car parks	<b>saba</b> España	✓	✓	✓
	<b>saba</b> Chile			✓
Logistics	<b>abertis logística</b> <sup>(4)</sup>	→	✓	✓
% Turnover*		✓✓ 74.9%*	✓✓ 96.50%*	✓✓ 94.04%*
		22.02%	1.10%	

(1) Spanish Motorways includes all the motorways **abertis** manages in Spain, except for **aulesa** (**acesa**, **aucat**, **aumar**, **iberpistas** y **avasa**).

(2) The portion of **sanef** with an established system refers to **sapn** and **sanef**, but these are not certified.

(3) Established systems in **tbi** refer to those in Cardiff, Luton and Sweden; these are not yet certified. Meanwhile, Orlando, Belfast and Bolivia are currently undergoing system implementation.

(4) **abertis logística**, CIM-Vallès and Penedès are the centres with a certified quality system in place. Coslada 1 is undergoing certification.

\* In relation to the scope of the report.

✓ Implemented and certified

✓ Implemented

→ In the process of being implemented

Objectives set in 2009 can be classified into four main areas of action for 2010. During the report period progress was made in all areas, although more work is needed to ensure ongoing improvement of our environmental management systems.

2010 Objectives	Degree of achievement
Better management of energy and water resources	Improvements were implemented in control and monitoring of water and energy consumption, facilitating actions geared towards their reduction.
Reduce consumption of resources and materials	All <b>abertis</b> companies have undertaken actions to reduce their consumption. Although significant reductions were seen in energy consumption, more work is needed in other areas.
Extend environmental commitment to employees, customers and contractors	A number of actions were undertaken to raise environmental awareness, which focused on waste separation and implementation of good practices among different stakeholders, both internal and external.
Reduce noise pollution and CO <sub>2</sub> emissions	Total emissions for the Group were reduced by 12% over 2009 in relation to turnover, and various actions were undertaken both at airports and motorways to reduce noise-related environmental impact.

#### ENVIRONMENTAL MEASURES IMPLEMENTED BY BUSINESS AREA

	Most significant aspects	Main measures implemented in 2010
Central services	Consumption of resources Waste generation Atmospheric pollution	<ul style="list-style-type: none"> <li>- Reduction in consumption of natural resources through reduction of flow volume of taps, programmed lighting switch-on and automatic switch-off</li> <li>- General environmental awareness-raising actions, such as "Aristos", our environmental information campaign</li> <li>- Improvement in percentage of waste separation and reduction of weight of non-hazardous waste</li> </ul>
Motorways	Water pollution Waste generation Consumption of resources Atmospheric pollution Noise pollution Activities affecting land Emergencies Impact on biodiversity Health problems	<ul style="list-style-type: none"> <li>- Actions taken to reduce impact of wastewater, such as channelling of water from maintenance workshops, improvements to water treatment plants and implementation of accidental spill response plan</li> <li>- Implementation and improvements to waste separation, re-use of material and prioritisation of recycling potential as final waste management step, taking into account the waste generated by a given product before purchase</li> <li>- Control of fuel consumption</li> <li>- Replacement of equipment employing R-22 type refrigerants (HCFCs) by others that use HFCs</li> <li>- Encouraging reduction of atmospheric emissions through implementation of a motorway speed regulation system to avoid traffic build-ups</li> <li>- Reduction of noise pollution through reforestation along motorways, the creation of a noise observatory and installation of noise barriers in the most densely populated areas</li> <li>- Replacement of conventional petrol tanks with others that feature containment systems to prevent spills</li> <li>- Performance of biodiversity audits</li> <li>- Extending environmental monitoring to some sections of certain motorways</li> </ul>
Telecommunications	Consumption of resources Waste generation Emergencies Impact on biodiversity Noise pollution	<ul style="list-style-type: none"> <li>- Expansion of Jaizkibel photovoltaic facility, doubling its existing capacity.</li> <li>- Minimising energy and water consumption through energy audits, maximising use of tank water, implementation of energy efficient measures such as solar panels or LED lighting</li> <li>- Development of an IT application that provides data on energy (consumed and produced) by the centre, as well as implementation of good practices or recommended actions to reduce consumption</li> <li>- Improved waste management through the use of waste separation bins in offices and distribution of informational posters at storage points</li> <li>- Installation of eleven systems that warn when overflow occurs in septic tanks</li> <li>- Installation of containment measures for diesel spills in tank loading and unloading operations</li> <li>- Increased control of electromagnetic radiation</li> </ul>

A fundamental aspect of any environmental management system is the control and monitoring of a company's compliance with environmental regulations. These monitoring activities are conducted by all of the business units that comprise **abertis**, recording any non-compliance that arises in this area.

In 2010, **avasa** received a fine of EUR 727 related to wastewater in the Logroño and San Asensio Service areas; and **aumar** also received a fine of EUR 16,182 associated with the technical problems at its water treatment plant in Sagunto.

Our vision for 2011 as regards environmental management includes a general objective for the Group to continue working to reduce consumption, along with the following specific objectives for each business area:

- **Central services:** Increase percentage of waste separation for the various waste types and reduce consumption.
- **Motorways:** There are two main objectives for Spain: to unify environmental management systems and combine environmental good practices with the help of the project entitled "Aristos hits the motorways".

Other objectives worthy of mention and which are specific to each of the motorways both within Spain and abroad, are those that seek to improve water quality, storage of chemical products, increase the use of the VIA-T teletoll and improve waste management.

#### ENVIRONMENTAL MEASURES IMPLEMENTED BY BUSINESS AREA

	Most significant aspects	Main measures implemented in 2010
Airports	Noise pollution Consumption of natural resources Atmospheric pollution Water pollution Soil pollution Waste generation Emergencies Health problems Impact on biodiversity	- Reduction in noise impact through approval of action plans that include implementation of noise barriers, designation of preferential routes and limits to the use of runways during night-time hours - Controlling water and energy consumption through reduction measures, such as energy action plans and installation of lower-consumption or dry sanitary ware - Awareness-raising actions for users about the resources they consume and the waste they generate - Inclusion of energy efficiency criteria in construction works - Control of vehicle emissions - Adaptation of maintenance policies to the needs of local habitats in affected areas
Car parks	Waste generation Consumption of resources Atmospheric pollution Water pollution Emergencies	- Waste separation through installation of ecosaba areas or green stations within car parks - Study of energy efficiency in a pilot car park and subsequent implementation of recommended measures in different car parks - Monitoring and control of emissions
Logistics	Consumption of natural resources Water pollution Noise pollution Soil pollution Waste generation Atmospheric pollution	- Actions aimed at reducing energy and water consumption, such as the installation of a drip irrigation system - Environmental awareness-raising actions for staff - Supplier environmental certification and monitoring - Improved communication and environmental management vis-à-vis customers - Analysis of a logistics park life cycle, as well as a workshop on sustainability to identify possible actions during its construction and operation

- **Airports:** The different airports have set objectives that will improve waste management, reduce greenhouse gas emissions and promote awareness-raising activities among staff.
- **Car parks:** Continue with implementation of ecosaba areas, to improve waste separation, electrical recharging points and VIA-T service in car parks.
- **Logistics:** Environmental certification and monitoring of suppliers, improve communication and environmental management vis-à-vis customers and carry out awareness-raising programmes.
- **Telecommunications:** Continue working to improve energy efficiency and management of the most significant environmental aspects identified.

## Smart cities

The impact of new information technology on resource management in cities entails better use of said resources, considering urban areas in their entirety whilst identifying areas of improvement that will enhance urban sustainability. Cities and regions in general are moving towards a global management model that takes into account all actors and the links between them, as well as actions that promote and implement new technology, giving rise to Smart Cities or regions.

**abertis telecom** has signed an agreement, in partnership with Indra and the Lleida and Sant Cugat del Vallès City Councils, that will develop and promote Smart Cities projects, the aim being to transform these two cities into models for the implementation and use of new technology. The agreement also includes the creation of a Reference Centre in Catalonia for the deployment and operation of solutions, technology and services associated with Smart Cities.

Smart Cities represent the cities of the future, which will efficiently manage their financial resources in the planning, management and operation of different municipal services, resulting in better quality of life for their citizens and greater environmental sustainability, along with increased participation by their residents, efficiency of public services and the opportunities that cities offer to people and organisations.

Through the use of cutting-edge technology, these improvements will optimise municipal services, enabling specific projects such as efficient management of park irrigation according to varying weather conditions, remote meter readings, optimisation of rubbish collection and control of rubbish bin overflow, daylight-synchronised city lighting systems and better mobility through the monitoring of free car parks and standing in loading and unloading bays.

Smart Cities also enable a more pro-active, flexible and versatile governance, with a greater response capacity when addressing some of the more complex needs of citizens.

## Second year of the Environmental Forum on Airports

The internal programme for increased participation and cooperation that began at **abertis** airports in 2009 has continued its activities throughout 2010. The airports in Luton, Cardiff, Belfast, Sweden, Orlando and Bolivia are active participants in this programme.

Three meetings in Barcelona and a number of online teleconferences were held between Group airports in order to define the common environmental management handbook that each will apply to its own airport context, in addition to the procedures, policies and other elements that are part of any ISO 14001 environmental management system. Their involvement in this forum has enabled the participating airports to exchange knowledge, and generate positive synergies, many of which focused on reducing their activities' environmental impact.

As a result of the implementation of the environmental management systems, each airport has drafted its own three-year environmental action plan to reduce the environmental impact of its operations. Noteworthy among these activities is the creation of an environmental intranet for the Swedish airport, which will manage and record all events relevant to environmental management and a good energy practices guide for Belfast airport that will be distributed to all its concessions to encourage their involvement in environmental improvements at the airport.

## "Paquet Vert": public-private partnership in France to support the environment

This public-private partnership is an infrastructure funding mechanism that will allow governments to control public deficit whilst maintaining and increasing spending on social programmes. This partnership was made possible through the granting of concessions by governments to the private sector.

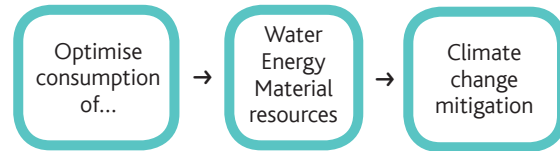
"Paquet Vert", which is part of the French government's Plan de Réance (economic stimulus plan), is an example of one such public-private partnership. Favouring short-term private environmental investment, and allowing a return on investment in several years, **sanef** has agreed to invest a total of EUR 250 million over the next three years, extending both concessions by one more year.

Investments will be made to improve the motorway network, as well as to implement innovative measures that will favour sustainable development. Some of the most noteworthy improvements include:

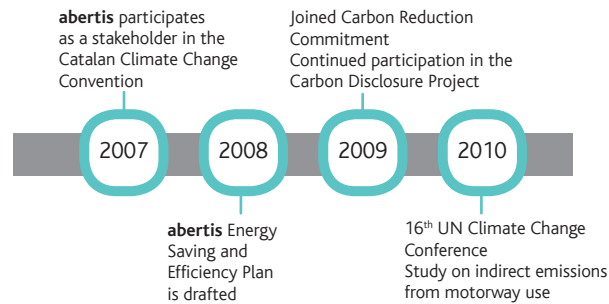
- **Implementation of customer services** already in place in certain sections of the motorway, such as the no-stop, electronic toll collection system. This measure, along with others such as the creation of a combined transport point and car parks for shared private vehicles, will reduce greenhouse gas emissions.
- **Creation of eco-responsible areas**, through the use of environmental protection techniques that were previously implemented in two pilot areas operated by **sanef** (energy efficiency, waste classification, etc.), which will be applied to other areas of its network.
- **Water conservation** via treatment of regular and accidental spills on motorways and increased storage capacity for rainwater.
- **Noise protection** on motorways, through treatment of over 550 noise pollution "black spots" and installation of four new noise barriers.
- **Maintaining and encouraging biodiversity** through actions such as biodiversity audits in **sanef's** green areas, the creation of wildlife passages and development and promotion of natural heritage through the planting of 10,000 indigenous trees.

## 7.1 Our response to climate change

### Policy



### Climate change response timeline



### Results

Climate change continued to make headlines in 2010, the year in which the UN held its 16<sup>th</sup> Climate Change Conference in Cancun. Its main objective was to host debates on possible measures to combat climate change.

In 2005, **abertis** defined its climate change mitigation strategy, which has served to guide actions undertaken by Group companies in recent years. This strategy encompasses three main action areas:

- Optimisation of natural and material resource consumption.
- Foster implementation of renewable energy and the use of fuels that have less environmental impact.
- Extend the commitment to mitigate climate change to the Group's employees, customers and suppliers.

### SUMMARY OF ACTIONS IMPLEMENTED IN 2010

Optimisation of natural and material resource consumption	abertis
Foster the use of renewable energy and fuels that have less environmental impact	
Extend the commitment to mitigate climate change to the Group's employees, customers and suppliers	abertis

In 2010, some of the more noteworthy actions implemented in this respect included the following:

- Continued application of the **Energy Saving Plan**. Under this plan, the company's different business units have been controlling and monitoring their own consumption whilst implementing measures aimed at reducing said consumption

and increasing efficiency. Measures included the installation of water flow reducers and automatic timers for lighting.

- The promotion of **renewable energy**; this has been particularly prevalent in **abertis telecom**, which has installed photovoltaic solar panels in a total of 33 of its telecommunications centres and wind turbines in 9 other centres. **abertis logística** has also installed photovoltaic systems on the roofs of its logistics parks.
- The creation of a **Mobility Plan** for 2011-2014, to foster sustainable mobility among staff, both while at work and travelling to and from their workplace.

- **Use of the VIA-T** electronic toll collection system, promoted by way of several information campaigns for users, informing them of lower emissions resulting from the use of this system, amounting to a 9% reduction for light vehicles and 31% for heavy vehicles. This payment system is available on all motorways operated by **abertis**, except **apr** and **elqui**. In 2010, the VIA-T system use on motorways accounted for 32% of all transactions, representing 36% of total toll revenue<sup>3</sup>.

	2008	2009	2010
Average VIA-T (teletac) payment on motorways	31%	32%	32%

3. The method for calculating this indicator has been changed, and therefore the indicator values for previous years have been adjusted for comparison purposes.

- The inclusion of sustainable construction criteria, particularly in **abertis logística**, such as the use of low-energy lighting systems, insulation in enclosures and roofs, recovery of construction waste and increased use of natural light. These criteria reduce the consumption of resources and waste generation throughout the infrastructure's lifetime.
- **Training sessions, and their promotion**, both internally and externally, to raise awareness for stakeholders. Courses covered a wide range of issues, including environmental good practices, waste separation and sustainable driving.
- **Promotion of biofuel** as a replacement for fossil fuels. Motorway operations promoted the use of biodiesel instead of diesel in their vehicles, and in airports fossil fuels were replaced by natural gas. A total of 45,284 litres of biodiesel were used.
- **A study to determine the carbon footprint** of motorways, setting out a calculation model that determined indirect emissions originating from motorway use, as well as the emission absorption capacity of roadside vegetation as carbon sinks.

**TREND IN CO<sub>2</sub> EMISSIONS GENERATED BY abertis**

CO <sub>2</sub> Emissions (t)	2008	2009	2010
Direct (Scope 1)	30,826	34,087	36,882
Indirect (Scope 2) <sup>4</sup>	159,158	171,145	150,976
Total	189,984	205,232	187,858
per million € turnover	56.21	57.89	50.64

4. The **rutas del pacífico** electricity consumption has not been included as no verified data is available

The source of emissions at **abertis**, in accordance with the Greenhouse Gas Protocol (the most widely-used accounting tool for greenhouse gas emissions), can be broken down into the following types:

- Scope 1: Direct emissions originating from direct consumption of fuels (natural gas, liquid fuel and liquefied petroleum gas).
- Scope 2: Indirect emissions derived solely from electricity consumption. The conversion factor for emissions derived from electricity consumption varies according to the country where said electricity is generated, which in turn depends on the energy sources said country uses to generate its electricity.

The total CO<sub>2</sub> emissions derived from **abertis's** activities have been reduced by 12% compared to 2009 in relation to turnover, mainly owing to the reduction of indirect emissions. There are two reasons for this decrease: reduced consumption, in particular the consumption of electricity in Spain, along with a favourable change in the Spanish national grid. If the Spanish conversion factor had remained unchanged since the previous year, the reduction in emissions would have totalled 4% in relation to turnover; this figure takes into account the increased data scope.

**TREND IN TOTAL CO<sub>2</sub> EMISSIONS BY SECTOR<sup>6</sup>**

	Motorways (t/ADF)	Telecom (t/Technical Centres)	Airports (t/Thousand Pax)	Car parks (t/Thousand vehicles)	Logistics (t/m <sup>2</sup> rented space)
2009	2.22	1.66	2.21	0.17	-
2010	2.16	1.16	2.41	0.18	0.003

6. The **rutas del pacífico** electricity consumption has not been included as no verified data is available

The total reduction in **abertis's** emissions for the year 2010 was equal to CO<sub>2</sub> emissions generated by 2,235 Spaniards over an entire year<sup>5</sup>.

Also worthy of note are the new environmental regulation applicable to airports operating in the United Kingdom, known as the Carbon Reduction Commitment. This new mandatory scheme is directed at organisations that show significant energy consumption levels, but which do not fall under the Kyoto Protocol; its aim is to reduce greenhouse gas emissions in the United Kingdom. Under this new regulatory framework, conversion factors used for **tbi's** direct emissions and indirect emissions originating in the United Kingdom have undergone some changes with respect to those used the previous year.

The conversion factors used in determining emissions are therefore based on the Greenhouse Gas Protocol, the National Atmospheric Emissions Inventory and the conversion factors determined by the Carbon Trust for direct emissions in **tbi** airports and indirect emissions in the United Kingdom.

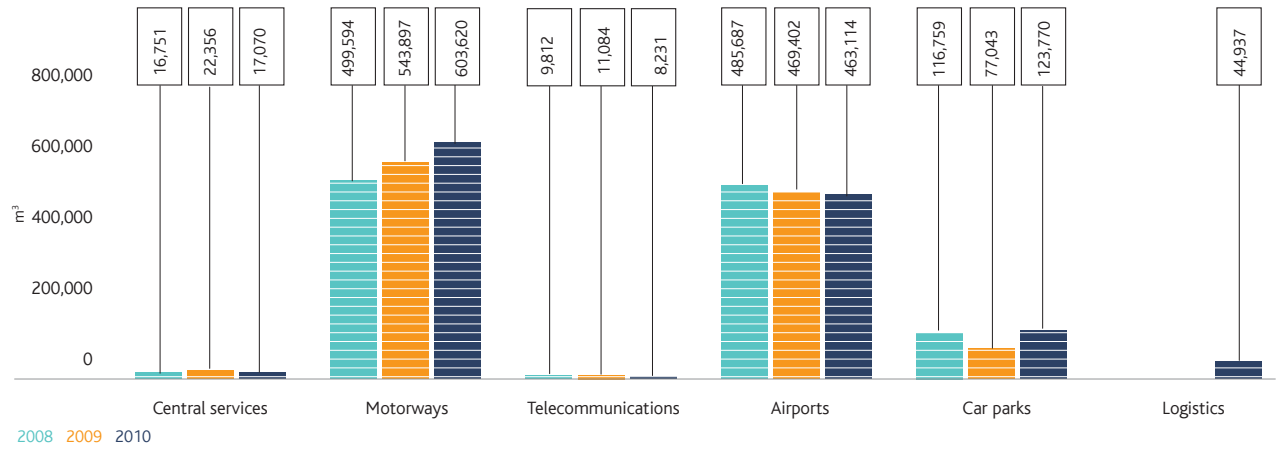
Total emissions for central services, whose activity cannot be measured directly, have decreased by 20%, from 3,657 total tonnes in 2009 to 2,922 tonnes in 2010.

5. 2009 Greenhouse Gas Inventory Data and National Statistics Institute census data.

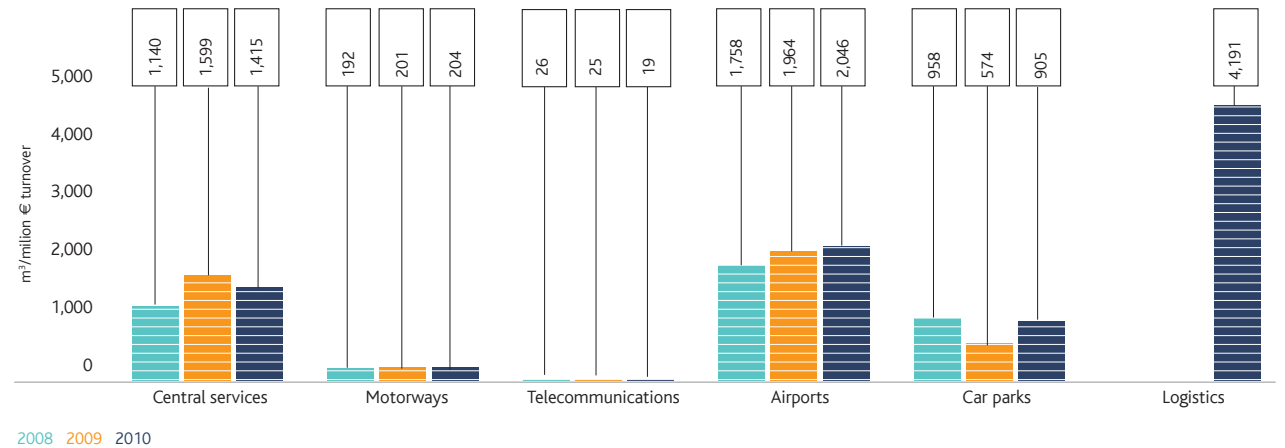
### Water consumption

Water consumption data from 2010 was influenced by the works undertaken to expand the AP-7 motorway, which included the installation of new toll barriers for the South AP-7 motorway section and the expansion of a third lane in a 40 km section of the North AP-7 motorway. Meanwhile, the data corresponding to the water consumption of  **rutas del pacífico**  and  **elqui**  could not be included in the calculation, as no verified data was available.

WATER CONSUMPTION BY SECTOR



WATER CONSUMPTION IN RELATION TO TURNOVER BY SECTOR<sup>1</sup>



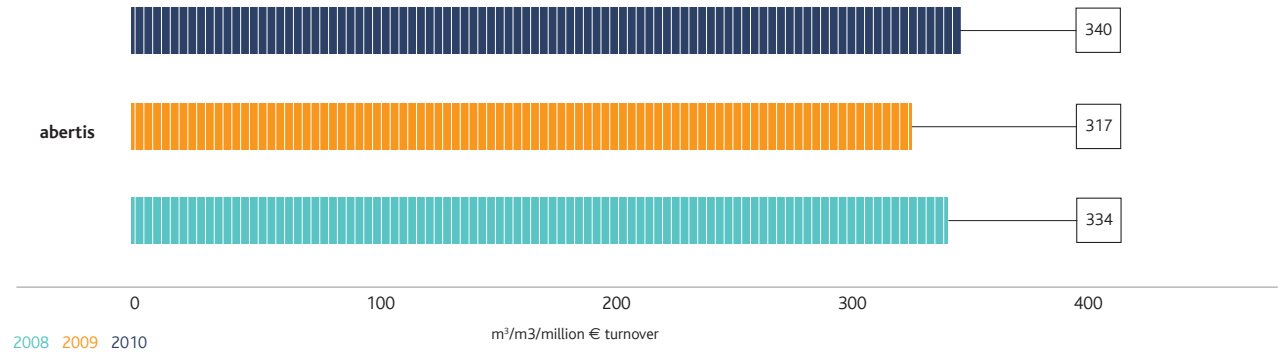
1. Central services only includes central offices located in the Zona Franca Logistics Park

Taking into consideration the aggregate consumption with respect to turnover, water consumption increased by 7%, mainly owing to an increase in consumption from car parks largely attributable to the opening of new car parks in Chile and Italy, an increased scope of data and the works undertaken in **acesa**.

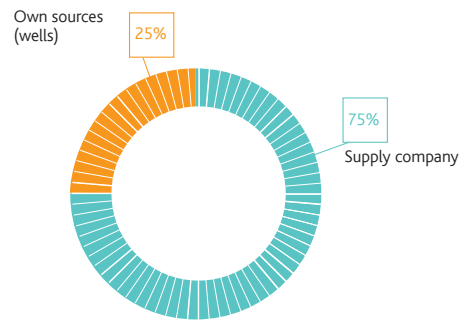
**WATER CONSUMPTION IN RELATION TO SECTOR**

	Motorways (m <sup>3</sup> /ADF)	Telecom (m <sup>3</sup> /Technical Centres)	Airports (m <sup>3</sup> /Thousand Pax)	Car parks (m <sup>3</sup> /Thousand vehicles)	Logistics (m <sup>3</sup> /m <sup>2</sup> rented space)
2009	24.15	0.20	20.78	1.37	-
2010	26.67	0.13	21.52	2.20	0.16

**TREND IN WATER CONSUMPTION AT abertis**



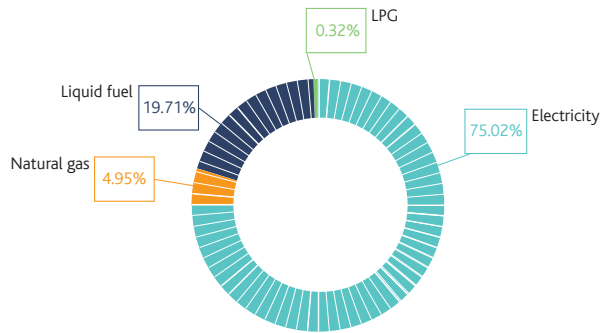
**SOURCES OF WATER SUPPLY**



## Energy consumption

abertis's overall energy consumption has remained fairly constant; however, if we take into account the greater scope of the data, then the energy consumed by our business activity decreased in 2010.

### DISTRIBUTION OF ENERGY CONSUMPTION

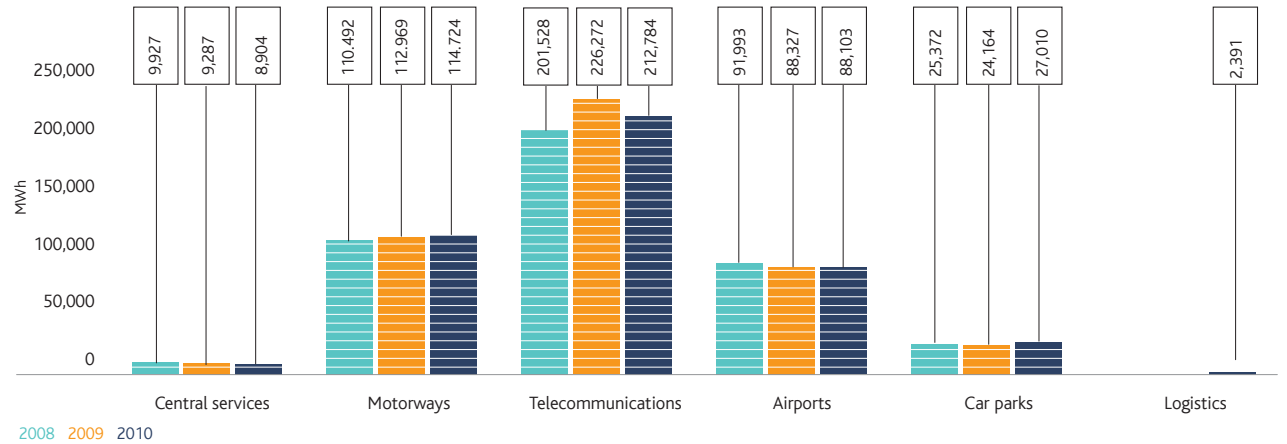


### Electricity

Electricity consumption decreased by 6% in relation to the turnover figure, owing mainly to the decrease in consumption by central services and telecommunications. It should be taken into account that the electricity consumption of **rutas del pacífico** was not included in the calculation because no verified data was available.

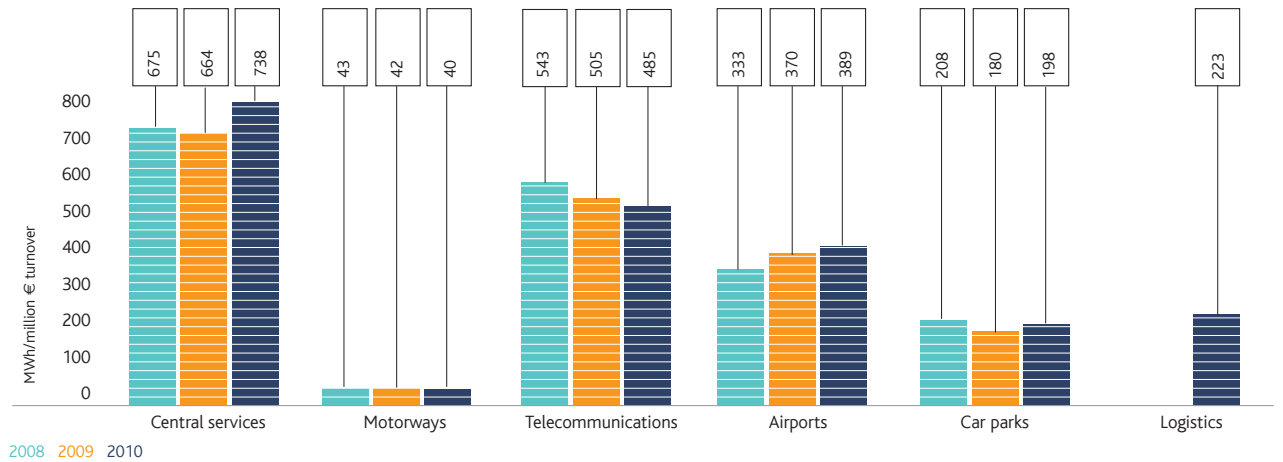
The increase in absolute consumption by car parks is mainly due to the opening of new car parks, as well as an increase in consumption from motorway operations, mainly attributed to the greater scope of the data.

### ELECTRICITY CONSUMPTION BY SECTOR



Information regarding primary sources is related to the electric grid of each country, and it is reflected in the calculations of CO<sub>2</sub> indirect emissions (Scope 2).

### ELECTRICITY CONSUMPTION IN RELATION TO TURNOVER BY SECTOR<sup>1</sup>

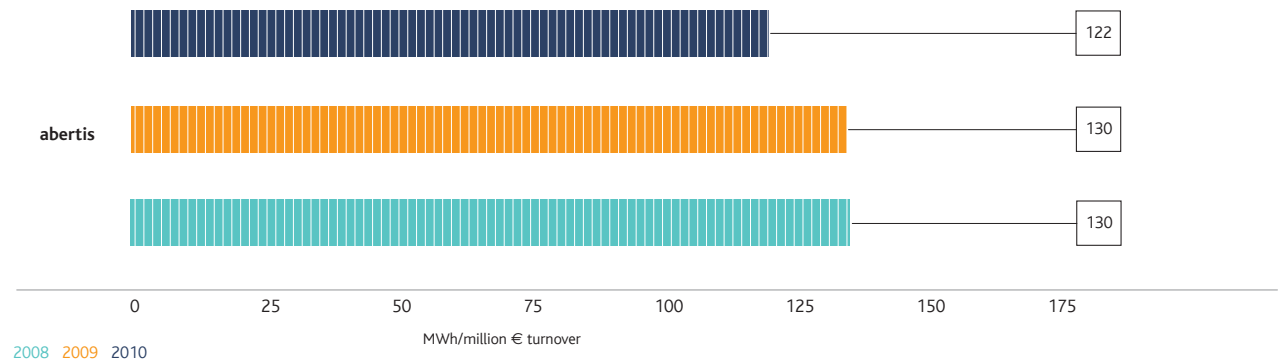


1. Central services only includes central offices located in the Zona Franca Logistics Park.

**ELECTRICITY CONSUMPTION IN RELATION TO SECTOR**

	Motorways (MWh/ADF)	Telecom. (MWh/Technical Centres)	Airports (MWh/Thousand Pax)	Car parks (MWh/Thousand vehicles)	Logistics (MWh/m <sup>2</sup> rented space)
2009	5.02	4.08	3.91	0.43	---
2010	5.07	3.37	4.10	0.48	0.009

**TREND IN ELECTRICITY CONSUMPTION AT abertis**

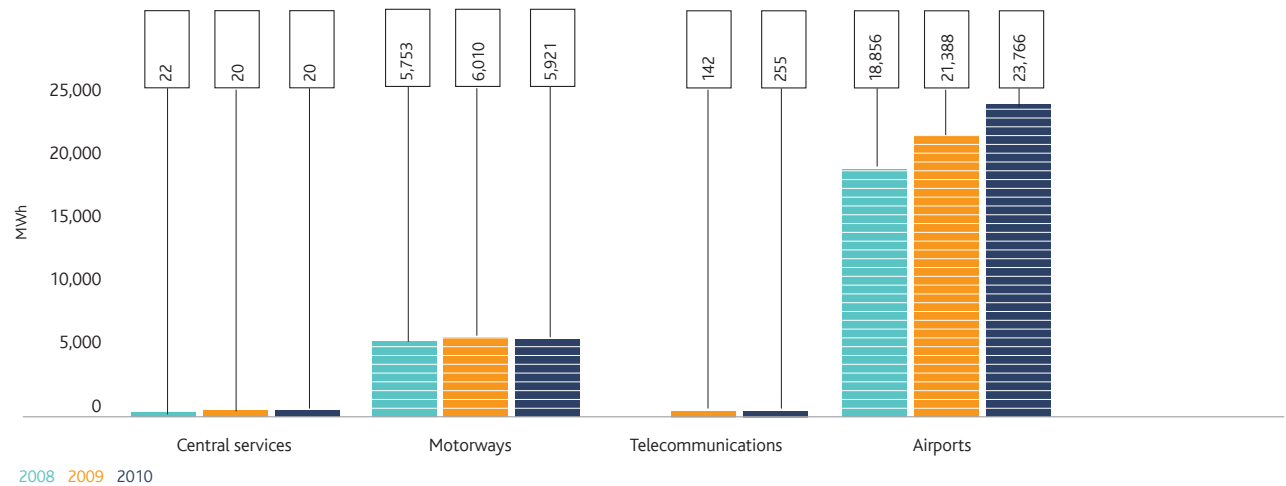


**Natural gas**

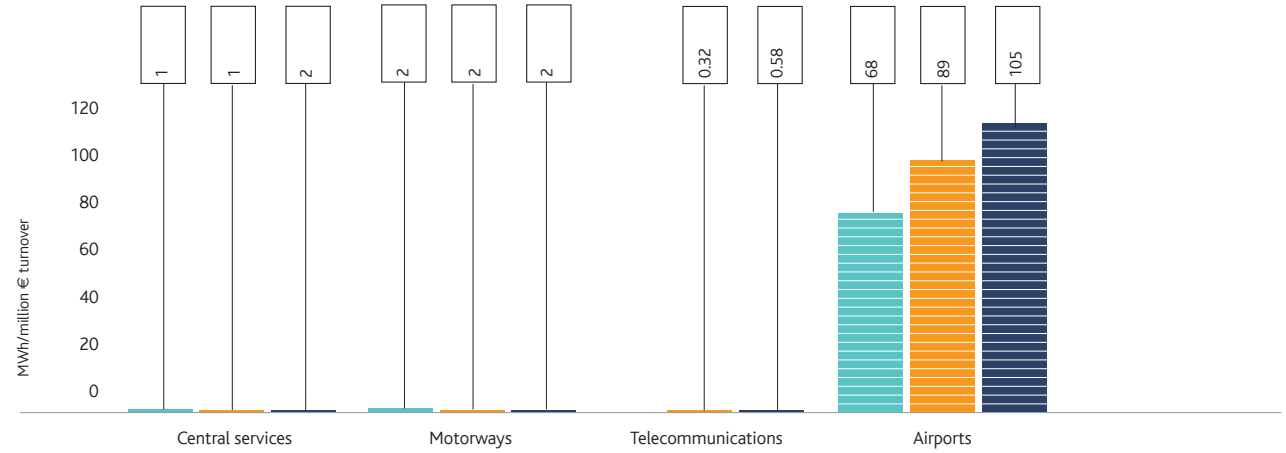
In 2010, natural gas consumption increased by 4% over 2009, in relation to turnover. This increase occurred in airports and telecommunications.

These increases were mainly attributable to more comprehensive measurements provided by newly installed meters in both areas.

**NATURAL GAS CONSUMPTION BY SECTOR**



**NATURAL GAS CONSUMPTION IN RELATION TO TURNOVER BY SECTOR<sup>1</sup>**



1. Central services only includes central offices located in the Zona Franca Logistics Park.

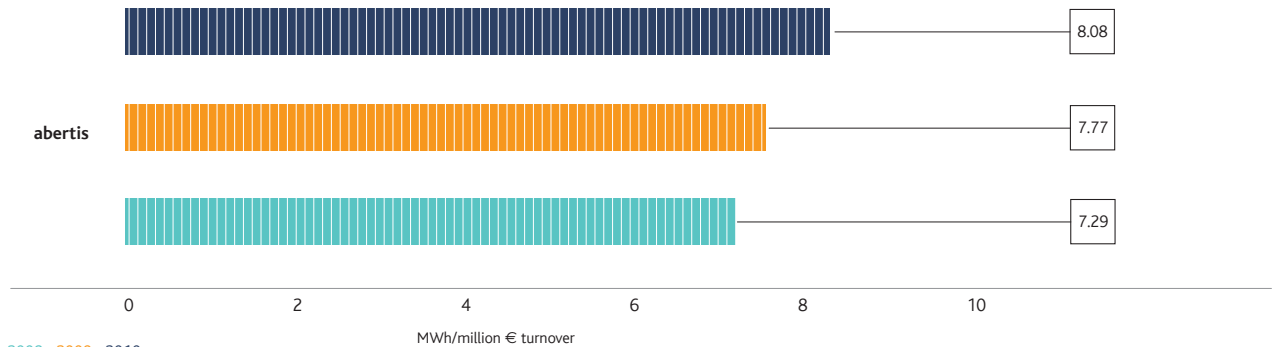
2008 2009 2010

**NATURAL GAS CONSUMPTION IN RELATION TO SECTOR**

	Motorways (MWh/ADF)	Telecom. (MWh/Technical Centres)	Airports (MWh/Thousand Pax)
2009	0.267	0.003	0.947
2010	0.262	0.004	1.105

The logistics and car park business units do not consume natural gas.

**TREND IN NATURAL GAS CONSUMPTION AT abertis**



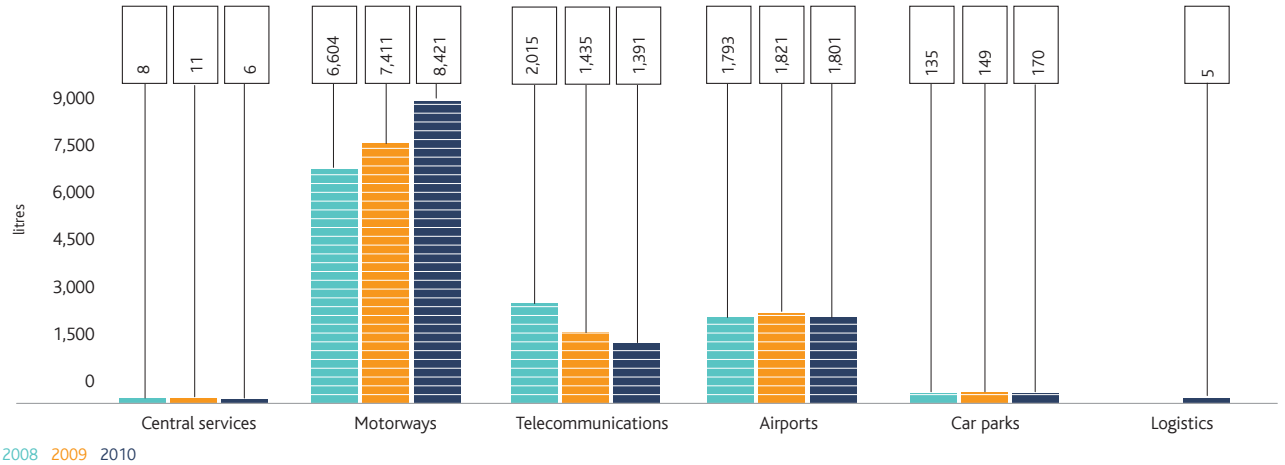
2008 2009 2010

## Liquid fuel

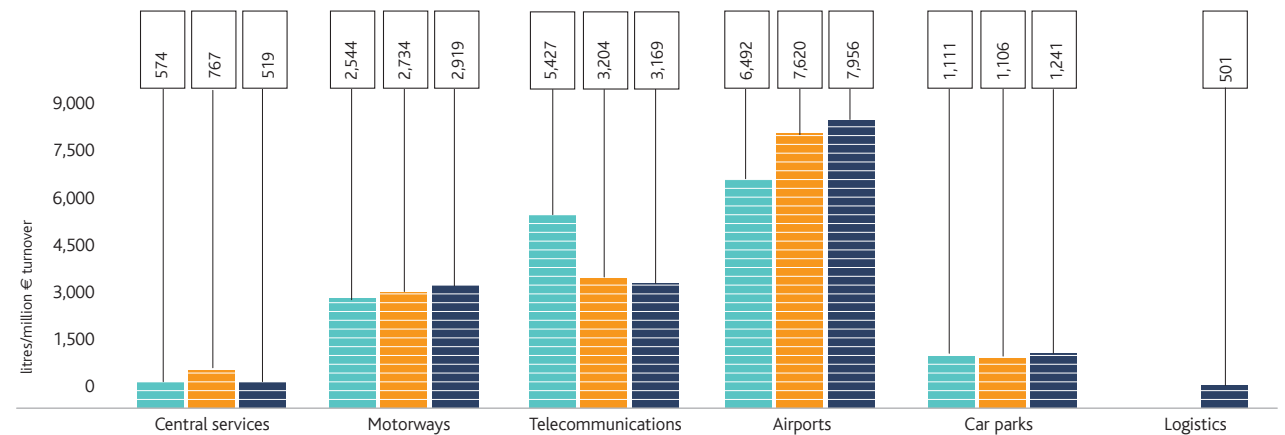
As in the case of water consumption, liquid fuel consumption was influenced by construction works for expansion of the AP-7 motorway. Furthermore, biodiesel consumption has been included in liquid fuel consumption for 2010.

If we take into account aggregate consumption in relation to turnover, this figure has increased by 4% compared to the previous year, mainly due to increased consumption in motorways. The increase seen in motorway operations is mainly owing to the construction works for expansion of the AP-7 motorway and the greater scope of the data.

### LIQUID FUEL CONSUMPTION BY SECTOR



### LIQUID FUEL CONSUMPTION IN RELATION TO TURNOVER BY SECTOR<sup>1</sup>

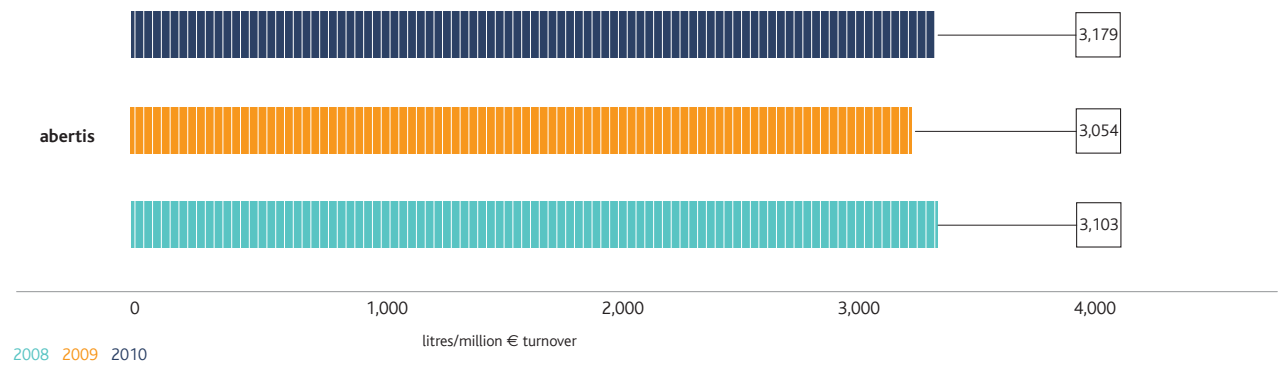


1. Liquid fuel consumption in relation to sector

## LIQUID FUEL CONSUMPTION IN RELATION TO SECTOR

	Motorways (litres/ADF)	Telecom. (litres/Technical Centres)	Airports (litres/Thousand vehicles)	Car parks (litres/Thousand vehicles)	Logistics (litres/m <sup>2</sup> rented space)
2009	329.1	25.90	80.63	2.64	---
2010	372	22.05	83.68	3.02	0.020

## TREND IN LIQUID FUEL CONSUMPTION AT abertis



## Material Consumption

In 2010, aggregate and asphalt were the most used materials, mainly for motorway maintenance, while salt and antifreeze were used on motorways and in airports to prevent the formation of ice which hinders the proper use of infrastructures. The increased consumption of aggregates is connected with the growth that occurred in French motorways, in which 23 bridges and 14 km of motorways were built. It has not been possible to incorporate any data for materials consumed by **rutas del pacífico** and **elqui**, as no verified data is available.

During 2010, the AP-7 motorway underwent expansion. These works represented a significant increase in materials used by **abertis**. The increase seen in 2010 in the consumption of materials such as aggregate, metals and paint is due to this expansion project, which also involved the consumption of other significant materials, such as 24,740 tonnes of gravel, 8,500 tonnes of earth fill and 2,836 tonnes of sand.

One noteworthy addition to consumed materials was rubber, which was re-used to cover hard surfaces of some Spanish motorways; not only did this allow for re-use of waste but this new surface reduces motorway noise levels. In 2010, a total of 5,196.16 tonnes of bituminous mixture, which contained a total of 20,784 discarded tyres, were used. This consumption represents an increase of 78.89% over 2009.

Material consumed (t)	2008	2009	2010	% consumed material recycled
Aggregates	747,402.10	1,264,873	2,189,623	10.09%
Asphalt	562,758.20	1,113,702	866,396	10.00%
Concrete	239,685.30	1,774,605	303,502	2.42%
Metals	4,904.70	8,575	27,225	0.00%
Paints	986	625	12,699	0.00%
Paper	188.4	236	404	9.05%
Salt	57,394	95,559	151,057	0.00%
Antifreeze liquid	506	641	1,697	0.00%

## Mobility Plan 2011-2014

In 2010, **abertis** drafted an Integrated Mobility Plan, its objective being to encourage a change in mobility habits of employees, both in their commuting patterns and in their work practices. This plan helped staff to rationalise the use of personal vehicles and encouraged the use of alternative modes of transport. This plan covers the offices of central services, which employ 1,100 people.

A detailed survey was conducted on 60% of the staff to identify their commuting patterns, along with an analysis of the possible modes of transport to this location (on foot, bicycle, shared transport, private vehicle). An action plan was drawn up using the compiled information. This plan is structured around six strategic lines and more than twenty corrective actions, setting **abertis**'s strategy and commitment to foster safer, more sustainable mobility for 2011-2014.

The main advantages of this action plan are as follows:

- Greater efficiency in the use of personal vehicles and an increased occupancy rate in commuting.
- A switch from personal vehicles to shared transport (both that offered by the company and public transport), in particular for travelling to and from the workplace.
- Greater efficiency and use of own fleet transport.
- Fewer instances of on-the-job travel through the use of video-conferencing.
- Increased road safety in areas surrounding the workplace and for each of the modes of transport employed.

## Carbon footprint of motorways

In an effort to determine the balance of carbon emissions coming from vehicles on the motorways managed by **abertis** in Spain, the **abertis foundation** commissioned a study headed by Gumersindo Feijoo, professor at the Department of Chemical Engineering at the University of Santiago de Compostela, on the life cycle analysis of direct and indirect greenhouse gas emissions generated on the **abertis** motorway network and the offsetting thereof by the vegetation on the motorways.

### Data analysis

- In order to obtain a detailed analysis, the study was conducted on **abertis**'s motorways, one section at a time. Direct emissions were measured from traffic flow (average daily traffic of light and heavy vehicles) as well as according to fuel type. The study also took into account the main greenhouse gases generated on the motorways. The procedures used in the study were based on the Tier 3 methodology set out in the EMEP/CORINAIR Emission Inventory Guidebook published by the European Environment Agency (EEA).
- Emission data coming from indirect sources were obtained by analysis of emissions generated by construction and maintenance work on motorways (materials used in construction of associated structures and road surfaces).
- Lastly, vegetation was analysed for each section studied, in particular the composition of existing species as well as the diameter of the main stem (plant age), as this parameter determines the CO<sub>2</sub> fixation capacity of each plant.

The overall results consists of the total (direct and indirect) CO<sub>2</sub> equivalent emissions in kg, minus the vegetation's fixation capacity, thus demonstrating whether the latter (i.e.: the carbon sink) is sufficient to absorb all the CO<sub>2</sub> emissions on each section, in the section studied to date, between Barcelona and La Jonquera, it was shown that of the CO<sub>2</sub> emissions generated, 3.65% were absorbed by the existing biomass. This is a favourable figure, given that it is greater than the 2% set by the Kyoto Protocol. The study is currently being extended to other motorway sections.

## Energy Saving and Efficiency Plan

In 2009, **abertis** defined a Energy Saving and Efficiency Plan, which included one of the company's objectives as regards climate change involving the reduction of energy consumption. Throughout 2010, a number of actions were implemented as part of this plan, their objective being to reduce energy consumption and improve energy efficiency among Group companies.

- **Motorways:** Improvements to exterior lighting on interchanges of the Tarragona-Valencia-Alicante AP-7 motorway, with an aim to decrease electricity consumption, reduce light pollution and CO<sub>2</sub> emissions, and have a more efficient, durable lighting control system. Actions here included replacement of all roadway lights, installation of voltage stabilisers/reducers and installation of a digital astronomical clock. These improvements have brought about a reduction of 14% in electricity consumption from lighting and 10% decrease in light pollution.
- **Telecommunications:** In 2009, greenhouse gas and water audits were conducted at one of the technical centres for the purpose of studying feasibility of energy measures. The energy saving measures proposed after said audits were applied in 2010. Some of the more noteworthy actions associated with this objective included the expansion of the Jaizkibel (Hondarribia) photovoltaic installation, which doubled its existing capacity, as well as the installation of 22 LED roadway lights and an astronomical clock. These modifications resulted in total energy savings of 32,120 kWh/year.
- **Airports:** In recent years, Cardiff airport has applied a number of measures to improve energy efficiency. Among these is the replacement of air conditioning units, refrigerants and the main boiler. Several projects were also completed as part of an energy management improvement programme. When purchasing products associated with lighting control, ventilation systems and insulation, the energy consumed by said products is borne in mind before purchase to ensure that their future environmental impact is minimised.

Luton implemented a system that controls energy consumption by both gas and electrical equipment, which has provided information on the areas requiring improvement to reduce airport consumption and environmental impact. This measure has brought about an 8% reduction in CO<sub>2</sub> emissions in 2010 compared to 2009. The airport also implemented an air conditioning management system, which uses carbon detectors to determine when there is little or no human traffic and decreases air conditioning to these areas accordingly, thereby lowering energy consumption.

Sabsa has put together a workgroup comprising three maintenance managers and electrical supervisors from the three airports under its management with an aim to draft an energy saving project.

- **Car parks:** **abertis's** car parks also implemented actions such as the switching-off of lighting on floors not in use and a pilot project to generate potential energy saving proposals for other car parks, as well as the implementation of a VIA-T payment system in some of its car park facilities.
- **Logistics:** Logistics implemented a system to control electrical consumption and has also analysed the implementation of savings measures. New logistics park construction will now include criteria that will enable energy savings when parks are fully operational. Some of these criteria refer to the installation of solar panels, energy efficient lighting systems and insulation.

## 7.2 Waste and wastewater management

### Policy

**abertis's** main objective with regard to waste is to reduce its generation and improve its management, prioritising reuse and recycling. Another objective for **abertis** is to improve wastewater treatment and quality.

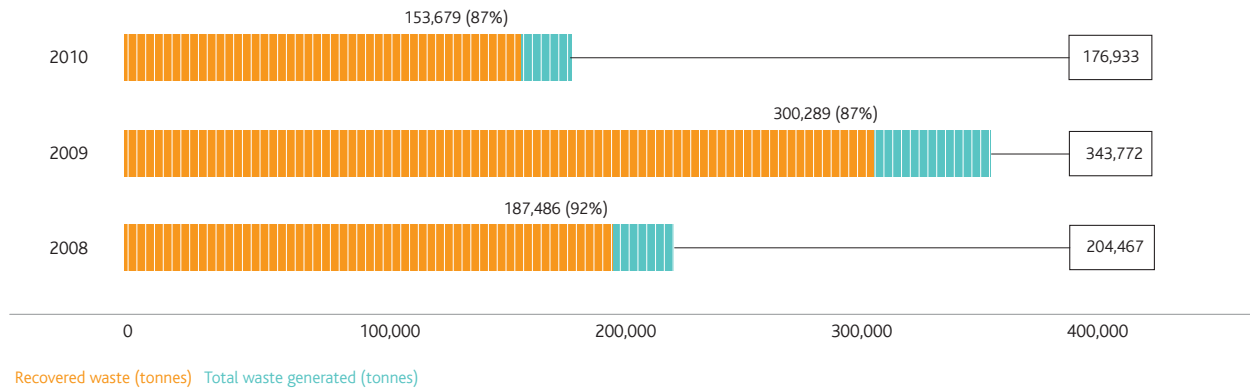
### Results

#### WASTE RECOVERY

	Tonnes generated	% recovered
<b>Hazardous</b>	<b>2,301</b>	<b>72%</b>
Used solvents	10	88%
Used mineral oils	39	47%
Paints, varnishes, inks and waste adhesives	8	37%
Mixed chemical waste	559	99%
Water/oil emulsion sludges	1,340	56%
Scrapped vehicles (vehicles)	156	100%
Scrapped electrical and electronic equipment	151	96%
Batteries and accumulators	27	78%
Scrapped components and equipment	11	40%

	Tonnes generated	% recovered
<b>Non-hazardous</b>	<b>174,632</b>	<b>87%</b>
Waste metal (except packaging)	1,741	83%
Metal packaging	38	65%
Glass packaging	149	93%
Paper and cardboard waste (except packaging)	539	82%
Paper and cardboard packaging	79	94%
Waste rubber	151	79%
Waste plastic (except packaging)	157	80%
Plastic packaging	109	10%
Waste wood	153	45%
Scrapped electrical and electronic equipment	8	76%
Organic waste	4,738	39%
Domestic waste and similar	7,190	25%
Common dry sludge	175	0%
Common wet sludge	5,399	37%
Construction and demolition waste	154,006	93%

## TREND IN WASTE GENERATION AND RECOVERY



In 2010, **abertis** generated 49% less waste overall than in 2009, mainly due to the reduction of building and demolition waste. It has not been possible to incorporate the data for **rutas del pacífico's** generated and recovered waste because it has not been verified.

It should be noted that of all the building and demolition waste generated in 2010, 75% was totally reused as material by the French motorways. In order to maintain comparability with the details of the previous year, the amount has been maintained as waste.

### Wastewater treatment methods

There are two types of wastewater produced as a result of activities at **abertis**: domestic-type wastewater that is sent to the mains sewage network and wastewater requiring prior treatment before it is discharged.

The techniques used to process wastewater vary and depend on the location and type of wastewater, including factors such as:

- Installation of water treatment plants
- The use of hydrocarbon settling and separation tanks
- Creation of OHMS wells and septic tanks with settling tank systems
- Creation of treatment lagoons

Flow meters are being installed at discharge points on an ongoing basis and the usual parameters in wastewater management (BOD, COD, suspended solids, etc.) will be monitored, in order to obtain an indicator that reflects the total volume of wastewater discharged.

Similarly, French motorways continued their active campaign to remove sludge from their wastewater tanks.

## Improved waste storage and management on the AP-7 motorway

In 2010, to better manage the waste generated by its operations, **umar** undertook a series of actions with two basic objectives in mind: to improve storage areas and improve waste management.

Actions undertaken as regards waste storage focused on improving 5 clean areas on the AP-7 network, in order to unify and reduce visual impact of the storage facilities located in the different maintenance areas. Clean areas are used as storage areas for waste generated onsite. This improvement involved the reuse of materials wherever possible, as in the metallic structures for the roof and concrete cylinders that were reused as planters. The company has also applied for a one-year extension of the storage period for hazardous waste, which will reduce costs associated with its management.

To increase efficiency of waste treatment, a study was conducted on alternative methods such as integrated waste management systems and cooperation with local non-governmental organisations involving the collection of electric and electronic equipment in addition to other materials with potential reuse value.

This project included an awareness-raising campaign for the motorway maintenance staff who are responsible for waste collection and separation at various clean areas located in the maintenance areas.

## Motorway water treatment facilities

In 2010 the water treatment plants (EDAR, in its Spanish abbreviation) located in the La Ribera service area and the Sagunto toll station were renovated, in an effort to improve wastewater quality and to improve performance of existing facilities. This renovation largely consisted of the installation of newer equipment that will aid maintenance operations and improve efficiency.

The EDAR plant at the Sagunto toll plaza was updated with a “full oxidation” water treatment system containing a catch basin, an anoxic chamber, aerobic bioreactor and settling tank.

Renovation of the EDAR at the La Ribera service area included:

- Installation of a new screw conveyor which washes, separates, dewateres and compacts solids from wastewater originating from the service and picnic area.
- Installation of two pumps to be used for homogenisation in the existing intermediate tank.
- Addition of a new anoxic selector tank for nitrification-denitrification.
- Installation of three new pumps in the settling and biological treatment tank.
- Construction of a cistern at the final pumping tank from where treated water is conveyed to discharge point, and installation of a digital flow meter.

## Ecosaba areas

The ecosaba areas are selective collection points installed as pilot tests in two **saba** España car parks. Each area is identified with its own signage, under which different bins are placed for the separation of waste, specifically paper, refuse and plastic.

To create these areas, the waste separation points were relocated, concentrating them in specific points as much as possible, with the aim of reusing the containers already in use in the car parks and to promote the use of these points as waste disposal areas.

The goal is to continue expanding the ecosaba areas in the Group's different car parks, based on car park users' response to the initiative and the rollout of the environmental actions planned for 2011.

## 7.3 Biodiversity management

### Policy

As part of its commitment to environmental conservation, **abertis**'s CSR strategy includes a number of actions that seek to **minimise the impact of infrastructure on biodiversity, ensuring its conservation and revitalisation.**

### Results

#### Current situation

Motorways, telecommunications and airports are the primary business areas that affect biodiversity, even though the former are not usually located in protected areas; this is also true for logistics parks, albeit to a lesser extent

- 159.5 km of the motorways managed by **abertis** in Spain pass through the Natura 2000 Network.
- 349.4 km of the motorways managed by **sanef** in France pass through protected areas.
- 2.2 km of the motorways managed by **abertis** in Puerto Rico (corresponding to the Tedoro Moscoso bridge) pass through protected areas.

- 72,003 m<sup>2</sup> of protected areas contain some facilities managed by **abertis telecom**. This surface area has decreased with respect to 2009, owing to a change in associated regulations.

Environmental monitoring plans and environmental impact studies related to infrastructure are fundamental tools in managing impact on biodiversity, as are other specific actions.

#### MAIN IMPACTS ON BIODIVERSITY BY MOTORWAYS, AIRPORTS, TELECOMMUNICATIONS AND LOGISTICS PARKS

##### Main impacts on biodiversity by motorways, airports, telecommunications and logistics parks

Barrier effect that fragments territory and changes the characteristics of trails and drainage channels used by fauna.

Increase in noise.

Increase in light pollution.

Dispersal of species.

Introduction of foreign species.

Habitat destruction and/or alteration of habitats inhabited by protected species

Impact on the quality of watercourses: rivers and streams.

Impact on indigenous flora and natural spaces.

Loss of land classified as Regional Nature Park or SCI.

Visual impact and impact on the landscape.

Loss of vegetation cover.

Occupation of land.

Elimination of vegetation in airport areas.

Wildlife collisions with aircraft.

##### Main conservation measures that have been implemented

Ensure the permeability of the infrastructure by building bridges or wildlife passages.

Installation of noise barriers.

Corrective measures affecting wildlife.

Preservation of sensitive areas through specific actions such as the creation of refuge areas for birdlife.

Reducing impact of logistics parks by ensuring natural growth of vegetation on artificial watercourses.

Control of water quality and creation of hydrological protection pools in areas around watercourses.

Planting of indigenous flora.

Revegetation and restoration of landscapes.

Landscape integration study for telecommunications facilities.

Environmental restoration of construction sites, embankments and watercourses.

Studies conducted prior to construction of the infrastructure to identify the best route.

Decreased frequency of grass-cutting to favour hare reproduction in the protected perimeter of the airport.

Measures relating to the prevention of forest fires.

Lifecycle assessment of telecommunications centres.

## Landscape integration in areas affected by the extension of the AP-6 motorway in the municipality of El Espinar

The expansion of the AP-6 motorway, the third lane and third Guadarrama Tunnel located between the Valle de los Caídos interchange and San Rafael received special mention in the "Best Public Works" category, granted by the Judges of the 2010 Madrid Civil Engineering Association Awards. This construction project affected certain areas within the municipal district of El Espinar. To restore the natural area surrounding the Gudillos River and reduce the impact on the landscape of the San Rafael aqueduct, a number of landscape integration actions were undertaken in late 2010, all of which were approved by El Espinar Town Council.

A restoration plan for the vegetation surrounding the Gudillos River was drawn up, which mainly involved replanting of riverside vegetation and reducing the visual impact of the viaduct; the plan also included the creation of vegetation based-barriers from the main observation points located under the viaduct.

## Protection of biodiversity at sanef

**sanef** has also made a commitment to protect biodiversity and to this end it has been working with MEEDDM (French Ministry of Ecology, Energy, Sustainable Development and the Sea) since 2009 to design the national plan on biodiversity. **sanef's** actions in favour of biodiversity can be broken down into three main strategic lines:

- Studies conducted prior to construction of the infrastructure to identify the route with least environmental impact.
- Ensure transparency in the infrastructure and protection of species. Throughout its network, **sanef** has created 139 wildlife passages which are periodically checked by operations teams or cooperating agencies.
- Conservation of environmentally vulnerable areas. The embankments and hard shoulders of the motorways are thoroughly managed by mowing and careful control of treatments. Other actions include leaving the surrounding area fallow to create natural cover for birdlife or cooperation with the Picardie natural conservatory and the Naturel Régional Park Oise-Pays de France to ensure differentiated management of green areas.

In 2010, a biodiversity audit of the entire **sanef** network began, which will consolidate available information and build upon existing knowledge regarding biodiversity of the area surrounding the infrastructure network; the information gathered will be used to create an action plan. This audit is part of the "Green Commitment" project of the French Ministry of the Environment, Sustainable Development and Transport for 2011-2013; other participating groups include national parks, nature conservation associations, government officials and hunters' associations. In 2011, studies will be conducted to build on available knowledge and in 2012 an action plan will be drawn up.

Another environmentally favourable action included the A13 motorway expansion project, which included criteria that will reduce impact on biodiversity. The permeability study conducted on the infrastructure has also provided information to design actions to improve the current situation. Some actions involved building bridges for fauna, and in relation to water works, relocation of fences, creation of corridors and planting of local species. In 2010, actions to ensure permeability of structures were incorporated into the Fontaine de Routot construction. These actions employed ecological engineering techniques on riverbeds and devices that helped to create rest areas inside the construction area.

## Airports and their habitats

Airport activities impact upon local biodiversity. With the aim of reducing this impact, the airports that **abertis** manages carry out various actions, of which it is worth highlighting those implemented by Luton and Belfast airports.

Firstly, the open habitat of Luton's runways provides an ideal source of food for birds such as lapwings, and birds that eat insects that fly over the fields, such as swifts and swallows. Areas of short grass make it easier for birds to find food and are safer for them, allowing them an unrestricted view of potential predators.

As part of the airport's operational procedures, Luton has developed and implemented a habitat management plan, aimed at reducing the risks to wild fauna, especially through collisions with birds during plane landing and takeoff on the runways.

The adoption of a long-grass system is considered to be the most effective habitat management technique that can be applied in an aerodrome, allowing the grass to reach a height of between 150 and 200 mm, which prevents good visibility by the birds, thus making it difficult for them to feed. This not only protects the local habitat, but also guarantees a safe environment for the airport's operations.

With regard to the grass-cutting system, Belfast airport manages it in a similar way to Luton. Furthermore, it collaborates with the Local Biodiversity Council and has participated in some activities organised by the latter. Among the activities in which Belfast participates, we should point out the monthly seminar on biodiversity and development, the aim of which is to raise awareness about various issues relating to biodiversity, and understanding how this affects a business, as well as what a business can do to conserve and improve biodiversity. These seminars are attended by speakers from the NIEA (Northern Ireland Environment Agency) and the industrial sector, who provide advice about regulations and examples of best practices.

Belfast has also received various visits from TV crews from the BBC Natural History Unit to record the local populations of hares, which are specific to the airport, and the airport is involved in a Health Protection Agency study, to investigate the spread of mosquitoes in the United Kingdom.

## 7.4 Noise management

### Policy

**abertis's** objective with regard to noise pollution is to minimise the impact from noise generated by the company's activities, prioritising impact reduction for local communities.

### Results

A number of actions mitigate the impact on local communities arising from noise-producing activities carried out on infrastructures managed by **abertis**.

As regards motorways, noteworthy measures included the installation of noise barriers, the use of quieter road surfacing materials, noise mapping and awareness-raising actions for users.

Fifty-eight percent of the motorway kilometres were monitored for their impact in terms of noise. This proportion has decreased in relation to 2009, largely owing to the greater scope of the report and to a reduction in the number of kilometres included in the noise impact study overall.

The various airports have created action plans which included the monitoring of noise parameters, redistribution of air routes according to noise impact, as well as fewer night-time flights and consultations carried out with the community with the aim of approving noise-reduction action plans.

## Noise observatory on motorways

The **sanef** noise observatory, which covers the 1,757 linear km of the motorways of both **sanef** and **sapn**, has been operating for several years. This observatory monitors the acoustic impact of the **sanef** infrastructure network on the adjacent towns, and also responds to queries about the acoustic impact of motorway traffic from third parties, whilst implementing the protection measures necessary for complying with the regulations.

The observatory consists of a computerised database linked to a geographic information system, which allows the average noise impact generated by motorway traffic to be mapped. The latest version was created in 2007, to adapt to European Directive 2002/49/EC, which aims to avoid, prevent or reduce the inconvenience created by noise exposure. This Directive, transposed in 2006 to the French Environmental Code, requires the production of noise maps and their national publication, as well as the preparation and implementation of noise prevention plans.

Through this observatory, the noise maps of the **sanef** motorways have been produced and published, thus allowing the noise exposure experienced by the residents of the towns neighbouring the **sanef** network to be identified. Based on these maps, environmental noise reduction plans have been drafted, which were sent in 2010 to the authorities of the 17 departments through which the **sanef** network runs. These plans contain:

- An assessment of the number of people exposed to a noise level above the thresholds established by the regulations.
- A census of the Group's intended measures to reduce any damage deriving from the acoustic impact, in those cases in which the permitted noise limits are exceeded.

This requires an update of the observatory in 2012 with the aim of integrating the urban planning changes that were made and the new traffic conditions. In turn, this update will ensure compliance with the European regulation's requirement to send new noise maps and prevention plans to the government every 5 years.

## Airports and noise management

Airports impact on the environment in a number of ways; noise pollution is one such example. Ever-aware of their contribution to this form of environmental impact, the airports managed by **abertis** have implemented a range of actions to mitigate it.

Boasting extensive experience in managing noise pollution, Luton airport has designed an action plan incorporating measures that will enhance control of noise levels of aircraft operations. This action plan is open to feedback from the public, to ensure that anyone who is interested in contributing to the plan is able to do so. In 2010, a policy prohibiting night-time traffic of high-noise aircraft was implemented. The airport has also worked with airlines to improve maintenance operations for aircraft using the airport.

Another clear example is Cardiff airport, which has its own Airport Consultative Committee, comprising local government representatives and stakeholders. The Committee meets quarterly to discuss airport operations, as well as environmental issues such as noise management, community projects and customer service. Belfast airport has also formalised an action plan to mitigate noise levels, in accordance with Northern Irish environmental legislation. The programme was also open to

public consultation to help designate specific noise reduction actions, some of which are currently in place, with others to be implemented in the short and medium term.

Stockholm Skavsta airport has also undertaken a number of actions to meet noise level standards for Swedish airports. Noise level reduction actions included a mapping of surrounding areas to the east and west of the airport that would benefit from lower noise levels, the completion of noise level contours to identify buildings that would benefit from said reduction, an analysis of the noise mitigation measures that would be most effective for the buildings identified and subsequent communication actions for owners of said buildings, among other actions.

## 7.5 Extending our environmental commitment

### Policy

**abertis** makes every effort to extend its environmental commitment to all stakeholders, both internal and external. In light of this objective, the different business units carry out various activities to raise awareness on environmental issues.

### Results

In keeping with **abertis**'s environmental commitment, the different business units have carried out numerous actions in 2010 geared towards raising awareness among employees and other stakeholders, including customers and suppliers.

In 2010, EUR 244,648 was invested in specific campaigns to raise awareness among customers about environmental issues<sup>11</sup>.

### Awareness-raising activities implemented

#### • Motorways

**acesa** and **aucat** sent out brochures to customers regarding the reduction in CO<sub>2</sub> emissions resulting from the use of the VIA-T.

**iberpistas** organised numerous volunteer activities such as toy, mobile phone and plastic cap collections and the installation of a clothing collection bin as per an employee's suggestion; the objective of these actions was to encourage reuse of items and extend their useful life before being discarded.

**aumar** offered a waste management course for managers and administrative staff and another course specifically directed at maintenance personnel.

As part of its implementation of an environmental management system, **avasa** organised a number of internal communications to employees to raise environmental awareness and encourage waste separation.

**sanef** offered sustainable driving courses for its staff, and also put together interactive areas that present various aspects of the environmental policy in the main service areas. **sapn** also implemented an ecologically-minded programme for school children in the Rogerville valley, part of which is managed by **sapn**.

**gco** provided an information session at a school in Ituzaingo on the environmental programmes put into place by the company, with the help of the staff and contractors.

**rutas del pacífico** has also conducted waste recycling campaigns.

#### • Airports

**Belfast** airport offered an information campaign for airport users to raise awareness of water and energy consumption and costs, as well as the waste generated by passenger operations.

During 2010, **sabsa** participated in a local environment project developed by Swisscontact, distributing leaflets to staff about environmental issues. This project sought to improve the waste separation system, waste management and associated environmental services, through systematic involvement in urban areas and neighbourhoods in particular, to generate revenue and eco-friendly employment.

On its website, **Cardiff** has included preferential routes taken by aircraft to decrease noise levels.

#### • Central services

As regards environmental management systems, the **abertis foundation** has provided the maintenance staff of and visitors to Castellet Castle with information on its site rules and environmental policy. For its "Aristos" campaign, **serviabertis** has implemented actions pertaining to waste management, resource consumption, climate change and other issues.

11. The total investment in raising awareness about environmental issues is included in the figure for overall environmental costs.

#### • Car parks

Several environmental courses were provided by **saba** España, such as training on waste management and general awareness-raising courses.

#### • Telecommunications

**abertis telecom** held a course on environmental operational control for areas of operation, and another course on environmental legal requirements for the Natura 2000 Viewer for areas where the company operates. Posters detailing good practices in waste separation were also created and distributed among the waste storage areas.

#### • Logistics

**abertis logística** has implemented awareness-raising actions for all functional areas regarding minimising the environmental impact of its activities..

## *Espai Terra: the environment as seen from your living room*

*Espai Terra* is a programme produced by Televisió Catalunya and sponsored by the **abertis foundation**, which first aired in April 2009. The programme's success, coupled with its resolve to protect and respect the region's natural environment — values it shares with the **foundation** — have led to a renewal of the collaboration agreement between the **foundation** and the television station. The programme's objective is to educate viewers on Catalonia's natural heritage, inviting them to discover and enjoy their region.

The programme is a powerful tool in raising environmental awareness among its viewers, relaying the importance of appreciating and respecting their natural surroundings; the programme places emphasis on participation through viewer photo submissions and the programme's blog. *Espai Terra* boasts an average audience of 260,000 and audience share of 11.6%. It has also received two awards:

- The International Environmental Film Festival of Barcelona Sol d'Or Special Prize, in recognition of the programme's commitment to environmental awareness, education and information on prime time television.
- The Sustainability award from the International Science in Action Fair of Santiago de Compostela, in recognition for its report on the recovery of the Tablas de Daimiel National Park aquifer.

**abertis**, in cooperation with Televisió de Catalunya and the Department of Education of the Government of Catalonia, organised the "Paisatge i Entorn" contest as part of the programme. Students from secondary schools competed to win a prize for the best research project. The prize was an English course in Ireland and was presented to the winner by Sergi Loughney on 14 June in Castellet.

Another project that was promoted as part of the television programme and sponsored by the **abertis foundation** was the publication of a book of photographs selected from among those submitted by viewers, its unifying theme being the four seasons.

## "Aristos" widens its horizons

Created by **abertis telecom** in 2009 within the framework of an environmental awareness programme, the image for this informational campaign was called "Aristos", which in Greek means "the best". Under this programme, information was sent out to all employees in a monthly online communiqué or e-mail about various environmental topics such as waste management, use of resources, purchase and contracting of services and climate change.

In 2010 the campaign was extended to a total of 1,100 employees from the Zona Franca Logistics Park central services; and subsequently to the overseas airports managed by **abertis**. Cardiff airport was the first to implement the programme, albeit in a different format. Communiqués are not sent

to employees; rather the texts are adapted and used in the magazine published by the airport. So far "Aristos" has played an important role in raising awareness internally among staff, but the magazine format will give the company an opportunity to send its message out to other stakeholders.

During 2010, work was carried out to adapt this icon of environmental communication to cover all the Spanish motorways; this will be achieved in 2011.