



# ENVIRONMENTAL REPORT 2015



## ABSTRACT 2015



## GRIFOLS AND THE ENVIRONMENT

- P. 5** ENVIRONMENTAL COMMITMENT AND MANAGEMENT
- P. 8** 2014-2016 ENVIRONMENTAL PROGRAM
- P. 12** INVESTMENT AND EXPENDITURE



## ENVIRONMENTAL PERFORMANCE

- P. 15** RAW MATERIALS CONSUMPTION
- P. 19** ENERGY CONSUMPTION
- P. 25** WATER CONSUMPTION
- P. 27** WASTEWATER
- P. 28** AIR EMISSIONS
- P. 32** WASTE
- P. 37** BIODIVERSITY
- P. 40** MANAGEMENT AND PREVENTION OF ENVIRONMENTAL RISK
- P. 41** ENVIRONMENTAL TRAINING, AWARENESS AND COMMUNICATION



## REPORT OUTLINE

- P. 44** INFORMATION MANAGEMENT AND SCOPE
- P. 45** DATA ANALYSIS

ENVIRONMENTAL EXPENDITURE (€)

Waste	8,248,208
Water cycle	2,331,970
Air emissions	345,559
Others	273,153

TOTAL  
**11,198,890**

ENVIRONMENTAL INVESTMENT (€)

Waste	521,752
Water cycle	2,680,364
Energy efficiency	3,210,970
Others	82,277

TOTAL  
**6,495,363**



TOTAL NATURAL GAS CONSUMPTION

**357.7**  
million kWh

↑ 3.8%



TOTAL ELECTRICITY CONSUMPTION

**316.6**  
million kWh

↑ 9.1%

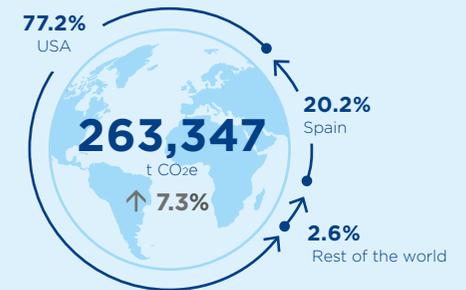


TOTAL WATER CONSUMPTION

**2,683,982**  
m<sup>3</sup>

↑ 16.2%

TOTAL CO<sub>2</sub> EMISSIONS



INTERNALLY TREATED WASTEWATER

**697,554** m<sup>3</sup>

↑ 19%



TOTAL WASTE  
**46,554** t

↑ 9.3%



% RECOVERED  
**54.9%**

↑ 0.4%



# GRIFOLS AND THE ENVIRONMENT

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PROGRAM
- P. 12** INVESTMENT AND EXPENDITURE



# ENVIRONMENTAL COMMITMENT AND MANAGEMENT

*In the context of its environmental management system, Grifols has an Environmental Program in place that defines the environmental targets and objectives for each business area.*

*Each company's Environmental Committee meets regularly to oversee compliance with environmental objectives.*

Grifols maintains a commitment to minimizing and controlling the potential environmental impacts of its activities. The company's [Environmental Policy](#), which was approved by the president and chief executive officer, defines the performance guidelines for improving Grifols' environmental sustainability, and involves all of its employees in achieving this common goal.

With the objective of promoting appropriate environmental management, the primary production centers operate to the principles of the international ISO 14001 standard. The company continues the process of standardizing its management systems, and the project of increasing the number of production centers certified by accredited international bodies. In 2015, the centers in Spain already held this certification, and the Clayton, North Carolina plant was being prepared for certification in the first half of 2016. At the same time, the implementation process was begun at the Emeryville, California production center.

## ENVIRONMENTAL MANAGEMENT AT PRODUCTION CENTERS



## ENVIRONMENTAL COMMITMENT AND MANAGEMENT

The *Corporate Environmental Manual*, shared by all production centers, unifies and coordinates the company's environmental management worldwide. It is the document of reference and conforms to the ISO 14001 standard.

Monitoring of the implemented environmental management system is performed at the environmental committee meetings held by each of the group's companies, with the participation of each company's management. Among other functions, the committees oversee progress on meeting the Environmental Program's goals, performance indicators, application of corrective measures, and legal compliance. A total of 19 monitoring meetings were held in 2015.

Key elements of the system are identification of, and compliance with, applicable environmental legislation, identification of environmental aspects relevant to the business, and development of necessary preventive measures.

In this respect, companies in Spain and the United States with environmental management systems already in place have specific procedures for identifying environmental aspects. During the design phase for new facilities and projects, the viability of applying available eco-efficiency measures is studied, and the environmental aspects of the future facility are identified. In terms of new developments and products, during the design phase new aspects that might arise are studied, with the goal of preventing and minimizing possible related impacts.

Grifols takes into account suppliers' environmental initiatives, such as ISO 14001 certification, and requests this information at the time of accreditation. This criteria, for example, is applied to freight companies for anything from plasma to end products, as well as to suppliers of raw materials.

Audits are also made of waste management companies in both Spain and the United States, and visits are made to facilities belonging to newly contracted waste management companies.



## ENVIRONMENTAL COMMITMENT AND MANAGEMENT

### PRACTICAL GUIDE FOR THE ECODESIGN OF NEW DIAGNOSTIC LABORATORIES

The Probitas Foundation, a private, non-profit organization founded by Grifols, launched the Global Laboratory Initiative (GLI) in 2010. The goal of this initiative is to support basic clinical laboratories in vulnerable areas to help accurately diagnose and then treat diseases that are public health concerns all over the world (malaria, tuberculosis, and HIV/AIDS).

The experiences of the Probitas Foundation and Grifols Engineering teams at the already functioning GLI laboratories have revealed the need to incorporate self-sufficiency and sustainability criteria in these facilities so as to ensure autonomous operation and reduce their environmental impact.

In May 2015, the Probitas Foundation, with the collaboration of Grifols, Inèdit and Sostenipra, published the *Practical Guide for the Ecodesign of New Diagnostic Laboratories*, which establishes ecodesign strategies aimed at minimizing the environmental aspects most relevant to this type of facility, such as energy and water supply and safe and environmentally sound waste management. This was a way for the Probitas Foundation to highlight its mission of sharing experience, resources, and knowledge with vulnerable communities as an engine for change and social transformation.

#### PRIMARY SELF-SUFFICIENCY AND SUSTAINABILITY MEASURES IDENTIFIED

									
	Maximize natural light and install energy-efficient lighting	Promote green purchasing	Analyze solar radiation and passive climate control systems	Estimate photovoltaic self-sufficiency potential		Install water-saving faucets and toilets	Install rainwater collection tanks		Prioritize waste recovery and separation at source

# 2014-2016 ENVIRONMENTAL PROGRAM

*In 2014, Grifols established its 2014–2016 Environmental Program, which identified the environmental objectives and targets for each division and facility during this period.*

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The primary advances in putting the Environmental Program into practice in 2015 have centered on implementation of systems to reduce electricity and natural gas consumption in existing facilities and those under construction, to reduce water consumption, and to improve waste recovery.

In 2015, a new objective was added to the Environmental Program as a result of identifying new water-saving opportunities.

- Implementation of a program to reduce water consumption by 45,488 m<sup>3</sup> annually by improving processes and recycling clean water in the Bioscience Division's facilities in Los Angeles, California. The specific actions are described in the water consumption section of this report.

Conversely, it was considered appropriate to discard the following objectives included in the Environmental Program in 2014:

- Reduce natural gas consumption by 1.8 million kWh/year in San Francisco by installing high-efficiency heat recovery heat pumps. The project has been reconsidered as construction progresses on the new production facility in San Francisco, given the limited applications for the recovered heat.
- In the Hospital Division in Parets del Vallès, Barcelona: Reduce use of sodium hydroxide for cleaning production lines and treating process water by 54 metric tons. Reduce use of hydrochloric acid for water treatment by 48 metric tons. This objective requires major changes in the production water treatment lines, which will be addressed in future years. Nevertheless, in 2015 consumption of sodium hydroxide was reduced by 21%, and consumption of hydrochloric acid by 6%, as a result of improvements in the process water demineralizer regeneration phase.
- The Diagnostic Division's Zero Landfill project in San Francisco, California has been postponed until the needs of the new production plant, which is currently under construction, can be properly studied.

# GRIFOLS AND THE ENVIRONMENT

## 2014-2016 ENVIRONMENTAL PROGRAM



### ENERGY · ELECTRICITY

Facilities already in operation  
**1.4-million-kWh/year reduction**



- Reduce consumption by 990,000 kWh/year by improving roof insulation and internal air recirculation.
- Decrease consumption by 239,000 kWh/year by increasing the energy efficiency of the climate control system.
- Save 95,000 kWh/year by improving energy efficiency in the compressed air network.
- Reduce consumption by 63,000 kWh/year through improvements in lighting and climate control systems in the Madrid and Vicopisano offices.
- Reduce consumption by 7,000 kWh/year by installing a virtual server.
- Replace two evaporative condensers, install automated CIP reactor-cleaning systems, improve pipe insulation, install variable-frequency drives and new, more efficient lighting.



### ENERGY · ELECTRICITY

Facilities under construction  
**2.7-million-kWh/year reduction**



- Save 1.3 million kWh/year by means of energy-efficient lyophilizers, high-efficiency motors, and energy-efficient lighting in the new Prolastin®-C production plant.
- Apply LEED standards in constructing the raw materials storage facility and office building, reducing energy consumption by 907,000 kWh.
- Reduce consumption by 360,000 kWh/year by installing variable-frequency drives in motors, converting cold water systems to closed circuits and installing LED lighting and motion sensors.
- Save 170,000 kWh/year by installing a high-efficiency cooling system in the new offices.



### ENERGY · NATURAL GAS

Facilities already in operation  
**7.3-million-kWh/year reduction**

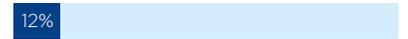


- Reduce consumption by 3.8 million kWh/year by using reverse osmosis water instead of water for injection (WFI) when cleaning production areas.
- Save 2.95 million kWh/year by improving the steam condensate system: flash steam recovery and increased condensate recovery.
- Reduce consumption by 590,000 kWh/year by eliminating the pasteurization phase in manufacturing blood collection bags.

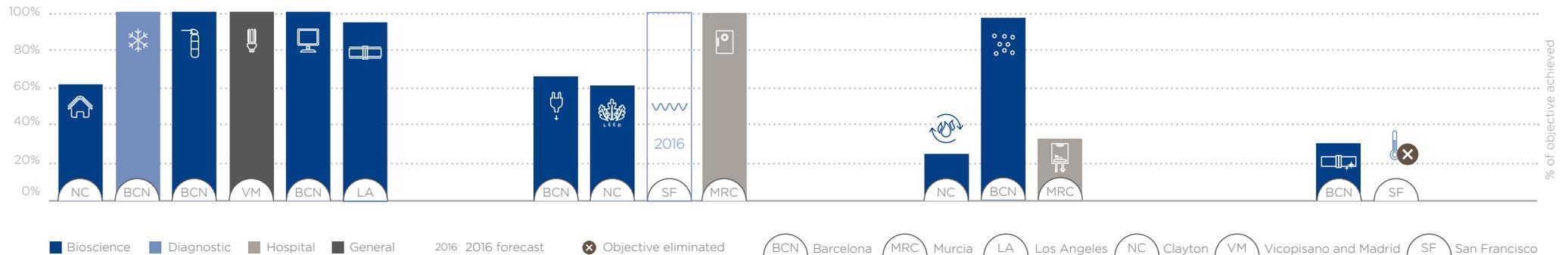


### ENERGY · NATURAL GAS

Facilities under construction  
**2.9-million-kWh/year reduction**



- Save 1.1 million kWh/year at the new Prolastin®-C plant by installing 8 CIP cleaning systems and high-efficiency cooling equipment and by insulating pipes.
- Reduce consumption by 1.8 million kWh/year by installing high-efficiency heat recovery heat pumps.



# GRIFOLS AND THE ENVIRONMENT

## 2014-2016 ENVIRONMENTAL PROGRAM

### WATER

Reduce by 225,488 m<sup>3</sup>



- Recover 120,000 m<sup>3</sup>/year of clean water for cooling towers.
- Perform a study to recover 280,000 m<sup>3</sup> of rainwater in refrigeration systems.
- Reduce consumption of reverse osmosis wastewater by 50,000 m<sup>3</sup>/year.
- Reduce the consumption of water for injection by 13,000 m<sup>3</sup> at the Bioscience Clayton (NC) production facility.
- Apply water-saving measures to reduce consumption by 30% in the new raw materials storage facility at Bioscience Clayton (NC) and in the new Diagnostics production facility in San Francisco (SF).
- Implement a program to reduce water consumption by 45,488 m<sup>3</sup> annually by improving processes and recycling clean water.

### WASTEWATER

Improve wastewater quality



- Improve pH neutralization in the wastewater plant.
- Increase the capacity of the wastewater plant to treat an additional 2,500 kg of COD per week.

### WASTE

Increase recovery by 9,077 metric tons in comparison with 2013



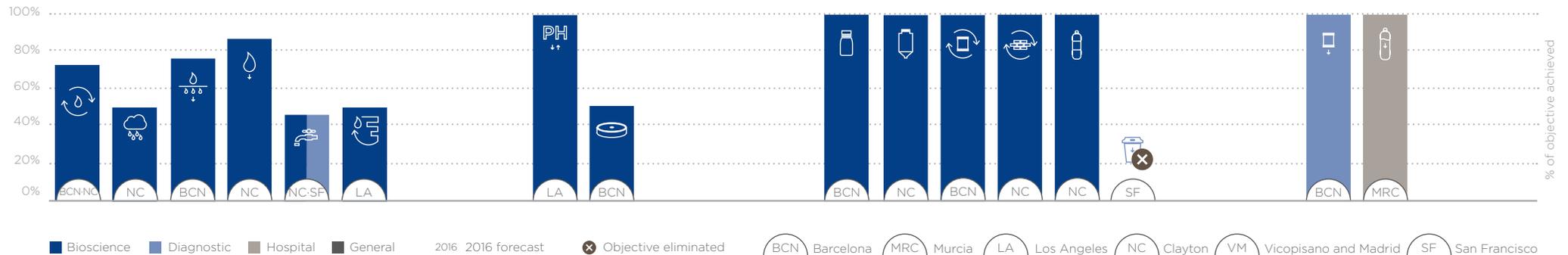
- Recover 1,000 metric tons/year of high-COD liquid waste and 3,360 metric tons/year of polyethylene glycol and sorbitol liquid waste.
- Recover 1,700 metric tons of production waste by means of anaerobic digestion.
- Increase polyethylene plastic recycling by 17 metric tons/year.
- Recover 3,000 metric tons of construction and demolition waste for energy use, and recycle more than 50% of this waste type during the construction of the new raw materials storage facility and office building.
- Improve the quality of the plastic recycled from plasma bottles.
- Decrease the volume of waste deposited in landfill sites (Project Zero Landfill).

### WASTE

Reduce waste by 9.3 metric tons



- Reduce plastic waste by 1.3 metric tons.
- Minimize the production of waste liquids in the preparation of concentrated solutions by 8 metric tons/year.



# GRIFOLS AND THE ENVIRONMENT

## 2014-2016 ENVIRONMENTAL PROGRAM



### RAW MATERIALS

Reduce consumption of raw materials by 102 metric tons.



- Reduce the use of sodium hydroxide for cleaning production lines and treating process water by 54 metric tons. Reduce the use of hydrochloric acid for water treatment by 48 metric tons.
- Decrease waste of plasma intended for fractionation by 10%.



### MATERIALS

Maximize the use of sustainable resources



- Use recycled parts, local materials and FSC wood in the new raw materials storage facility.
- Replace 0.3 metric tons of PVC plastic with chlorine-free plastic during equipment manufacturing.



### EMISSIONS

Reduce atmospheric pollutants emissions



- Reduce emissions of CO<sub>2</sub> equivalent by 31 metric tons by reducing plasma collection routes by 30,000 km/year in Spain.
- Use low-VOC construction materials.
- Reduce NO<sub>x</sub> and particulate emissions by means of a new low-emission emergency generator.
- Replace 25 metric tons of R-22 refrigerants with refrigerants that don't deplete the ozone layer.

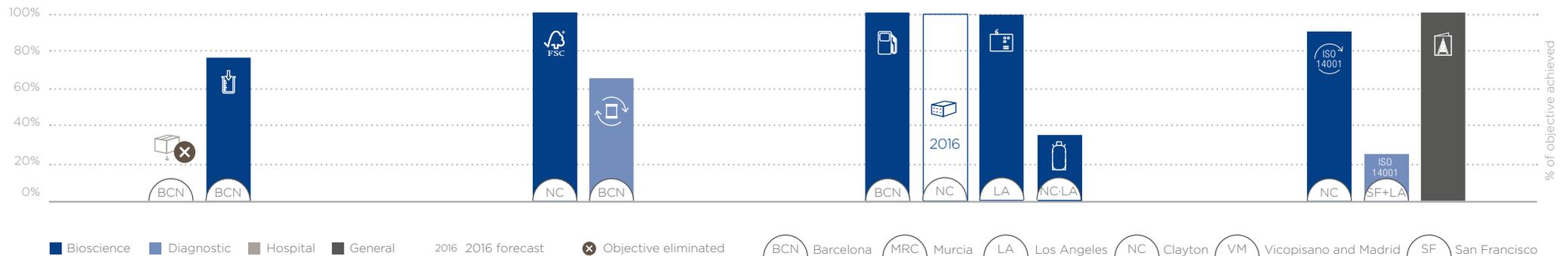


### ENVIRONMENTAL QUALITY

Standardize environmental management



- Standardize and certify the Environmental Management System under ISO 14001.
- Implement the Environmental Management System under ISO 14001.
- Implement the Corporate Environmental Manual in all production plants.



## INVESTMENT AND EXPENDITURE

*In 2015, environmental investment reached 6.49 million euros, while environmental expenditure totaled 11.20 million euros.*

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In line with its goal of continually improving its environmental performance, Grifols has made various environmental investments. In 2015, investment primarily centered on improvements in energy efficiency and on reducing water consumption. Investments made include improving thermal insulation in two buildings in Clayton, North Carolina; implementing energy efficiency measures in the new Prolastin®-C production plant under construction in Parets del Vallès, Barcelona; and improving the steam condensate system, also in Parets del Vallès.

Measures to limit water consumption at the Prolastin®-C plant that is under construction have been taken into account since its inception. Specifically, automated CIP cleaning systems that consume less water than manual ones, as well as allowing for reuse of final rinse water in the cooling towers, have been installed. This plant will have a condensate recovery system that returns condensates to the boiler supply water, providing a reduction in energy consumption. Investments have been made at the Clayton, North Carolina facilities to improve the wastewater treatment plant.

The primary environmental expenditures have related to waste management and the costs of external treatment of wastewater generated during the production process.

No environmental grants were received in 2015. In Spain, corporate tax deductions for investments directed at environmental improvements amounted to 117,700 euros. In the United States, the tax exemption for water quality certification totaled 65,119 euros.

## INVESTMENT AND EXPENDITURE

### ENVIRONMENTAL EXPENDITURE · Euros

2015	2014	2013	
8,248,208	7,177,436	7,016,358	WASTE
2,331,970	2,237,548	2,397,517	WATER CYCLE
345,559	113,959	10,655	AIR EMISSIONS
273,153	316,147	235,071	OTHERS
<b>11,198,890</b>	<b>9,845,090</b>	<b>9,659,601</b>	<b>TOTAL</b>



### ENVIRONMENTAL INVESTMENT · Euros

	2013	2014	2015
WASTE	2,212,013	1,166,090	521,752
WATER CYCLE	1,693,834	3,172,215	2,680,364
ENERGY EFFICIENCY AND EMISSIONS REDUCTION	2,925,264	2,015,506	3,210,970
OTHERS		265,106	82,277
<b>TOTAL</b>	<b>6,831,111</b>	<b>6,618,917</b>	<b>6,495,363</b>



## ENVIRONMENTAL PERFORMANCE

- P. 15** RAW MATERIALS  
CONSUMPTION
- P. 19** ENERGY CONSUMPTION
- P. 25** WATER CONSUMPTION
- P. 27** WASTEWATER
- P. 28** AIR EMISSIONS
- P. 32** WASTE
- P. 37** BIODIVERSITY
- P. 40** MANAGEMENT AND PREVENTION  
OF ENVIRONMENTAL RISK
- P. 41** ENVIRONMENTAL TRAINING,  
AWARENESS AND COMMUNICATION



# RAW MATERIALS CONSUMPTION

*Each Grifols division consumes different materials, according to its respective production processes.*

Grifols relies on procedures during the research and development stage to identify future environmental aspects and evaluate eco-efficiency criteria applicable to new products, with the goal of reducing their environmental impact.

## BIOSCIENCE DIVISION

The primary raw material used in this division is the plasma required to manufacture blood-derived medicines. Ethanol, polyethylene glycol and sorbitol, among other materials, are used in fractionation and purification of the various plasma proteins.

57.6% of the ethanol consumed in the production process is recovered in the distillation towers and reused at the Clayton, North Carolina and Parets del Vallès, Barcelona facilities. The remaining ethanol needed to carry out the fractionation process is purchased.

Packaging for the product is mainly glass.

### MAIN MATERIALS CONSUMED



**1,414** METRIC TONS  
SORBITOL



**2,020** METRIC TONS  
ETHANOL (purchased ethanol)



**1,731** METRIC TONS  
POLYETHYLENE GLYCOL



**190** METRIC TONS  
GLASS PACKAGING

ENVIRONMENTAL PERFORMANCE

**RAW MATERIALS CONSUMPTION**

**ETHANOL CONSUMPTION**

In 2015, the ethanol distillation tower at the Bioscience Division's Los Angeles facility was validated. The decrease in water-alcohol solution waste is a result of the start-up of this new equipment. A greater reduction in this waste is expected when the ethanol can be incorporated into the production process.

	2013	2014	2015	Variation
 WATER ALCOHOL SOLUTION TREATED (≈30%) (LITERS)	15,730,403	15,989,210	17,574,753	↑ 9.9%
 ETHANOL RECOVERED FOR THE PRODUCTION PROCESS (LITERS)	4,719,121	4,796,763	5,272,426	↑ 9.9%
 ETHANOL PURCHASED (LITERS)	4,277,175	4,183,807	3,882,348	↓ 7.2%
 ETHANOL USED IN MANUFACTURING (LITERS)	8,996,296	8,980,570	9,154,774	↑ 1.9%
 WATER ALCOHOL SOLUTION MANAGED AS WASTE (METRIC TONS)	5,849	4,923	2,226	↓ 54.8%

## RAW MATERIALS CONSUMPTION

### DIAGNOSTIC DIVISION

The primary raw material used in production of DG Gel© diagnostic cards is the plastic in the card itself.

PVC is used for manufacturing blood collection bags for the collection and storage of blood.

#### MAIN MATERIALS CONSUMED



**34,518** UNITS  
CIRCUIT BOARDS



**22** METRIC TONS  
PLASTIC REAGENT PACKAGING



**353** METRIC TONS  
PVC PELLETS



**195** METRIC TONS  
PP PLASTIC CARDS



**208,076** LITERS  
*RED CELL* REAGENTS



**342** METRIC TONS  
FLAT TUBES AND PVC SHEETS



**16** METRIC TONS  
GLASS PACKAGING

### HOSPITAL DIVISION

In 2015, polypropylene used for manufacturing bags for IV solutions was the main raw material consumed by this division. The remaining materials are associated with production of saline and glucose solutions.

#### MAIN MATERIALS CONSUMED



**543** METRIC TONS  
PP (PELLETS AND FLAT TUBES)



**185** METRIC TONS  
SODIUM CHLORIDE



**272** METRIC TONS  
GLUCOSE



**1,714** METRIC TONS  
GLASS PACKAGING

Paper is one of the raw materials consumed in all of Grifols' activities. In 2015, paper consumption rose by 24.8% in absolute values due to the inclusion of data from the Emeryville, California production center, which was acquired recently. In relative values, paper consumption per employee was 14 kg, an 18.5% increase on the previous year. Consumption of paper manufactured from recycled paper pulp rose 19.9%, representing 36.9% of all paper consumed.

## RAW MATERIALS CONSUMPTION

### LEED CERTIFICATION OF THE BIOSCIENCE DIVISION'S NEW RAW MATERIALS STORAGE FACILITY IN CLAYTON, NORTH CAROLINA

In June 2015, this new facility came on line, providing increased raw materials storage space at the Clayton, North Carolina plant. This storage facility was the first in Johnston County to get LEED (Leadership in Energy and Environmental Design) certification, a credential sponsored by the [US Green Building Council \(USGBC\)](#).

The LEED certificate recognizes those buildings which have been designed and constructed according to various sustainability criteria, such as: efficient use of water and energy; atmospheric emissions; type of materials used; environmental quality; and innovation.

#### PRIMARY SUSTAINABILITY CRITERIA IN THE NEW STORAGE FACILITY



##### MATERIALS USE

- 39.7% of construction materials were recycled
- 37% of construction materials were locally sourced



##### WASTE

- Separation at source of construction waste and recycling of 82% of waste generated



##### INTERNAL AIR QUALITY

- Design that reduces internal air quality issues and exposure of employees to chemicals and contaminants
- The paint, flooring, and adhesives comply with VOC emissions limits
- The wood and agricultural-fiber composites used inside the building do not contain added urea formaldehyde



##### SITE SUSTAINABILITY

- 5.3% of the parking spaces are set aside for low-emission and fuel-efficient vehicles
- Use of solar reflectance surfaces on roofs and building surfaces



##### WATER CONSUMPTION

- 38% reduction in potable water consumption



##### ENERGY AND EMISSIONS

- 30.9% reduction in energy requirements
- Zero CFC-based refrigerant gases

# ENERGY CONSUMPTION

## ELECTRICITY CONSUMPTION

The Bioscience Division's electricity usage represents 88.7% of Grifols' total consumption. The increase in consumption in absolute values is due to production increases in the plants in Spain and the United States, as well as to incorporation of the new plasma warehouse in Clayton, North Carolina. The energy-saving measures implemented in these facilities are reflected in the 5.5% year-on-year decrease in consumption relative to production.

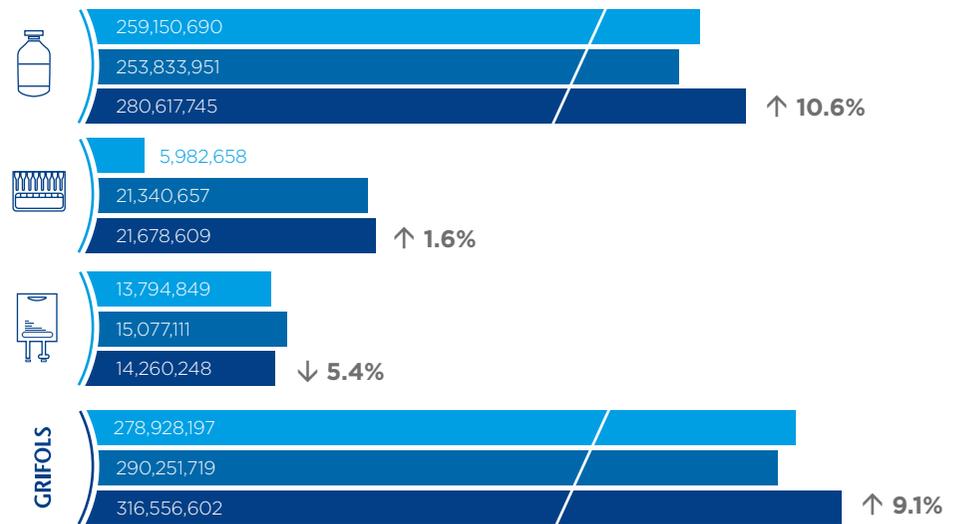
The Diagnostic Division's electricity usage represented 6.8% of total consumption. Consumption in absolute values remained stable, and declined 8.9% relative to production.

The remaining electricity consumption, some 4.5%, was associated with the activity of the Hospital Division, which reduced its energy consumption by 5.4% in absolute values. This reduction was due to the decline in production at the division's facilities at the industrial site in Barcelona and to new measures implemented in Murcia's new plant, whose activity has recently increased. This new plant was designed to eco-efficiency criteria according to the approved measures included in the 2010–2012 Grifols Strategic Energy Action Plan. These measures included installation of a high-efficiency distiller, an electric rather than hydraulic injector, and two steam autoclaves. Relative consumption has undergone the same trend, decreasing 0.8%.

*In 2015, electricity consumption totaled 316,556,602 kWh, a 9% increase on the previous year.*

### ELECTRICITY CONSUMPTION

ABSOLUTE VALUE · kWh

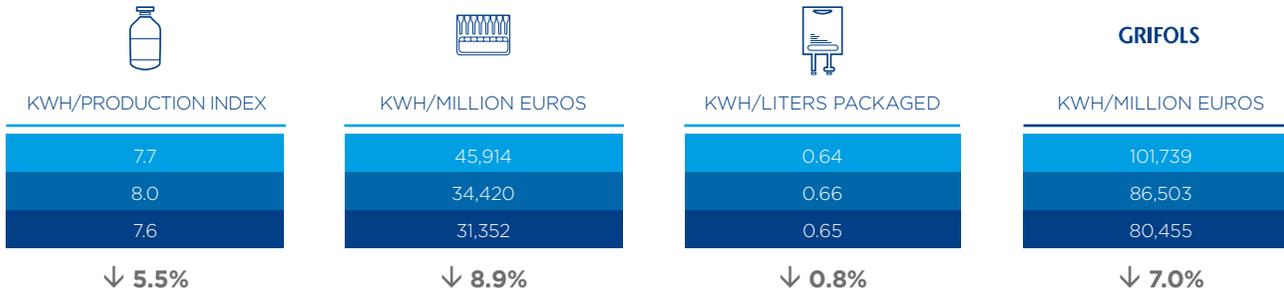


ENVIRONMENTAL PERFORMANCE

**ENERGY CONSUMPTION** · ELECTRICITY CONSUMPTION

**ELECTRICITY CONSUMPTION**

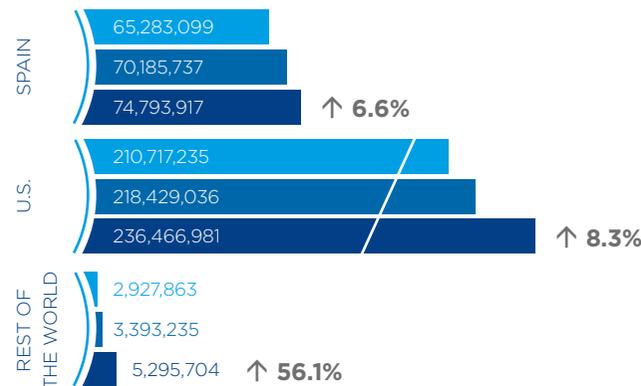
RELATIVE VALUE · kWh



*Total consumption relative to revenues decreased 7%.*

From a geographic perspective, the majority of electricity consumption occurred in the United States, where most of the Bioscience Division's activities are concentrated. Consumption in the rest of the world, though well below that of Spain and the United States, increased, primarily due to the incorporation of the new plasma logistics center in Dublin (Ireland), as well as to that of new commercial subsidiaries.

ABSOLUTE VALUE · kWh



**OPTIMIZATION OF THE INDUSTRIAL LIGHTING SYSTEM**

In 2015, a project was carried out to optimize electricity consumption associated with the industrial lighting in a warehouse at the Bioscience Division's plant in Parets del Vallès, Barcelona.

The project included:

- Substituting metal hydride lighting with high-efficiency fluorescent lighting custom-designed for these facilities.
- Long-life fluorescent tubes with an average life of over 45,000 hours.
- Improving light intensity to more than 200 lumens in work and transit areas.
- Installing light sensors that regulate lighting according to the amount of natural light available.
- Lighting is controlled using the DALI (Digital Addressable Lighting Interface) protocol, which allows for scene programming, complete automation, and remote control.

These improvements have produced a 50% reduction in installed power, reductions in electricity consumption of 220,000 kWh, and a decrease in atmospheric emissions of 66,000 kg of CO<sub>2</sub> per year.

## ENERGY AUDIT AT THE HOSPITAL DIVISION'S PRODUCTION FACILITIES IN PARETS DEL VALLÈS

An energy audit was carried out at the Hospital Division's production facilities in Parets del Vallès in 2015, with the following objectives:

- Analyze the plant's energy consumption and identify measures to minimize CO<sub>2</sub> emissions and costs.
- Establish an audit template applicable to the group's other facilities.

The audit focused on all energy vectors required by production in these facilities: electricity, natural gas, steam, compressed air, climate control, and lighting.

The analysis was based on a cost-effectiveness approach. Savings measures were analyzed for uses that form a significant percentage of the plant's energy consumption.

A total of 24 measures were looked at based on production conditions, maintenance operations, and planned installations. Of these, 16 were selected and analyzed in depth, producing a detailed proposal and return on investment estimate.

Among the main measures the following stand out:



For steam consumption, optimization of the climate control loop.



For electricity, creating and managing temperature zones, and standardizing motors to high energy-efficiency criteria.



For the compressed air network, carrying out a leak audit, and possible sectorization of consumption.

## COGENERATION PLANT FIGURES

The Bioscience Division's facilities in Parets del Vallès are equipped with a 6 MW cogeneration plant. This plant generates electricity that is sold back to the grid. At the same time, the useful heat generated by this process is used in Grifols' facilities.

In 2015, this provided primary energy savings of 14.85% and a 3,193-metric-ton reduction in CO<sub>2</sub> emissions (when compared with emissions produced by a conventional plant).

### COGENERATION FIGURES

	2013	2014	2015	Variation
 NATURAL GAS CONSUMED (KWH)	99,142,960	104,775,825	100,740,280	↓ 3.85%
 TOTAL ELECTRICITY GENERATED (KWH)	37,167,450	38,638,880	36,766,480	↓ 4.85%
 USEFUL HEAT RECOVERED (KWH)	25,882,360	26,788,850	27,230,480	↑ 1.65%
 GLOBAL OUTPUT	69.95	69.24	70.88	↑ 2.37%
 PRIMARY ENERGY SAVING (PES)	15.18	14.54	14.85	↑ 2.13%
 CO <sub>2</sub> EMISSIONS (T)	18,350	19,070	18,308	↓ 4.00%
 CO <sub>2</sub> EMISSIONS SAVINGS (T)	3,284	3,250	3,193	↓ 1.75%

## TOTAL NATURAL GAS CONSUMPTION

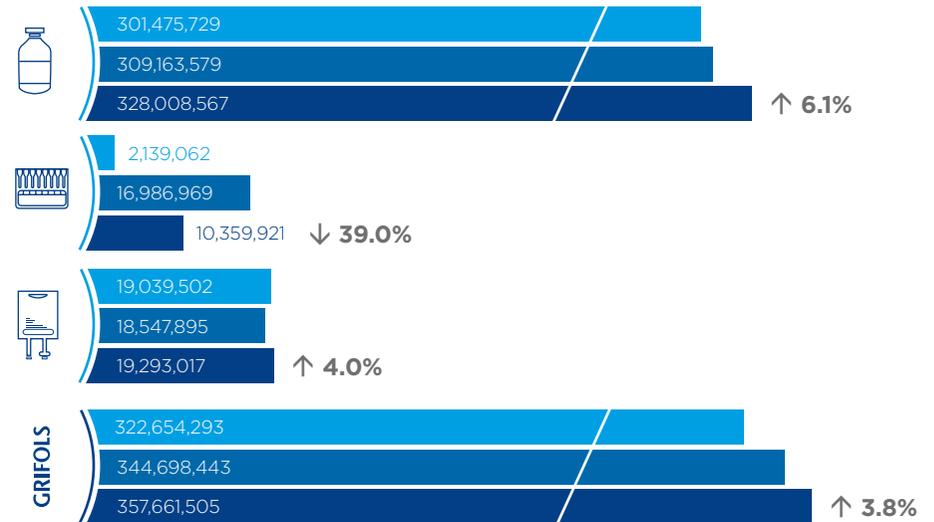
*In 2015, natural gas consumption totaled 357.66 million kWh, an increase of 3.8% on the previous year.*

The Bioscience Division accounted for the majority of natural gas consumption, with its cogeneration plant using 28% of the total. The division's consumption in absolute values rose by 6.1%, while consumption in values relative to production declined 9.3%.

The Diagnostic Division experienced a noteworthy 39% decrease in consumption in absolute values, and a 45% decrease in values relative to production. This change was influenced by complete separation of the buildings at the Diagnostic Division's facilities in Emeryville, California.

The Hospital Division's consumption increased slightly by 4% in absolute values, while the increase in relative values was 9.1%.

### NATURAL GAS CONSUMPTION ABSOLUTE VALUE · kWh

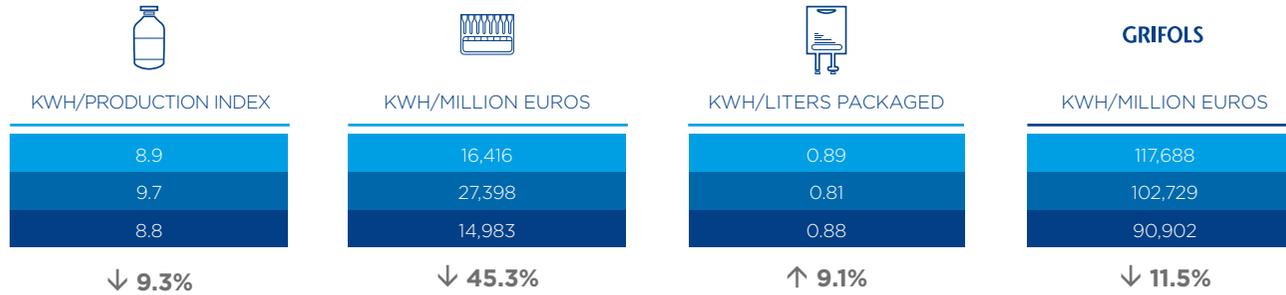


ENVIRONMENTAL PERFORMANCE

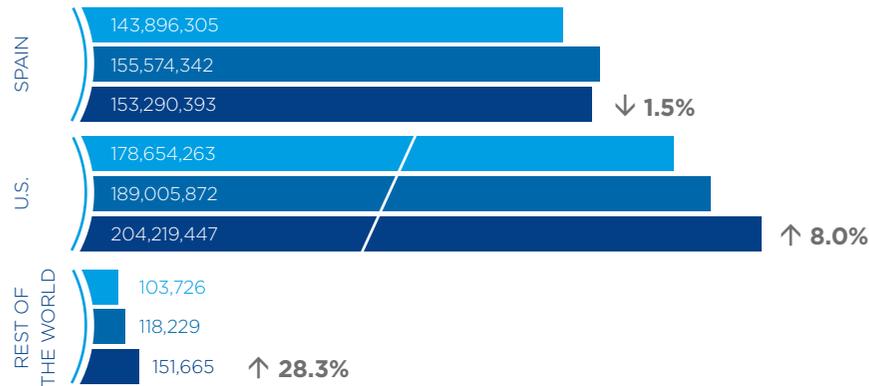
**ENERGY CONSUMPTION** · NATURAL GAS CONSUMPTION

**TOTAL NATURAL GAS CONSUMPTION**

RELATIVE VALUE



ABSOLUTE VALUE · kWh



As was the case with electricity consumption, the majority of natural gas consumption occurred in Spain and the United States, where Grifols' primary production centers are located.

# WATER CONSUMPTION

*In 2015, total water consumption relative to revenues decreased by 0.9%.*

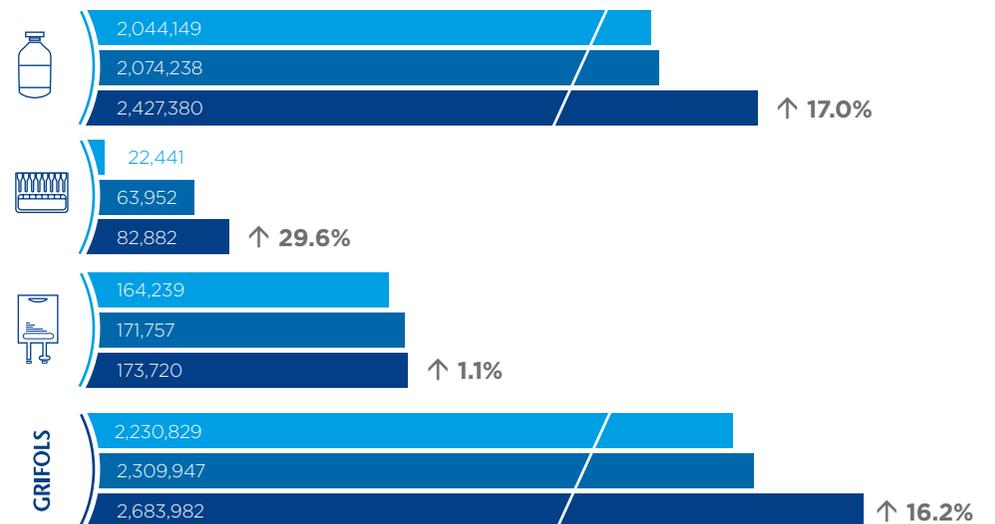
In 2015, total water consumption was 2,683,982 m<sup>3</sup>, an increase of 16.2% on 2014. Overall, 90.3% of the water consumed came from the water mains, with the remaining 9.7% coming from wells located at the production facilities in Spain.

The rise in the Bioscience Division's consumption in absolute values is due to increases in production. In terms of consumption relative to production, there was no change. A significant new contributor to consumption is the new fractionation plant in Clayton, North Carolina. When it begins to function at full capacity, savings will be achieved, since it will replace older facilities.

In 2015, the Diagnostic Division increased its water consumption in both absolute and relative terms. An incident involving the company's water meter was detected at the end of the year at one of the Sant Cugat buildings associated with this division. The incident was reported to the company, and is in the process of being resolved. This building was acquired by Grifols in 2014, and during 2015 was occupied by Grifols and other outside businesses.

The Hospital Division's consumption has remained flat, but with an increase in relative value. Consumption has primarily increased in the Hospital Division's facilities in Murcia.

## WATER CONSUMPTION ABSOLUTE VALUE · m<sup>3</sup>

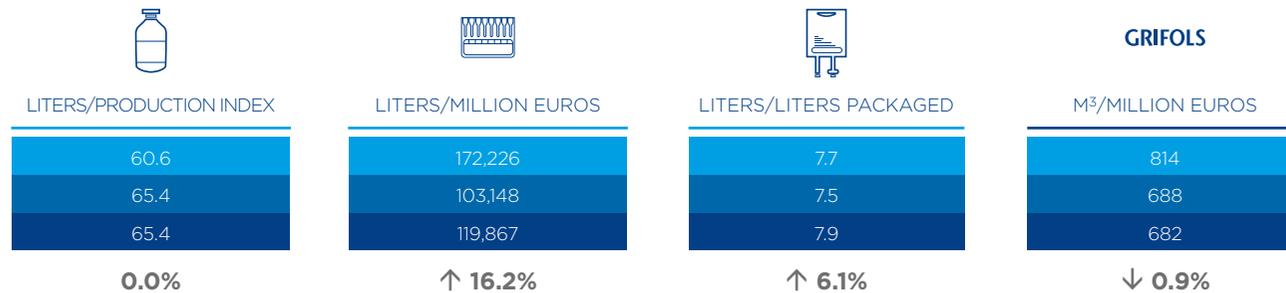


# ENVIRONMENTAL PERFORMANCE

## WATER CONSUMPTION

### WATER CONSUMPTION

RELATIVE VALUE



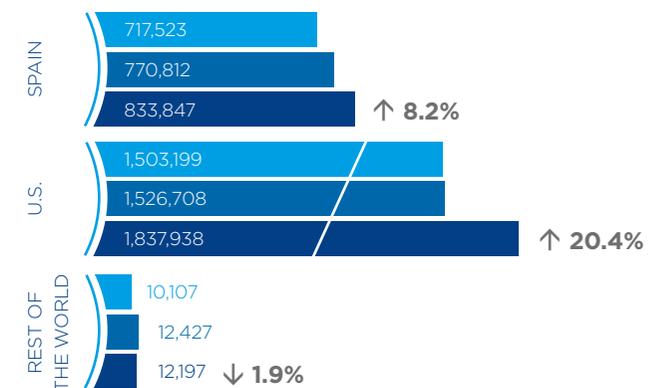
Grifols operates in three areas that could pose water-shortage risks at certain times: Catalonia and Murcia in Spain, and California in the United States. Because of this, the company applies preventive measures to reduce water consumption when designing new facilities, as well as modifying existing facilities to this effect. These measures include recovering water used in the production process for other auxiliary uses, automating processes to ensure water conservation, and reducing the amount of water used in cleaning reactors by installing automated CIP cleaning systems.

### WATER CONSUMPTION REDUCTION PROGRAM

A program to reduce water consumption has begun at the Bioscience Division's production center in Los Angeles, California. The first stage, which started at the end of 2015, included seven measures intended to achieve a reduction of 45,488 m<sup>3</sup>:

- Eliminate use of water in a CO<sub>2</sub> tank
- Install water-saving systems in toilets
- Replace the open-cycle refrigeration system in the Quality Control autoclave with a closed-cycle system
- Replace the water softener system with a more efficient unit
- Reduce the washing system phases during the albumin purification process
- Recover condensates from the alcohol tower for the boilers
- Optimize the reverse osmosis system to minimize rejection

### ABSOLUTE VALUE · m<sup>3</sup>



# WASTEWATER

*Grifols complies with the applicable regulations and permits required for wastewater discharge in all of its facilities. Wastewater is managed in proprietary or municipal treatment systems. Ultimately, all wastewater is discharged into the public sewer system.*

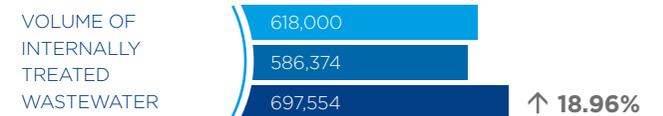
The volume of wastewater corresponds to 70% of the water consumed, since 30% of this water is incorporated in the product itself during the manufacturing process, or is used in auxiliary processes that do not involve discharge, such as the cooling towers.

In some of the Bioscience Division's facilities, wastewater is treated in-house with biological systems prior to discharge:

- The Bioscience Division's production facilities in Parets del Vallès, Barcelona have a membrane bioreactor (MBR) treatment plant to treat high-organic-load effluents from the manufacturing process. The treated water is separated from the reactor's biomass by means of a system of ultrafiltration membranes. In 2015, work continued to expand the plant to enable efficient treatment of wastewater resulting from the production increases expected in the next few years.
- The Clayton, North Carolina facility has a biological treatment plant that treats effluents using MBBR (Moving Bed Biofilm Reactor) technology.
- At the Los Angeles, California facility the industrial wastewater neutralization system has been improved, optimizing the CO<sub>2</sub> dosing system used in pH neutralization.

## WASTEWATER TREATMENT VOLUMES (SPAIN AND THE UNITED STATES)

ABSOLUTE VALUE · m<sup>3</sup>



The volume of wastewater processed in the treatment plants grew 19% due to the increase in water used by the Bioscience Division at the Clayton, North Carolina plant.

In 2015, improvements to the Clayton municipal wastewater treatment infrastructure were completed with the collaboration of Grifols. The company will be able to use these facilities to complement the wastewater treatment it carries out at its own facility.

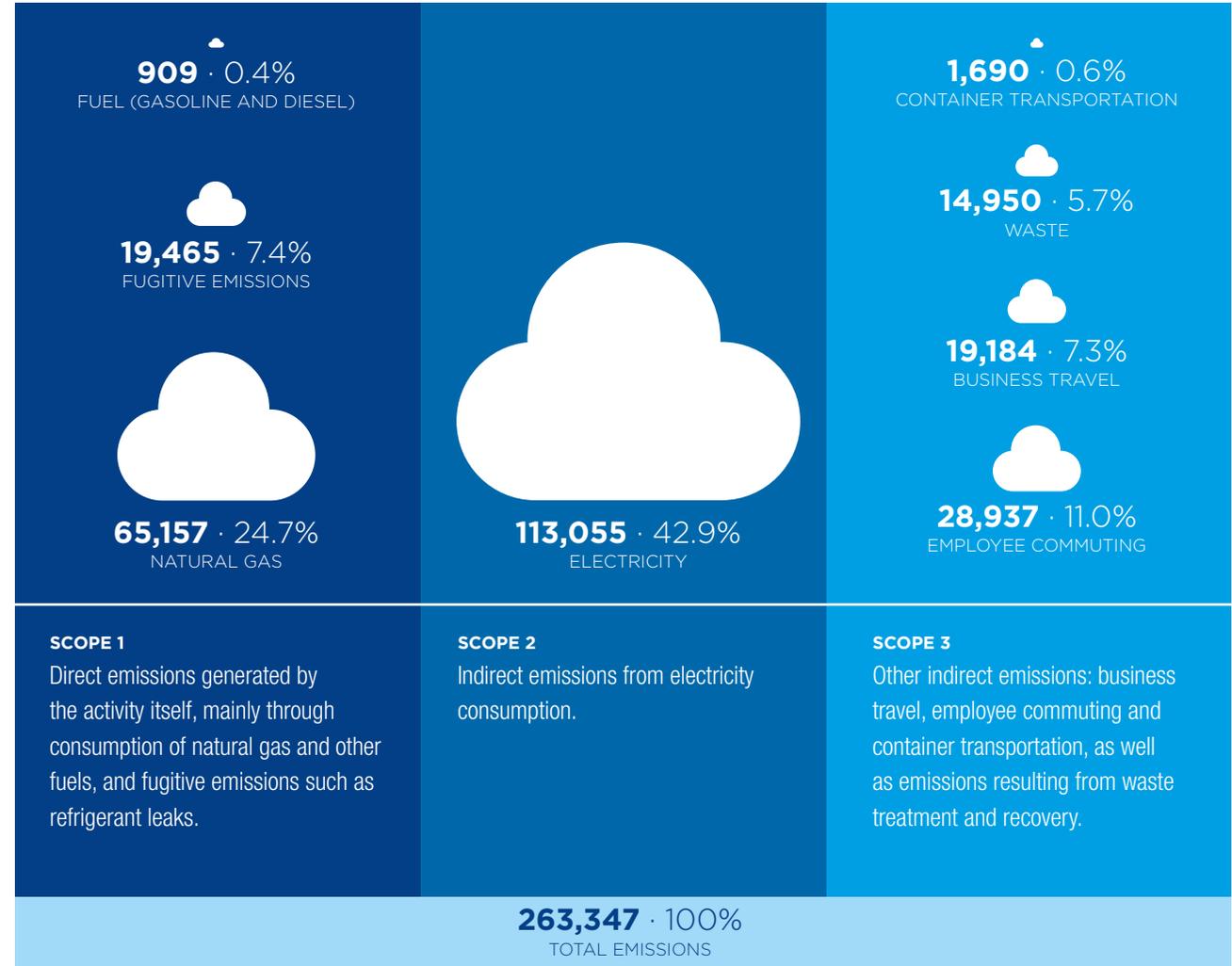
■ 2013 ■ 2014 ■ 2015

# AIR EMISSIONS

For the fifth consecutive year, Grifols calculated the company's carbon footprint in order to identify the greenhouse gas emissions generated by the various sources, and their impact on climate change.

Calculations are based on [Greenhouse Gas Protocol \(GHG Protocol\) methodology](#), the international standard for measuring and reporting greenhouse gas emissions. In accordance with this methodology, emissions are categorized in three scopes:

## EMISSION BY SOURCE 2015 · t CO<sub>2</sub>e

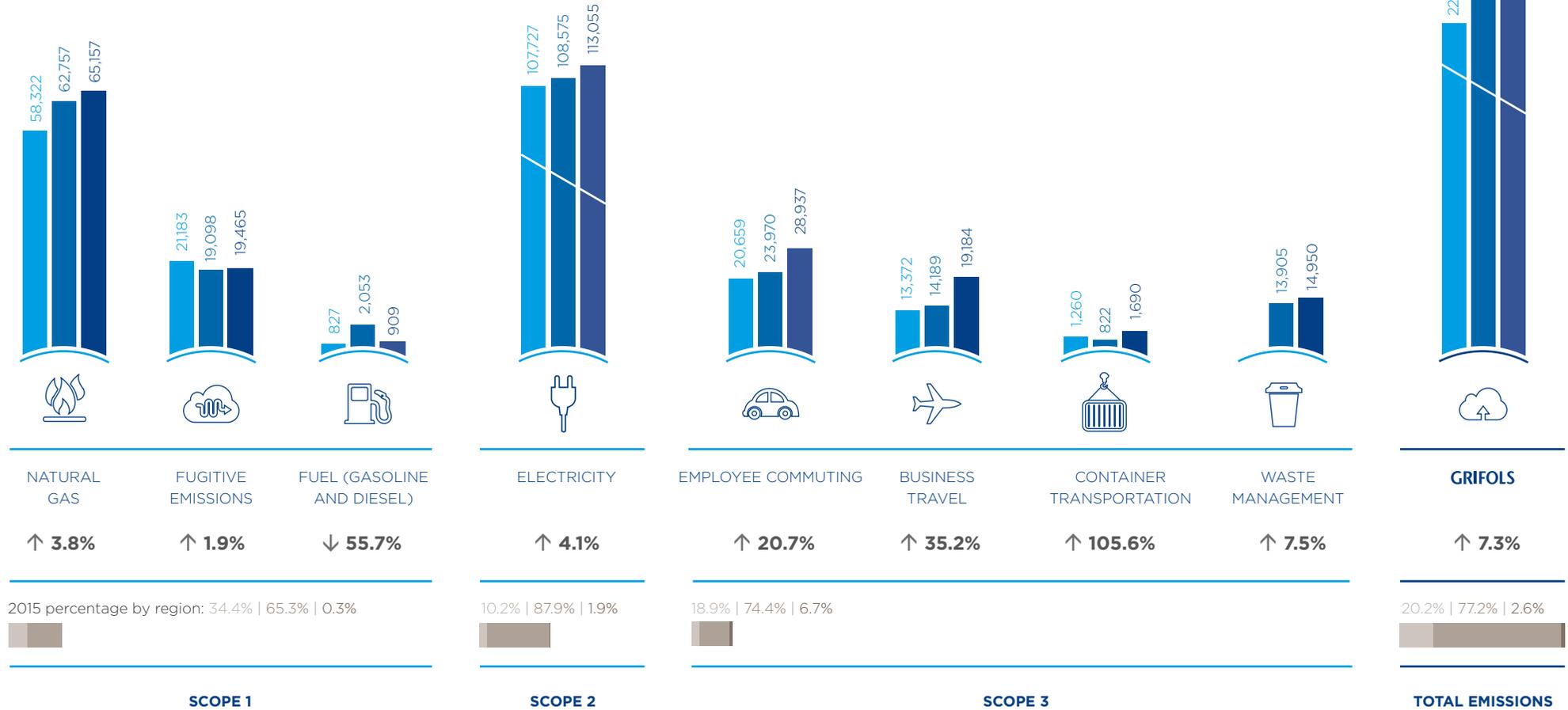


ENVIRONMENTAL PERFORMANCE

**AIR EMISSIONS**

**TOTAL EMISSIONS BY SCOPE AND REGION**

ABSOLUTE VALUE · t CO<sub>2</sub>e



2015 percentage by region: ■ SPAIN ■ UNITED STATES ■ REST OF THE WORLD ■ 2013 ■ 2014 ■ 2015

ENVIRONMENTAL PERFORMANCE

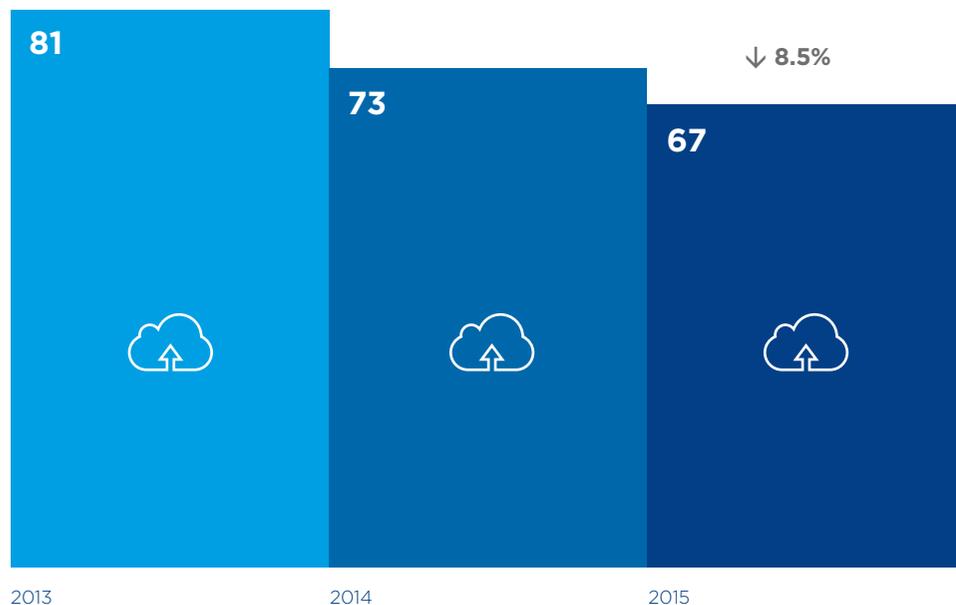
**AIR EMISSIONS**

Employee commutes and business travel accounted for the biggest increases in emissions in absolute value.

In 2015, airplane travel rose by 13% over the previous year. In addition, the methodology for calculating emissions generated by flights has changed. Until 2014, the IPCC's tables were used, but in 2015 they were replaced by data provided directly by the airlines.

**2015 CO<sub>2</sub> EMISSIONS INTENSITY**

total t CO<sub>2</sub>e/million euros



A 7.3% increase in CO<sub>2</sub> emissions in absolute values was recorded compared to 2014. This rise was due to the Bioscience and Diagnostic Division's increases in production, which led to rises in electricity and natural gas consumption, generating increases of 4,480 and 2,400 metric tons of CO<sub>2</sub> emissions, respectively. However, the emissions intensity indicator reveals an 8.5% reduction in emissions relative to revenues over 2014.

In 2015, the primary emissions sources continued to be electricity consumption, at 42.9%, and that of natural gas, at 24.7%.

Overall, 77.2% of greenhouse gases were emitted in the United States, where 73% of employees and 63% of manufacturing are based.

**REFRIGERANT GASES LEAKS**  
ABSOLUTE VALUE · t

	2013	2014	2015	Variation
HCFC	9.9	9.2	6.6	↓ 28.6%
HFC	2.3	2.0	3.8	↑ 88.8%
OTHERS	0	0.010	0.002	↓ 80.0%
<b>TOTAL</b>	<b>12.2</b>	<b>11.2</b>	<b>10.3</b>	<b>↓ 7.7%</b>

## ENVIRONMENTAL PERFORMANCE

### AIR EMISSIONS

Total leaks of refrigerant gases dropped by 7.7%. This reduction can largely be attributed to the improvements made in preventive equipment maintenance.

Emissions of atmospheric contaminants NO<sub>x</sub>, CO and SO<sub>2</sub> are generated by combustion of natural gas in the boilers belonging to the production centers and the cogeneration plant in Parets del Vallès, Barcelona, and by the fuel used in electric generators. Emissions of these compounds at all production plants are below the limits established by the relevant environmental authorities.

The NO<sub>x</sub> emissions from Grifols' Los Angeles plant are tradable on California's Regional Clean Air Incentives Market (RECLAIM), which works to reduce emissions of this pollutant. This system of allowances sets maximum emission levels for nitrogen oxides at each facility. Grifols did not purchase or sell NO<sub>x</sub> credits on the regional market in 2015.

#### ATMOSPHERIC EMISSIONS

ABSOLUTE VALUE · t

	2014	2015	Variation
 NO <sub>x</sub>	44	53	↑ 19.4%
 CO	19	24	↑ 25.4%
 SO <sub>2</sub>	4	4	0.0%

### CARBON DISCLOSURE PROJECT AND CARBON FOOTPRINT

The [Carbon Disclosure Project \(CDP\)](#) is an independent non-profit organization that manages the world's most extensive database of information on corporate practices in relation to climate change.

Each year, the organization invites international large-capitalization companies to participate in the project. The companies provide information identifying their risks and opportunities in the face of climate change, together with an action plan with concrete measures aimed at reducing the possible consequences of this environmental problem.

In the *CDP Iberia 125 report* for 2015, which analyzes information from 2014 for the 125 biggest companies on the Iberian Peninsula, Grifols was once again the highest-ranked company in the healthcare sector in Spain and Portugal. In addition, Grifols' rating improved to 97 out of 100, putting it in performance band B (out of a total of five bands, with A being the highest band).

Access to this information, which is of a non-financial nature, provides an evaluation tool for investors and representatives to evaluate the listed companies' strategies, plans and objectives for reducing emissions, and their achievements in a given period.

# WASTE

*In 2015, the volume of recovered waste reached 25,562 metric tons, representing 54.9% of total generated waste. This was an increase of 9.8% over the previous year.*

In 2015, a total of 46,554 metric tons was generated, a 9.3% increase on the previous year. However, the relative values confirm a 6.8% reduction in total generated waste relative to revenues.

Compared with 2014, there was an increase of 9.8% in recovered waste, and an increase of 8.7% in treated waste.

Grifols' waste management strategy prioritizes preventing and minimizing waste and encouraging recovery whenever possible, as opposed to landfill or incineration. In 2015, Grifols continued its commitment to waste management treatments such as recycling, anaerobic digestion, and energy recovery.

**GENERATED WASTE**  
ABSOLUTE VALUE · t

	2013	2014	2015	Variation
 RECOVERED WASTE	21,970	23,281	25,562	↑ 9.8%
 WASTE DISPOSED OF	20,080	19,314	20,992	↑ 8.7%
<b>TOTAL</b>	<b>42,050</b>	<b>42,595</b>	<b>46,554</b>	↑ 9.3%

RELATIVE VALUE · t/million euros

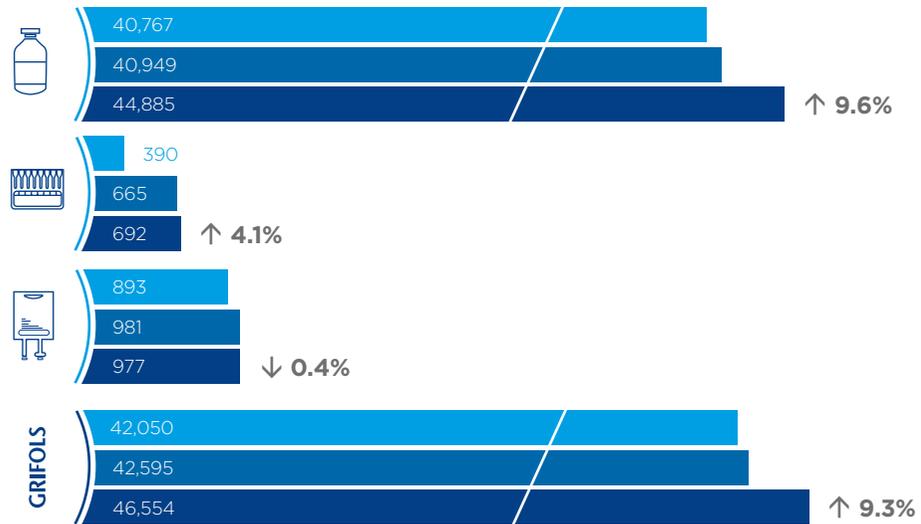
 RECOVERED WASTE	8.0	6.9	6.5	↓ 6.4%
 WASTE DISPOSED OF	7.3	5.8	5.3	↓ 7.3%
<b>TOTAL</b>	<b>15.3</b>	<b>12.7</b>	<b>11.8</b>	↓ 6.8%

## ENVIRONMENTAL PERFORMANCE

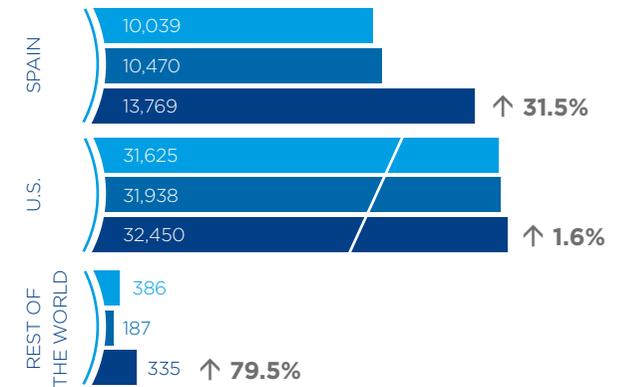
### WASTE

#### WASTE GENERATED

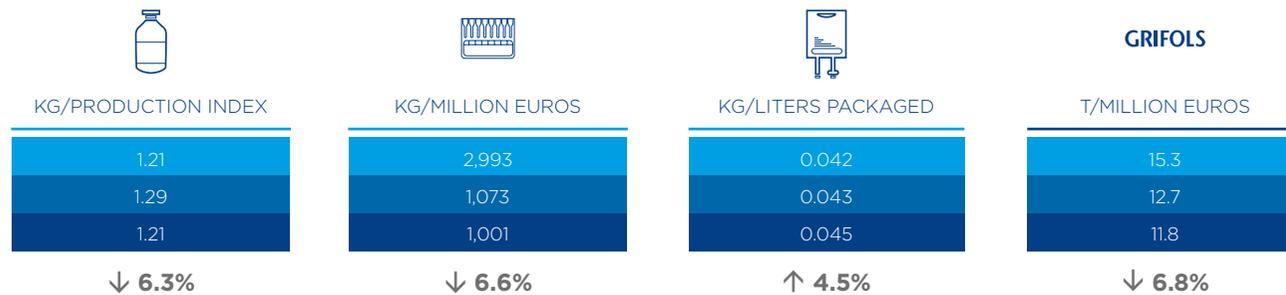
ABSOLUTE VALUE · t



ABSOLUTE VALUE · t



RELATIVE VALUE



Bioscience | 
 Diagnostic | 
 Hospital | 
 2013 | 
 2014 | 
 2015

## ENVIRONMENTAL PERFORMANCE

### WASTE

#### PRIMARY RECOVERED WASTE

ABSOLUTE VALUE · t

	2013	2014	2015	Variation	Outcome
POLYETHYLENE GLYCOL AND SORBITOL	8,931	8,372	9,641	↑ 15.2%	  
CONCRETE AND ASPHALT		1,697	4,324	↑ 154.8%	
WASTEWATER SLUDGE	2,337	3,044	2,759	↓ 9.4%	
WATER ALCOHOL SOLUTION	5,849	4,923	2,226	↓ 54.8%	
PAPER - CARDBOARD	2,026	1,762	1,881	↑ 6.7%	
PRODUCTION PASTES	569	1,285	1,459	↑ 13.5%	
CLEAN PLASTIC AND PLASTIC PALLETS	490	585	724	↑ 23.7%	
GLASS	538	564	671	↑ 19.0%	
NON-HAZARDOUS SRF (SOLID RECOVERED FUEL)	323	305	379	↑ 24.2%	
WOOD/PALLETS	223	258	307	↑ 18.9%	 
METALS	145	249	235	↓ 5.6%	
CHEMICAL-PRODUCT PACKAGING	51	49	59	↑ 20.4%	 
CATERING PACKAGING	15	49	53	↑ 8.2%	
OTHERS	473	138	844	↑ 512.3%	
<b>TOTAL</b>	<b>21,970</b>	<b>23,280</b>	<b>25,562</b>	<b>↑ 9.8%</b>	

A highlight of 2015 was the 2,697-metric-ton reduction in water-alcohol solution waste, a 54.8% decrease over 2014. During 2015, validation of the ethanol distillation tower at the Bioscience Division's plant in Los Angeles, California was carried out. This allowed us to reduce the volume of ethanol treated externally by an authorized agent. This waste is expected to decrease significantly when the ethanol can be reincorporated into the production process.

The increase in polyethylene glycol and sorbitol waste is directly related to the increase in Flebogamma® DIF production at the Bioscience Division's Parets del Vallès plant. Other waste, such as production pulp, clean plastic, glass, and chemicals packaging also increased as a result of this output. Relative values indicate a 6.8% reduction in total waste relative to production in this division.

The increase in concrete and asphalt waste is due to the construction work on the new raw materials storage facility, and to the start of work on the new office building located at the Clayton, North Carolina plant.

Recycling of plastic plasma bottles –already under way at the Los Angeles plant in California– has now begun at the Bioscience Division's facilities in Clayton and Parets del Vallès.

 By-product  Compost  Recycling  Re-use  Energy recovery

## ENVIRONMENTAL PERFORMANCE

### WASTE

Grifols participates in several integrated waste management programs to guarantee correct handling of certain waste generated by its activities. In Spain, it participates in the SIGRE program that handles the packaging and remains of domestic medications, and in the ECOASIMELEC scheme to ensure correct handling of electronic and electrical waste. In Chile, Grifols collaborates with Recycla to collect and recycle this equipment.

A significant part of the total increase in waste disposed of is due to the increase in the production of Flebogamma® DIF at the Bioscience Division's facilities in Barcelona. This resulted in 1,607 metric tons of waste that could not be reused as a by-product due to lack of demand, and were therefore disposed of by an external waste management company.

	PRIMARY WASTE DISPOSED OF ABSOLUTE VALUE · t			
	2013	2014	2015	Variation
 GENERAL WASTE	12,857	13,048	13,512	↑ 3.6%
 MEDICAL WASTE	4,923	3,869	3,225	↓ 16.6%
 WASTEWATER SLUDGE	624	604	370	↓ 38.7%
 OTHERS	1,676	1,793	3,885	↑ 116.5%
<b>TOTAL</b>	<b>20,080</b>	<b>19,314</b>	<b>20,992</b>	<b>↑ 8.7%</b>

**WASTE**

 RECOGNITION FOR APPROPRIATE WASTE HANDLING



**DUPONT SUSTAINABILITY AWARD**

In 2015, Grifols' efforts to reduce generation of medical waste were recognized with the DuPont Sustainability award. Grifols began to work with state regulators to establish a more accurate process for identifying types of medical waste in 2013. Only a small percentage of the medical waste incinerated at the North Carolina plant was biologically hazardous, so a larger percentage of this waste could be treated or recycled.



**KIMBERLY-CLARK PROFESSIONAL AWARD**

Grifols also received another award for its work with waste in North Carolina. The Kimberly-Clark Professional award recognizes Grifols' participation in the RightCycle program, which focuses on recycling non-hazardous waste generated in laboratories and clean rooms on a large scale. The program is designed to help pharmaceutical and research companies reduce solid waste destined for landfill by facilitating recycling of items such as robes, gloves, masks, etc.

This waste is recycled and turned into raw materials that can be used to manufacture environmentally friendly products. In 2015, Grifols separated close to 4.5 metric tons of these materials, avoiding disposal of them at landfill sites.

# BIODIVERSITY

*The Clayton, North Carolina plant is located next to a specially protected natural biodiversity area. The rest of the production centers are located in industrial zones.*

The area covers 38 hectares (95 acres) and is certified by the Wildlife at Work and Corporate Lands for Learning programs. Through these programs, the company collaborates with several local land protection and conservation organizations, such as the Museum of Natural Sciences, North Carolina State University, and the NC Wildlife Resources Commission. Both programs are promoted by the [Wildlife Habitat Council](#).

Within the framework of the Wildlife at Work program, Grifols has developed a performance plan for this nature area, led by specialists and volunteers from the Clayton plant. Currently, the performance plan includes four projects to restore natural habitats, conserve species of flora and fauna, and promote employee and community awareness about protecting the natural world.

## WILDLIFE AT WORK PERFORMANCE PLAN

 <p>Conserve the <i>eastern bluebird (Siala sialis)</i> by installing nesting boxes in feeding and nesting areas. Monitoring by young <a href="#">4-H</a> club members of the bird's reproductive activity.</p>	 <p>Eliminate invasive species (<i>Paulownia tomentosa</i> and <i>Ligustrum sinense</i>, among others) in order to conserve indigenous species.</p>	 <p>Reclaim boundaries of plots around fields to create shelter for fauna and regulate water quality.</p>	 <p>Provide nature area access to employees and outside groups, as well as education and information about the site's flora and fauna.</p>
<p>NESTWATCH NEST MONITOR CERTIFICATION BY THE <a href="#">CORNELL LAB OF ORNITHOLOGY</a>.</p>	<p>HABITAT RESTORATION FOR INDIGENOUS BUTTERFLIES LIKE THE VARIEGATED FRITILLARY (<i>Euptoieta claudia</i>).</p>	<p>MONITORING OF SPECIES DIVERSITY AND ABUNDANCE FOLLOWING BOUNDARY RECLAMATION.</p>	<p>DESIGN AND PUBLICATION OF INFORMATIONAL MATERIALS AND IMPROVEMENT OF ACCESS.</p>
<p><b>Begun</b> Summer 2012</p> <p><b>Inventories taken</b> May and October 2013 May 2014 May 2015</p>	<p><b>Begun</b> May 2013</p> <p><b>Follow-up</b> 2015, part of the invasive species removed To be continued in 2016</p>	<p><b>Begun</b> Summer 2015</p>	<p><b>Begun</b> May 2012</p> <p><b>Follow-up</b> 2013, 2014 and 2015, awareness-raising programs and publication of informational materials</p>

ENVIRONMENTAL PERFORMANCE  
**BIODIVERSITY**



Specially protected biodiversity area, Clayton, North Carolina (Andrea Andersen).

The nature area is used by the local community, universities, and secondary schools for educational purposes to broaden learning in areas such as forestry, soil analysis, and wildlife protection. A group from the local 4H Club, an association set up to facilitate youth training and development, helped with the eastern bluebird conservation project. These projects were carried out under the Corporate Lands for Learning program.

The 2015 natural species inventory identified 128 animal species (five of which are listed in the North Carolina Wildlife Action Plan as priorities for conservation) and 172 plant species. With reference to the [IUCN Red List](#), the species included are listed in the table.

All of these species are found in a specially protected nature area where Grifols carries out conservation and habitat restoration projects.

**IUCN RED LIST CLASSIFICATION BY SPECIES**  
**CATEGORY** · No of species

EXTINCT	0
EXTINCT IN THE WILD	0
CRITICALLY ENDANGERED	0
ENDANGERED	1
VULNERABLE	3
NEAR THREATENED	3
LEAST CONCERN	169
INSUFFICIENT DATA	2
NOT EVALUATED	194

Note: The table includes species of flora and fauna identified in inventories prior to 2014-2015, but not identified in the most recent inventory. Of the total species identified in the inventories, 37 could not be classified by their full scientific names.

## BIODIVERSITY

### 👍 PARTNERSHIP AGREEMENT WITH THE PROTECTION OF THE RIVER BESÒS BASIN

Grifols and the Consorcio para la Defensa de la Cuenca del Río Besòs (Consortium for the Protection of the River Besòs Basin) have a partnership agreement in place for 2014–2018 to restore this natural area through two projects: *Restoration of the Tenes River Path* and *Study of Otters' Return to the Besòs Basin*. Grifols contributes financially to both initiatives.

As a result of this agreement, in 2015 the *Restoration of the Tenes River Path* project was drawn up, which covers the section between the municipal boundaries of Parets and Montmeló.

The environmental significance of restoration of the Tenes, which runs the length of the valley ending below Parets del Vallès, where Grifols' Barcelona plant is located, lies in its ecological value as a tributary of the Besòs river.

The 2015 monitoring report covering otters' return to the Besòs river basin, carried out by the consortium responsible for the project and volunteers from the Grupo Ornitológico del Río Tenes (Tenes River Ornithological Association), verified the presence of the species in this river basin, primarily in the middle section. Grifols' contribution to both projects will help recovery of this animal, which is classified under Catalan legislation as a protected native wildlife species.



Specially protected biodiversity area, Clayton, North Carolina (Andrea Andersen).

# MANAGEMENT AND PREVENTION OF ENVIRONMENTAL RISK

*Grifols identifies environmental risks and establishes preventive measures to minimize the possible environmental impact of its activities. These measures are periodically reviewed to ensure they are up-to-date and effective.*

The company takes adherence to applicable environmental regulations seriously and acts within the framework of its environmental management system. Grifols was not fined or cited for any environmental violations during 2015.

Every company facility has a self-protection plan that defines the actions to be taken in case of an environmental emergency, and specifies the personnel responsible for carrying them out.

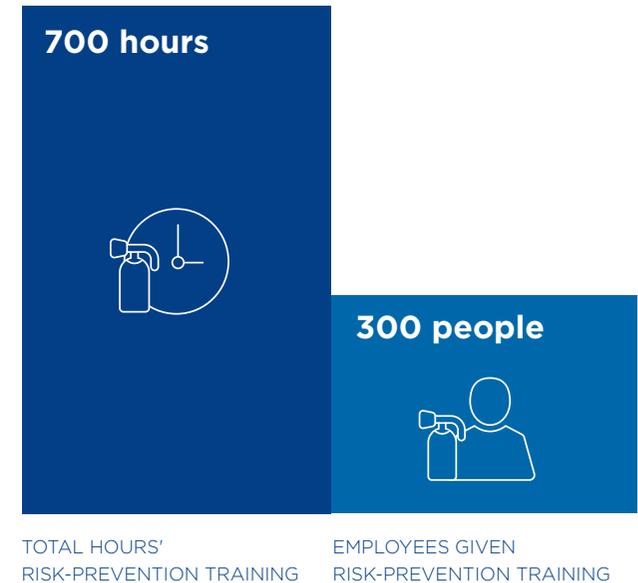
Drills are carried out periodically at the production plants to assess the ability to react in the event of emergencies or incidents that might have major or minor environmental impact.

In 2015, a drill simulating a hydrochloric acid spill was carried out at the Hospital Division's Parets del Vallès facility. This simulation enabled us to confirm the functioning of the incident protocol designed for this type of spill, and the ability to react so as to minimize its impact.

The Clayton, North Carolina plant has a risk management plan in place that covers response to emergencies under the provisions of the US Clean Air Act. Various drills were carried out in the plant, such as a simulated chemical leak, to verify the ability to react in a similar situation. Several evacuation drills were performed at the production centers in Los Angeles and Emeryville, California and practical training was provided in subjects such as identification and handling of hazardous substances.

Additionally, emergency evacuation drills were performed in all plants in the United States and Spain.

Preventive measures include various types of specific training for the relevant employees, in which over 300 people participated for a total of 700 hours.



# ENVIRONMENTAL TRAINING, AWARENESS AND COMMUNICATION

*Overall, 2,738 employees received a total of 3,244 hours of environmental training. Almost 50% of these hours were dedicated to increasing employee environmental awareness.*

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In its efforts to improve the company's environmental sustainability, Grifols organizes environmental awareness-raising activities for its employees. In 2015, use of internal display screens to communicate environmental messages was increased. In addition, the employee portal was used to publish information and news of the company's environmental achievements.

Each year, the company celebrates World Environment Day by organizing a children's drawing competition for the children of employees and other young family members. The tenth edition of the competition had 74 participants.

In Spain, the company organized a walk for employees and their families to acquaint them with the Cingles de Bertí nature area near Barcelona. The route through this nature area covered 9 kilometers, and 247 people signed up for the walk.

The production plants in the United States celebrated Earth Day on April 22. In Los Angeles, local government agencies and Grifols suppliers took part in activities and received tips on protecting the environment. Various topics were addressed, such as recycling of office products (paper and plastic), saving water and energy, encouraging consumption of local products, and promoting use of electric vehicles and renewable energy sources.

In Clayton, North Carolina various activities were organized, such as Compost Give Away Day, Dumpster Dive days, an Earth Day contest, and classes about soil stratification for a local school at the specially protected nature area adjacent to the plant.

## ENVIRONMENTAL TRAINING, AWARENESS AND COMMUNICATION

Once again, on Compost Give Away Day, Grifols handed out 45 m<sup>3</sup> of compost generated as a production by-product to help maintain 24 landscaped areas in the community.

On Dumpster Dive days, a team of 15 employees inventoried recyclable waste mistakenly deposited in general waste containers. Subsequent analysis showed that 15% of the waste could have been placed in recycling containers already on the site. This percentage was higher than the 12% recorded in 2014, although it must be kept in mind that a different area of the plant was analyzed. In order to achieve lower percentages in future inventories, an emphasis will be placed on increasing awareness. The Earth Day contest rewarded knowledge of the basic aspects of environmental protection in place in the workplace. Once again, this facility supported the North Carolina Department of Transportation's [Adopt-A-Highway](#) program.

At the Emeryville, California plant, around 200 employees participated in an activity to familiarize themselves with sustainable products and services, such as electric vehicles, composting techniques, and appropriate water usage. Local government and suppliers supported the event. The occasion was also used to give employees an opportunity to recycle household electronic waste.

Grifols uses various communication channels to interact with stakeholder groups on environmental issues: email ([medioambiente@grifols.com](mailto:medioambiente@grifols.com)), telephone, direct contact, the employee magazine, and the suggestion box on the employee portal.

Through its internal and external environmental communications procedures, the company is able to ensure proper response, and within an established time limit, to every communication it receives. A total of 278 communications of an environmental nature were received during 2015.

*The rest of the activities focused on waste separation and prevention in specific areas, knowledge of procedures, and the ISO 14001 internal audit, as well as including courses on carbon footprint calculation and the LEED standard.*

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*This is the twelfth edition of the Grifols environmental report, which documents the company's environmental performance for the information of all stakeholders. The current report complements the rest of the information published by the company, available on its website: [www.grifols.com](http://www.grifols.com).*

In compiling this report, we have used the environmental indicators recommended by the [Global Reporting Initiative \(GRI\)](#) in its G4 Guidelines, the international standard of reference for sustainability reporting, in compliance with the European directive on the disclosure of non-financial information.

## INFORMATION MANAGEMENT AND SCOPE

This annual report covers the period from January 1 to December 31, 2015, which corresponds to Grifols' fiscal year. Also, historical data corresponding to the last three years (2013–2015) have been included by business division, and by country in which Grifols carries out production activities. This last classification considers only aspects relative to water consumption, electricity consumption, emissions, and waste generation.

The scope of the information includes all of Grifols' operations, from manufacturing facilities to sales offices and service centers, taking into account the following considerations for 2015:

- Data from Progenika Biopharma, of which Grifols holds a 56.15% share, have been included in the indicators for the Diagnostic Division, just as in 2014.
- Data from Araclon Biotech, of which Grifols holds a 70.83% share, have been 100% incorporated and consolidated in the indicators for the Bioscience Division, just as in 2014.
- Energy data relating to the new logistics center in Ireland have been included, although it will only be fully operational as of 2016.
- In 2015, data from the commercial subsidiaries in São Paulo (Brazil) and Milan (Italy) were included as they have more than 10 employees.
- Data from commercial subsidiaries with fewer than 10 employees were not included.

The data provided by Grifols in this report represent 100% of its production activity. Nearly all of its commercial activity is represented as well, excepting those international commercial subsidiaries with fewer than 10 employees.

All of Grifols' production facilities in Spain are equipped with an environmental management system that has been certified to the international ISO 14001 standard. In the United States, the Clayton, North Carolina plant has a system based on ISO 14001, and hopes to gain this certification in 2016. At the end of 2015, implementation of this system was begun at the Emeryville, California facility. Production centers already holding this certification represent 40% of the total, while those in the process of being certified represent 30% (see Chapter 3.2). The guidelines established in the Corporate Environmental Manual are applied in the remainder of Grifols' facilities.

The indicators included in this report were compiled by Grifols using SAP Sustainability Performance Management software, which enables compilation and processing of quantitative data for all of Grifols' facilities and its subsidiaries. The systemization of information retrieval ensures methodological rigor and allows historical comparisons to be made.

## DATA ANALYSIS

The variations in data have been analyzed using absolute values and in terms that are relative to the activity and revenues of each division with regards to the previous year.

Additionally, analysis of data by country in terms of energy consumption, emissions, water consumption and waste generation has been included in the report.

### PERFORMANCE INDICATOR



#### BIOSCIENCE

PRODUCTION INDEX (LITERS OF FRACTIONATED PLASMA + LITERS OF PLASMA EQUIVALENT)



#### DIAGNOSTIC

REVENUE IN MILLION EUROS



#### HOSPITAL

LITERS PACKAGED

The variety of products made by the Diagnostic Division (reagents, cards and equipment) makes it difficult to come up with a definitive performance indicator. Because of this, revenue has once again been used as the performance indicator for this division.

The environmental performance of the Raw Materials Division, which includes sales of intermediate biological products and plasma to third parties, royalty income, and work performed by Grifols Engineering for outside companies, is included with that of the other divisions.

GRIFOLS | 75  
ANNIVERSARY