## 5.1. ENVIRONMENT



The ACS Group integrates efficient resource management and environmental protection into its business objectives, operating under the principles of precaution and conservation of the natural environment to minimise the impact of its operations. Likewise, due to the climate emergency, the ACS Group aims to contribute to the transition to a low carbon economy by promoting products and services that have a smaller impact on the environment and improving the efficiency of processes in its activities.

As a result of these commitments, the company has defined an environmental management framework comprising the Group's Environmental Policy, approved by the Board on 14 November 2018 and updated on 28 July 2022, which is articulated by the different management systems implemented in the Group companies.

For this reason, the main environmental measures implemented by the ACS Group companies are governed by the basic principles of action developed in the policy. These guidelines are flexible enough to accommodate the specific procedures and mechanisms of each of the Group companies. The commitments established in the Environmental Policy are:

- Compliance with applicable legislation and regulations, and other commitments voluntarily accepted by each of the Offices, Delegations, Projects, Works and Services performed by the ACS Group.
- To prevent contamination, by assessing the potential environmental risks at every stage of a project, job or service, with the aim of designing processes that



minimize as much as possible the environmental impact as much as possible

- 3. To continuously improve management of environmental activities, by setting and following up on environmental goals.
- 4. To strive for transparency in external communications, by periodically publishing information about environmental initiatives to all stakeholders, meeting their demands and expectations, either in compliance with regulations or independently.
- To enhance skills and raise awareness, by providing training and educational activities to employees, suppliers, customers and other stakeholders.

The company's environmental policy in the Group's companies is implemented through the environmental management systems, which ensure the correct management of environmental risks and opportunities, and the ongoing improvement of the company's performance.

89.6% of the Group's turnover is generated by companies that have management systems certified under the ISO 14001 standard. The Group applies the principle of precaution through these certifications. Likewise, the environmental management systems are verified by an external third party in companies representing a 94.6% the Group's turnover and, in 2022, 877 environmental audits.

Due to the Group's activity, it the consumption of natural resources, generation of greenhouse gas emissions, production of waste and the possible impact on biodiversity have been identified as key areas in the management of the company.

Level of implementation of the environmental management systems in ACS Group companies (expressed as % of operations)	2021	2022
Implementation of ISO 14001 certification	87.1%	89.6%



### 5.1.1. THE FIGHT AGAINST CLIMATE CHANGE

Concern about the risks arising from climate change requires Governments and companies to be involved in contributing to a production and consumption model that is less carbon intensive, and the promotion of infrastructures and services that support the decarbonisation of the economy.

As a global company, the ACS Group is aware of the important role it can play in the fight against climate change. Therefore, the ACS Group has established as part of its Sustainability Master Plan targets the promotion of energy efficiency and the reduction emissions in its business activities, and being a leader in the transition to sustainable infrastructure.

The basic principles governing the Group's actions in this area are included in the Group's Environmental Policy and focus on:

- Considering and assessing the climate change impacts of its activities, products and services.
- Minimising energy consumption and the emission of greenhouse gases generated by its activities.
- Establishing greenhouse gas emission reduction targets aligned with the latest trends and standards.
- Establishing mechanisms to manage the use of energy and emissions, to objectively measure performance and decision-making.
- Identifying opportunities to promote environmentallyfriendly products and services, adapted to the potential impacts of climate change and that contribute to the transition to a low-carbon economy.

In 2022, the Group continued to develop its reporting model to be able to communicate information on risks and opportunities related to climate change. All of this following the recommendations of the Task Force on Climate-Related Financial Disposals (TCFD), through the identification of the main risks and opportunities arising from climate change, considering different scenarios and future projections of international organisations. The aim is to continue making progress on the quantitative and qualitative reduction targets established in the Master Plan for the short, medium and long term.

### **GOVERNANCE**

The Board of the ACS Group, as the highest governance body, is responsible for overseeing the overall climate change strategy. Through its functions, it approves the development of the policies required to meet the climate challenges of the business, leaving the Group companies responsible for developing their own management mechanisms depending on the type of activity and geographic area.

In addition, the ACS Group's Audit Committee is responsible for monitoring aspects related to climate change, as it has been given the function of supervising

internal regulations, which includes the Sustainability Policy and the Environmental Policy, and managing financial and non-financial risks. The Committee's responsibilities include the ongoing review of the implementation and development of the Group's Environmental Policy, of the action plans, procedures and improvement programmes implemented by the Environmental Department of each one of the Group's divisions, with a special focus on climate change issues.

Within the 2025 Sustainability Master Plan, the Group's governance structure was adjusted to the higher sustainability requirements, strengthening governance. In July 2022 a modification to the Environmental Policy was approved, which established that to ensure that the commitments made in the Environmental Policy, including those related to climate change, govern the activity along its global value chain, the ACS Group agreed to follow the procedures defined in its Corporate Protocol on Due Diligence in the field of Human Rights in those aspects related to respect for and protection of the environment.

### **STRATEGY**

To meet the challenges of the climate crisis, the ACS Group has given these issues more importance in the Group's governance and management model. In addition to the basic principles of action included in the Group's Environmental Policy, the approval of the Group's Sustainability Policy defines the fight against climate change, a principle that is also stated in the Sustainability Master Plan 2025. This Plan was approved by the Board on 16 December 2021 to establish the priorities, commitments, strategic lines and targets of the ACS Group in relation to climate change. All this in order to anticipate and manage the risks arising from climate change, and to identify new opportunities with the development of new sustainable environmentally friendly solutions, and to maintain the Group's commitment to the targets established in the Paris Agreement, that set the goal of reducing greenhouse gas emissions to limit the increase in global temperature in this century to 2°C and strive to limit this increase to only 1.5°C, that latter being the current reference framework.

Thus, within the 2025 Sustainability Master Plan, the ACS Group has set itself three basic strategic lines in relation to its commitment to "Move forward climate neutrality to 2045":

- Implementing a climate strategy to move this climate neutrality forward to 2045.
- Advancing in the measurement of the carbon footprint and reducing scope 1 and 2 emissions by 2025.
- Strengthening the management of the risks arising from climate change through the implementation of international methodologies.

Each of the ACS Group companies is working on various initiatives and measures that help the Group follow this strategy and achieve these global targets set in the 2025 Sustainability Master Plan and following the guidelines set in the Group's Environmental Policy.

The ACS Group also has a risk management system that integrates financial and non-financial risks, including the risks associated with climate change. The analyses arising from the risks to which the company is exposed are considered in both the company's decision-making and in the design of the ACS Group's strategy. For this reason, ACS has a strategy that allows it to operate in such a way as to ensure the resilience of its activity in the short, medium and long terms.

## MANAGEMENT OF RISKS AND OPPORTUNITIES RELATED TO CLIMATE CHANGE

To respond to the need for global and standardised risk management, the Corporate Unit has established a model which includes the identification, assessment, classification, valuation, management and follow-up of risks at the Group and operating division levels. These identified risks are used to create a risk map that is regularly updated based on the different variables that comprise it and on the Group's areas of activity.

Thus, the ACS Group's Risk Management System identifies, evaluates and updates the various risk scenarios using the categories of financial and non-financial risk to which the Group is exposed. Likewise, the ACS Group has a General Risk Map which is regularly updated, in which risks related to climate change have been identified based on their potential relevance for the company's activity, depending on the type of activity, action areas, policies and management approaches.

Therefore, as part of its commitment to continuous improvement, during this year the Group has deepened its analysis and assessment of the most significant risks and the identification of the opportunities of the ACS Group, based on the the previous year's report in which an initial identification and assessment of the most significant risks that may have implications for the company was performed. The following is a summary of the methodology, the identification and the assessment of the main risks and opportunities identified for the ACS Group in relation to climate change. The full analysis was presented by the ACS Group's Audit Committee at its meeting held on 27 February 2023. The recommendations of the Task Force on Climate-Related Financial Disposals (TCFD) were followed to report risks and opportunities related to climate change.

### **Definitions**

Climate change risks can be classified into physical risks and transitional risks.

 Physical risks arise from the physical effects of climate change. They are considered acute if they arise from specific weather events and chronic if they arise from more progressive changes in climate patterns.  Transition risks are the risks arising from adapting business models to a decarbonised economy. These risks are interconnected and their identification is important for stakeholders, especially investors, since inaction against these risks may have operational and financial consequences. These risks include legal, technological, market risks and reputational risks.

Climate opportunities arise both from the transition to a lowcarbon economy and from adaptation to physical risks. These opportunities can be classified into five categories: opportunities related to energy efficiency, adoption of lowcarbon energy sources, development of new products, access to new markets and resilience through the supply chain.

### **Scenarios and time horizons**

As indicated in the Task Force on Climate-Related Financial Disclosure (TCFD) recommendations, several climate scenarios and time horizons have been used to assess climate risks and opportunities.

For physical risks, the scenarios SSP2-4.5 and SSP5-8.5 used by the Intergovernmental Panel on Climate Change (IPCC) in its latest assessment report (AR6) were taken as a benchmark. The SSP2-4.5 scenario is a combination of the RCP4.5 scenario, which includes an average evolution of greenhouse gas concentrations in the atmosphere and the resulting increase in the overall average temperature of 2.1°C between 2041 and 2060, and the SSP2 scenario, in which climate change mitigation rather than adaptation is favoured. The SSP5-8.5 scenario is a combination of the RCP8.5 scenario, which includes a high evolution of greenhouse gas concentrations in the atmosphere and the resulting increase in the overall average temperature of 2.6°C between 2041 and 2060, and the SSP2 scenario, in which climate change mitigation rather than adaptation is favoured. The time horizon analysed for physical risks was updated using the time horizons determined by the IPCC:

- (2021 2040) corresponding to the short and medium term reported in the 2021 Integrated Report.
- (2041 2060) corresponding to the long term reported in the 2021 Integrated Report.
- (2080 2100).

For transition risks and opportunities, the Stated Policies Scenario (STEPS) and Net Zero Emissions by 2050 (NZE) scenarios of the International Energy Agency (IEA) were taken as a reference. The STEPS scenario is based on current policies and explores its consequences for climate change. The NZE scenario is based on the result of limiting global warming to 1.5°C and includes the policies necessary to meet this objective. The following time horizons have been updated for transition risks, using the transition scenarios analysed:

- (2022 2035) corresponding to the short and medium term reported in the 2021 Integrated Report.
- (2036 2050) corresponding to the long term reported in the 2021 Integrated Report.

### Methodology

To identify and assess the specific risks and opportunities related to climate change, a structured methodology was applied in the following phases:

- Comprehensive analysis of the documentation: internal and external, including the review of the risks identified in the previous year.
- 2. Identification of potential risks:
  - Taking the list of physical hazards in the EU Taxonomy and the recommendations of the TCFD as a reference for physical risks.
  - Taking the recommendations of the TCFD as a reference for transitional risks.
- 3. Semi-quantitative assessment of the potential risks identified:
  - The analysis for physical risks was based on the scenarios and time horizons considered and and on the three main risk components: exposure, vulnerability and hazard:
    - "Exposure" assesses the locations that could be negatively affected by a physical hazard arising from climate change.
    - "Vulnerability" assesses the probability of being negatively affected by a physical hazard arising from climate change.
    - "Hazard" assesses the impact or extent of the damages and losses caused by a physical hazard arising from climate change

- The initial data for the exposure levels were taken directly from the CMIP6<sup>2</sup> while the risk and vulnerability analysis was performed qualitatively, based on a review of scientific literature, relevant publications and the input of the main ACS areas.
- A qualitative assessment of the probability and impact components was performed for risks and transition opportunities.
  - Probability of materialisation of the risk/ opportunity based on the scenario and time horizon considered.
  - Potential financial or reputational impact or impact on operations of risk, depending on the scenario and time horizon considered.
  - The impact and probability analysis was performed qualitatively based on the review of scientific literature, relevant publications and the input of the main ACS areas.

The identification and assessment of climate risks and opportunities was performed globally for the three main ACS business divisions. The qualitative assessment of the components of each physical risk was performed with a scale of 5 levels: very low, low, medium, high and very high. Exposure was calculated based on the climate projections of climatic variables associated with each physical hazard and each scenario and time horizon.

The most significant risks classified based on their risk level are presented in the following tables. Physical risks were aggregated by type, taking into account the relative importance of each geography and business division.



<sup>&</sup>lt;sup>2</sup> Sixth Coupled Model Intercomparison Projects (CMIP6), the latest project to intercompare coupled climate models used by IPCC (IPCC, 2021)

Assessment of the main physical risks					
Risks	Description	Potential impact	Scenario analysis		
Increase in the	Climate change is expected to affect the magnitude and frequency of extreme weather events:  - Increased overall average temperature would mean higher intensity of strong precipitation.	Extreme weather events can cause: - Direct losses due to material damage to the structure of the construction works, which may lead to an increase in maintenance and repair costs Disruptions and delays in construction	2021- SSP2- 2040 4.5  2041- SSP2- 2060 4.5  2061- SSP2- 2100 4.5		
severity and frequency of weather events (acute)	precipitation at the global level could lead to an increase in the frequency and magnitude of floods.  - Climate change will foreseeably amplify the impact of cyclones on regions where ACS operates.  - An increase in the impacts caused by storms or tornadoes in regions where ACS operates is also possible.	work may lead to a loss of income Safety issues, including hazardous conditions for workers. This may lead to an increase in spending on safety and prevention The non-operability of certain infrastructures, causing a decrease in income from concessions.	2021- SSP5- 2040 8.5		
		2041- SSP5- 2060 8.5 2061- SSP5- 2100 8.5			
	Climate change is expected to affect the magnitude and frequency of extreme climate events related to temperatures:  - Climate risk of forest fires is increasing worldwide due to global heating. In the highest heating, the magnitude and frequency of forest fires are expected to increase in a alarming way.  - Heat waves are expected to increase in duration, intensity and frequency in most regions in the world.  - Cold waves could be more frequent and intense in certain regions where ACS operates despite the overall increase in minimum temperatures.		2021- SSP2- 2040 4.5		
Extreme weather events related to temperatures (acute)		Extreme weather events related to temperatures can cause:  - Direct losses due to material damage to the structure of the construction works, which may lead to an increase in maintenance and repair costs.  - Disruptions and delays in construction work may lead to a loss of income.  - Safety issues, including hazardous conditions for workers. This may lead to an increase in spending on safety and prevention.  - The non-operability of certain infrastructures, resulting in a decrease in income from concessions.	2041- SSP2- 2060 4.5		
			2061- SSP2- 2100 4.5		
			2021- SSP5- 2040 8.5		
			2041- SSP5- 2060 8.5		
			2061- SSP5- 2100 8.5		
			2021- SSP2- 2040 4.5		
	impediments to the transport of them:  - Extreme weather events affect transport infrastructure, causing problems in the movement of goods.  - The negative economic impact is passed along the supply chain, transferring physical risks between sectors and borders.	Increased frequency of supply chain disruptions caused by extreme weather events would entail:  - Disruptions in construction works, which may lead to delays causing profit losses.  - Increase in the price of certain materials due to disruptions in the supply chain, resulting in higher costs.	2041- SSP2- 2060 4.5		
Disruptions in the supply chain caused by extreme weather events (acute)			2061- SSP2- 2100 4.5		
			2021- SSP5- 2040 8.5		
			2041- SSP5- 2060 8.5		
			2061- SSP5- 2100 8.5		



	Assessment of the main	risks transition		
Risks	Description	Potential impact	Scer	nario analysis
Reputational	The growing awareness of climate change in society can lead to poor public opinion of the company and the sector: - As decarbonisation progresses, the focus of public opinion may shift towards the construction sector.	Reputational damage caused by climate change could entail:	2022- 2035	NZE STEPS
damage caused by climate change (reputational)	emissions. In particular, buildings have an important role in	Reduced project concession.     Increased difficulty in attracting talent.     Reduced access to financing.	2036-	NZE
	do not meet their climate targets.		2050	STEPS
	The ecological transition can significantly affect the cost of		2022-	NZE
Increase in borrowing costs (market)	The ELI Tayonomy framework may encourage changes in the	An increase in borrowing costs would entail: - Increased difficulties in implementing certain projects A loss of overall profitability in the various activities affected.	2035	STEPS
(market)	notions of private investments towards activities that substantially contribute to environmental objectives.  - Climate aspects have greater influence when redirecting investment flows or to obtain better credit conditions.	Loss of competitiveness in the event of unfavourable relative positioning.	2036- 2050	NZE
				NZE
Increase in prices	companies: - There is an increasing risk that insurance will not cover natural disasters and extreme weather events related to climate change Damages caused by climate events are an obstacle to the	Increase in prices or decrease in insurance coverage would mean: - Increase in insurance contracting costs, which could reduce the profitability of the projects developed Increased exposure to the physical risks of climate change, which could entail greater economic losses in the future.	2022- 2035	STEPS
or decrease in insurance coverage (market)			2036-	NZE
		economic losses in the luture.	2050	STEPS
	Emissions or carbon tax trading schemes are tools increasingly used by regulators to decarbonise the economy:		2022-	NZE
Increase in the price of greenhouse gas	- The current trading schemes could be extended to other sectors indirectly affecting ACS, as was the case with the European trade scheme with fuel suppliers in the building and transport sectors.  - Emissions or carbon tax trading schemes could be applied in the construction sector that directly affect ACS transactions.	An increase in the price of greenhouse gas emissions might entail: - Increased project cost through carbon taxes or other mandatory mechanisms Higher cost of offsetting carbon emissions on a voluntary basis.	2035	STEPS
emissions (regulatory)			2036- 2050	NZE
				STEPS
	The energy transition may involve changes in project specifications, arising directly from regulation or indirectly	The response to the new legal requirements	2022- nts 2035	NZE
Regulation of project specifications and	through the decarbonisation needs of end customers: - Public procurement can integrate anti-climate change criteria, such as emission reduction and carbon footprint, into its	could entail:  - A general reduction in the profitability of the business model due to the adaptation of production processes and the value chain to		STEPS
services. (regulatory)	performance catalogue.  - Management may require its contractors to publicly disclose climate-related information, such as their decarbonisation targets and climate risks.	the new specifications.  - Loss of profit margin in construction projects.	2036- 2050	NZE
				STEPS
	Effective climate change policies and investments in low-carbon technologies could increase the price of raw materials:	An increase in the cost of raw materials might entail: - A reduction in the profitability of certain projects Loss of competitiveness in the market Low supply of low-carbon raw materials that could reduce ACS' ability to respond to calls for tenders with these criteria.	2022- 2035	NZE
Increase in the cost of raw	- In a global decarbonisation scenario, there is a greater risk that fossil fuel prices will increase Increased energy cost or a greater effort to decarbonise production processes could increase the prices of			STEPS
materials (market)	Construction materials such as cement and steel.  - The placement on the market of substitutes of low-carbon construction materials could make them more expensive.		2036- 2050	NZE
				STEPS



Assessment of the main opportunities					
Opportunity	Description	Potential impact	Scenario analysis		alysis
	Considering the possible impacts of climate change on the future:  - The governments of most countries have designed plans to adapt to climate change, which is expected to increase the mobilisation of public and private resources to finance structures and services for adaptation.  - Achieving resilience in key infrastructures such as roads,	The need to develop infrastructure resilient	2022-	NZE	
Expansion of the market to construct climate		to climate change can lead to the following opportunities: - Increased need to construct/develop infrastructure and buildings that contribute to	2035	STEPS	
change adaptation solutions (market)		adaptation to climate change.  - The need is expected to be global and not only would the number of potential projects increase, but it could also lead to an	2036-	NZE	
		opportunity to reach new markets/countries	2050	STEPS	
New opportunities related to the electrification of the economy (electricity transport, battery construction) and renewable energy (market) the infras	consumers will require significant improvements to the existing energy infrastructure. More intelligent and more responsive networks are necessary to ensure that clean energy is sufficiently reliable and flexible to meet future demand.  - Storage deployment will also be required and a significant increase in battery development is expected.  - In Spain, the increase in renewable energy would increase the added value of the construction sector significantly (from EUR 1,920 million in 2021 to EUR 2,995 million in 2030 as a result of	- Partnerships for R&D development, positioning the Company in new markets	2022- 2035	NZE	
				STEPS	
			2036-	NZE	
	the infrastructures necessary to deploy renewable energy or electric cars).			STEPS	
Other opportunities identified	Other opportunities identified that could potentially have a signific - New opportunities related to the decarbonisation of the transportunities of th	rt sector (railways, public transport systems) gy efficiency criteria			



The ACS Group bases the Risk Control System on a range of strategic and operational actions to mitigate these risks and meet the objectives set by the Board. Therefore, as regards the risks related to climate change, the main risk management and mitigation measures are determined by the commitments and basic guiding principles defined in the Group's Environmental Policy and in the strategic lines and objectives set out in the ACS Group's 2025 Sustainability Master Plan, which include:

- Implementing a climate strategy to move climate neutrality forward to 2045.
- Reduction in scope 1 and 2 emissions by 2025 and 2030, and progress in measuring scope 3 emissions.
- Strengthening the management of the risks arising from climate change through international methodologies.
- Preventing and minimising environmental impacts through the objective of zero environmental incidents with severe damage and increasing environmental management systems certified under ISO 14001.
- Adapting the Group's governance structure to the highest sustainability requirements.
- Strengthening internal/external communication.

- Taking advantage of the new forms of sustainable financing provided by the market.
- Anticipating and complying with regulatory requirements and better reporting standards.

Similarly, the analysis performed in 2022 identified the main measures to adapt to the physical risks arising from climate change that should be implemented in the ACS Group's main lines of activity.



The ACS Group's leadership position in the infrastructure sector, and the actions performed by the various ACS Group companies in the fight against climate change, means that the Group is also well positioned with a competitive edge to take advantage of the opportunities arising from climate change mitigation and adaptation activities.

In regard to the opportunities identified, the ACS Group has consolidated experience in the development of environmentally friendly products and services, adapted to the impacts of climate change and contributing to the transition to a low-carbon economy. In 2022 the projects managed by the ACS Group in Green Building and Green Infrastructure reached the 12.935 million euros in 2022 (compared to 10,763 millions of 2021) and represent 41.2% sales of ACS Group Construction.

One of the strategic lines in the ACS Group's Sustainability Master Plan is to guide the provision of sustainable solutions (design, materials, mitigation/adaptation to climate change, etc.) in the projects performed by the Group, including the goal of achieving 45% of infrastructure sales in projects with sustainable certification in 2025.

The ACS Group also participates in the development of innovative applications in the field of transport, energy storage and mobility, and in the use of more efficient construction materials and processes within the framework of the fight against climate change.

Thanks to the overall positioning of the ACS Group, its solid track record, together with the local presence in key developed markets, the ACS Group is also in a position of competitive advantage to maximise the opportunities offered by certain key and highly growing sectors such as the construction of the infrastructure necessary for the energy transition that includes the battery manufacturing capacity for large scale electric vehicles or for the electricity supply and the development of new energy projects. Examples of the implementation of this growth strategy in new generation markets are the awards achieved by the Group in the last 12 months, such as the battery power plant for Honda and LG Energy in Ohio (US), the project to construct a battery recycling factory amounting to approximately US \$1,000 million in Kentucky (US) and the installation of a high-voltage infrastructure and a battery energy storage system provided by Tesla in Queensland (Australia) together with a solar park on the same site, which will allow stored energy to be transmitted to the electricity network from early 2025, among other examples.



Similarly, the data obtained by the ACS Group in an initial EU taxonomy analysis show that activities are performed in key sectors identified by the European Commission as contributing to the transition towards a low-carbon economy and society.



#### TARGETS AND MONITORING INDICATORS

To effectively monitor the commitment taken on by the ACS Group in relation to climate change, GHG emissions are monitored at all of the Group's levels. In fact, it is increasingly common among the Group companies to have their own carbon footprints certified by an independent external party.

The methodology for calculating the carbon footprint is in the process of continuous improvement and the ACS Group, adhering to its 2025 Sustainability Master Plan, is improving the scope and quality of the data reported, especially in emissions of scope 3. In 2022 the ACS Group continued to standardise the processes and standards for their collection and reporting, which entails, where possible, restatement of previous years to show the same scope and methodology.

In 2022, the upturn in ACS Group activity lead to an increase in emissions of scope 1 and 2 in absolute terms of 1.8%. However, in relative terms, this is the generation of issues as regards the sales level, the level of intensity of the emissions in scope 1 and 2 is in 15.6 EUR tCO2eq/mn in 2022 as regards 18.6 EUR tCO2eq/mn in 2021, which implies a reduction by 16.0%

It is very important to consider that, given the size and diversification of the ACS Group, the evolution of the Group's activity itself, the mix of projects developed in the year, and the stage of the large projects, may significantly affect the year-on-year performance of the issues in absolute terms. However, all ACS Group companies are taking initiatives to consolidate the trend of reducing the emissions generated in the various activities and to achieve, despite the changes in activity, the targets set in the Group's Sustainability Master Plan for the short, medium and long term, as demonstrated by the 28.7% reduction in scope 1 and 2 emissions compared to 2019<sup>3</sup>.

Regarding scope 3 emissions, the ACS Group companies made a significant effort in reporting to include in this category in 2021 and 2022, the emissions generated through employee travel, in the consumption of construction materials, in the treatment of waste and other emissions identified in the value chain. The increase in scope 3 emissions in 2022 is due, on the one hand, to the increase in activity, which entails greater consumption of materials, travelling again after the restrictions during the pandemic and advances in data collection.

<sup>&</sup>lt;sup>3</sup> For the sake of comparability, all data presented under this heading have been restated to show the same scope of consolidation and calculation methodology as in 2022

The evolution of the calculation of emissions in the last four years of the ACS Group is included below. For the sake of comparability, all data presented under this heading have

been restated to show the same scope of consolidation and calculation methodology as in 2022.

## CO2 emissions (TCO2eq) (1)

	2019	2020	2021	2022
Total ACS Group	3,255,088	2,371,245	3,996,573	4,703,532
Scope 1 (2)	532,412	391,217	381,261	389,195
Scope 2	184,456	115,173	120,294	121,602
Scope 3 (3)	2,538,219	1,864,855	3,495,018	4,192,735
Emissions intensity (tCO2eq/mn € sales)	107.9	88.6	148.2	143.9
Scope 1 (2)	17.6	14.6	14.1	11.9
Scope 2	6.1	4.3	4.5	3.7
Scope 3 (3)	84.1	69.7	129.6	128.3

Note: Data shown excluding Industrial Services, following its sale in December 2021, and Thiess, following the sale of a 50% stake in December 2020 and its equity-accounted consolidation in 2021.

	2020	2021
Construction: total emissions	3,787,036	4,375,754
Scope 1 (2)	360,060	367,858
Scope 2	117,478	120,935
Scope 3	3,309,498	3,886,961
Emissions intensity (tCO2eq/mn € sales)	149.4	141.4
Concessions: total emissions	2,261	2,122
Scope 1	2,134	1,907
Scope 2	78	128
Scope 3	49	87
Emissions intensity (tCO2eq/mn € sales)	25.6	23.4
Services: total emissions	207,276	325,656
Scope 1	19,067	19,431
Scope 2 (4)	2,738	539
Scope 3	185,471	305,687
Emissions intensity (tCO2eq/mn € sales)	135.7	197.6

<sup>(1)</sup> For the calculation of Scope 1 emissions, the conversion factors provided by Defra (Department for Environment, Food & Rural Affairs) for the different types of fuels reported in the report have been taken as a general reference. For Scope 2, the conversion factors provided by Carbon Footprint for the different geographical areas are taken as a general reference. In Scope 3 within the employee travel conversion is calculated using Defra's conversion factors for each type of transport as a reference.

In addition to the emissions generated through its operating business, the ACS Group has shares in different companies, with the most significant being: Abertis (30% share through the ACS parent and 20% through HOCHTIEF) and Thiess (50% share through Cimic).

Seeking to advance in the the calculation and scope of indirect emissions, the ACS Group reported for the first time the greenhouse gas emission indicators (scope 1, 2 and 3) of its main

financial investments that are consolidated in the ACS Group due to their equivalence.

The emissions data presented here correspond to Group's proportional share in terms of its percentage of contribution to operating profit. These emissions are not being included in the scope 3 operational emissions previously reported, to avoid distortions in the intensity ratios.

<sup>(2)</sup> Construction includes HOCHTIEF and Dragados. HOCHTIEF includes all companies under operational control (excluding construction JVs). In HOCHTIEF, natural gas consumption is not included in the calculation of emissions in 2019 and 2020, as 2021 was the first reporting year.

<sup>(3)</sup> Scope 3 emissions include in 2021-2022 emissions concerning supply chain, waste management, employee travel and others. In 2019-202O only employee travel and supply chain emissions were included in HOCHTIEF.

<sup>(4)</sup> The reduction of Scope 2 emissions in Services is due to the purchase of renewable electricity with a guarantee of origin.

	2022		
GHG Emissions Abertis (tCO2eq)	Total reported % sta		
Scope 1	46,715	23,358	
Scope 2	34,183	17,092	
Scope 3	687,286	343,643	
Total	768,184	384,092	

The ACS Group has an ownership interest of 50% in Abertis at the operating level. The emissions shown here are presented in accordance with this percentage of contribution to operating profit and are calculated based on the data published by Abertis in its Consolidated Annual Report 2022 (https:// www.abertis.com/es/el-grupo/informacion-financiera/informe-anual).

	2022		
GHG Emissions Thiess (tCO2eq)	Total reported	% stake ACS Group	
Scope 1	2,150	1,075	
Scope 2	2,810	1,405	
Scope 3	2,965,800	1,482,900	
Total	2,970,760	1,485,380	

Cimic owns a 50% stake in Thiess. The emissions shown here are presented in accordance with this percentage contribution to operating profit and are calculated based on data published by Thiess in its Sustainability Report 2022 (https://thiess.com/es/sustainability).

The ACS Group will continue to work to expand the reporting of scope 3 emissions, including improvements in measurement and relevant categories so that quantitative reduction targets can be set in 2025 at 2030.

In 2022, the various ACS Group companies worked on various initiatives adapted to their activity to achieve the other targets set by the Group in relation to climate change in the 2025 Sustainability Master Plan related to:

- · Implementing a climate strategy to move climate neutrality forward to 2045
- Reduction of scope 1 emissions by 35% in 2030, with an intermediate reduction target of at least 15% by 2025.
- Reduction of scope 2 emissions by 60% in 2030, with an intermediate reduction target of at least 30% by 2025

### **INITIATIVES TO REDUCE EMISSIONS**

Clece remains strongly committed to sustainability and energy efficiency, implementing various consumer savings measures and minimising our carbon footprint. The various actions include:

- Carbon Footprint: Certification of 21 Stamp and Subsidiaries companies adhering to ISO 14064-1: 2018 of Carbon Footprint, including categories 3.4, 5 and 6.
- Solar Energy: Installation of photovoltaic panels in several sites, with a total of 810 kW installed. This will result in estimated savings of 1,157,227 kWh and a reduction in emissions of 358 tonCO2.
- Biomass: Installation of 2 thermal power plants with Biomass boilers. One at the San José de Bárcena nursing home, and one at the Residencia Baño Salud nursing home This will lead to a reduction in emissions of 319 tonCO2.
- 100% of lighting in the Clece Vitam HQ offices (20) and private residences is LED lighting. Ending this year with the Integra offices in Madrid.
- 98% of electricity consumption comes from renewable energy sources.
- In the last quarter, some main offices were closed on Fridays with the aim of reducing energy consumption. In addition, the standard temperature have been adjusted and air conditioning and heating schedules timetables have been rationalised, achieving savings of 107,712 kWh in the last quarter of the year, which represents an average saving of 27% compared to 2021.
- 18 charging points for electric cars have been installed.
- Green Fleet: 30% of Clece's car fleet are ECO or CERO cars.

### CAR FLEET ELECTRIFICATION AND OTHER REDUCTION INITIATIVES AT TURNER

Turner aims to convert its entire car fleet into electric vehicles. Since 2022, it has had thirteen fully electric vans, an initial milestone on the road to Scope 1 carbon neutrality. Turner also replaced 60 diesel generators with hybrid models with battery.

In a project in San Diego, California, Turner partnered with a battery supplier to test a system that optimises the size of the necessary generator, while reducing the total operating cost. A conventional 500 kW generator was replaced by a smaller 200 kW unit. The battery storage system was also replaced.

Several tower cranes were included in the pilot project, which made it possible to compare them directly with a conventional 500 kW machine.

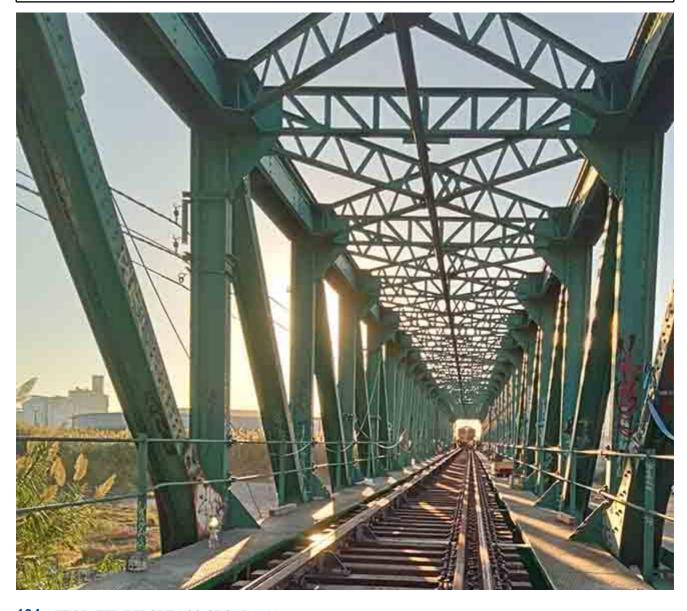
Overall, the pilot project reduced operating time by 50%, resulting in 46% less fuel consumption and 39% less total emissions.

## REDUCTION OF EMISSIONS OLYMPIA-ODOS MOTORWAY (HOCHTIEF PPP Solutions)

The Olympia-Odos highway, operated by HOCHTIEF PPP Solutions in Greece, reduced its carbon footprint by more than 25% between 2017 and the end of 2022.

The team implemented innovative programmes and continuously developed climate change mitigation and environmental protection measures. Initiatives include LED lighting, electric vehicles, hybrid tolls based on mileage and atmospheric water generation.

All the energy needs of the highway are met with renewable energy, reducing emissions by approximately 16,300 tons of carbon dioxide equivalent per year.



### OFFSETTING EMISSIONS IN VIAS

In 2022, VIAS calculated the greenhouse gas (GHG) emissions associated with the exercise of its own works in 2021, had them verified by an accredited external entity and entered them in the Registry of carbon footprint, CO2 offsetting and absorption projects kept by the Ministry for the Environmental Transition and the Demographic Challenge,

VIAS achieved a 14.43% reduction in the average intensity of greenhouse gas emissions in the 2019-2021 period compared to the 2018-2020 period, for the 1+2 scope, fulfilling with its commitment to reducing GHG emissions.

In order to help mitigate climate change, VIAS offset 94.17% of the carbon footprint of its own works in scopes 1+2 (1.09% in a national reforestation project and 93.08% in an international hydropower project).

In this way, VIAS took another step to achieve carbon neutrality in the future of its direct and indirect GHG emissions from imported energy.

Some of the actions carried out by VIAS to reduce GHG emissions and the offsetting projects in which it participated are described below:

- Efficient driving courses. Techniques and habits to optimise fuel consumption.
- Purchase of green energy. Selection of marketers that produce 100% renewable energy, or obtaining guarantees of renewable origin, granted by the National Market and Competition Commission (CNMC).
- Reuse of excavated natural material and stone waste instead of recovering them outside the work site and providing material.
- Work site implementation of alternative solutions to the project solutions approved by the Customer which represent a reduction in emissions compared to the initial project solution. These actions were basically aimed at optimising construction materials and incorporating materials with low emissions throughout the product's life cycle.
- Use of electric and hybrid vehicles (gasoline-LPG, gasoline-CNG).
- Replacement in conventional lighting work with energy-efficient LED lighting.
- Pilot test in the execution of a residential building work consisting of replacing the standard power generation model (conventional generators) by a more efficient hybrid model of Battery Packs + Stage V generator with motorization. This average lead to a 51% reduction in fossil fuel consumption in the period considered.

In 2022, VIAS once again offset some of its GHG emissions through the absorption project, registered in the 'Section B' of the Carbon Footprint, Compensation and Absorption Projects Registry: Forest restocking at the CMVMC in Borela (Pontevedra).

Another measure taken by VIAS in 2022 to mitigate climate change is the offsetting of emissions through Certified Reductions of emissions (CERs), a process supervised and certified by the United Nations. This offsetting was made through the voluntary purchase of 1,530 certified emission reductions (CERs), equivalent to Tn CO2, of the "Hydropower Project in Uttarakhand" for greenhouse gas mitigation (GHG) implemented in India, a developing country within the framework of the Clean Development Mechanism (CDM). This project not only reduces greenhouse gas emissions, but also contributes to the sustainable development of the country where it is implemented, and is certified by the United Nations Framework Convention on Climate Change (UNFCCC).

In 2022, ACS Group companies performed actions to reduce GHG emissions, with an estimated emission savings of 19,906.8 of tonnes of CO2 in initiatives such as electricity supplies with a guaranteed renewable origin or vehicle replacement and substitution, as shown in this chapter.

The ACS Group has also committed to minimising emissions other than Greenhouse Effect Gases (GHG) emissions, taking into account other pollutant gases (NOx, SOx or ozone-depleting substances), noise emissions and other possible disturbances arising from the activity such as light pollution.

### SUSTAINABLE CONSTRUCTION

One of the indirect impacts of the ACS Group's activity that can have the greatest impact on climate change is the operation of the infrastructure that is constructed. According to recent estimates published by A World Green Building Council, building and the construction sector represented 37% of carbon emissions from energy consumption and 34% of world energy consumption in 2021<sup>4</sup>. For this reason, the ACS Group promotes sustainable construction in its projects, following the main standards in this area.

Since 1999, 1,148 HOCHTIEF projects have been registered and certified according to different certifications in terms of efficient building and in 2022 183 projects under construction that applied for sustainable certification. By type of certification, in Turner's constructions, the LEED standard predominates, while CIMIC uses the Australian Green Star Methodology of the GBCA (Green Building Council of Australia) and LEED. The main certifications used by HOCHTIEF Europe are DGNB, LEED and BREEAM.

Since 2013, 60 projects have also been certified in terms of efficient infrastructure (CEEQUAL, ISCA and Greenroads) and in 2022 HOCHTIEF had 19 infrastructure projects applying for this type of certification in its portfolio. In 2017, Dragados also began to obtain certification for different construction projects certified under LEED and BREEAM, and over the last three years, the objective has been extended to infrastructure projects.

In 2022, through HOCHTIEF and its subsidiaries, the Green Building and Green Infrastructure projects managed totalled 11,806 million euros in 2022 (compared to 9,775 million euros 2021), while, in the Dragados Group, turnover of sustainable certification construction projects was 1,129 million in 2021 (compared to 988 million 2021). Thus, the consolidated sales figure for projects with sustainable certification in the Group's construction area amounted to EUR 12,935 billion in 2022, which represents an increase of 20.2% compared to 2021, amounting to 41.2% of the ACS Group's total Construction sales.

SUSTAINABLE HOCHTIEF CERTIFICATION CONSTRUCTION	2021	2022
Completed Green Buildings*	1,102	1,148
Certifiable Green Buildings		183
Completed Green Infrastructures* *	54	60
Certifiable Green Infrastructures		36

<sup>\*</sup> Total number (since 1999) of Green Buildings completed by HOCHTIEF. In each case, the buildings certified at the end of the year are presented.

Construction of sustainable buildings classified as Green Building allows emissions to be reduced, during the project execution phase (which is performed with sustainable materials, works contracts at regional level, etc.), and over the life cycle of the project. According to a study conducted by the US Department of Energy<sup>5</sup>, buildings with LEED certification consume 25% less energy and 11% less water than conventional buildings, while Australia's Green Building Council indicates in a study<sup>6</sup> that Green Star certified buildings

greenhouse gas emissions decreased by 62% and water consumption by 51%. In addition, and as mentioned above, in the ACS Group companies, one of the fundamental pillars of the R & D area is the development of new material projects. The ultimate aim is to identify materials that promote the resilience of the infrastructure in response to increasingly extreme weather events resulting from climate change, and the reuse of materials and better use to reduce the consumption of raw materials.



<sup>&</sup>lt;sup>4</sup> Source: World Green Building Council, 2022 Global Status Report for Buildings and Construction

<sup>\*\*</sup> Total number (since 2013) of Green Infrastructures completed by HOCHTIEF. In each case, the infrastructures certified at the end of the year are presented

<sup>&</sup>lt;sup>5</sup> Source: "Re-Assessing GreenBuilding Performance," September 2011.

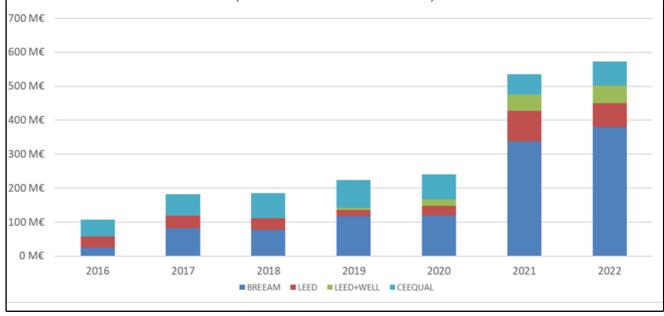
<sup>&</sup>lt;sup>6</sup> Source: 'The Value of Green Star,' 2013.

### SUSTAINABLE CONSTRUCTION IN SPAIN AND THE UNITED KINGDOM

The number of projects, both construction and civil works, with some type of sustainable certification is growing year after year. In 2022, the Dragados Group had a total of 47 works in progress with LEED, BREEAM, WELL, ENVISION or CEEQUAL certification, the sales figure of which represented 21% of the Group's total sales.

The evolution of the sales of Dragados, S.A. in sustainable construction projects in Spain and the UK continues to grow, placing Dragados as one of the market leaders in this type of construction. It should be mentioned that construction of a hotel with an exceptional BREEAM certification began in 2022.

### SUSTAINABLE CONSTRUCTION SALES IN DRAGADOS, S.A. (SPAIN AND UNITED KINGDOM)





### **ENERGY CONSUMPTION**

Energy is one of the main resources used by the ACS Group companies and, as part of the fight against climate change, the ACS Group is committed to energy efficiency and renewable energy. The Group's energy consumption is defined annually, to a large extent, based on the weight of the works performed during the year since, given the Group's high degree of diversification, there are activities with greater energy intensity. Energy consumption in 2022 decreased by 0.6% compared to the previous year.

Despite the increase in activity in 2022, the mix of projects and the measures performed by the various Group companies led to a reduction in energy intensity of 18.0%.

In 2022 the ACS Group companies consumed 57,978,910 kWh from renewable energy sources.

Energy Consumption (kWh)	2019	2020	2021	2022
Total ACS Group	12,669,431,610	1,663,427,356	1,863,998,130	1,852,102,031

	2021	2022
Construction	1,750,213,747	1,748,249,532
Concessions	7,300,361	6,435,803
Services	106,484,022	97,416,696
Energy Intensity ACS Group (kWh/mn Euros Sales)	69,134	56,676

Note: Since 2020, data restated for Industrial Services sale and Thiess' 50% participation

(1) In 2021 calculations of Hochtief's natural gas consumption are included for the first time



The different companies that form part of the ACS Group have developed investments and implemented measures to reduce energy consumption, with the implementation of LED lighting in the main projects, the implementation of systems to control and optimise consumption and the replacement of equipment with less energy intensive equipment.

### **USE OF HYPER PILES IN EUSTON STATION (DRAGADOS)**

The high-speed railway project High Speed 2 (HS2) is a development in full operation throughout England. Its first phase of which starts in London (Euston Station) and ends in Birmingham (Curzon Station). Dragados and its partners were awarded the design and construction contract for both stations.

Temporary offices will be built for the entire duration of the project for the remodelling of Euston Station. This building (Maria Fidelis Building) will consist of 6 floors and a terrace (5,500 m2 housing up to 2,500 workers). An innovative foundation system called HIPER (Hollow Impressed Precast Energy Reusable) piles, "hollow piles", was used. This is the first time that they are used in a structure in use in the world. The shafts inside these piles will serve as a tool to obtain the energy to supply the building during its useful life (providing hot water for sanitary use and heating in the building).

The objectives of using this solution could be summarised as follows:

- Reduction of around 70% of the materials used with respect to conventional piles. An estimated reduction of 280 m3 of concrete and 17,500 kg of steel.
- Reducing the depth of the piles through impressions in the ground to increase shaft resistance (around 40% increase). In the specific case of Euston Station, the depth of the conventional piles envisaged was between 23 and 32 m, and the execution of HIPER Piles has involved piles between 16 and 22 m deep.
- Use of piles as a geothermal tool, the central shaft of which increases capacity by 60% if compared to conventional piles of pipes concreted on site, designed for this geothermal function.
- The possibility of drilling through this shaft in the future, being able to increase the capacity of the structure.
- Building these piles in prefabricated sections, which would give the possibility to reuse these parts when the building reaches the end of its useful life.

The last two objectives are very specific to the use that will be given in Euston Station HS2, as it is a building that will be in use for around 10 years.

Finally, for the foundation of the Maria Fidelis Building, a total of 41 on-site piles and 5 prefabricated piles were built.

Once the piles have been built, all the elements necessary for the operation of the geothermal part are installed. The first step is to fill the central shaft of the pile with water. The GSHP (Ground Source Heat Pump) system weights are then positioned at the bottom of the pile to place the ducts through which the water will be pumped, obtaining the geothermal energy necessary to heat the water of the future offices, which will also be used for heating.

This innovation was an important milestone for both the project and Dragados. Being part of the first installation in the world of this type of pile for a structure in use represents a great opportunity to continue advancing towards several objectives, such as the reduction in the use of materials, the associated cost, and a decrease in the depth of the pile through impressions on the ground. And, of course, the great environmental progress involved in reducing the use of concrete and steel, increasing geothermal capacity, and reducing consumption of other types of energy.

As regards execution in the works, the temporary building serves to identify different points for improvement, both in on-site and prefabricated piles, to improve efficiency in the works and continue to develop procedures for more sustainable construction.

### **USE OF POWER STORAGE SYSTEMS FOR TOWER CRANES**

Turner and Aggreko partnered to build a piles system that eliminates the need to oversize the power plant of the tower cranes and reduces operating costs. The use of hybrid battery energy storage solutions (BESS) adjusts the size of the generators to perform heavy lifting and disconnects them during period with no loading. As part of the IQHQ RaDD pilot project, the conventional 500-kilowatt Tier-2 generator was replaced by a smaller Tier-4i power plant of 200 kilowatts and a 240 kilowatt/120 kilowatt hour BESS. The operating time was significantly reduced, which is equivalent to a 46% reduction in fuel consumption.

## 5.1.2. CIRCULAR ECONOMY: SUSTAINABLE USE OF RESOURCES AND WASTE MANAGEMENT

The promotion of a circular model that prioritises reducing and optimising the use of materials and efficient waste management is another one of the priority action areas of the ACS Group. Consequently, the ACS Group is working to:

- Minimise the impact to use of materials and waste management, taking into account the life cycle of projects and services.
- Promote the use of environmentally responsible materials adhering to the best practices outlined in the Group's Building Materials Policy.
- Give priority to operating models to reduce resource consumption and waste generation, in terms of both quantity and hazardousness.
- Contribute to extending the usefulness of resources, secondary products and waste through repair, reuse and recycling.
- Identify business opportunities to contribute to the circular economy through activities, products and services.

### **CONSUMPTION OF MATERIALS**

The ACS Group specifically promotes the use of recycled and/or certified construction materials, offering clients these types of options when making decisions regarding the materials to be used.

To encourage the use of sustainable materials among the Group companies, the Group has a **Construction Materials Policy** that establishes guidelines and best practices.

## **MATERIALS POLICY**

The ACS Group seeks to implement the following best practices in the process of recommending construction materials to clients in tendering processes in which it is applicable:

- 1. Propose a traceability analysis of 100% of products used.
- Keep a record of suppliers who offer recycled/certified products.
- 3. Stress the importance of aspects such as durability and maintenance when selecting construction materials.
- Provide information about the characteristics of products which give off gases or contain harmful substances and also about the products' life cycles.
- When making an offer or taking part in a bid to tender, always include the option of certified timber, and offer information on the environmental benefits of its use.
- 6. When making an offer or taking part in a bid to tender, always include the option of cement made from recycled aggregates, and offer information on the environmental benefits of its use.

- Provide environmental details of the proposed construction materials, such as energy used by machinery during extraction or treatment, greenhouse gas emissions, etc.
- 8. Report on the corporate waste management policy.
- Provide information on waste management plans in projects, including design phases.
- 10. Give information on specific targets to reduce, recycle and reuse waste.
- Report on procedures in place for the recovery and recycling of construction materials by subcontractors.
- 12. Give details of staff and subcontractor training processes in waste management techniques.
- 13. Provide details of waste separation processes in project facilities and works.
- 14. Actively promote the purchase and sale of recycled by-products



### **USE OF EARTH FRIENDLY CONCRETE (EFC) EUSTON STATION (DRAGADOS)**

The Euston Station Dragados project in London, England is a prominent example of the implementation of Earth Friendly Concrete (EFC) .The project in which Dragados participated has used Earth Friendly Concrete (EFC) slabs that will support the polymer silos used for future piloting work in the northern part of Euston Station. Although the foundation is temporary, it will be in use for at least two years.

Low carbon geopolymeric Earth Friendly Concrete (EFC) is a sustainable alternative to traditional concrete that is becoming increasingly popular in the construction industry.

This type of concrete reduces greenhouse gas emissions due to the low amount of carbon embedded in the concrete. The Euston station project resulted in a total saving of 80 tons of CO2 during the manufacturing process.

The Earth Friendly Concrete (EFC) is a Wagners-patented geopolymeric concrete that contains a combination of ground granulated blast-furnace slag (GGBS), fly ash and a mixture of chemical activators that replace Portland cement. The development of a new mixture capable of providing the consistency and workability necessary to perform the transport and construction processes of the concrete has been a significant improvement in the field of commercial geopolymers. The geopolymer binder system reduces the carbon incorporated by around 70%, saving 250 kg of CO2 per cubic meter poured.

One of the main objectives of the Euston project is to reduce carbon emissions by 50% with respect to the original design. The use of a low-carbon concrete alternative to the use of concrete with Portland cement represents a pioneering sustainable solution to reduce CO2 emissions in the project, while offering mechanical and durability properties similar to Portland cement. Since it has greater resistance to compression, traction and greater durability, it makes it more resistant to erosion and cracking. This improves the overall resilience of the project to extreme weather events and natural disasters.

In recent years, the ACS Group made an effort to collect data and report on the consumption of the main materials used by the ACS Group, mainly due to infrastructure activity. In 2022, the reactivation of the activity increased the use of these materials. However, the Group continued to implement measures to ensure the efficient use of these materials in its activities, promoting their recycling and reuse, and the development of R & D projects focused on this objective.

Similarly, one of the commitments defined in the Sustainability Master Plan is to promote resource optimisation by promoting the durability of construction materials. To this end, the various ACS Group companies are promoting life cycle analysis in infrastructure and building projects through digitalisation and new technologies to improve efficiency in terms of the materials used and to improve their useful lives. In 2022, the ACS Group companies performed this life cycle analysis in 69 projects.

	Total used		% Recycle	% Recycled/ reused	
Construction Material	2021	2022	2021	2022	
Wood (m3)	240,579	322,632	6.0%	4.4%	
Steel (t)	659,411	854,477	48.5%	54.8%	
Concrete (m3)	4,966,701	5,011,694	12.9%	16.6%	
Aggregates (t)	9,165,434	11,646,977	10.0%	12.8%	
Asphalt (t)	2,080,570	2,261,897	13.9%	36.5%	
Cement (t)	700,736	692,397	4.2%	4.5%	
Glass (t)	59,710	13,014	0.02%	0.02%	

(1) During the year 2022, 10.4% of the total wood purchased was certified (1.2% PEFC certified, 8.9% CSA certified and 0.3% others) (2) Percentage of recycled cement to reach data of 13% and 12.2% of total procurement expenditures in 2021 and 2022 respectively



# USE OF RECYCLED ASPHALT PROJECT M80 IN SYDNEY AND HIGHWAY A6 IN GERMANY (HOCHTIEF)

CPB Contractors is using high-recycled asphalt in the M80 project. The improvement of the Sydney Road to Edgars Road section is the first segment of the Australian highway to use "Reconophalt", a road covering material manufactured from soft plastics, glass and toner that would otherwise be sent to landfills or stored.

After consulting with the customer, the recycled products were incorporated into all layers of the pavement. "Reconophalt", an Australian innovation, is composed of a high performance asphalt additive. Performance tests conducted on asphalt showed an improvement of up to 65% in its useful life, combined with increased resistance to deformation to support heavy vehicle traffic.

Similarly, HOCHTIEF used recycled asphalt in the A6 highway project in southern Germany. The team milled the asphalt of the old carriageway, crushed it in a mixing plant and reprocessed it. This allowed for a total of 500,000 metric tons of waste material to be reused, an outstanding example of recycling in practice.

#### WASTE PREVENTION AND MANAGEMENT

Waste management in the ACS Group prioritises recycling, reuse or other recovery operations over landfill disposal, to minimise as much as possible the waste generated when performing its activity. Specifically, the ACS Group is working to reintroduce the products used in the production process to enable them to be used again as raw materials, minimising the impact of the business on the environment.

The waste is managed by each of the Group companies adhering to the regulations in force in each country. The installations have the corresponding authorisations for producers of hazardous waste, which enable them to be recorded, inventoried, stored and managed. Based on the above prioritisation of waste management, the waste is handed over to authorised waste managers.

During 2022, a total of 15,900,096 tonnes of hazardous and non-hazardous waste were generated, representing an decrease of 15.2 % with respect to 2021.

The ACS Group has a strong commitment to the circular economy, prioritising the recovery and minimisation of waste not destined for landfill as the strategic line of the Sustainability Master Plan. In 2022 the rate of non-hazardous waste destined for recovery operations stood at 83.8%. This confirms the Group's efforts to prioritise recycling or reuse as opposed other waste disposal methods as a sign of its commitment to the circular economy.

Lastly, in 2022 an effort was made to report information related to waste in accordance with the most demanding standards, presenting the information broken down by method of disposal, if it is performed inside or outside the facilities, or providing for the first time a breakdown of the main waste generated by composition. It should be noted that in 2022 more than 50% of the waste generated corresponded to mineral waste (land/rock) resulting from the increase in the activity of projects with road tunnelling machines or railway projects.

	2019	2020	2021	2022
ACS Group				
Non-hazardous waste (t)	12,669,950	15,941,779	18,344,366	15,761,762
Hazardous waste (t)	130,343	358,311	400,892	138,334

<sup>\*</sup>From 2020 onwards, data are shown excluding Industrial Services, following its sale in December 2021, and Thiess, following the sale of a 50% stake in December 2020 and its change to the equity method in 2021.

ACS Group Waste breakdown by activity	2021	2022
Construction		
Non-hazardous waste (t)	18,322,812	15,736,124
Hazardous waste (t)	400,744	137,558
Concessions		
Non-hazardous waste (t)	132	162
Hazardous waste (t)	10	2
Services		
Non-hazardous waste (t)	21,422	25,477
Hazardous waste (t)	138	775

ACS Group Waste		2021		2022		
breakdown by operations (t)	Onsite	Offsite	Total	Onsite	Offsite	Total
Hazardous waste (t)	107	400,785	400,892	24	138,310	138,334
Waste not for disposal per operation	19	208,751	208,771	21	23,367	23,388
Reuse	6	29,049	29,054	5	22,458	22,463
Recycling	14	179,619	179,633	15	419	434
Other recovery operations	_	83	83	1	491	492
Waste for disposal per operation	88	192,033	192,121	4	114,943	114,946
Incineration with energy recovery	_	13,738	13,738	_	57	57
Incineration without energy recovery	_	24	24	_	135	135
landfill	86	178,198	178,285	_	114,475	114,475
Other disposal operations	2	73	75	4	275	279
Non-hazardous waste (t)	1,474,744	16,869,626	18,344,366	715,378	15,046,381	15,761,762
Waste not for disposal per operation	1,352,131	14,250,059	15,602,190	496,101	12,704,561	13,200,662
Reuse	152,342	11,754,771	11,907,113	161,372	10,205,289	10,366,661
Recycling	1,180,616	2,238,099	3,418,715	290,508	2,138,176	2,428,684
Other recovery operations	19,173	257,189	276,362	44,221	361,096	405,317
Waste for disposal per operation	122,613	2,619,567	2,742,181	219,277	2,341,820	2,561,097
Incineration with energy recovery	_	56,023	56,023	_	2,295	2,295
Incineration without energy recovery	_	11	11	_	588	588
landfill	118,075	2,546,996	2,665,071	219,272	2,336,714	2,555,986
Other disposal operations	4,538	16,537	21,075	5	2,223	2,228

The ACS Group is beginning to collect the information on waste by composition. Information for 2022 is presented as there is no comparable data from 2021:

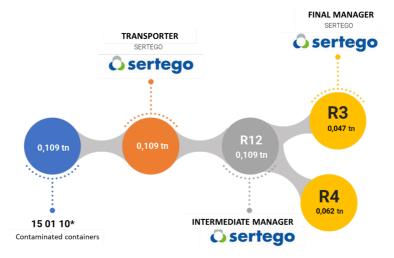
ACS Group Waste breakdown by composition (t)		2022	
	Waste non- directed to recovery	Waste directed to recovery	Waste generated
TOTAL	2,676,043	13,224,050	15,900,096
Mineral waste	1,828,123	7,539,646	9,367,768
Construction waste	298,585	757,807	1,056,392
Others	549,335	4,926,597	5,475,932

### **ZERO WASTE (DRACE GEOCISA)**

Once the works to modernize the Sagunto Factory were completed and, taking into account the achievements and excellent results obtained in implementing the Waste Management Plan established in the verification and certification based on Zero Waste, with a verified recovery value of 98.86% of the waste generated in these works, it was agreed that the criteria and methodology implemented in these actions will be extended and developed to adapt and implement them in the normal activity of this site, which consists of the execution of various models of railway sleepers.

To this end, this process was initiated in 2021 with the update of the Waste Management Plan of the site and subsequent implementation of it, for which the waste inventory was identified and updated, as well as the various treatment operations for each of the waste generated, including the traceability to the final destination of all waste.

The following are examples with infographics of the quantities and processes used to process any of the waste generated:



In 2022, the verification audit was carried out to verify the results of the implementation of the Waste Management Plan, which recorded the milestone of a 99.77% percentage of waste recovered.



# 5.1.3. EFFICIENT AND RESPONSIBLE USE OF WATER RESOURCES

The ACS Group is aware of the importance of water in its activities. Through its Industrial Services business, which develops water desalination, drinking water treatment and filtering infrastructure, the ACS Group contributes to guaranteeing access to clean water and improving waste water quality.

The management and monitoring of these indicators allows the Group to identify those places where the use of water generates a greater impact on the environment, with the firm goal of performing its activity in a sustainable and environmentally friendly manner.

ACS Group Breakdown of water (withdrawal-discharge)	2021	2022
Total water withdrawn (m3)	12,649,099	12,414,396
Volume of water withdrawn from surface water (rivers, wetlands, lakes) (m3)	672,093	545,962
Volume of water withdrawn from groundwater (m3)	3,208,444	4,448,873
Volume of water withdrawn from third parties (municipal network, processing plant or public or private service) (m3)	6,032,500	6,465,060
Volume of water withdrawn from marine waters (m3)	3,061	8,314
Volume of rainwater (m3)	2,733,000	941,750
Water produced	0	4,437
Total water withdrawn in water stress areas (m3)	3,258,100	1,350,491
Volume of water withdrawn from surface water (rivers, wetlands, lakes) in water stress areas (m3)	22,243	59,408
Volume of water withdrawn from groundwater in water stress areas (m3)	714,675	372,386
Volume of water withdrawn from third parties (municipal network, processing plant, etc.) in water stress areas (m3)	2,521,182	918,581
Volume of water withdrawn from marine waters in water stress areas (m3)	0	117
Total water discharged (m3)	6,776,487	10,607,047
Volume of water discharged into surface water (rivers, wetlands, lakes) (m3)	4,456,349	7,100,636
Volume of water discharged into groundwater (m3)	747,414	823,056
Volume of water discharged into third-party waters (municipal network, processing plant or public and private services) (m3)	1,538,409	2,584,237
Volume of water discharged into marine waters (m3)	34,316	99,119
Total water discharged in water stress areas (m3)	3,177,315	1,262,976
Consumption (m3)	5,872,611	1,807,349
Ratio: m3 of water consumed/ turnover	217.8	55.3
Consumption in water stress areas (m3)	80,785	87,515

(1) Most of the water discharged to marine waters is due to the Hampton Road project in Virginia Bay. The difference between the water discharged between 2020 and 2021 is due to the project being in a different phase of development.



The activities performed by the ACS Group are associated with significant water consumption, particularly in the area of construction, and in 2022 the total amount of water consumption reached 1,807,349 m3.

Similarly to other environmental indicators, the variability in water consumption experienced by the ACS Group in recent years is explained, due to the different types of projects developed over the year, and it may distort year-on-year comparability in absolute terms.

The company acknowledges the need to reduce consumption of this natural resource, especially in areas that are subject to water stress. For this reason, beginning in 2019, the ACS Group has been monitoring water

consumption corresponding to water stress areas, accounting for 87,515 m3 of the total water consumption in these areas in 2022.

The ACS Group has adequate measurement systems (at the project, company and corporate levels), permitting detailed knowledge of the main sources of consumption. This information makes it possible to develop the most suitable efficiency measures in each case.

It should also be noted that the ACS Group also performs exhaustive control on the quality of the water discharged into the environment, to ensure that the discharges do not have significant effects on the environment and always comply with the provisions in local legislation.

## SOLUTIONS FOR SUSTAINABLE WATER MANAGEMENT IN SEDGMAN (CIMIC)

Since 30% to 50% of copper, gold, iron ore and zinc production is concentrated in areas with severe water shortages, Sedgman offers solutions to reduce the impact of mines.

One of Sedgman's key services is the dehydration of the relays, which maximises water recovery. Sedgman carried out a significant number of studies and projects, taking advantage of its extensive technical experience in dehydration systems, flotation sweeping and reprocessing of relays, in basic metals and coal. Solutions include a range of relay dehydration technologies and a variety of transport methods and rejection placement.

In 2022, Sedgman delivered an engineering, acquisition and construction contract for a new relay dehydration facility at the Queensland Byerwen mine. This project transformed the existing system for the co-arrangement of wet pump-down rejections into a combined system for the dehydration of dry relays and coarse rejects by truck.

The new system aims to reduce operating risk, reduce energy consumption and improve water recovery and management of chemicals for dehydration. Compared to the use of unpurified water prior to the installation, the design of Byerwen's dry waste is expected to save around 1.2 million cubic meters of water per year, which is equivalent to 492 Olympic swimming pools.



## 5.1.4. PROTECTION OF BIODIVERSITY

The activities of the ACS Group are potentially capable of causing impacts on the natural environment when operating in all types of locations and environments where a multitude of ecosystems may coexist. In this context, the company always attempts to minimise the impact of its activities on biodiversity, particularly respecting protected natural areas and areas with high ecological value, and committing to no deforestation.

As a result of this commitment, the Group performs its activities according to the following basic principles in the area of biodiversity:

- Consider the initial value of the ecosystems that may be affected and assess the impact of the activities, products and services on them.
- Apply the hierarchy of mitigation of impact on ecosystems by means of prevention, reduction, restoration and compensation actions.
- Implement management plans to preserve or restore biodiversity in activities or services that have a significant impact on ecosystems.
- Establish non-action criteria to avoid performing activities or services in certain areas based on their intrinsic value or vulnerability. In 2022, the Group performed activities on 626.97 hectares considered to be of high biological value, implementing specific objectives and plans to minimise the impact.
- Strengthening the measures to preserve/restore biodiversity in projects in environmentally sensitive areas.

Prevention of deforestation resulting from the activity, and direct suppliers and indirect suppliers whose contracted activity is critical to non-deforestation, through actions focused on compensation, restoration and reforestation, and the promotion of the use of certified and recycled wood.

The ACS Group has implemented measures that ensure the conservation of plants and wildlife from the start of planning the operations to the end. These measures are based on:

- a. Physical protection, transplanting or transfer, and respect for the life cycles of the plant and animal species affected.
- b. Environmental impact studies, which identify the main effects on the natural environment of the projects and establish actions to minimise them. Public participation in procedures to approve these projects is guaranteed by the national and regional legislation in each of the countries where they are performed.
- c. Monitoring plans, ensuring compliance not only with mandatory biodiversity and forest conservation regulations and standards, but also with preventive measures and reducing the impact of projects and processes that are not subject to environmental impact assessments.
- d. Promoting the compensation of the impacts generated by activities on biodiversity and the forest mass through restoration, recovery and reforestation. Thus, in 2022 the ACS Group performed work on 81.28 hectares.

### PROMOTION OF MARINE BIODIVERSITY IN PRINCESS AMALIA PORT (HOCHTIEF)

HOCHTIEF is expanding Princess Amalia Port in Rotterdam (Netherlands). They plan to use underwater blocks under the wharf wall as artificial reefs to promote biodiversity.

The blocks are made of what is called "ECOncrete", which organisms such as algae and aquatic plants can colonise more easily than conventional smooth concrete. Once these organisms are established, they will have a positive effect on water quality and help to further promote biodiversity. This is because they nourish other organisms, such as mussels and birds, which further stabilises the entire ecosystem. Floating algal carpets are also reduced, which improves light conditions and, in turn, favours the germination and growth of other aquatic plants.



Scope 19.4% ACS Group sales

<sup>&</sup>lt;sup>8</sup> Scope 19.4% ACS Group sales

## **CARE FOR AVIAN FAUNA ISABELLA LAKE DAM (DRAGADOS)**

In the Dragados *Isabella Lake Dam* Safety Modification project, special care is being taken to preserve the avian fauna and its habitat. To achieve this, a specific Biological Resource Protection Plan has been developed to implement various measures to avoid and protect biological resources.

These measures were grouped into different categories:

- 1. Protection of existing vegetation and biological resources
- 2. Fish trapping prevention
- 3. Nesting and breeding birds protocol

Focusing on the latter, a key measure that the Dragados environmental department has implemented is to have an avian biologist in the team, who is in charge of identifying active and inactive nests with nesting studies prior to construction and weekly studies of birds nesting during construction.

Together with studies prior to construction and monitoring during construction, Dragados has a team lead by the biologist that identifies and implements preventive measures to deter birds from using active construction areas as nesting sites. Some prevention measures include: removing the initial materials from the nest, placing networks in construction equipment and materials when they are not in use, covering the open pipes, installing deterrents such as reflective/predatory lures and installing active noise generator construction areas. In addition, waste is removed daily to remove potential sources of attractive food for birds and wildlife.

If an active nest is identified in any activity, a suitable noise buffer is installed to reduce or avoid discomfort to nesting birds. In these cases, the nest is monitored until the chicks have grown, to ensure that they do not abandon it.

All employees have received training to report any possible finding of nests to the Project's Aviar Biologist or the Environmental Manager and to avoid active nests.



## 5.1.5. ENVIRONMENTAL RISK **MANAGEMENT**

The functions attributed to the Audit Committee of the Group's Board include the review, monitoring and assessment of the Group's Sustainability Policy, and the supervision of the Group's Environmental Policy.

Secondly, the responsibility of overseeing environmental performance and performing the appropriate action plans and improvement programmes lies with the Environmental Department of each group of companies, along with adopting the necessary measures to reduce and mitigate the environmental impacts related to the Group's activities, always following the principles established in the Group's Environmental Policy.

Likewise, in accordance with the Group's risk map and the materiality analysis, both updated in 2022, the Group has

prioritised the risks based on their potential relevance for the company's activity, depending on the type of activity, action areas, policies and management approaches.

In 2022, to strengthen its environmental commitment, the ACS Group included for the first time the risks associated with the Environmental Due Diligence as a cross-cutting management element within its corporate governance model and the Global Compliance Management System, as indicated in paragraph 5.4.6 of this report.

The table below shows the results obtained from this prioritisation of potential risks to perform the activity related to the environment, and the management measures adopted by the ACS Group:

MATERIAL ISSUE	RISKS	DETECTION, PREVENTION, MANAGEMENT AND MITIGATION MEASURES	ASSOCIATED MANAGEMENT INDICATORS	APPLICABLE ACS GROUP POLICIES
Climate change: transition to a low-carbon business model	Companies face the need to design appropriate strategies to address climate change. While most companies focus on the risks associated with climate change, some seek to identify and take advantage of the business opportunities associated with this global challenge. The ACS risk map identifies the specific risks related to climate change (physical and transition risks) based on the relevance they may have for the development of the company's activity.  Related risk Risk map Climate change and energy efficiency Risks  Increase in cost overruns  Reputation risks  Regulatory restrictions and sanctions	The Environmental Plan and the Group's Sustainabilityy Master Plan define the commitments and objectives for emissions reduction and use of resources. ACS' Board has overall responsibility for the climate change strategy through the Audit Committee, which is responsible for monitoring the ACS Group's sustainability policy.  In 2021, the Company set targets linked to the variable remuneration of the Executive Directors in relation to performance on climate change.  Each company is responsible for keeping an inventory of emissions, identifying main sources and developing initiatives to reduce them.  The Group offers its customers construction products and services that help to promote the transition to a low carbon economy.	Decrease in emissions reaches 1 + scope 2 of a 28.7% with respect to the Sustainability Master Plan baseline year (2019)  Increase in the calculation and reporting of scope 3 emissions, including in all areas emissions related to the consumption of construction materials, waste, travel and other emissions arising from the value chain.  Development of business opportunities such as Green Building projects  In 2022, the Group continued with the evolution of its reporting model to communicate information on risks and opportunities related to climate change following the recommendations of the Task Force on Climate-Related Financial Disposals (TCFD), and the implementation of measures and initiatives to achieve the targets set in the 2025 ACS Group's Sustainability Master Plan for climate change mitigation.	The ACS Group's Sustainability Policy The ACS Group's Code of Conduct Code of Conduct for Business Partners Human Rights Policy Environmental policy Risk Control Policy
Circularity in the procurement of construction materials and in waste management	The incorporation of the concept of circularity into the production model makes it possible to reduce the intensive use of natural resources and the high pressure on the environment. Likewise, the optimisation of resources increases operational and financial efficiency, in addition to reducing the waste generated  Related risk Map of risks Environment and circular economy Risks  Failure to comply with the ACS environment policy  Reputation risks  Statutory breach  Inefficient use of raw materials or conflict minerals	The Environmental Policy and the Group's Director Sustainability Plan establish the commitments to encourage the use of recycled construction materials, their durability and efficient waste management.  The promotion of promote life cycle analysis in infrastructure and building projects was included within the Sustainability Master Plan. More 200 projects underwent this analysis in 2025. Maintaining a waste rate for recycling in excess of 80%, and measures to encourage the use of recycled materials were also established.	ACS Group companies participate in various R & D projects related to the durability and efficiency in the use of construction resources and materials.  Waste rate (hazardous + non-hazardous) destined for recovery in 2022: 83.2%  Number of projects in which a life cycle analysis was performed: 69	<ul> <li>Environmental Policy.</li> <li>Sustainability Policy.</li> <li>Construction Materials Policy.</li> <li>Risk Control Policy.</li> </ul>

Environmental

management

**RISKS** 

#### DETECTION, PREVENTION, MANAGEMENT AND MITIGATION MEASURES

## ASSOCIATED MANAGEMENT INDICATORS

APPLICABLE ACS GROUP POLICIES

Companies have a dual relationship of reliance and impact on the natural environment. Therefore, the mitigation of impacts on biodiversity and natural resources is indispensable during the development of the Group's projects and operations, establishing an assessment of ecosystem services that affect the company.

The conservation and protection of biodiversity has become one of the main environmental challenges faced by companies. The natural environment is one of the main allies in the fight against climate change, in addition to being a support for the economy, providing the natural resources on which the company's activity is based:

Associated risks Risk Map Risks of fines and sanctions, reputational risks, and Biodiversity risk.

#### Risks

- · Loss of ecosystem services
- · Reduction in economic growth
- · Statutory breach
- Litigation and environmental sanctions

- Continuously improve the environment, implementing an environmental management system to ensure compliance with policies, setting and monitoring objectives.
- Assess the potential risks to the environment in each of the phases of a project, work or service, with the aim of designing processes that make it possible to minimise the environmental impact.
- Promote training and awareness of employees in environmental aspects.
- Promote actions aimed at increasing awareness among clients, value chain and society in general.
- Carry out all activities of the ACS Group under environmental legislation.

In 2022, 89.6% of ACS Group operations were certified under ISO 14001. The environmental management systems are verified by an external third party in companies representing a 94.62 % the Group's turnover and, in 2022, 877 environmental audits. In 2022 there was one significant infringement of environmental legislation and regulations, fined with EUR 15,000, which is understood as non-compliance that entails a fine greater than EUR 10,000. According to Note 37 on Information on the Environment of the Annual Accounts of the ACS Group, ACS Group companies incurred environmental expenses in 2020 totalling 14,840 thousand euros (6,493 thousand euros in 2021), and according to Note 20 of the Annual Accounts, the provisions for environmental actions are included in non-current provisions, which include provisions to cover the probable environmental risks that may arise, with no provision of this nature included in the accounts in 2022. The Group companies manage environmental risk coverage through different systems depending on their activity and geographic area and using their own environmental management systems.

- Environmental
   Policy
- Sustainability Policy.
- Risk Control Policy.

The risks arising from climate change, the scarcity of natural resources and the state and social context of the territory increase the demand for sustainable infrastructure. Since a significant percentage of GHG emissions come from buildings, developing more energy-efficient infrastructure contributes to climate change mitigation.

The design and execution of resilient infrastructure, in addition to granting recognition and leadership, make it possible to provide safer services that better withstand extreme weather events and mitigate the effects of natural threats on society and its economy.

Related risk Map of risks Loss of market competitiveness and innovation capacity

#### Risks

Sustainable

and resilient

infrastructure

- · Loss of competitiveness
- Physical risks arising from climate change
- · Reputational damage
- · Loss of profitability

- The ACS Group, through its different activities, provides services that help create more efficient and sustainable infrastructure and cities sustainable construction, construction of public transport systems, traffic management services, etc.
- ACS offers customers the use of recycled and/or certified construction materials. The projects of HOCHTIEF, Turner, CIMIC and Dragados comply with different sustainable construction certification requirements, and CEEQUAL, ISCA and Greenroads, in terms of efficient infrastructure.
- In the ACS Group companies, one of the fundamental pillars of the R & D area of the construction companies is the development of new projects and materials that increase the resilience of infrastructure and that make it possible to cope with the increasingly extreme weather changes resulting from climate change, in addition to the reduction of these construction materials, and their reuse and use.
- Develop biodiversity policies and environmental studies to minimise impacts on the business areas.

- Development of Green Building projects: 1,148 cumulative projects by HOCHTIEF and 47 underway in 2022 by Dragados
- Sales of sustainability-certified projects in 2022: EUR 12,935 mn €
- Environmental Policy.Sustainability
- Policy.

   Construction
- Materials
  Policy.
- Risk Control Policy.