9

Sustainability, the Environment, and Climate Change

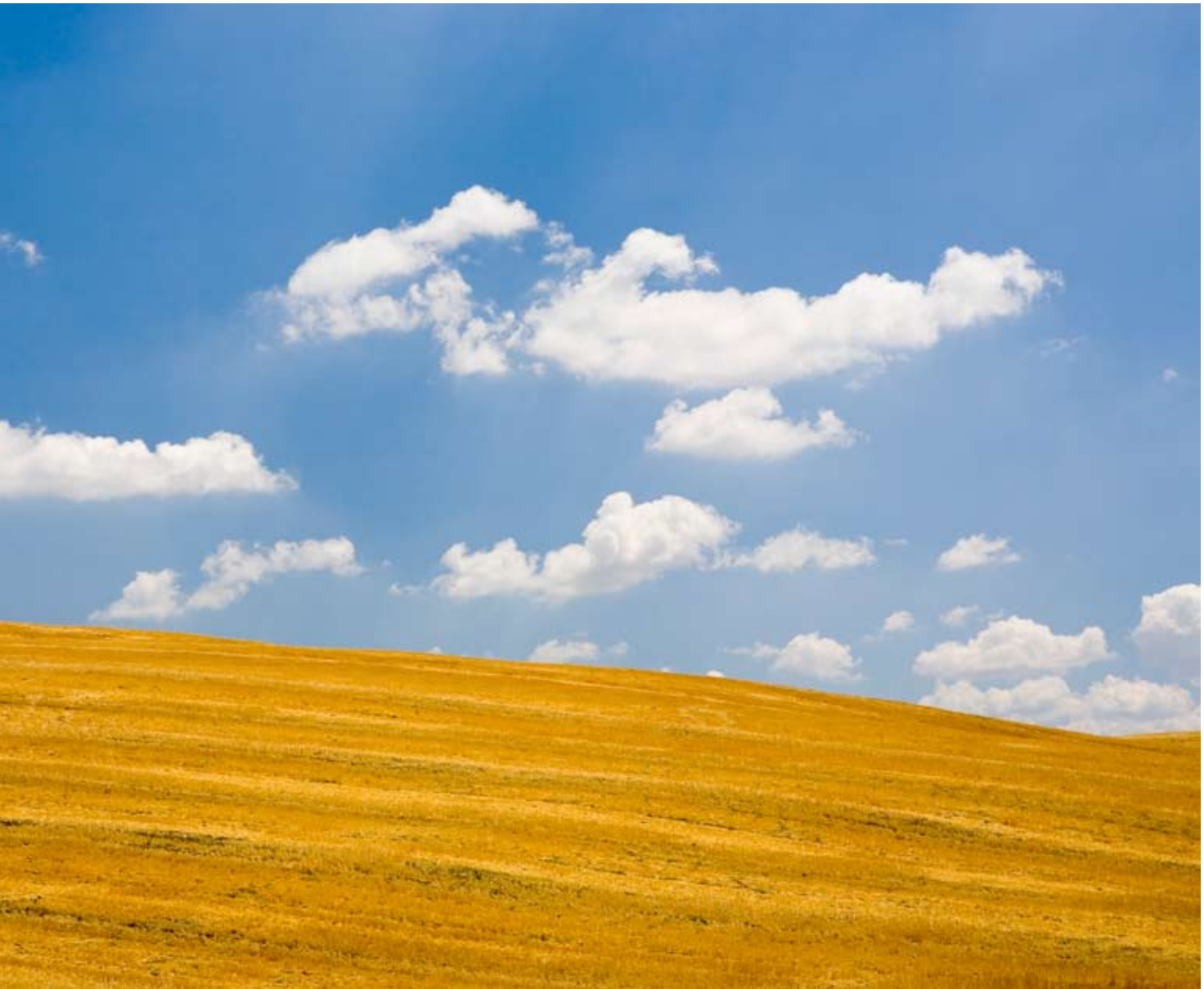
We align the sustainable approach to our businesses with the sustainable manner in which we conduct our business

For Abengoa, sustainable development is something that goes **beyond a mere commitment**, for sustainability is a fundamental part of the strategic approach to company activities. Abengoa gears its businesses towards environmental sustainability through a policy of **ongoing reduction of the environmental footprint** of company activities. Abengoa upholds a commitment to conducting its business around the struggle against climate change; however, sustainability not only is the cornerstone of the company's business, but rather has a presence in business evolution itself.

Abengoa applies innovative solutions for sustainable development in the **energy and environmental** sectors. The company is dedicated to intensive activity, building and operating concentrating solar power plants, producing first-generation bioethanol in different places around the world today, building and operating desalination plants for generating drinking water on four continents, recycling industrial waste in many different countries, and driving forward smart systems to increase efficiency and savings in power grid projects and transportation networks.

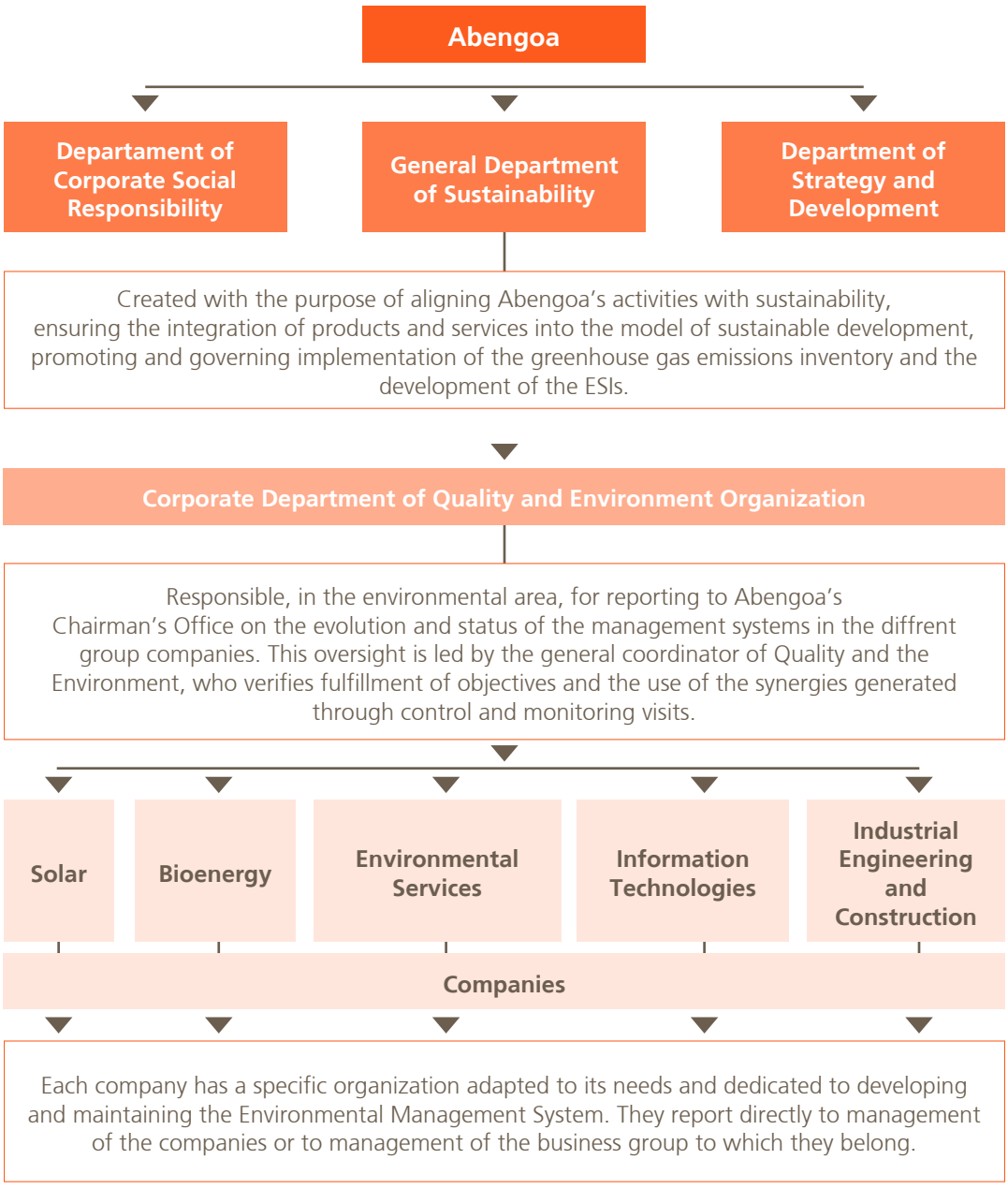
Abengoa also has an **Integrated Sustainability Management System** made up of a range of tools to ensure thorough and reliable measurement of the global impact of its activity to establish objectives for change and improvement. The main tools of this system are the following: on the one hand, the Greenhouse Gas (GHG) Emissions Inventory, and, on the other, the Environmental Sustainability Indicator (ESI) System and the GRI Indicator System.

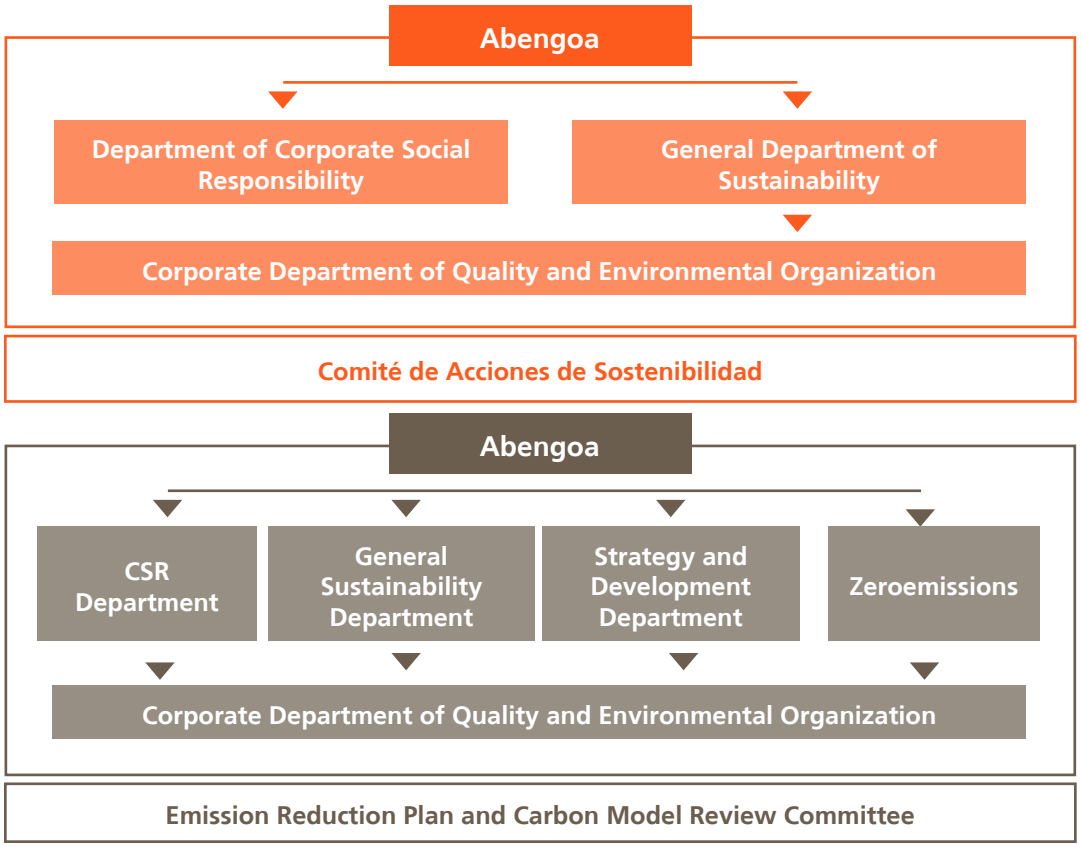
Abengoa's aim is thus to both guarantee the sustainability of its products and services, and ensure that sustainability is assured, measured and validated using instruments that are transparent and recognized by the market and by society at large.



Environmental Sustainability-Related Organizational Structure

The company's vision in sustainability is that of being an exemplary company with a **culture** and **business model** in keeping with **sustainable development**, credibility, confidence and respect in the markets, businesses and communities in which it operates.





Abengoa's environmental sustainability policy, in accordance with the requirements of activity and project certification and accreditation derived from the **United Nations Global Compact and good governance**, is being realized through a variety of instruments: **ISO-14001** environmental management system certification, the **greenhouse gas emission inventory** and the corresponding **ISO-14064** certification, **ISO-14067** product and service labeling certification, and the **Environmental Sustainability Indicator (ESI) system.**

Environmental Management System Certification

In accordance with its policy on environmental management and sustainable use of natural and energy resources, Abengoa has established as a strategic objective for its range of companies the implementation of environmental management systems in accordance with the requirements of the **ISO 14001** Standard. This framework establishes a concrete objective: reducing the potential negative environmental impacts of the products and services of each company, including lowering the consumption of natural resources, and minimizing the generation of waste and emissions.

The environmental management systems in place at Abengoa are extremely demanding in terms of measuring and monitoring environmental impact and controlling associated operations, and therefore all activities with significant impact on the environmental aspects evaluated must be covered under a **Measurement and Monitoring Plan**, as well as an **Operational Control Program.**

Practically all of Abengoa's activities fall under the scope of an environmental management system in line with the ISO 14001 Standard, and all significant environmental impacts are identified according to each company's internal procedures.

The percentage of certified Abengoa companies in 2010 totals 86.05 %.

Environmental Sustainability Indicators

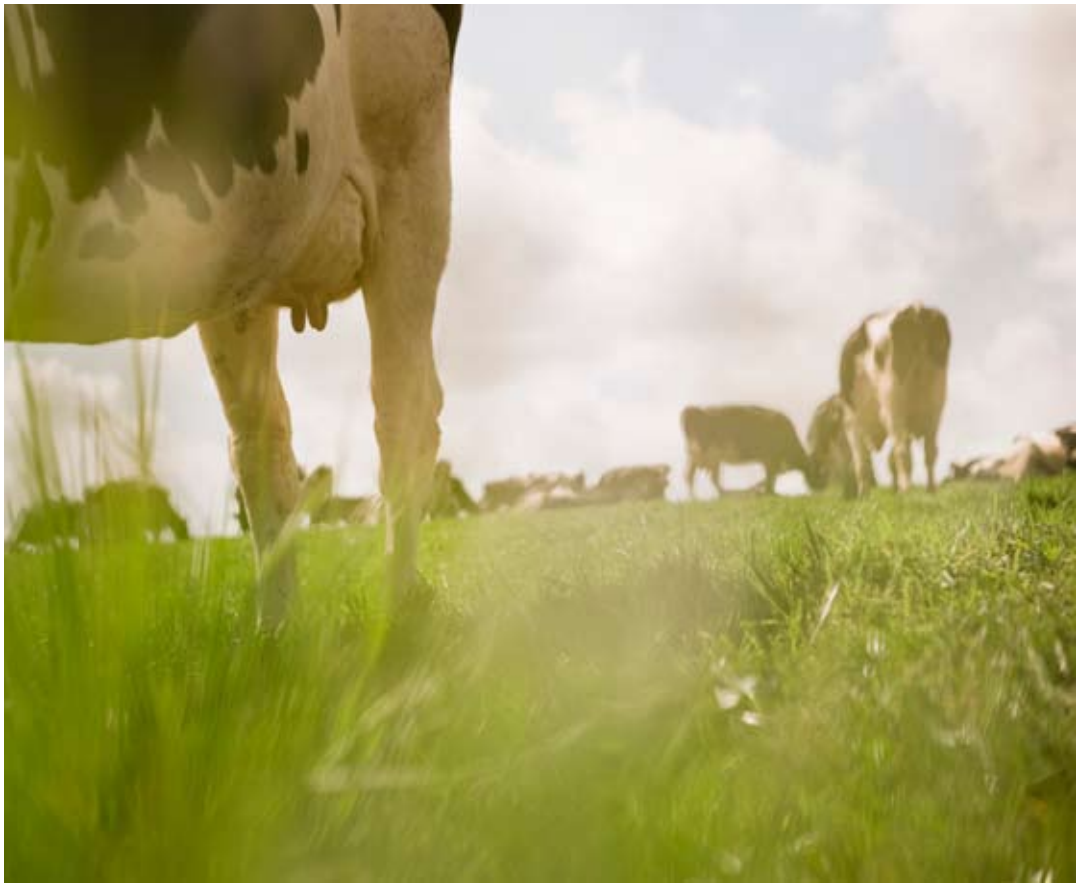
Combating climate change is one of the **cornerstones** of Abengoa's commitment to sustainable development. However, there are other aspects that are not directly associated with greenhouse gas emissions but which nevertheless are part of the concept of sustainable development.

For this reason, Abengoa has drawn up an **Environmental Sustainability Indicator (ESI)** system that will be implemented during the first quarter of 2011 in order to contribute to **enhanced business management**, enabling the company to **quantify** and **compare** the sustainability of its activities and to establish future **improvement targets.**

This system covers the following indicator categories:

- **Biodiversity**: environmental project installation response according to the sensitivity of the surroundings of the site location.
- **Odors**: emission of bothersome odors beyond project sites or areas of operation.
- **Noise**: level of environmental noise produced by project installations and areas of operation.
- **Water discharges**: discharge management related to the environmental quality of the receiving medium, reduction thereof, lowering resulting impact, and control of administrative requirements.
- **Soil and aquifers**: degree of soil contamination of the site and potential impact on nearby aquifers.

- **Products and services**: production recyclability; that is, making use of materials consumed; adapting products for reuse depending on their structure; raw material inputs applied more than once in the production process, and reutilization of means of production and transportation.
- **Water consumption**: sustainable project installation performance in terms of water consumption.
- **Energy consumption**: sustainable project installation performance in terms of energy consumption.
- **Atmospheric emissions**: sustainable project installation performance with respect to air quality, with the exception of CO_2 and other GHG emissions that are treated as part of the GHG reporting system.



The primary objectives of the system are as follows:

- **Ensure Abengoa's business** by ascertaining and **quantifying associated environmental risks** and setting **reduction targets.**
- Guarantee that the company is **recognized** as a business that strives to achieve sustainability, operating in a way that is sustainable.
- Enable persons in charge of the different Abengoa companies to **measure and compare** the sustainability of their activities.
- Establish future **improvement targets.**

The indicator system will facilitate environmental **risk detection** and coverage by determining aspects which have or could have a significant impact on the environment. It also enables planning of environmental issues required under the ISO 14001 in Section 4.3.1. "The organization should plan to establish, implement and maintain one or more procedures for identifying the environmental aspects of its activities, products and services that can be controlled and on which it may have an influence".

Training in Management of Environmental Issues

For a complex and multifaceted organization like Abengoa to successfully meet all of its environmental objectives and fulfill its commitment to sustainability requires that all members of the organization know the impact of the activities they perform in their positions on the environment, having received the right kind of training.

At Abengoa **training in environmental issue management** is part of the group's general training process. Each company has an annual training plan, which is generally based on Abengoa's competency-based management model, and which entails systematic assessment of its effectiveness.

Since December 2009, the course on **Sustainable Development and Climate Change** is available to all company personnel. Part of Abenga's corporate training program, this course is offered online in both English and Spanish. In 2010, 24,984 hours were devoted to this particular training.

Course objectives include the following:

- To analyze **causes and effects** of climate change on industrialized society.
- To learn about Abengoa's **business focus** on promoting technologies aimed at sustainable development.
- To foster greater **personal engagement** with Abengoa's policy and strategy with respect to sustainability, particularly involving halting **climate change.**

Furthermore, in 2010, 742 hours of attendance-based training were conducted, as well as 474 hours of webex online courses in Spanish and English on the new GHG inventory computer application. Online training is also available in Spanish and English on internal inventory norms. A total of 11,675 hours were devoted to this training initiative.

Extension of the Environmental Principles to Include Suppliers

The internal norm upon which the GHG inventory is based, reflected in Abengoa's common management systems, establishes the obligation to obtain **emission reports from its suppliers.** The norm specifies, therefore, a connection between purchasing systems and reporting of the emissions associated with goods and services acquired for incorporating them into the inventory.

In keeping with the obligations established under the internal regulations, all Abengoa suppliers are required to sign up to the Abengoa **Social Responsibility Code** and report the emissions linked to their goods and services or sign an **Agreement to Implement a Greenhouse Gas Emission Reporting System[1].**

In 2010 Abengoa continued to promote this corporate policy pertaining to company suppliers, establishing **16,700** supplier agreements to date throughout the world.

Climate Change and Greenhouse Gas Emissions

We have set emission reduction targets for all of our activities

Climate change is a reality, and it is caused by human activity. For this reason, the Kyoto Protocol set the target of achieving a 5% reduction by 2012 over the 1990 emission levels of the world's developed countries.

GHG emissions are **directly related to industrial activity**, with more industrialized countries being the biggest emitters. Cutting GHG emissions without having an effect on Gross Domestic Product (GDP) requires, among other initiatives, the development of clean industrial technologies, replacement of fossil energy use with renewables, and modification of production and consumption rationale to make these processes efficient so that resources, energy in particular, are employed in a way that is in keeping with the goal of obtaining satisfaction and generating development and opportunities for everyone. This poses a challenge, not only for governments, but for businesses and citizens alike. Agenda 21 of the United Nations has established an operational framework for facing the challenges of the new century through the integration of development and the environment.

The key role of the business community in combating climate change is synthesized in managing clean production and in promoting responsible engagements in this area, and is implemented through a range of actions:

- **Management of the knowledge of an entity's own emissions:** emissions accounting and balance sheet, enabling traceability to the different inputs.

1 See chapter titled Abengoa and its Suppliers

- **Product labeling.**
- **Analysis of product and service life cycles**, including evaluations on potential for improvement.
- **Innovation**.
- Alignment of new businesses with sustainable development.
- A company can voluntarily become a neutral emitter by purchasing carbon credits to compensate its emission balance.

In keeping with the above, in 2008 Abengoa implemented a complete system for quantifying GHG emissions[2] by means of an internal norm that is comparable to international standards. In **2008**, **2009** and **2010** the inventory, which was conducted in accordance with this internal management norm, was **audited by an independent external entity**. The inventory of GHG emissions has been disclosed through the Carbon Disclosure Project (CDP) since 2009.

Based on the results obtained from 2008 and 2009 emissions analyses, Abengoa set emission reduction targets in 2010 for all of the company's activities.

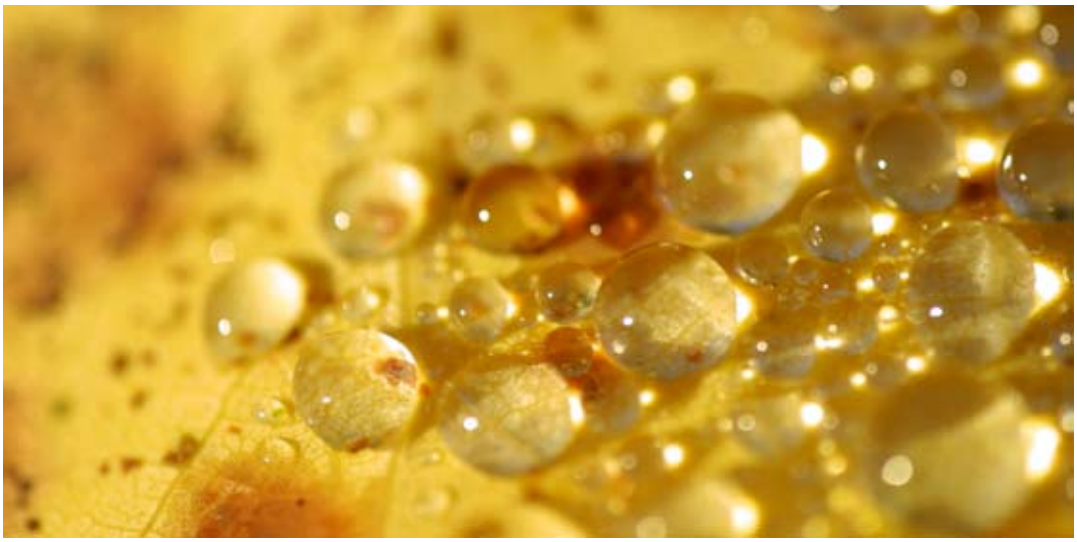
The purpose of this inventory is to gain in-depth knowledge of the direct and indirect GHG emissions of each one of the company's activities. This accurate emissions accounting enables the company to draw up annual GHG emission reduction plans, label Abengoa products and services, and evaluate company suppliers according to the GHG emissions associated with the products and services they provide.

The scope of this norm includes:

- **Scope 1.** Direct emissions: emissions associated with sources that are under Abengoa's control.
- **Scope 2.** Indirect emissions associated with the generation of acquired electricity or thermal energy.
- **Scope 3.** Indirect emissions associated with the production chain of goods and services acquired by Abengoa.

The inventory is incorporated into the metrics for determining the economic, **social and environmental footprint** of the company's activity, and constitutes yet another parameter for boosting sustainability. The inventory is an integral part of Abengoa's commitments to society.

For Abengoa, calculating emissions and quantifying efforts to reduce them is a task linked to its businesses; a duty deriving from the business model of consistency between the provision of innovative solutions for sustainable development and the commitment to sustainability and combating climate change.



2 See chapter titled Greenhouse Gas Inventory

Computing GHG Emissions

Implementation of the **Integrated Sustainability Management System** computer application was completed in 2010. This system combines, among others, all reporting tools in place for the **GHG inventory**, the **GRI (Global Reporting Initiative)** indicators, and the **ESI** system.

As far as the GHG inventory is concerned, the tool incorporates emissions computation for all scopes and sources established under Abengoa's internal norm in accordance with international standards. It also contains methodology, data bases and calculation systems to address all existing typologies in the company's activities.

In order to monitor the emissions associated with all acquired goods and services, this tool is linked to Abengoa company purchasing applications, impedes the formalization of purchases from suppliers who do not report their emissions, and ensures that emissions are registered for each order.

Abengoa's Main Environmental Indicators

Calculation of the environmental indicators takes into account Abengoa's work facilities, associated activities, and all projects promoted directly by Abengoa, with the exception of companies that have requested exclusion from reporting for substantiated reasons.

All other projects take into consideration the main figures deriving from our operations, excluding raw materials, consumption or waste attributable to the promoters of said projects. Nor were activities involving maintenance or operation conducted in customer facilities or purchases realized between Abengoa companies taken into account.

To illustrate the wide range of **initiatives** undertaken, and while not intended to be an exhaustive list, noteworthy is the application in all business units of policies to reduce paper, toner, water, and office electricity consumption, in addition to waste collection for subsequent treatment or recycling.

Among the activity highlights in obtaining results aimed at greater **control**, **awareness** and **minimization of environmental impacts**, the range of possibilities includes environmental prevention and management, conducted through management systems, dumping and waste inspections, internal and external audits, certification by authorized agents, suitable employee training, use of clean technologies, and conducting and maintaining a greenhouse gas inventory at each company.

In the **Industrial Engineering and Construction group**, environmental programs are carried out for project works, reforestation in areas adjacent to projects under execution and the coordination of subcontracted transportation with the aim of adapting the type of transportation to the size and quantity of the materials to be transported.

Environmental Services takes steps to reduce waste generation, including the sale of certain projects in bulk tanks in order to prevent the generation of container waste, reutilization and recovery of containers, etc. In order to reduce water consumption, gross water supply networks have been built for process water and systems for capturing rainwater, among other initiatives. In addition to the different R&D projects, including the development of advanced wastewater treatment systems or those involving desalination: minimization of the potential environmental impact of brine through the study of the brine dissolution phenomenon, carrying out desalination using renewable energies, etc.

The **Bioenergy** business unit conducts activities such as the reutilization of water from wastewater and collection of rainwater, among others.

With the aim of improving the reliability of the environmental indicators, improvements have been made to the process of compiling and aggregating data, with a computer tool having been specially developed for this purpose. Some figures from previous years have been rectified according to revised classification, estimation and computation criteria.

All of the indicators shown were calculated by following specific protocols for measurement and calculation with the aim of standardizing application criteria.

Raw Materials

Due to the nature and variety of Abengoa's activities, it is practically impossible to reflect all of the **raw materials utilized** in an exhaustive manner. Therefore, available data were aggregated and consolidated so as to give a real and adjusted picture of the company's environmental impact according to the different activities conducted.

Construction/Installation/Assembly Activities* (t)	2010	2009	2008
Material			
Aggregates and natural rocks	275,494	-	-
Binding materials used in construction (concrete, cement, plaster, etc.)	227,848	-	-
Iron-containing metal materials	95,217	-	-
Glass and ceramic material	36,923	-	-
Wood	25,319	-	-
Chemical products and non-renewable additives	3,816	-	-
Non-iron-containing metal materials (aluminum)	1,845	-	-
Non-iron-containing metal materials (copper)	1,415	-	-
Coating material (paint, varnish, etc.)	1,390	-	-
Oils, fats, and waxes	1,367	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Distribution/Intermediation/Storage Activities* (t)	2010	2009	2008
Material			
Non-iron-containing metal materials (copper)	109,153	-	-
Non-iron-containing metal materials (others)	31,347	-	-
Non-iron-containing metal materials (aluminum)	7,735	-	-
Plastics	6,799	-	-
Non-iron-containing metal materials (zinc)	4,332	-	-
Wood	1,188	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

R&D Activities* (t)	2010	2009	2008
Material			
Vegetable feedstocks (grain, vegetable oils, biomass, etc.)	15	-	-
Oils, fats, and waxes	6	-	-
Paper	4	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Provision of Services/Consulting/Engineering* (t)	2010	2009	2008
Material			
Industrial waste	616,213	-	-
Binding materials used in construction (concrete, cement, plaster, etc.)	3,781	-	-
Chemical products and non-renewable additives	2,464	-	-
Aggregates and natural rocks	1,107	-	-
Paper	852	-	-
Plastics	134	-	-
Non-iron-containing metal materials (copper)	132	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Production/Manufacturing Processes* (t)	2010	2009	2008
Material			
Vegetable feedstocks (grain, vegetable oils, biomass, etc.)	8,413,146	-	-
Chemical products and non-renewable additives	830,089	-	-
Minerals for industrial, chemical, fertilizer, refractory, foundry and pigment use	659,922	-	-
Industrial waste	523,947	-	-
Metal waste	363,549	-	-
Other waste	111,445	-	-
Animal raw material	77,188	-	-
Binding materials used in construction (concrete, cement, plaster, etc)	50,105	-	-
Aggregates and natural rocks	34,496	-	-
Iron-containing metal materials	22,481	-	-
Non-iron-containing metal materials (others)	15,676	-	-
Chemical products and renewable additives	13,173	-	-
Materials of fossil origin	10,580	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Projection Promotion Activities* (t)	2010	2009	2008
Material			
Binding materials used in construction (concrete, cement, plaster, etc.)	6,054	-	-
Aggregates and natural rocks	132	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Companies in the Environmental Services area are dedicated to the recycling of industrial waste by means of treatment, valorization and recovery, obtaining products such as plastic chippings, secondary aluminum, Waeltz oxide with a 65 % zinc content, and secondary zinc. This is the area with the highest potential for recovering products sold, which in practice totals 100 % in most cases.

In addition, most consumption of plastic as the raw material is derived from the recycling of the film used in greenhouse enclosures.

The percentage of material used that are recycled inputs materials totaled 15 %.

The following is a list of the **main types of waste treated:**

Recycled* (t)	2010	2009	2008
Steelwork and smelting dust	199,369	255,148	307,078
Waste containing zinc	303,734	217,347	311,232
Waste containing sulfur	84,692	83,000	95,612
Waste containing aluminum	159,588	81,055	182,472
Saline slag	68,106	76,055	62,078
Plastics	13,583	8,689	12,800
Filter dust	38,902	-	-
Lime	7,288	-	-
Slag dust	1,445	-	-
Cake	19,112	-	-
Molasses	77,083	-	-
Others	9,278	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

This area also encompasses companies dedicated to tank, centrifugator, etc. management, waste treatment and industrial cleaning. Another activity is the management of PCB[3]-contaminated equipment, consisting of treatment and cleaning of transformers, condensers, both solid and liquid, recovering metals.

The wastes taken into account are listed according to their classification as being hazardous or **non-hazardous** and in terms of the treatment they undergo.

3 Polychlorinated Biphehyls

Waste for Managing and Treating (t)	2010	2009	2008
Hazardous			
Waste for deposit treatment	34,142	47,702	76,231
Waste for recovery-regeneration treatment	43,586	37,643	20,815
Waste for physico-chemical treatment	22,728	28,596	37,163
Waste for energy valorization treatment	23,897	20,831	34,887
Waste for inertization treatment	136,674	128,913	304,377
Waste for evapo-condensation treatment	12,613	12,543	15,670
Waste for PCB treatment	3,118	4,137	4,904
Waste for thermal treatment	7,201	1,209	1,546
Waste for reactive segregation treatment	490	513	667
Total	**284,448**	**282,087**	**496,260**
Non-hazardous			
Waste for deposit treatment	317,146	558,823	638,870
Waste for physico-chemical treatment	6,425	7,835	3,255
Waste for energy valorization treatment	4,151	3,044	2,404
Waste for inertization treatment	127	-	-
Waste for reutilization-recycling treatment	17,554	18,991	24,713
Waste for inert deposit treatment	143	-	-
Waste for deposit treatment	810	-	-
Uncontaminated oil transformers	1,132	-	-
Total	**347,488**	**588,693**	**669,242**

Purines are one type of raw material treated of livestock farming origin.

Treatment of Waste from Farming Activity (t)	2010	2009	2008
Purines (*)	50,172	75,749	75,045

(*) Purines are a type of waste derived from livestock farming activity

Energy

Data on the amount of **electrical power** consumed from the grid correspond to permanent work centers, both production sites as well as offices, and to those projects promoted directly by Abengoa.

Intermediate Energy Purchase (GJ)	2010	2009	2008
Electrical energy	3,523,601	2,208,159	2,796,857
Thermal energy*	1,420,822	1,118,017	-

(*) 2008 data are not available due to modifications to classification criteria

Transforming this electrical consumption to the **primary sources** utilized for generation, according to AIE data for the different countries where Abengoa operates, results in the following:

Indirect Energy Consumption by Primary Sources (GJ)	2010	2009	2008
Coal	2,416,012	1,107,666	1,436,579
Fuel oil	325,509	224,720	267,157
Gas	2,611,728	1,482,370	1,058,804
Biomass	172,254	119,928	154,560
Residues	67,929	43,531	41,764
Remainder*	1,692,859	1,241,513	1,795,015
Total	**7,286,290**	**4,219,729**	**4,753,880**

(*) Nuclear, hydraulic, geothermal, photovoltaic, solar thermal, wind and tidal power combined

In **direct energy consumption** elements including fuels consumed in the different industrial processes, such as grain dryers, smelting furnaces, machinery, etc., are listed as important elements, as well as in the production of electrical power at cogeneration plants.

Energy (GJ)	2010	2009	2008
Petroleum derivatives	7,419,737	-	-
Coal derivatives	1,262,897	-	-
Natural gas	23,125,221	-	-
Biofuels	879,758	-	-
Biomass	11,744,536	-	-
Otros	251,869	-	-
Total energy	**44,684,019**	**-**	**-**

(*) Certain 2008 and 2009 data are not available due to modifications to classification criteria

Part of the energy consumed is recovered in the form of electrical power. It should be noted that 8% of the production of this energy is of **solar origin.**

Energy Production (GJ)	2010	2009	2008
Electrical energy	7,979,782	2,905,578	2,942,388
Electrical energy of solar origin	668,210	163,156	616
Thermal energy	4,008,288	629,601	585,532

Data on electrical and thermal production in 2008 were modified due to an error in the units employed.

The table below shows the results of proactive efforts to **increase energy efficiency** through technological process enhancements and other savings measures realized in 2010.

Energy Savings

Energy saving initiative	Instructions	Energy savings achieved (GJ)	Benefit obtained	Investment (€)
Installation of 48 solar panels	Kw generated are calculated by means of solar panel meter-reading	23	The energy produced is self-consumed, thereby preventing corresponding power grid consumption	62,942
Increased engine performance following overhaul	Motor performance monitoring	22,067	2 % savings in natural gas consumption	162,500
Reduction in electrical power consumption	Improved stoppage management through coordination between production and maintenance. Checks conducted on equipment in operation during stoppages and lowering installed power output capacity through replacement with more efficient equipment. Study of potential equipment to be substituted. Economic viability study	444	Reduction in electrical power consumption	26,607
2% reduction in gas consumption with respect to 2008	Gas consumption savings estimation based on data on tons processed in 2009 and 2010	2,793	Reduction in gas consumption	0
Energy savings in lamps employing photocells	Confinement site lighting primarily employs photocell lighting	13	Very significant energy savings as the result of the measure implemented	37,830
Roof insulation was added to the Lakewood, CO, facility in January of 2010 by the building owner. This increased the R value by	Natural gas usage from 2009 was compared with 2010. The roof insulation was added in January 2010. The weather variation was eliminated by using linear regression. We added 2 inches of poly iso (styrofoam) roof insulation to the metal roof in January. The added insulation increased the R-value of the building to r26. This was an increase of about 12.5 % or 93 %.	65	Reduction in natural gas consumption	805

A variety of initiatives were carried out over the course of 2010 aimed at providing products and services with **higher energy efficiency**. Thus, the replacement of LED-based incandescent stoplights not only led to a significant reduction in power grid consumption, but also rendered a reduction in the fuel use of the vehicle fleet employed for maintenance as a product of the significantly longer useful life of this type of lighting.

Initiatives were also implemented with the aim of **lowering indirect energy consumption**. These initiatives involve business travel and commutes to and from work and include, for example, facilitating public bus service for employees at their worksites, and, in the product and service value chain, efficiently managing the supplier portfolio.

Water

According to Abengoa's information system, none of the sources used to collect water is on the Ramsar list of wetlands or may be considered especially sensitive. Nor is there any record of cases in which annual consumption totals more than 5% of the volume of the sources affected.

The company's policy on sustainability prioritizes reduction at the place of origin by minimizing the amount used or through reutilization of the resource for activities in which potability is not a priority.

Water capture (m^3)	2010	2009	2008
Capture sources			
River water	9,668,754	-	-
Sea water	83,050,309	-	-
Well water	6,666,764	-	-
Grid water	5,522,792	-	-
Rainwater	125,140	-	-
Used water	164,443	-	-
Bottled water	1,193	-	-
Acquired steam (t)	65,419	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

The total volumen of reclycled and reused wáter was 249,126,393 m^3, which represents and increase of 238 % with respect to the total volume of water used at Abengoa

Discharges and Spills

In companies in which, due to the nature of the activities conducted, the state of water utilized is negatively altered, suitable treatment is undertaken, with final quality being within the limits established under legal requirements, prior to discharge into a public water source.

All discharge operations are likewise authorized and controlled by the pertinent authorities.

The amount of water discharged into surface water masses was updated for 2009, reporting brine dissolution at desalination plants.

Discharges (m^3)	2010	2009	2008
Discharges to sewer networks or outside treatment facilities	1,137,879	-	-
Discharges to surface water masses	48,391,034	15,275,209	5,275,438
Discharges from land infiltration	5,818	1,066	8,774
Dispersed or undefined land discharges	773,273	-	3,382,376
Third-party delivery for reutilization	42,613,544	-	-
Third-party delivery (steam)	52,270	-	-
Discharge into the environment (steam)	2,566		

(*) Certain 2008 and 2009 data are not available due to modifications to classification criteria

In 2010, six (6) accidental spills were recorded through the information channels due to Abengoa activity. These spills entailed a total cost of € 60,073.

Spills (€)

Substance spilled	Location	Recovery cost	Description	Solution
Fuel	Spain	6,986	Tank rupture. Ground spill	Spill absorption and removal of contaminated land for delivery to authorized agent
Fuel	Spain	2,328	Electrogen group tank rupture and adverse weather conditions. Catch basins full of gasoline mixed with rainwater	Pump collection in catch basins, absorbing layers and sepiolite
Oil	Spain	86	Leveling motor hose breakage. Land spill	Removal of contaminated land by an authorized agent
Oil	Spain	50,563	Tank switch malfunction during ship unloading. Spilling extending to the beach	Making sure that the rainwater outlet valve is closed during ship unloading
Wastewater	Peru	86	Spill and contamination of non-impermeabilized soil	Contaminated land cleanup, including respective treatment
Contaminated land	Peru	25	Spill and contamination of non-impermeabilized soil	Contaminated land cleanup

No water resources or habitats affected by spills deriving from company activity were identified through Abengoa's reporting system.

Waste

In conducting its usual activity, Abengoa generates many different types of waste, most of which are monitored through the different environmental management systems implemented in each company. Here the most significant are shown according to final destination.

Non-Hazardous Waste* (t)	2010	2009	2008
Physico-chemical treatment	51	-	-
Ground or underground deposit	141,375	-	-
Permanent deposit	286	-	-
Prior storage	202	-	-
Treatment in terrestrial environment	7,675	-	-
Dumping at specially designed sites	648	-	-
Biological treatment	81	-	-
Utilization as fuel or other means of producing energy	232	-	-
Soil treatment, resulting in agricultural benefit or ecological improvement	2,986	-	-
Waste accumulation for use in subsequent operations	1,816	-	-
Recycling or recovery of organic substances that are not utilized as solvents	17,137	-	-
Recycling or recovery of metals and metal compounds	10,450	-	-
Recycling or recovery of other inorganic material	232,505	-	-
Recovery of elements used to reduce contamination	1,702	-	-
Combination or mixture	14	-	-
Utilization of waste obtained from operations	55	-	-
Land incineration	168	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Hazardous Waste* (t)	2010	2009	2008
Ground or underground deposit	854	-	-
Land incineration	5,024	-	-
Prior storage	3,453	-	-
Dumping at specially designed sites	417	-	-
Physico-chemical treatment	16,088	-	-
Utilization as fuel or other means of producing energy	1,706	-	-
Waste accumulation for use in subsequent operations	328	-	-
Solvent recovery or regeneration	52	-	-
Recycling or recovery of metals and metal compounds	7,550	-	-
Recycling or recovery of other inorganic material	76,288	-	-
Recovery of elements used to reduce contamination	56	-	-
Regeneration or other new use of oils	57	-	-
Deep injection	317	-	-
Utilization of waste obtained from operations	204	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

In accordance with our Environmental Management Policy, all companies that generate hazardous waste conduct an exhaustive process for identifying and monitoring these types of waste and their quantities in all operations involving transportation to authorized agents, whether they belong to Abengoa or to outside companies.

Hazardous Waste Transportation* (t)

Country	Entry of waste into the country	Exit of waste from the country	Waste imported internationally	Waste exported internationally
Argentina	8,656	-	-	-
Chile	1,908	1,364	-	-
Germany	120,586	2,985	162,156	35,287
Spain	406,464	109,255	50,336	-
France	10,565	0.12	29,882	8,691
Mexico	0	569	-	-
United Kingdom	43,897	6,961	7,133	-
Peru	22,308	5	-	-
Brazil	-	148	-	-
Sweden	17,530	-	-	-
United States	-	10	-	-
Netherlands	-	1,450	-	-
Finland	-	-	35,412	-
Total	**631,914**	**122,747**	**284,920**	**43,979**

(*) 2008 and 2009 data are not available due to modifications to classification criteria

There are companies which, due to the nature of the equipment they produce -electrical and electronic- adhere to the Integration Systems for waste recovery in order to ensure proper recovery and valorization of equipment at the end of its useful life. At present, Telvent GIT has signed a contract with the ECOTIC Foundation in representation of Telvent Traffic and Transportation and Telvent Energy and Telvent Environment.

Evaluating the impact of the transportation of products, goods and materials is a strategic component of our environmental management systems. In this regard, the Abengoa reporting system has not recorded any significant impact derived from the same.

Sustainability, Our Main Challenge

The transition to a **model of sustainable** development is the key challenge facing human society over the next few years. The challenge lies in being able to **generate opportunities** for economic development that will ensure future use of available resources.

For Abengoa, this constitutes both a challenge and an unwavering commitment, and is part of the company's approach to its businesses and the very essence of company strategy.

Within the framework of sustainability, climate change is one of the main axes of Abengoa's activity. Humanity needs to tackle the physical changes and the consequences of human activity for our planet's climate, which are affecting productive systems, resource availability, and social equilibrium. Climate change, therefore, has an impact on society's **security** and **viability**.

It is obvious, then, that steps must be taken towards **lowering GHG emissions** to thereby hold the concentration of emissions in the atmosphere to levels which, even while unavoidable alterations in the earth's climate occur, are compatible with present conditions for life.

In this regard, one of the conclusions from the UN **Conference on Climate Change** held in Copenhagen last December is the need to hold the earth's temperature increase to below 2º C.

This poses a global problem that calls for **global solutions.** Therefore, it is not enough for one country to lower its emissions, but demands monitoring and abating the emissions generated by the world's nations as a whole. It is essential that global decisions be made to ensure that economic development in the coming years will be accompanied by a reduction in greenhouse gas emissions; in short, paving the way for sustainable development.

GHG emissions are produced by fossil fuel consumption and there cannot be a significant emissions cut without a change in the energy model that gives rise to these emissions. Currently 80 % of the energy used in the world is of fossil origin, a fact that is utterly incompatible with halting climate change.

Renewable energies are at the crux of this **new paradigm**. Solar energy, wind power and biofuels constitute a viable alternative that is now available commercially. Hydrogen as an energy vector may also play an important role in the medium term.

The **solar radiation** the earth receives contains energy that amounts to approximately ten times the energy presently being consumed. Therefore, the sun is an energy source with the capacity to meet today's needs by simply making use of a mere portion of its potential. At present, the costs of producing photovoltaic or concentrating solar power energy are beginning to parallel the costs of fossil fuel-based energy production. Generalized development and deployment of this type of energy, in conjunction with the internalization of the emission costs associated with fossil energies, would almost instantly make solar energy profitable with respect to energies of fossil origin, not only from an environmental standpoint, but economically as well. Concentrating **solar power**, furthermore, enables thermal storage systems which render ease in managing its integration into the power grid.

Wind power, in turn, is also an energy source which, while still limited, may make a significant contribution to a totally or fundamentally renewable energy mix.

Abatement of the emissions from the transportation sector, the cause of approximately a quarter of all GHG effluents, will require the use of alternative energy sources. In this field, **biofuels** are a readily available solution. Their use in hybrid vehicles, which run on an electric engine and another internal combustion engine, or those with conventional internal combustion engines, can lead to a very significant emissions reduction. In the case of hybrid cars running on E85 (85% bioethanol, 15 % gasoline) of average environmental quality, the emissions cut would be greater than that of electric cars with the same horsepower powered by the European electrical mix. Biofuel use does not alter the performance of today's vehicles, maintains autonomy, and does not require a significant modification to the current supply network or increase vehicle cost. In different parts of the world both flexifuel vehicles, running on 100 % bioethanol, as well as biofuels ensuring a GHG reduction of between 35 % and 50 % are currently being commercialized. Furthermore, generalized production of second-generation lignocellulosic biofuels, currently in their demonstration phase, will enable an even greater reduction in the emissions derived from transportation.

The change in the **energy model** is not only necessary, but constitutes a tremendous opportunity for creating wealth and jobs in a way that is environmentally and socially sustainable. This change in model will not only give rise to development, but will also yield energy independence and supply security.

Emissions

Computation of greenhouse gas (GHG) emissions took into account the **direct emissions** of all sources that are owned by Abengoa (combustion, process, transportation and emission leaks), **indirect emissions** from acquired electrical power, thermal energy and steam and the indirect emissions resulting from work-related travel, work commutes, losses in the distribution and transmission of electrical power and emissions in the value chain of fuels consumed for generating acquired electrical power. Likewise, the emissions involved in biomass combustion or processing are reported separately.

Emissions calculation was made based on the IPCC and GHG Protocol methodologies, using, whenever possible, specific fuel emission factors; and in other cases, national GHG inventory values of the countries in which our activities are carried out, and, as a last resort, generic figures published by the IPCC.

Greenhouse Gas Emissions (t CO_2 equivalents)	2010	2009	2008
Direct Emissions	2,432,644	1,352,951	1,659,422
Direct Emissions from Biomass (1)	1,795,727	1,843,259	1,280,132
Indirect Emissions (2)	593,086	392,363	422,921
Other Indirect Emissions (3)	175, 615	113,244	197,461
Emission Total	**4,997,072**	**3,701,817**	**3,559,936**

(1) According to the GHG Protocol Corporate Standard
(2) Including emissions from acquired electricity, thermal energy and steam.
(3) Including emissions associated with work-related travel, work commutes, losses in the transmission of electrical power and emissions in the chain of value of fuels consumed for generation of acquired electrical power.

For Abengoa, the greenhouse gas emissions inventory is a complete and mature instrument for ensuring responsibility with respect to climate change.

With respect to other techniques for footprint analysis of local scope, complete accounting of emissions commits all Abengoa companies, in all geographies, to integrating the supply value chain in determining emissions.

Emission measurement in the inventory conceived by Abengoa has comparative advantages over other instruments: it is thorough, both in terms of the consolidation perimeter, as well as scope; it is verifiable both internally and externally; it constitutes a global model upon which to base reduction targets; it binds suppliers to climate preservation policies.

Initiatives aimed at lowering GHG emissions	
Initiatives implemented to lower greenhouse gas emissions	**Reductions achieved (tons of CO_2)**
Increasing efficiency in natural gas use and reducing natural gas consumption	5,927
Replacement of diesel-powered vehicle fleet with vehicles running on bioethanol	25,432
Efficient management of the supplier portfolio	159,910
Encouragement of webex meetings to eliminate unnecessary travel	506
Raising employee awareness by encouraging them to turn off their PC monitors when not in use and switching off the office lights when they leave in order to decrease electrical power consumption	2
Reorganizing work shifts so that people who live farthest away can come to work using just one vehicle	12
Substitution of a portion of natural gas use for hydrogen produced during the process of treating saline slag	500
Improved stoppage management through coordination between production and maintenance	1,168
Training sessions for operating personnel on sound environmental practices and loading and unloading fuel	8
Implementation of ecological vehicles into the internal fleet	3
2% reduction in emissions from burning sugar cane chaff	20,790
EcoPass Bus Pass Program	20
WindSource Program	114

There is no record via the Abengoa reporting channels over the last three years of significant emissions of ozone layer-depleting substances deriving from company activity.

Emissions recorded in 2010 are listed below.

Ozone layer-depleting substances (kg)	2010	2009	2008
Ozone layer-depleting substances	820	-	-

NOx, SOx and other Atmospheric Emissions (t)	2010	2009	2008
CO	27,153	26,494	38,206
VOCs	3,522	3,612	5,756
NOx	6,042	4,293	20,796
SOx	606	487	782
Particles	2,857	2,287	7,247

Managing Biodiversity

Abengoa understands that a sound strategy for preserving biodiversity requires a combination of elements involving prevention, management and restoration of damage that may be caused to the natural habitats in which the company operates.

Always bearing this in mind, environmental impact studies and monitoring tasks were carried out on the activities being conducted on land adjacent to or lying within protected areas (Table 1), the identification of affected species, as well as quantification and assessment of derived impact (Tables II, III).

Conservation of these habitats is an objective that encompasses recovery plans and reforestation, strategies geared towards protecting plant and animal species, training in forest fire prevention, etc. (Tables IV, V).

Land adjadcent to or located in side projected or highly biodiverse areas							
BU	Protected or highly biodiverse areas affected by project installations	Project location with respect to the protected area	Protection status	Type of operation	Attribute of the protected area	Total protected area (hectares)	Protected area affected (hectares)
Abeinsa	Vitrolles	Within	National Park	Production	Terrestrial ecosystem	143,637	50
	Helios C San Juan II	Within / Containing a portion thereof	Natural Protected Area	Production	Terrestrial ecosystem	294	14
	Morocco	Within	National Park	Production	Terrestrial and marine ecosystem	33,800	10
	Morocco	Within	National Park	Production	Terrestrial ecosystem	54,000	10
	Morocco	Within	Reserve	Production	Terrestrial and marine ecosystem	Not available	20
	Helioenergy Écija I JV	Adjacent to	Bridleway	Production	Terrestrial ecosystem	1	0.003
	Solacor I	Within	Archeological sites	Production	Terrestrial ecosystem	25	25
	Solacor I	Containing a portion thereof	Bridleway	Production	Terrestrial ecosystem	7	0.2
	Água Parada Municipal Environmental Protection Area - ATE Transmissora de Energia S.A.	Containing a portion thereof	Sustainable Exploitation Conservation Unit	Production	Terrestrial ecosystem	1,803	33
	Mata dos Godoy State Park - ATE Transmissora de Energia S.A.	Adjacent to	Comprehensive Protection Conservation Unit	Production	Terrestrial ecosystem	676	41
	Arthur Thomas Municipal Park - ATE Transmissora de Energia S.A.	Adjacent to	Comprehensive Protection Conservation Unit	Production	Terrestrial ecosystem	83	43
	Ibiporã Forest Park- ATE Transmissora de Energia S.A.	Adjacent to	Comprehensive Protection Conservation Unit	Production	Terrestrial ecosystem	74	64
	Assis Ecological Station - ATE Transmissora de Energia S.A.	Adjacent to	Comprehensive Protection Conservation Unit	Production	Terrestrial ecosystem	110	110

Land adjadcent to or located in side projected or highly biodiverse areas							
BU	Protected or highly biodiverse areas affected by project installations	Project location with respect to the protected area	Protection status	Type of operation	Attribute of the protected area	Total protected area (hectares)	Protected area affected (hectares)
Abeinsa	Caetetus Ecological Station - ATE Transmissora de Energia S.A.	Adjacent to	Comprehensive Protection Conservation Unit	Production	Terrestrial ecosystem	2,179	94
	Bauru Ecological Station and Experimental Station - ATE Transmissora de Energia S.A.	Adjacent to	Comprehensive Protection Conservation Unit	Production	Terrestrial ecosystem	288	131
	Fazenda e Castanhal Sororó Natural Heritage Private Reserve- ATE III Transmissora de Energia S.A.	Adjacent to	Sustainable Exploitation Conservation Unit	Production	Terrestrial ecosystem	100	100
	Fazenda Limeira Natural Heritage Private Reserve - ATE III Transmissora de Energia S.A.	Adjacent to	Sustainable Exploitation Conservation Unit	Production	Terrestrial ecosystem	800	640
	Carajás National Forest - ATE III Transmissora de Energia S.A.	Adjacent to	Sustainable Exploitation Conservation Unit	Production	Terrestrial ecosystem	412,000	0
	Rio Passaúna Environmental Protection Area - ATE IV - São Mateus Transmissora de Energia S.A.	Containing a portion thereof	Sustainable Exploitation Conservation Unit	Production	Freshwater ecosystem	650	27
	Rio Verde Environmental Protection Area - ATE IV - São Mateus Transmissora de Energia S.A.	Containing a portion thereof	Sustainable Exploitation Conservation Unit	Production	Freshwater ecosystem	14,600	48
	Escarpa Devoniana Environmental Protection Area - ATE V - Londrina Transmissora de Energia S.A.	Containing a portion thereof	Sustainable Exploitation Conservation Unit	Production	Terrestrial ecosystem	392,363	60
	Iguaçu National Park - ATE VII - Foz do Iguaçu Transmissora de Energia S.A	Containing a portion thereof	Sustainable Exploitation Conservation Unit	Production	Terrestrial ecosystem	185,262	98
Bioenergy	Abengoa Bioenergy Corporation - York	Adjacent to	Protection status maintained per the Comprehensive Plan and Environmental Assessment	Production	Freshwater ecosystem	38	38
	Abengoa Bioenergy Agroindustry - São João	Within	Protected	Offices	Freshwater ecosystem	0.04	0.04

Land adjadcent to or located in side projected or highly biodiverse areas							
BU	Protected or highly biodiverse areas affected by project installations	Project location with respect to the protected area	Protection status	Type of operation	Attribute of the protected area	Total protected area (hectares)	Protected area affected (hectares)
Bioenergy	Abengoa Bioenergy Agroindustry - São João	Within	Under recovery	Extraction	Terrestrial ecosystem	1,462	1,462
	Abengoa Bioenergy Agroindustry - São Luiz	Within	Under protection. Not possible to determine protection status.	Offices	Terrestrial ecosystem	20	20
	Abengoa Bioenergy Agroindustry - São Luiz	Within	Under recovery/ Under protection. Not possible to determine protection status.	Producción	Freshwater ecosystem	5	5
	Abengoa Bioenergy Agroindustry - São Luiz	Within	Under recovery/ Under protection. Not possible to determine protection status.	Extraction	Terrestrial ecosystem	1,805	1,805
Befesa	Befesa Valera	Adjacent to	ZNIEFF 109 : Flamande maritime plain	Production	Terrestrial ecosystem	10	0
	Planta Chilca	Adjacent to	Archeological remains - Protection by INCE	Production	Terrestrial ecosystem	1	1

Number of species included on the IUCN Red List affected by operations					
Protected or highly biodiverse areas affected by project installations	Critically endangered (CR)	Endangered (EN)	Vulnerable (VU)	Near threatened (NT)	Least concern (LC)
Morocco	11		2	45	161
Carajás National Forest - ATE III Transmissora de Energia S.A.			1	3	57
Rio Verde Environmental Protection Area - ATE IV - São Mateus Transmissora de Energia S.A.					7
Escarpa Devoniana Environmental Protection Area- ATE V - Londrina Transmissora de Energia S.A.				1	50
Iguaçu National Park - ATE VII - Foz do Iguaçu Transmissora de Energia S.A			1		104
Vitrolles				12	

Most significant impacts on biodiversity in protected or high-biodiversity areas					
Protected or highly biodiverse areas affected by project installations	Instructions	Types of impact generated	Description	Cause	Solution/Corrective measure
Transmission Line of: ATE III Transmissora de Energia S.A, ATE IV São Mateus Transmissora de Energia S.A, ATE Transmissora de Energia, ATE V Londrina Transmissora de Energia S.A, ATE VII Foz do Iguaçu Transmissora de Energia S.A.	Assessment of impacts generated by the project on protected areas in terms of type of impact, duration, and reversibility.	Disturbance of ecological processes and loss of biodiversity.	The transmission line segment interferes with biodiversity in causing disturbance to ecological processes and also gives rise to a loss of biodivesity. However, impact is limited and can be minimized by adopting mitigating measures.	Transmission Line segment interference in the Conservation Unit.	Execution of the Environmental Programs established under the Basic Environmental Plan - BEP.

Strategies and initiatives implemented and planned for managing impact on biodiversity				
Protected or highly biodiverse areas affected by project installations	Initiative	Instructions	Description	Benefit
LT Londrina - Araraquara - ATE Transmissora de Energia S.A, LT Itacaiúnas - Colinas - ATE III Transmissora de Energia S.A, LT Curitiba - Bateias - ATE IV São Mateus Transmissora de Energia S.A, LT Foz do Iguaçu - Cascavel - ATE VII Foz do Iguaçu Transmissora de Energia S.A.	Assess project impact on biodiversity	Evaluation of impacts on biodiversity	Assessment of project impact on biodiversity, primarily in protected areas, and including Conservation Units.	
Vitrolles	Protection through the placement of markers	Steps have been taken to prevent contact with protected flowers and therefore no damage has occurred		Impact on biodiversity is considered to be Medium-level based on the information reported
Zimapán Plant	Soil Recovery, Reforestation and Conservation Program for the plant and access road - Authorizations	GPS measurements are taken of 132ha. project installation land.	Generation of new autochthonous specimens to compensate areas taken up by the confinement site and access road over the entire course of the plant's life.	Ecological balance, increased biodiversity

Protected or restored habitats							
BU	Areas where restoration or protection activities are being conducted	Instructions	Area (square meters)	Initiative	Description	Benefit Obtained	Investment (euros)
Abeinsa	Helios C San Juan II	A description is prepared on the restored or protected areas based on status thereof at the end of the reporting period	52,214	The habitat shall remain unaltered and free of installations	Markers are put in place in the area.	Paleodune habitat protection.	177
	ATE IV São Mateus Transmissora de Energia S.A.	Initiatives and measures for protection/restoration of protected areas (Conservation Units) affected by the Curitiba LT/Bateias PR/PR of ATE IV São Mateus Transmissora de Energia S.A.	750,000	The company is required by law to compensate the impacts on the conservation units through an Environmental Compensation Term.	The Environmental Compensation Term was signed with the IAP and anticipates payment of R$ 67,539.93 for the IAP.	The managing body of the Conservation Unit that receives recourse or employs it to make improvements to the unit according to specific needs.	11,577
	ATE V Transmissora de Energia S.A.	Initiatives and measures for protection/restoration of protected areas (Conservation Units) affected by the Londrina LT/Maringá PR/PR of the ATE V Londrina Transmissora de Energia S.A.	600,000	Considering the execution of EIA/RIMA for the Londrina - Maringá LT, the company is required by law to compensate the impacts on the conservation units through an Environmental Compensation Term.	The Environmental Compensation Term was signed with the IAP and anticipates payment of R$ 64,651.29 for the IAP.	The managing body of the Conservation Unit that receives recourse or employs it to make improvements to the unit according to specific needs.	8,147
	ATE VII Foz do Iguazú Transmissora de Energia S.A.	Initiatives and measures for protection/restoration of protected areas (Conservation Units) affected by the Foz do Iguaçu – Cascavel LT of ATE VII Foz do Iguaçu Transmissora de Energia S.A.	980,000	The company is required by law to compensate the impacts on the conservation units through an Environmental Compensation Term.	The Environmental Compensation Term was signed with the IAP and anticipates payment of R$ 98,274.86 for the IAP.	The managing body of the Conservation Unit that receives recourse or employs it to make improvements to the unit according to specific needs.	22,364

Protected or restored habitats							
BU	Areas where restoration or protection activities are being conducted	Instructions	Area (square meters)	Initiative	Description	Benefit Obtained	Investment (euros)
Befesa	Zimapán Plant	Measurement is taken using a tape measure to obtain the surface area	324,172	Restoration of areas affected by the plant facility	Generation of new specimens in the winter to restore these areas	Ecological balance	7,272
	Zimapán Plant	GPS measurement is taken of 132ha. project installation land.	324,172	Soil Recovery, Reforestation and Conservation Program for the plant and access road - Environmental Authorizations- 50-year plan.	Generation of new autochthonous specimens to compensate areas taken up by the confinement site and access road over the entire course of the plant's life.	Ecological balance, greater biodiversity	9,695

Abengoa is aware of the importance for its activities to contribute positively to maintaining biodiversity, minimizing impact, and establishing a positive correlation with the habitats and animal and plant species that are most sensitive to human activity.

The ESI system analyzes the biodiversity factor by means of the following indicators:

- **Sensitivity of the environment.**

  The potential impact of pressure exerted on the environment depending on the environmental quality of the areas surrounding project sites.
- **Project installations in protected areas**

  Knowledge of the environmental sensitivity of installation surroundings enables specific dimensioning of the environmental policies associated with the project.
- **Formal claims and complaints**
- **Confirmed sanctions**

  Indicators associated with complaints, claims and sanctions determine the evolution of the activities in terms of their acceptability and conformity with the environment and the capability to respond to social sensitivity processes and instrumental activity in relation to biodiversity.
- **Environmental management systems**
- **Environmental measures**
- **Environmental protection expenditure**

These indicators are directly related to the company's commitment in both the analysis of the evolution of the biodiversity factor, as well as the structural integration of the costs of environmentally and socially significant values.

Products and Services

Integration of environmental considerations associated with product and service design helps to lower risk and mitigate the resulting environmental impacts. Design that is favorable to the environment helps us take a more proactive stance in mitigating product and service impact, identify new **business opportunities**, and boost **technological innovation.**

Lowering the Environmental Impacts of Products and Services

Environmental impact reduction measures	Description	Benefit obtained
Mitigating environmental impacts identified in the EIA/RIMA deriving from projects through the execution of the so-called Environmental Programs	The PBA contains a description of the Environmental Programs that should be executed or monitored throughout TL construction and operation to minimize project impacts on the environment. Among the programs planned are the following: Environmental Education, PAC, and Vegetation Suppression.	Execution of Environmental Programs reduces the environmental impacts from projects to a minimum
Purchasing recycled material	Percentage of the paper purchased is recycled	Reduction in virgin paper production
Replacement of the Madrid office vehicle fleet	Vehicles running on diesel fuel have been replaced with bioethanol-powered vehicles	GHG emission reduction

Lowering the Environmental Impacts of Products and Services		
Encouraging the use of Webex for meetings	Encouraging the use of Webex for meetings to eliminate business trips	GHG emission reduction
R&D&i Project	Minimizing potential environmental impact of brine produced in desalination processes	Project in progress
R&D&i Project	Developing supercritical oxidation technology for application to sludge (purifier and industrial) elimination	Project in progress
R&D&i Project	Developing membrane systems for purification-reutilization of urban and industrial wastewater	Project in progress
R&D&i Project	Developing technology for potabilizing contaminated natural water and developing technology to increasing treatment capacity and regenerate urban wastewater	Project in progress
R&D&i Project	Developing industrial wastewater treatment-regeneration technologies to enable reutilization	Project in progress
R&D&i Project	Developing a model for hydrographical basin level water resource management to optimize quantity, quality, drought management, energy production-use	Project in progress
R&D&i Project	Incorporating sustainability criteria into the design of Befesa Water solutions in terms of CO_2 emissions and other sustainability indicators	Project in progress
Application of a waste compatibility procedure in order to prevent reactions, fire outbreaks, and the release of toxic gases	Suitable labeling, packaging and storage (hermetically sealed containers and/or cylinders) according to the type of waste (toxic, corrosive, reactive, flammable)	Prevention of accidents that contaminate the environment
Business plan to eliminate container generation and container waste	A baseline was calculated based on container weight, sales, and type of packaging requested by customers	Reduction of the number of containers introduced into the market and of the subsequent generating of waste derived from our activity
Impermeabilization of areas where hazardous waste will be located and utilization of antispill trays for cylinders in poor condition	Preventing soil contamination by means of impermeabilization employing geomembranes where hazardous waste is to be stored, treated and deposited	Prevention of ground spills and contamination

In certain activities, the environmental impacts of products and services that occur during utilization and at the end of their useful life may be of equal or greater importance than those resulting from manufacturing and pose an ever growing environmental challenge.

Products Sold and Recovered

Product category	Collection system	Collection	Reutilization	Amount of product introduced to the market (t)	Amount of product recovered (t)
Non-Iron-Cont. Met. Mat. (Aluminum)	Commercial transactions	Outside Abengoa means	In new fusions	37,421	37,421
Non-Iron-Cont. Met. Mat. (Aluminum)	Through commercial transactions	Outside Abengoa means	In new fusion processes	57,734	57,734
Non-Iron-Cont. Met. Mat. (Aluminum)	Purchase-sale	BU	As a raw material input in new secondary smelting fusions	9,096	9,096

Packaging Sold and Recovered

Packaging category	Collection system	Collection	Reutilization	Amount of packaging introduced into the market (t)	Amount of packaging recovered (t)
Wood	Storage	Other business unit	Referring to wood pallets. Reutilized by third parties	31,981	3
Plastics	NA	Outside Abengoa means	Packaging introduced into the market is not recovered	3	0
Non-Iron-Cont. Met. Mat. (Others)	We recover cylinders containing hazardous waste and deliver them to an Envaksac company that cleans and recovers the cylinders and reintroduces them into the market	BU	For transporting chemical waste	119	46
Non-Iron-Cont. Met. Mat. (Others)	The cylinders are crushed, turning them into scrap metal	BU	Sold to businesses that will give them other added value	336	33
Cardboard	n/a	Outside Abengoa means	n/a	261	0
Paper	Carts	Outside Abengoa means	Donated	0	1

Environmental Expenditure

Calculating expenditure on environmental **mitigation and protection** helps Abengoa to determine the efficiency of its environmental initiatives. The following is a list of correction expenses and environmental expenses involving prevention and management.

Environmental Expenditure* (€)	2010	2009	2008
Correction Expenses			
Waste treatment and disposal	9,718,139	-	-
Emissions treatment	319,152	-	-
Expenses for purchasing and utilizing emissions certificates	842,795	-	-
Amortization of specific equipment, maintenance, materials and services necessary for operation	4,601,064	-	-
Environmental responsibility insurance	483,515	-	-
Cost of remediation-cleanup and decontamination	506,292	-	-
Outside environmental management services	9,370		-
Environmental prevention and management expenses			
Personnel dedicated to training and instruction	361,332	-	-
Outside environmental management services	1,421,087	-	-
Outside management system certification	254,026	-	-
Personnel for activities arising from environmental management	1,684,912	-	-
Research and development	7,367,413	-	-
Costs of implementing cleaner technologies	686,023	-	-
Other environmental management costs	153,358	-	-
Environmental training	1,165	-	-
Amortization of specific equipment, maintenance, materials and services necessary for operation	1,139,228	-	-
Cost of remediation-cleanup and decontamination	53,145	-	-
Environmental responsibility insurance	147,275	-	-
Emissions treatment	221,378	-	-
Waste treatment and disposal	3,551,245	-	-
Expenses for purchasing and utilizing emissions certificates	1,908,987	-	-

(*) 2008 and 2009 data are not available due to modifications to classification criteria

Four infractions involving unsuitable hazardous waste management in Murcia were reported in 2010 entailed a total cost of €330.557. These incidents occurred in 2001. Abengoa has no knowledge of any other incidents.

2010 Milestones

- Third annual GHG accounting including independent external verification.
- Implementation of the GHG emissions inventory computer application.
- Definition and organization of reduction plans.
- Implementation of the working group on labeling to define methodologies to enable allocation of emissions to Abengoa products and services, and disclosure thereof to the market in the form of GHG labeling.
- Abengoa was reconfirmed as a component of the FTSE4Good Ibex, the responsible investment index managed by the FTSE Group (Financial Times Stock Exchange) global index provider in conjunction with the Spanish Stock Exchange (BME).
- For the third consecutive year, Abengoa participated in the Carbon Disclosure Project (CDP), disclosing the company's entire GHG inventory.

Improvement Areas

Improvement is an ongoing objective for Abengoa which, in addition to driving forward innovative solutions for sustainable development, defines and implements sustainability policies to increase the value of its activities by identifying and lowering related risks and setting necessary monitoring, reduction and improvement targets with respect to the impacts generated in all of its businesses.

Abengoa seeks for its commitment to sustainability to enable the company to be recognized by society and the market, not only in terms of its contribution to sustainable development, but also in the environmental alignment manifested in the way Abengoa performs, operates, and responds to the needs of Humanity.

Future Goals and Objectives

Abengoa's primary objective is to minimize the impact of its activities, and be a company that reduces or compensates its greenhouse gas emissions, and reports on and validates its environmental performance.

To achieve this, it is important to dedicate efforts to both ongoing employee training as well as achieving maximum efficiency in industrial plant operation and office management, which requires supplier involvement and customer assurance that Abengoa products are synonymous with quality, solid performance, professional effectiveness, and sustainability.