



**RISKS AND  
OPPORTUNITIES  
MANAGEMENT  
RELATED TO  
CLIMATE CHANGE**

**GRIFOLS**



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Grifols recognizes the importance of informing its stakeholders on the company's climate-change impact and measures to manage associated risks and opportunities.

In 2020, Grifols confirmed its management of climate-related risks and opportunities, identified in 2019 following the Task Force on Climate-Related Financial Disclosures (TCFD) guidelines.



# CLIMATE CHANGE: MITIGATION AND ADAPTION

## GOVERNANCE

Grifols recognizes the importance of informing its stakeholders on the company's climate-change impact and measures to manage associated risks and opportunities. In 2020, Grifols confirmed its management of climate-related risks and opportunities, identified in 2019 following the Task Force on Climate-Related Financial Disclosures (TCFD) guidelines.

Grifols Board of Directors is responsible for approving the corporate risk policy, corporate responsibility policy and the environmental policy, which include the management of environmental risks associated with regulatory changes and the establishment of commitments to mitigate climate change risk.

Grifols' Board of Directors continued to reinforce the company's corporate governance with the creation of a new sustainability committee at the end of 2020. This committee will advance Grifols' efforts as a responsible and transparent company, committed to its diverse stakeholders through the continuous improvement of its economic, social, environmental and corporate governance performance.

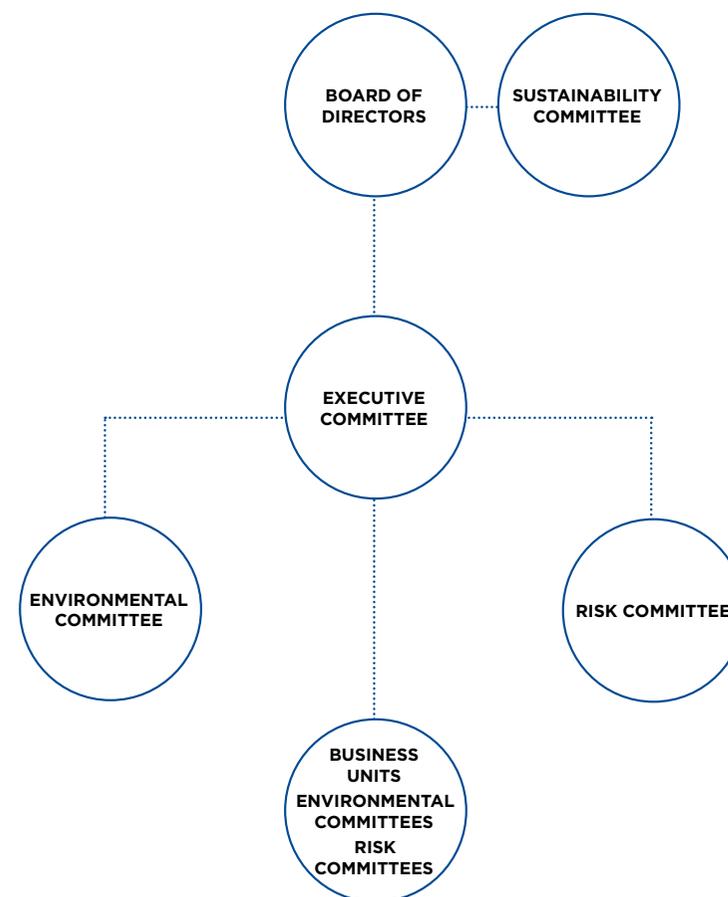
The Sustainability Committee will establish the core principles and commitments regarding the company's environmental and social responsibility and oversee the integration of financial and non-financial information related to ESG (environment, social and corporate governance) factors. In this context, Grifols' Board

of Directors has also approved a new Sustainability Policy, aimed at reinforcing these basic principles and commitments and facilitating their integration into Grifols' business model.

The Executive Committee is the committee that routinely monitors Grifols' performance on its diverse environmental programs, including indicators and action lines related to climate change. It also supervises this report, which outlines Grifols' performance on climate-change issues.

The Chief Industrial Officer (CIO), in addition to serving on the Executive Committee, is a member of the Environmental Committee. The CIO is responsible for regularly updating the CEOs on the company's environmental performance. The CIO also approves the Environmental Plan and the economic and human resources required to meet those objectives. Furthermore, the CIO approves the Grifols Energy Policy and oversees the Global Facilities Department, responsible for approving investments related to energy efficiency projects and the control of energy expenditures, in addition to reducing atmospheric emissions.

Finally, the Risk Committee, which reports to the Board of Directors, is responsible for developing the risk management model and supervising the most relevant risks, including climate-related risks.



## RISK MANAGEMENT

Based on its internal risk management procedure and Task Force recommendations, Grifols adapted and prioritized its climate risks and opportunities identification to TCFD rating, taking into account their probability of occurrence and financial impact on previously defined timeframes.

A complete list of climate risks and opportunities, each reflecting their financial impact on the business model, is included in the annex at the end of this report. To formulate this table, the first step was categorizing the financial impacts as follows:

- High: > 200 M€
- Medium-high: >20 M€ ≤ 200 M€
- Medium: >10 M€ ≤ 20 M€
- Low: ≤10 M

The financial impact associated with all transitory risks was deemed low, while the impact of specific physical risks and opportunities was determined as medium. As shown in the following table, additional aspects were assessed for risks and opportunities with impacts higher than EUR 10 million:

- Likelihood of occurrence, classified as unlikely, likely or very likely

- Timeframe:
  - Short term: 0 ≤ 3 years
  - Medium term: >3 ≤ 6 years
  - Long term: > 6 years
- Area of financial impact:
  - OPEX
  - CAPEX
  - Acquisition or divestment
  - Access to capital

None of the risks were determined to have a high or medium-high impact. In terms of physical risks and their corresponding financial impacts, the following were determined as relevant, all with a medium impact (between EUR 10 million and 20 million).

Relevant climate risk	Associated financial impact	Probability	Timeframe	Impact on financial strategy
<b>Acute physical risk:</b>	Increase of costs due to unexpected losses of damaged facilities	Likely	Long term	OPEX and CAPEX
Increase in frequency and severity of extreme weather events	Decrease of revenues due to lower production capacity (transportation difficulties or supply chain interruptions)	Likely	Long term	OPEX
<b>Chronic physical risk:</b>	Increase in operational costs due to variability in available resources, e.g. water scarcity	Likely	Long term	OPEX
Changes in weather patterns				



In line with its internal risk management procedure, Grifols is currently managing these risks by diversifying its production, establishing contingency and emergency plans, designing facilities to withstand extreme weather events and cutting down on water consumption in production processes.

One of Grifols' most important manufacturing plants is located in North Carolina, an area prone to heavy rains or hurricanes. In Barcelona, Grifols' packaging facility is located near the Tenes River, a small waterway. While it could potentially be affected by floods, there is no historical record of such an occurrence, so its probability is low, although climate-change events could increase its likelihood in the future. These facilities have been specifically designed to resist extreme weather events, so damages would primarily only affect facades and roof replacements. In the North Carolina facilities, emergency and contingency plans have been developed to ensure they can withstand extreme events like hurricanes and in the design stage extreme-weather-resistant materials and structures were selected. The management cost related is nil.

Some of Grifols most important production centers are based in Barcelona and Murcia, Spain and the U.S. state of California, all of which have a Mediterranean climate. These plants could be affected by droughts – more likely as a result of climate change – which in turn could affect the availability of groundwater used in the production process. In Barcelona, water used in manufacturing comes from municipal sources and Grifols' own wells, which could be impacted after a long period without rain. In 2020, Grifols consumed 864,079 m<sup>3</sup> of water in Spain, 36% of which came from wells, down from 37.8% in 2019. That said, the municipal network provides more than enough water to meet the plants' needs and it is unlikely this supply would diminish since Grifols is considered an essential company.

Using the same aforementioned method, no high or medium-high impact opportunities were identified. The opportunities deemed as relevant and their associated financial impacts (between EUR 10 million and 20 million) are outlined in the following table:

## OBJECTIVES TO REDUCE WATER CONSUMPTION

Main objectives established at the Environmental Program 2020-2022 in order to reduce water consumption are:

### TREATMENT OF WATER

Reduce water consumption by 75,600 m<sup>3</sup> per year by replacing a reverse osmosis unit for the treatment of process water with a highly efficient one at the Clayton facilities.

### AUTOMATED CLEANING PROCESSES

Reduce water consumption by 2,100 m<sup>3</sup> per year through the implementation of more efficient automated cleaning processes in some production areas of the facilities of Laboratorios Grifols and Instituto Grifols in Barcelona.

### REUSE AND RECOVERY OF WATER

Reduce water consumption by 10,000 m<sup>3</sup> per year through the reuse and recovery of water from pasteurization baths from the albumin purification process in Los Angeles and Ireland.

GRIFOLS REDUCED ITS WATER CONSUMPTION BY 4% FOR THE SECOND CONSECUTIVE YEAR

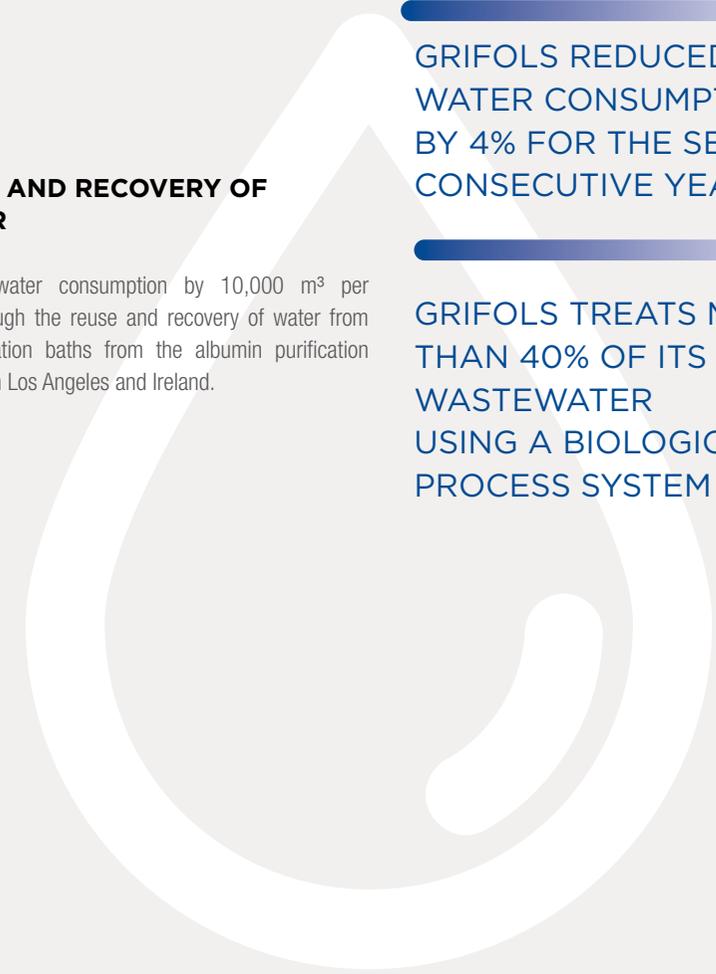
GRIFOLS TREATS MORE THAN 40% OF ITS WASTEWATER USING A BIOLOGICAL PROCESS SYSTEM

### EFFICIENT CONSUMPTION

Savings of 400 m<sup>3</sup> per year through the implementation of water reduction and reuse measures such as the use of rainwater for irrigation, drip irrigation systems or the installation of low-consumption taps in the new Sant Cugat del Vallés building, built under the LEED standard.

### GOOD PRACTICES

Study the possibilities of saving water for irrigation in the Los Angeles facilities and the implementation of good practices for saving water in the Clayton production facilities.



## ■ OPPORTUNITIES

Using the same aforementioned method, no high or medium-high impact opportunities were identified. The opportunities deemed as relevant and their associated financial impacts (between EUR 10 million and 20 million) are outlined in the following table:

Relevant climate opportunity	Associated financial impact	Likelihood	Timeframe	Impact on financial strategy
More efficient production and distribution processes	Reduction of operational costs due to lower energy and water expenditures	Likely	Long term	OPEX and CAPEX
Circular economy	Reduction of operational costs by taking the complete life cycle into consideration	Likely	Long term	OPEX
Access to new markets	Increase in revenues due to access to new and/or emerging markets	Likely	Long term	OPEX, CAPEX and Access to capital
Resilience	Increase in market value through resilience and/or adaptive capacity	Likely	Long term	CAPEX

To manage these relevant opportunities, Grifols integrated its eco-efficiency and circular economy objectives into its 2020-2022 Environmental Program. It also predicts access to new markets through new diagnostic solutions, to address the possibility of future needs arising from climate change. Lastly, the company manages its resilience or adaptive capacity by continuously promoting innovation and development, including the design of high-efficiency technologies.



## ■ STRATEGY

Business excellence and innovation are two fundamental pillars of Grifols' corporate strategy. Both rely directly on climate-change objectives outlined in the Environmental Program and are driven by the Corporate Risk and Energy Policies. In this way, climate-related risks and opportunities are already interwoven into Grifols' strategy and decision-making framework.

Climate risks and opportunities affect Grifols' business, financial strategy and planning, particularly in the areas of operations, products and services. For this reason, climate change is used as an input in operational cost planning and capital allocations, especially when implementing eco-efficiency

measures and strategies to reduce atmospheric emissions. Grifols also takes into account existing and future regulatory requirements, implementing procedures to ensure compliance (EV-SOP-000004 Compliance Obligations), which are subject to bi-annual audits. The Environmental Committee is responsible for carrying out any necessary corrective measures.

Since the risks determined as relevant are physical, Grifols' climate strategy also includes the qualitative analysis of future physical scenarios, the most relevant being those related to water stress, both for Spain as well as for the United States.

Taking into account the worst-case physical scenario provided by Spain's State Meteorology Agency (RCP 8.5 2046-2065), Grifols has a robust strategy with respect to its current management model. However, this scenario could increase the relevance of risks in the Murcia plant, where the associated financial impact of water scarcity could grow. Grifols is currently managing these risks and specifically designed the plant to enhance its water consumption efficiency. Nonetheless, the company is aware of the need to increase its strategic resilience in this region.

Using the World Resources Institute's risk-mapping tool, "WRI Aqueduct Water Risk Atlas," Grifols has also taken into account future physical scenarios in

the United States. Based on these scenarios, 2040 variables would not be substantially affected in North Carolina or California. As mentioned in previous yearly reports, Grifols is aware that its California plants are located in high-water-stress regions. As a result, it makes concerted efforts to reduce water consumption as part of a robust and resilient long-term strategy



## METRICS AND OBJECTIVES

Grifols continuously measures and monitors its achievements of the objectives included in its environmental programs, allowing it to mitigate its relevant physical risks and leverage transitional opportunities. These programs include both qualitative and quantitative objectives aimed at reducing atmospheric emissions (currently measured in reduction of tons of CO<sub>2</sub>e) and decreasing water consumption to manage risks associated with water shortages. Within the framework of the European Union objectives, Grifols also commits to using 70% of renewable electric energy by 2030.

With regard to the link between the remuneration policy and performance indicators, it should be noted that the Energy Manager's incentives are tied to energy-efficiency improvements in Grifols' production processes. Finally, it is also worth highlighting that the company is not subject to emission-trading schemes nor an internal carbon price.

Grifols is analyzing its areas of improvement with respect to the TCFD recommendations in its four main areas: governance, risk management, strategy, objectives and metrics. In this regard, it will devise an action plan to continue improving its performance and communication initiatives on climate-related issues. Some of these possible actions include:

- Integrating relevant climate-related risks into current decision making and strategy formulation, including planning, assumptions and objectives.
- Defining specific metrics and objectives in order to measure and manage all relevant climate risks and opportunities.

Every year, Grifols participates in the Carbon Disclosure Project (CDP), which assesses the firm's

corporate strategy and performance related to climate change. The 2020 questionnaire was submitted in July, with Grifols earning an "A-" rating for its efforts to effectively diminish its impact on climate change. Grifols has various objectives focused on reducing its atmospheric emissions, measuring and managing their impact, risks and opportunities, and developing solid policies and strategies to both minimize its environmental impact while leveraging opportunities.

The following table summarizes the key performance indicators used to measure Grifols' performance regarding financial impacts of relevant risks:

### GRIFOLS SETS TARGETS TO REDUCE ITS ATMOSPHERIC EMISSIONS AND MANAGES ITS ENVIRONMENTAL-RELATED RISKS AND IMPACTS

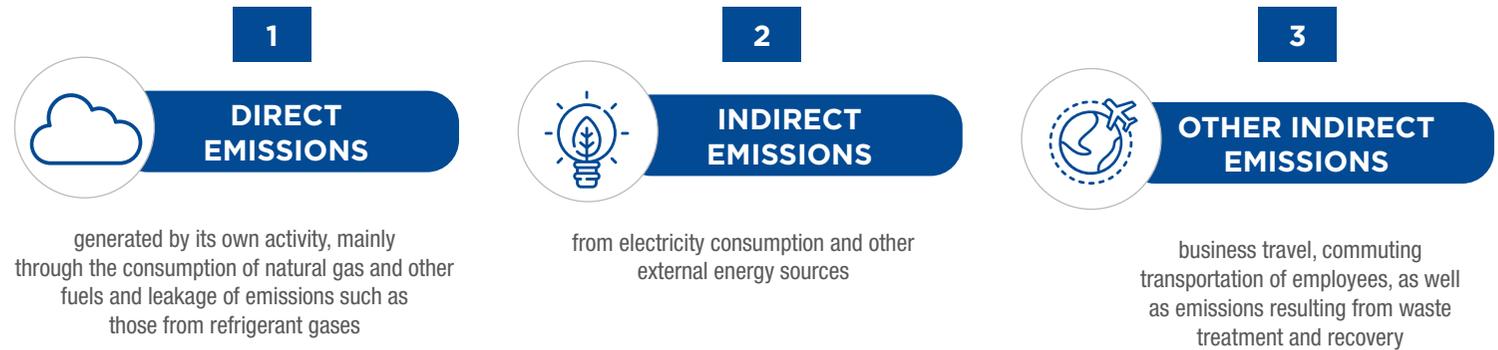
Relevant climate risks	Associated financial impact	KPIs
Acute physical risk: Increase in the frequency and severity of extreme climate events	Increase in costs due to unexpected losses of damaged facilities Reduction of income due to a decrease in production capacity (transportation difficulties or interruptions in the supply chain)	<ul style="list-style-type: none"> <li>– Annual losses due to damage to the facilities, derived from extreme weather events (€)</li> <li>– Increase in associated costs (€)</li> <li>– Number of extreme weather events that occurred in the areas of operation in the last year.</li> <li>– Production capacity (Liters of plasma in Bioscience, sales in Diagnostic, liters packed in Hospital)</li> </ul>
Chronic physical risk: Changes in climate patterns	Increase in operational costs due to the variability of resources, such as water scarcity	<ul style="list-style-type: none"> <li>– Water consumption (m<sup>3</sup>)</li> <li>– Water costs (€) per facility</li> <li>– Renewable energy consumption (MWh)</li> <li>– Electricity consumption (MWh)</li> <li>– Electricity costs (€) per facility</li> <li>– Natural gas consumption (MWh)</li> <li>– Natural gas costs per facility</li> <li>– Carbon footprint / atmospheric emissions (tCO<sub>2</sub>e)</li> </ul>

These consumption and emission indicators are expressed both in absolute value and relative to production (Liters of plasma in Bioscience, sales in Diagnostic, liters packed in Hospital)

# CARBON FOOTPRINT: IMPACT AND MITIGATION

Grifols calculates its carbon footprint to identify greenhouse gas emissions generated by its operations and their impact on climate change. These calculations are based on the Greenhouse Gas Protocol (GHG), the international standard used to measure and report GHG emissions.

## EMISSIONS ARE CLASSIFIED INTO THREE SCOPES



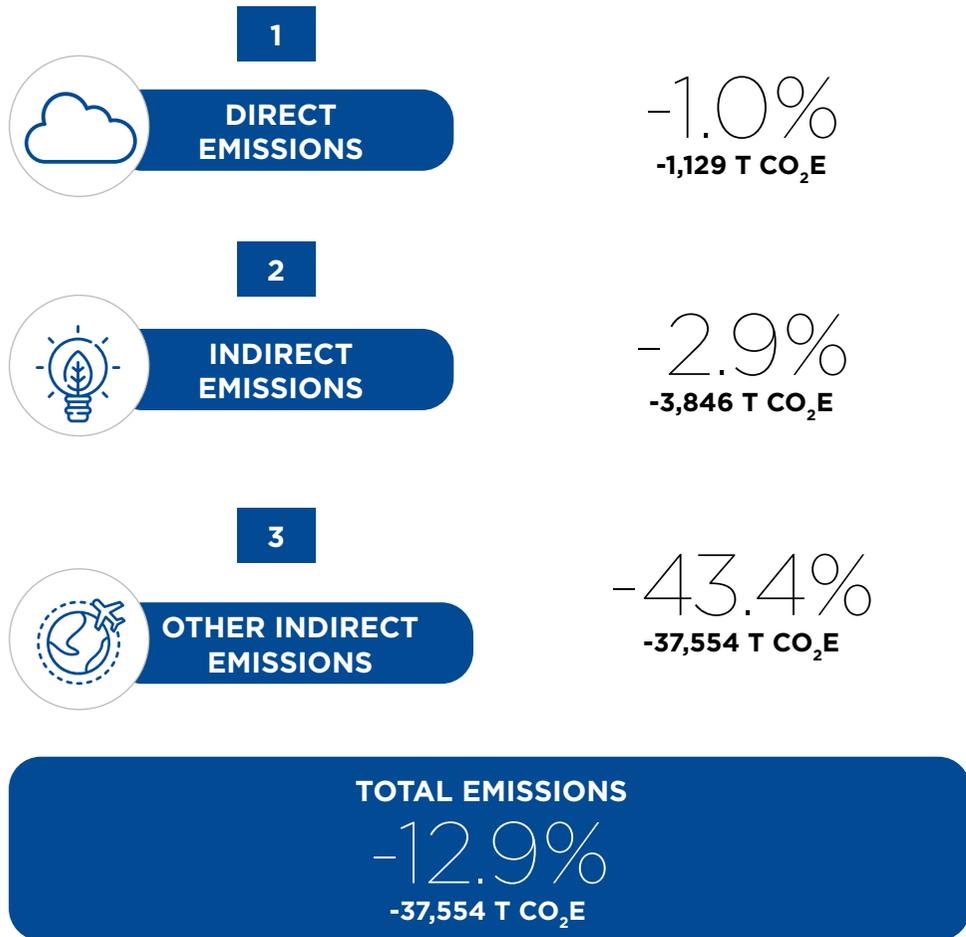
TELEWORK CONTRIBUTES TO REDUCING GRIFOLS CO<sub>2</sub> EMISSIONS, WHICH FELL BY 12.9% IN 2020

### TOTAL EMISSIONS BY ORIGIN

T CO <sub>2</sub> e	2020	2019	2018
<b>Scope 1</b>	<b>111,435</b>	<b>112,564</b>	<b>98,043</b>
Natural Gas	76,629	79,833	75,556
Fugitive Emissions	32,737	31,057	19,975
Other fuel (Gasoline, diesel and propane)	2,069	1,674	2,512
<b>Scope 2</b>	<b>127,596</b>	<b>131,442</b>	<b>120,493</b>
Electricity	125,300	131,442	120,493
District heating	2,296	-	-
<b>Scope 3</b>	<b>48,961</b>	<b>86,515</b>	<b>77,388</b>
Employee Commuting	28,307	50,211	40,076
Business Travel	3,904	11,343	12,535
Waste Management	9,754	17,056	16,112
Container Transportation	6,995	7,905	8,665
<b>TOTAL</b>	<b>287,992</b>	<b>330,521</b>	<b>295,924</b>

Source emission factors: GHG Protocol. Catalan Office of Climate Change. Environmental Protection Agency (US). Department for Environment, Food & Rural Affairs (UK)

**REDUCTION IN 2020**



Globally, Grifols' efforts have led to an 8.1% reduction in its Scope 1 and 2 CO<sub>2</sub>e emissions compared to 2018. The company aspires to reduce its CO<sub>2</sub>e emissions by 32,360 metric tons by 2022 in accordance with the 2020-2022 Environmental Program.

In 2020, total emissions amounted to 287,992 tonnes of CO<sub>2</sub>e, a 12.9% decrease over the previous year, stemming primarily from an increase in teleworking and greater use of videoconferencing, and a consequent decline in employee commuting and fewer business trips. At the same time, changes in other emission factors like electricity and discharges from waste generation also impacted this value. The reduction of the emission factors associated with the generation of electricity in the different geographical areas has resulted in a containment of carbon dioxide emissions.

Refrigerant gas leaks increased by 5.4% compared to the previous year as a result of an increase in manufacturing operations in the Bioscience Division's U.S. facilities. For this reason, the 2020-2022 Environmental Plan includes specific objectives to replace some of the Bioscience Division's current refrigerant installations with systems whose refrigerant gas has a lower Global Warming Potential (GWP).

Furthermore, atmospheric emissions of other pollutants such as NO<sub>x</sub>, CO and SO<sub>2</sub> are generated by the combustion of natural gas in Grifols' production facilities, as well as by the fuel used in the generators. However, the emissions of these compounds in Grifols production plants are below the limits established by the corresponding environmental authorities.

## INITIATIVES TO REDUCE ATMOSPHERIC EMISSIONS

### LIMITING AIR TRAVEL

Grifols is cutting back on air travel to reduce the environmental footprint caused by aircraft emissions. In 2020, the COVID-19 pandemic exceptionally limited airline travel, which dropped by 72%

### GRIFOLS OFFSETS CARBON EMISSIONS FROM ITS BUSINESS TRAVEL

In 2019, Grifols signed an agreement with Air France, KLM and Delta Airlines to offset its travel-related carbon footprint. Grifols intends to reinstate and expand these programs once the global situation has recovered

### INCREASE IN WORKING FROM HOME

At the end of 2019, Grifols launched a pilot plan to facilitate working from home whenever feasible, offering employees the option to work remotely. In 2020, the pandemic accelerated its implementation and made it the norm

### EFFORTS TO MITIGATE TRANSPORT-RELATED ENVIRONMENTAL IMPACTS

Grifols has carried out various initiatives over the years to reduce the impact of emissions generated from employees commuting to and from work

### DRIVING BIODIVERSITY THROUGH GRIFOLS WILDLIFE

Including several projects in the conservation area surrounding the company's Clayton, North Carolina (U.S.) plants and collaboration agreement to promote initiatives in Barcelona's Besòs River basin (Spain)

### GRIFOLS LAUNCHED A NUMBER OF INITIATIVES TO REDUCE ITS GREENHOUSE GAS EMISSIONS AND IMPROVE ITS ENERGY PERFORMANCE, AS OUTLINED IN ITS 2020-2022 ENVIRONMENTAL PROGRAM

- In 2020, generation began in one of the two planned photovoltaic plants in the Hospital Division's Murcia facilities. The plant has a capacity of 100 kW and is installed on the roof of the silo, located on the compound. The annual 150,000 kWh generated will partially cover the demand from the facilities.
- Purchase of 16 million kWh of renewable electricity for Spanish plants and 7 million kWh for the Bioscience Division's plant in Ireland.
- Realization of a viability study to purchase 25 million kWh per year of green energy in Spain through a PPA, expected to launch in the coming months.
- Increase in the generation of electrical energy and useful heat produced by the cogeneration plant in the Bioscience Division's Barcelona facility, boosting operating hours by 20% compared to 2018.
- Various energy audits carried out in headquarters, donation centers and analytical labs in the manufacturing facilities of the Bioscience and Bio Supplies Divisions in Germany.
- Completion of a study to replace refrigerant gases in the cooling systems of the Bioscience Division facilities in Spain with others that have a lower Global Warming Potential.

# SIX COMMITMENTS FOR 2030



## REDUCING EMISSIONS

**GOAL**  
Reduce greenhouse gas emissions per unit of product by 40%

### PROGRESS IN 2020

In 2020, CO<sub>2</sub>e emissions per unit of sales fell by 8.1% in relation to 2018, taking into account Scope 1 and Scope 2 emissions. Higher consumption of renewable electricity sources favored the decrease in emissions.



## ENERGY EFFICIENCY

Increase energy efficiency per unit of product by 15% by systematically integrating eco-efficiency measures in new projects and existing facilities

### PROGRESS IN 2020

Grifols' total energy consumption in 2020 declined by 9.4% compared to 2018 and energy consumption only increased by 7.8% in absolute terms. In the Bioscience Division, which generated 79% of Grifols' total sales in 2020, energy consumption per unit of production was 2.1% higher than in 2018. In some facilities, production levels were lower than expected due to COVID-19 restrictions and constraints in the supply of some raw materials. Nevertheless, Grifols' facilities continue to maintain their baseline energy consumption. Some of the new facilities made further inroads in their validation processes, including facilities in the United States and Ireland, which increased energy consumption without increasing production. Consumption in plasma centers remained stable.



## RENEWABLE ENERGIES

Consume 70% of electricity using renewable energies

### PROGRESS IN 2020

In 2020, renewable energy accounted for 5.4% of Grifols' renewable electricity consumption. At the end of 2020, one of the two photovoltaic plants planned for the Hospital Division's Murcia facilities launched operations. Grifols purchased 16 million kWh of renewable electricity for its plants in Spain and 7 million kWh for the Bioscience Division's plant in Ireland. These actions, initiated in 2020, along with others defined in the Corporate Environmental Program, will enable the company to reach its 2030 target.



## DECARBONIZATION

Facilitate the decarbonization of transport in business trips and employee commutes by reducing air travel, carbon offsetting and promoting work from home, among other measures.

### PROGRESS IN 2020

The pandemic significantly catalyzed this process, accelerating practices originally planned for 2020 but were not yet fully implemented. This year, 20,000 fewer business airline trips were made compared to 2018, reducing air-travel-related CO<sub>2</sub>e emissions by 75%. In total, the decline in business travel led to a 8,631 tCO<sub>2</sub>e decrease in emissions, 68% less than in 2018. The average number of employees working remotely increased by 505% compared to 2018. CO<sub>2</sub>e emissions from employee commutes fell by 11,869 tCO<sub>2</sub>e, 30% of 2018 levels.



## CIRCULAR ECONOMY

Continue to implement circular economy measures in every stage of the operational life cycle to encourage waste reduction and recovery, as well as optimize the consumption of water, raw materials and intermediate products.

### PROGRESS IN 2020

The Bio Supplies Division continued to market Bioscience Division materials not used in any of Grifols' plasma-derived products. Obtained from Grifols' facilities in Spain, the United States and Germany, these materials were previously considered waste and managed by authorized waste managers. Today, they are marketed and sold as diagnostic products to companies that produce reagents. In 2020, the Bioscience Division's U.S. reverse osmosis systems were fully operational, further boosting water savings from what was already achieved in 2019.



## PROTECTING BIODIVERSITY

Protect biodiversity on Grifols properties through the Grifols Wildlife Program, promoting CO<sub>2</sub> capture

### PROGRESS IN 2020

Promotion of Grifols Wildlife program, which includes several projects in the conservation area surrounding the company's Clayton, North Carolina (U.S.) plants  
Collaboration agreement to promote initiatives in Barcelona's Besòs River basin (Spain).

# ANNEX: COMPLETE LIST OF ANALYZED CLIMATE RISKS AND OPPORTUNITIES

Climate-Related Risks & Opportunities	Potential Financial Impacts	Gross Impact
<b>Transitional Risks</b>		
<b>Political and legal</b>		
Increased pricing of GHG emissions	Increased operating costs, due to more expensive carbon rights	Low
	Increased operating costs, due to the increase in energy taxes (fossil fuels)	Low
Enhanced emissions-reporting obligations	Increased operating costs, including higher compliance costs related to reporting obligations	Low
	Increased operating costs, including higher insurance premiums	Low
Mandates on and regulation of existing products and services	Write-offs, asset impairment and early retirement of existing assets due to policy changes	Low
	Depreciation of office buildings due to policy changes	Low
Exposure to litigation	Increased operating costs and/or reduced demand for products and services resulting from fines and judgments	Low
<b>Technology</b>		
Substitution of existing products and services with lower emissions options	Write-offs and early retirement of existing assets	Low
Unsuccessful investment in new technologies	Write-offs and early retirement of existing assets	Low
Costs of transitioning to lower emissions technology	Research and development (R&D) expenditures in new and alternative technologies	Low
	Costs to adopt/deploy new practices and processes	Low
<b>Market</b>		
Changing customer behavior	Reduced demand for goods and services due to shift in consumer preferences	Low
Uncertainty in market signals	Abrupt and unexpected shifts in energy costs	Low
	Changes in revenue mix and sources, resulting in decreased revenues	Low
Increased cost of raw materials	Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations)	Low
	Increased production costs due to changing input prices (e.g., energy, water) and output requirements	Low
<b>Reputation</b>		
Shifts in consumer preferences	Reduced revenue from decreased demand for goods/services in carbon intensive sectors	Low
Sector Stigmatization	Reduction in capital availability	Low
	Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)	Low
Increased stakeholder concern or negative stakeholder feedback	Reduced revenues due to the sustainability performance not aligning with customer expectation	Low
	Reduced revenues due to non-compliance with Grifols own voluntary commitments having a negative effect on clients, employees and other stakeholders	Low

Climate-Related Risks & Opportunities	Potential Financial Impacts	Gross Impact
<b>Physical Risks</b>		
<b>Acute Risks</b>		
Increased frequency and severity of extreme weather events such as cyclones and floods	Increased insurance claims liability arising from climate-related impacts on assets in "high-risk" locations	Low
	Increased capital costs due to unexpected losses from damage to facilities	Medium
	Reduced revenue from decreased production capacity (transport difficulties, supply chain interruptions)	Medium
	Higher costs from negative impacts on workforce (health, safety, absenteeism)	Low
	Write-offs and early retirement of existing assets located in "high-risk regions"	Low
<b>Chronic Risks</b>		
Changes in precipitation patterns and extreme variability in weather patterns	Increased operating costs (e.g., higher compliance costs, increased insurance premiums) - Increased operating costs due to resources variability (eg. water) and higher compliance/insurance costs	Medium
Rising mean temperatures	Increased operating costs due to more energy demand, including refrigeration costs	Low
Rising sea levels	Increased insurance premiums on assets in "high-risk" locations, especially in the Mediterranean region (higher likelihood of a rise in sea levels)	Low
<b>Opportunities</b>		
<b>Resource Efficiency</b>		
Use of more efficient modes of transport	Reduced operating costs through the promotion of more efficient modes of transport in the company's fleet (Scope 1)	Low
	Reduced operating costs through the promotion of more efficient modes of transport on business trips (Scope 3)	Low
Use of more efficient production and distribution processes (energy and water).	Reduced operating costs by improvements of operational eco-efficiency, especially in terms of consumption and management of energy and water. This impact includes the adoption of Voluntary Standards such as ISO14001 or EMAS	Medium
Circular economy	Reduced operating costs, taking into account the infrastructure life cycle assessment	Medium
	Increased value of fixed assets (highly rated energy efficient buildings)	Low
Move to more efficient buildings	Increased benefits from new services related to energy efficiency in buildings	Low
	Reduced operating costs due to value decrease of utilities bills	Low
<b>Energy Source</b>		
Use of lower-emission energy sources	Reduced sensitivity to changes in carbon prices, due to GHG emissions reduction	Low
	Reduced exposure to increases in future fossil fuel prices	Low
	Returns on investment in low-emission technology	Low
	Increased capital availability (e.g., as more investors favor lower-emissions producers)	Low
	Reputational benefits resulting in increased demand for goods/services	Low
	Reduced operational costs (e.g., through the use of lowest cost abatement)	Low
Use of supportive policy incentives	Reduced operational and compliance costs to adapt to new legislative trends and requirements	Low
Use of new technologies	Reduced operational costs due to the usage of new and more efficient technologies	Low
	Increased capital availability (e.g., as more investors favor lower-emissions producers)	Low
Participation in the carbon market	Increased benefits from participation in the carbon market	Low

Climate-Related Risks & Opportunities	Potential Financial Impacts	Gross Impact
<b>Products and services</b>		
Development and/or expansion of low emission goods and services	Increased revenue through the demand for lower emissions products and services	Low
	Better competitive position to reflect shifting consumer preferences, resulting in increased revenues	Low
Development of climate adaptation	Increased revenue through new solutions to adaptation needs (related to the core business)	Low
Development of new products or services through R&D and innovation	Increased revenue through new products for new diseases related to climate change.	Low
Ability to diversify business activities	Increased revenue from alternative energy activities, different to the core business ones	Low
Shift in consumer preferences	Increased revenue through a better competitive position that reflects shifting consumer preferences	Low
<b>Markets</b>		
Access to new markets	Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)	Medium
	Increased diversification of financial assets (e.g., green bonds and infrastructure)	Low
	Increased share of revenues from the participation and agreements with public-sector initiatives and shareholders	Low
<b>Resilience</b>		
Participation in renewable energy programs and the adoption of energy efficiency measures	Increased market valuation through resilience planning or adaptation capabilities. For example, through R&D in more efficient technologies	Medium
Resource substitutes/diversification	Increased supply chain reliability and the ability to operate under various conditions	Low



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