



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

**GRIFOLS**

# GRIFOLS

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

In 2019, following the guidelines established by the Task Force on Climate-Related Financial Disclosures (TCFD), Grifols analyzed its management of climate-related risks and opportunities by focusing on four main areas: governance, risk management, strategy and establishment of objectives and metrics.



# GOVERNANCE

## THE SUPERVISION OF CLIMATE-RELATED RISKS AND OPPORTUNITIES IS INTEGRATED INTO GRIFOLS' CORPORATE GOVERNANCE

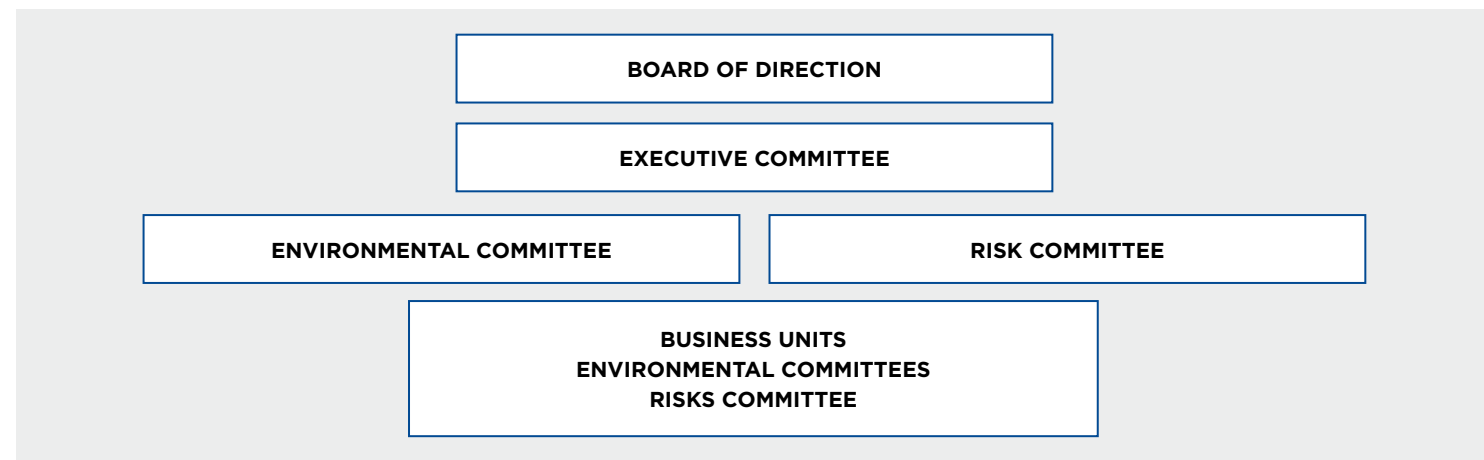
The Board of Directors is responsible for approving the corporate risk policy, corporate responsibility policy and environmental policy. These integrate the management of environmental risks associated with regulatory changes and the establishment of commitments to mitigate climate change risk.

The Executive Committee supervises Grifols' performance with regard to the Environmental Program, including indicators and lines of action linked to climate change.

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, including climate-change issues. The CIO also approves the Environmental Plan and the economic and human resources required to meet the objectives. Furthermore, the CIO approves the Grifols Energy Policy and oversees the Global Facilities Department, which is responsible for approving investments related to energy efficiency

projects and 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 those related to the climate.



# RISK MANAGEMENT

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

Appendix of this document shows the complete list of climate risks and opportunities. Grifols adapted the financial impact of each of them to its business model in order to obtain this complete list of financial impacts derived from climate change. As it is shown in this Appendix table, the first step was evaluating

the financial impact of each risk and opportunity and classifying it in terms of:

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

Although the financial impact associated with all transitory risks has been determined as low, the impact that is associated with some physical risks and opportunities has been determined as medium. As it is shown in the following table, for those risks and opportunities with an impact higher than 10M€, the following aspects have also been analyzed:

– Likelihood, classified as: unlikely, likely or very likely

– Timeframe, distinguishing between:

- Short term:  $0 \leq 3$  years
- Medium term:  $>3 \leq 6$  years
- Long term: > 6 años

- Where the financial impact takes place:

- OPEX
- CAPEX
- Acquisition or divestments
- Access to capital

No risk has been determined to have high or medium-high impact. Finally, **the following physical risks and their financial impacts** have been determined as relevant, all of them having medium impact (between 10M€ and 20M€):

Relevant climate risks	Associated financial impact	Likelihood	Timeframe	Impact on financial strategy
<b>Impact on financial strategy:</b>	Increase in costs due to unexpected losses on damaged facilities	Likely	Long term	OPEX and CAPEX
Increase in the frequency and severity of extreme climate events.	Reduction of income due to a decrease in production capacity (transportation difficulties or interruptions in the supply chain)	Likely	Long term	OPEX
<b>Chronical physical risk:</b>	Increase in operational costs due to the variability of resources, such as water scarcity	Likely	Long term	OPEX
Changes in climate patterns.				

**FOLLOWING THE GUIDELINES ESTABLISHED BY THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD), THE FINANCIAL IMPACT ARISING FROM CLIMATE CHANGE RELATED TO TRANSITORY RISKS IS LOW. THERE IS NO RISK THAT HAS BEEN DETERMINED AS HIGH OR MEDIUM-HIGH IMPACT**

In line with its internal risk management procedure, Grifols decided to diversify its production, establish contingency and emergency plans, design facilities to withstand extreme weather events and reduce water consumption in its manufacturing processes to effectively manage these risks.

Grifols has one of its most important manufacturing plants in North Carolina. This site could be affected by heavy rains, tornadoes and/or hurricanes. In the Barcelona site, Grifols has the packaging facility near to the small river Tenes. A potential flood could affect this site but there is no historical record and the actual probability of this happening is low. However, climate changes could increasingly affect this natural phenomena. Since the facilities are purposely built to resist this kind of extreme weather events, damages would be mostly associated to facades or roof replacements. Emergency and contingency plans are developed in order to ensure facilities in North Carolina are well prepared to face any extreme events such as tornadoes and hurricanes. For instance, during the design stage of the facilities, materials and structures are specifically chosen in order to adapt to extreme weather events. The management cost is 0€.

Some of Grifols most important production centers in Spain (Barcelona and Murcia) are located in a Mediterranean climate area, and in the USA (California). These sites could be affected by droughts, which could increase due to climate change. Droughts could affect the availability of subsoil water that is used in the production process. In Barcelona, water for production comes from wells owned by Grifols and city water. A

long time without rain could affect the reservoir of these wells. In 2019, Grifols consumed 916,778 m<sup>3</sup> of water in Spain, of which 26% comes from wells (23% in 2018). Nevertheless, the city water supply is more

than enough to meet the needs of these facilities and it is unlikely to run out of supply as Grifols is considered essential infrastructure.



## 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.

### 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.

AS A RESULT OF THE WATER REDUCTION OBJECTIVES IMPLEMENTED IN THE ENVIRONMENTAL PROGRAM 2017-2019, TOTAL WATER CONSUMPTION HAS DECREASED IN 2019 BY 4%

THE BIOSCIENCE DIVISION\* DECREASED ITS CONSUMPTION BY 6.4% IN A CONTEXT OF PRODUCTION GROWTH OF 9.8%. ITS CONSUMPTION OF WATER PER UNIT OF PRODUCTION HAS BEEN REDUCED BY 15%

\* The Bioscience division represents 78% of Grifols' turnover and 87% of its total water consumption



# OPPORTUNITIES

Using the same method explained above, no high or medium-high impact opportunity has been determined. The opportunities determined as relevant and their associated financial impacts (between € 10M and € 20M) are as follows:

Relevant climate opportunity	Associated financial impact	Likelihood	Horizonte temporal	Impacto en estrategia financiera
More efficient production and distribution processes	Reduction of operational costs, due to the reduction of energy and water consumption	Likely	Long term	OPEX and CAPEX
Circular economy	Reduction of operational costs, considering the complete life cycle analysis	Likely	Long term	OPEX
Access to new markets	Increase in revenue due to access to new or emerging markets	Likely	Long term	OPEX, CAPEX and access to capital
Resilience	Increase in market value through resilience or adaptation capacity	Likely	Long term	CAPEX

In order to manage these relevant opportunities, Grifols integrated eco-efficiency and circular economy objectives into its Environmental Program 2020-2022. It also predicts access to new markets through new diagnostic solutions to address the possible emergence of new 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



The company's corporate strategy includes business excellence and innovation as two of its fundamental pillars. Both rely directly on climate-change objectives that are outlined in the Environmental Program and are driven by the Corporate Risk and Energy Policies. In this way, climate-related risks and opportunities are interweaved 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' Environmental Committee also takes into consideration existing and future regulatory requirements.

Since the risk 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 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. Nonetheless, this scenario could increase the relevance of risks in the Murcia plant, where the associated financial impact of water scarcity could increase. Grifols is currently managing these risks and has specifically designed the plant to enhance its water consumption efficiency. With that said, the company is aware that it must pay particular attention to this region to increase its strategic resilience.

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. These scenarios indicate that the variables in 2040 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 regions with high levels of water stress. As a result, it makes concerted efforts to reduce water consumption as part of a robust and resilient long-term strategy.



# OBJECTIVES AND METRICS

Grifols continuously measures and monitors the achievement of the objectives included in its environmental programs, allowing the company 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 objective, Grifols also commits to using 70% of renewable electric energy by 2030.

Regarding the link between the remuneration policy and performance indicators, it should be noted that the Energy Manager has incentives tied to energy-efficiency improvements in Grifols' production processes. Finally, it is also worth noting that the company is not subject to an emission trading scheme, and therefore there is not 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. That is why it plans on designing

an action plan to continue improving its performance and communication initiatives on climate-related issues. Some of these future possible actions are:

- Including relevant climate-related risks into current decision making and strategy formulation, including planning assumptions and objectives.
- Define 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 questionnaire for CDP2019 was submitted in June. In 2019, Grifols was recognized with a "B" management rating. These results underline Grifols' efforts to effectively reduce atmospheric emissions; measure and manage their impact, risks and opportunities; and develop a solid policy and strategy to carry out steps to minimize the negative impacts of climate change.



GRIFOLS MEASURES AND MONITORS THE ACHIEVEMENT OF THE OBJECTIVES INCLUDED IN ITS ENVIRONMENTAL PROGRAMS

THE COMPANY PARTICIPATES ANNUALLY IN THE CARBON DISCLOSURE PROJECT (CDP), WHICH VALUES THE COMPANY'S STRATEGY AND ITS PERFORMANCE IN THE FIELD OF CLIMATE CHANGE

Below are the appropriate KPIs performance indicators, that are determined as relevant for monitoring Grifols' performance against the financial impacts

Relevant climate risks	Impacto financiero asociado	KPIs
Acute physical risk: Increase in the frequency and severity of extreme climate events.	Increase in costs due to unexpected losses on 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> <li>– Water consumption (m3)</li> <li>– Water costs (€) per installation</li> <li>– Renewable energy consumption (MWh)</li> <li>– Electricity consumption (MWh)</li> <li>– Electricity costs per installation</li> <li>– Natural gas consumption (MWh)</li> <li>– Natural gas costs per installation</li> <li>– Carbon footprint / atmospheric emissions (tCO2eq)</li> </ul> <p>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)</p>
Chronical physical risk: Changes in climate patterns.	Increase in operational costs due to the variability of resources, such as water scarcity	

# SIX COMMITMENTS FOR 2030



## EMISSIONS REDUCTION

Reduce greenhouse gas emissions per unit of production by 40%.

-40%



## ENERGY EFFICIENCY

Increase energy efficiency per unit of production by 15% by systematically integrating eco-efficiency measures in new projects and existing installations.

+15%



## RENEWABLE ENERGIES

Consume 70% of electricity from renewable sources.

70%

GRIFOLS HAS ESTABLISHED SIX CORE ENVIRONMENTAL COMMITMENTS FOR 2030 COMPARED TO 2018 LEVELS





### CIRCULAR-ECONOMY

Continue to implement circular-economy measures in every stage of the operational life cycle as part of Grifols' environmental efforts to minimize and reuse waste and optimize the consumption of water, raw materials and intermediate products.



### DECARBONIZATION

Facilitate the decarbonization of transport in business trips and employee commutes by reducing air travel, carbon offsetting, encouraging teleworking, among others.



### PROTECT BIODIVERSITY

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

# APPENDIX: 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>Accute 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 at 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	Other, please specify (Product efficiency regulations & standards)	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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