

Risk Assessment under Different Climate Scenarios







The Climate Resilience Plan contains statements and objectives that represent EGF's commitment to mitigating climate risks and enhancing the preparedness of its companies for the climate transition. However, its implementation does not depend solely on EGF's actions, as it is subject to the strategic alignment of other stakeholders. EGF's Climate Resilience Plan was developed based on assumptions drawn from the company's best knowledge at the time, using historical data and publicly available information from third parties. Therefore, these assumptions may be subject to change due to unknown or uncertain factors and other contingencies beyond EGF's control, which may affect management and operational decisions related to climate risk.





Emídio Pinheiro Chairman of the Board of Directors, EGF

The transition to a carbon-neutral economy is one of the major challenges of our time, driven by an increasingly demanding regulatory framework. The municipal waste management sector, in which the EGF Group hold a leading position in Portugal, plays a crucial role in this transformation. It contributes not only as a pillar of the circular economy and decarbonisation, but also as an essential activity in ensuring the resilience of communities in the face of climate change.

In recent years, initiatives such as the European Green Deal, the Circular Economy Action Plan, the Waste Framework Directive and the National Energy and Climate Plan 2030 (PNEC 2030) have set ambitious targets for reducing emissions, promoting waste recovery and ensuring the sustainable management of resources. However, beyond the need to meet these targets, we face another major challenge: the resilience of the EGF Group in the face of climate change impacts and the risks associated with the transition to a low-carbon economy.

The Climate Resilience Plan we now present is not merely a commitment to sustainability; it is a strategy designed to ensure that the Group is prepared for a future increasingly shaped by severe climate risks and a rapidly evolving regulatory landscape. The plan aims to ensure asset protection and reaffirm our commitment to climate transition. Therefore, it serves as an essential tool for mitigating risks, seizing opportunities and strengthening our leadership in the waste management sector in Portugal.

We have identified three critical dimensions of resilience: (i) Resilience to physical risks, by strengthening infrastructures and improving responsiveness to extreme phenomena (severe winds and rainfall, heatwaves, cold spells and wildfires) that can impact our facilities and operations; (ii) Resilience to transition risks, by anticipating the challenges of decarbonisation, energy optimisation and innovation, namely in waste recovery, in order to align our operations with the new regulatory and market requirements; (iii) Organisational and financial resilience – The sustainability of our business model requires continuous adaptation and integration of new solutions to maximise efficiency and minimise costs, ensuring long-term balance and security.

As part of the Mota-Engil Group, the EGF group shares the ambitious goals set out in its Strategic Plan, "Building26". The Climate Resilience Plan that we now present, together with the underlying climate risk assessment, represents another step towards fulfilling our commitment to the climate transition. Through this plan, we set out our strategic priorities for the coming years, ensuring not only compliance with legally mandated or internally established environmental objectives, but also the protection of our companies and employees against climate and transition risks.

With the commitment of all involved, we can turn challenges into opportunities and lead the sector's evolution towards a truly sustainable and resilient model.







EGF IS A LEADING EUROPEAN COMPANY IN THE ENVIRONMENTAL SECTOR AND THE NATIONAL LEADER IN THE TREATMENT AND RECOVERY OF MUNICIPAL WASTE IN PORTUGAL.

The company stands out for excellence in service, driven by quality, technical expertise, innovation and sustainability.

The EGF Group\* is made up of 11 concession companies operating Multi-Municipal Systems for the treatment and recovery of Municipal Waste - ALGAR, AMARSUL, ERSUC, RESIESTRELA, RESINORTE, RESULIMA, SULDOURO, VALNOR, VALORLIS, VALORMINHO and VALORSUL.

With over 3,000 employees across approximately 170 facilities, the EGF Group processes more than 3 million tonnes of Municipal Waste (MW) annually, representing around 60% of the MW produced in the country. It serves more than 6 million people across 174 municipalities, covering an area equivalent to 60% of Portugal's territory.

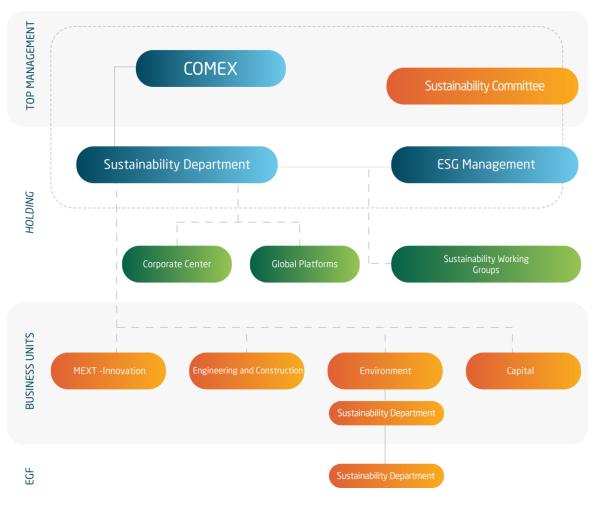
Its activities include the selective collection of packaging waste, including paper/cardboard, plastic and glass; sorting of recoverable waste; organic recovery of selectively collected biowaste; mechanical and biological treatment of residual MW from mixed collection; energy recovery from MW; biogas-to-energy conversion; forwarding of recyclable waste for recycling; and production and sale of organic soil improvers, AEIRU aggregate and electricity, as well as the operation of sanitary landfills.

Since August 2015, following the privatisation process, the EGF Group has been part of the Environment Business Unit of the Mota-Engil Group.





# THE CENTRAL ROLE OF SUSTAINABILITY IN THE MOTA-ENGIL GROUP'S STRATEGY IS REFLECTED IN A STRENGTHENED SUSTAINABILITY GOVERNANCE STRUCTURE, WHICH IS ESSENTIAL FOR PURSUING THE DEFINED STRATEGIC OBJECTIVES.



The Executive Committee of the Mota-Engil Holding (COMEX) is committed to managing sustainability and is responsible for approving the corresponding strategy.

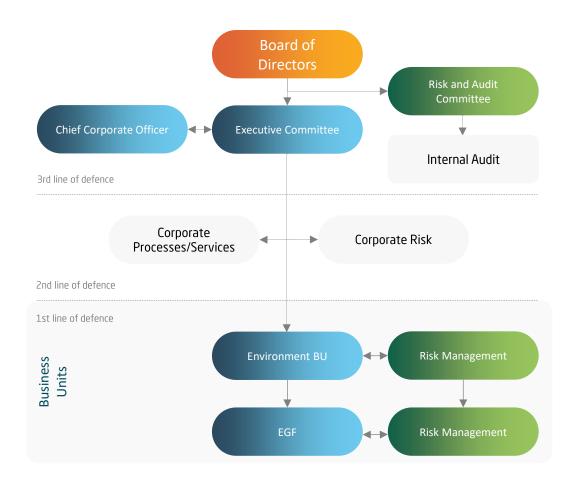
The Sustainability Committee, along with other leadership levels dedicated to sustainability matters, is responsible for implementing the "Building 26 for a Sustainable Future" strategy.

The Sustainability Department, reporting directly to the CEO of the Mota-Engil Group, is responsible for coordinating the implementation of the strategy and maintaining the sustainability and reporting system, in collaboration with the other Corporate Departments and Business Units across the various geographies where the Group operates, as well as with the Manuel António Mota Foundation (FMAM). The relationship between the Sustainability Department and the Business Units and Companies, whether direct or through Working Groups, is ensured through alignment with the respective Sustainability Focal Points.

#### 1 Introduction | Risk Governance



MOTA-ENGIL'S CORPORATE AND RISK MANAGEMENT MODEL ESTABLISHES A FRAMEWORK OF ACCOUNTABILITY FOR RISK MANAGEMENT BASED ON THE THREE LINES OF DEFENCE, WHICH INCLUDE EGF. ALIGNED WITH THE RECOMMENDATIONS OF THE TCFD, THE CLIMATE RISK MANAGEMENT PROCESS IS INTEGRATED INTO THE GENERAL RISK MANAGEMENT MODEL, PARTICULARLY WITH REGARD TO ITS ANNUAL REVIEW OR REVISION WHENEVER CIRCUMSTANCES CHANGE, ENSURING A BROADER ASSESSMENT OF RISKS AND OPPORTUNITIES THAT MAY IMPACT THE GROUP'S BUSINESS ACROSS ALL ITS FACILITIES AND PROJECTS.



The overall risk management of the Mota-Engil Group is the responsibility of its Executive Committee, with the Corporate Risk function assigned to an Executive Director. Additionally, a Risk and Internal Audit Committee has been established, reporting to the Chairman of the Board of Directors, with responsibilities that include, among others, the monitoring of the Group's risk management system.

As the third line of defence, Internal Audit covers all areas, processes and activities within the Group. Its core mission is to contribute to the achievement of strategic objectives by ensuring, among other goals, compliance with the Risk Management Policy, the efficiency of the Group's internal control system, and its continuous improvement.

The Corporate Risk function is responsible for defining the Risk Management Policy and ensuring its effective implementation, making sure that the Group is aware of its key risks. The corporate processes/services are tasked with establishing specific control standards for both internal and external risks that may impact the Group's strategic objectives or targets.

The first line of defence is carried out by the business units, markets, companies and projects, which are responsible for front-line risk management, including the assessment of risks and the definition of appropriate mitigation measures.



CONCERN OVER CLIMATE CHANGE AND SOCIAL ISSUES IS GAINING INCREASING PROMINENCE IN COLLECTIVE AWARENESS, LEADING TO GREATER REGULATION AND STRICTER STANDARDS RELATED TO ESG REPORTING, PARTICULARLY IN THE DISCLOSURE OF CLIMATE-RELATED FINANCIAL IMPACTS.

#### WHY IS IT IMPORTANT TO ASSESS CLIMATE RISK?

#### **BUSINESS IMPACT**

Preparing for potential physical and transition risks related to climate change

Weather tracker: heavy rain and severe

flooding hit the Balkans

Devastating floods in Nigeria were 80 times more likely because of climate



down airport killing 1 minor



#### **REGULATORY TSUNAMI & STANDARDS**

Need to adapt to increasingly stringent regulatory requirements and the latest standards



# companies, large private companies and

#### STAKEHOLDER AWARENESS

Growing demand for specific information and indicators from investors, financial institutions, clients and other stakeholders



#### WHY IS IT IMPORTANT TO EGF?

#### IMPROVING THE COMPANY'S STRATEGIC APPROACH

Assessing the company's resilience to different physical and transition scenarios

#### CREATING A MORE COMPREHENSIVE RISK MANAGEMENT MODEL

Integrating climate change issues into the overall risk management framework

#### POTENTIAL TO MITIGATE EVENTUAL IMPACTS ON DIFFERENT **BUSINESS AREAS**

Early mitigation of impacts resulting, for example, from rising temperatures, increased frequency of wildfires, etc.



A CLIMATE RESILIENCE PLAN AIMS TO DEFINE A COMPANY'S ABILITY TO ANTICIPATE, PREPARE FOR AND RESPOND TO THE IMPACTS OF CLIMATE CHANGE, BASED ON AN UNDERSTANDING OF CLIMATE-RELATED RISKS AND VULNERABILITIES AND THE IMPLEMENTATION OF APPROPRIATE MANAGEMENT AND ADAPTATION MEASURES.

The importance of a resilience plan is justified by the extensive regulation surrounding this topic. Key guidelines include the development of a TCFD and TPT transition plan, the requirements of the CSDDD and CSRD, and the CDP reporting framework.



TCFD

Published a guideline outlining the core components required for an effective transition plan:

- Aligned with the company's strategy
- Anchored in clear benchmarks and quantitative targets
- Subject to an effective governance process
- Feasible and targeted initiatives
- Credible
- Regularly reviewed and updated
- Communicated annually

TPT

TPT

Seeks to develop global standards to support organisations in creating credible and robust transition plans as part of their annual disclosure process.

The framework developed includes a set of disclosure principles, elements and sub-elements, namely the following:

- Fundamentals
- Implementation strategy
- Commitment strategy
- Metrics and targets
- Governance



**CSDDD** 

Requires the adoption of a transition plan that ensures the implementation of processes to manage human rights and environmental impacts.

Importance of adopting the plan:

- Identification, prioritisation and mitigation of environmental risks, with structures in place for remediation when risks materialise
- Integration of sustainability into core business operations, ensuring longterm compliance with CSDDD objectives
- Commitment to a transition plan builds stakeholder trust



**CSRD** 

Requires companies to disclose detailed information on their ESG impacts.

Importance of adopting the plan:

- Integration of sustainability throughout the entire operation, facilitating alignment with CSRD requirements
- ESG indicators for creating reports that meet the directive's standards
- Tracking and assessing <u>impacts</u> across the entire value chain

#### WHY IS IT IMPORTANT TO EGF?

#### MITIGATING THE EFFECTS OF CLIMATE CHANGE

Crucial for managing and reducing increasingly frequent and severe climate risks caused by greater variability in weather patterns and the rise in the Earth's average temperature.

# SUPPORTING THE SUSTAINABILITY OF NATURAL SYSTEMS

Mitigating significant threats to ecosystems, livelihoods and supply chains, while ensuring the well-being of the communities in which EGF operates.

### STRATEGIC INVESTMENT AND RESILIENT DEVELOPMENT

Implementing proactive resilience measures that allow EGF to stand out in its commitment to environmental sustainability and to adapt in a timely manner to threats posed by climate change.

**TCFD** 

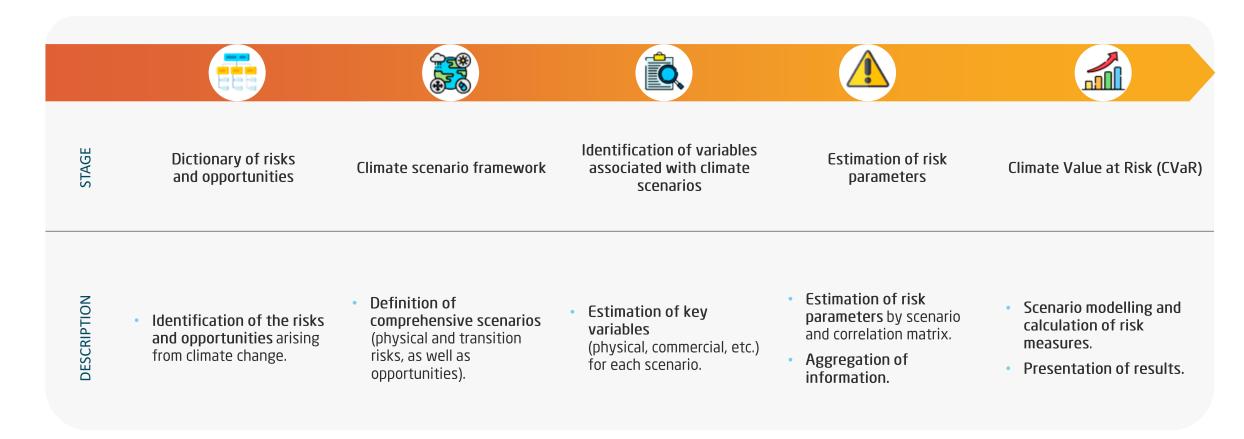
CDP

Provides a platform for companies to disclose data on their carbon emissions, climate strategies and environmental impacts, aligning with the objectives of climate transition plans.





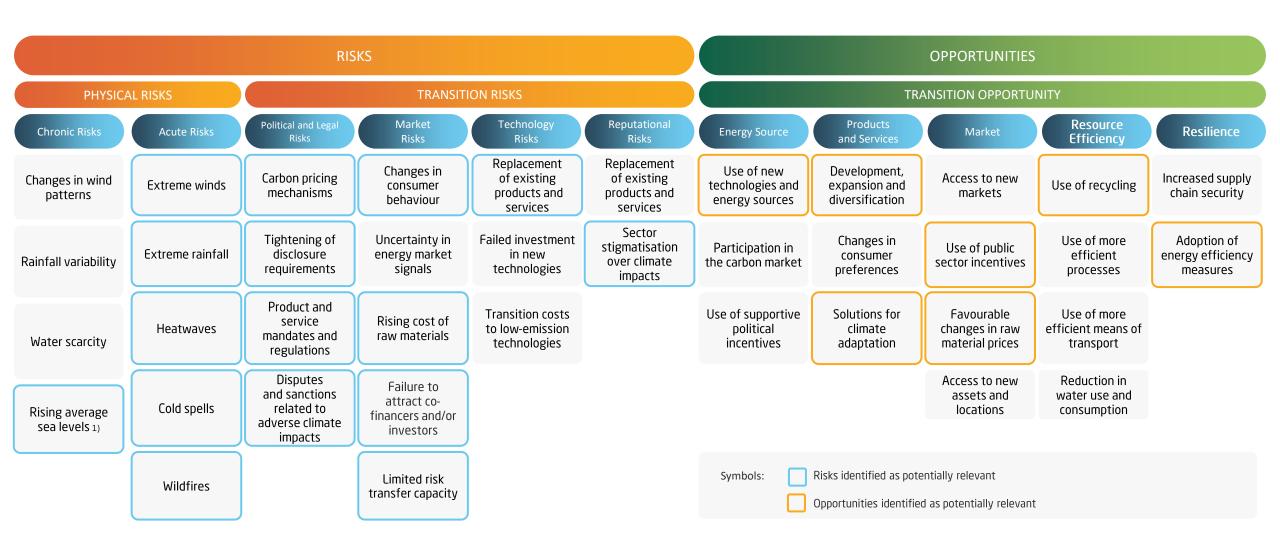
IN ORDER TO MANAGE RISKS AND OPPORTUNITIES, METHODOLOGIES HAVE BEEN DEVELOPED TO MEASURE CLIMATE RISKS, WITH THE AIM OF QUANTIFYING POTENTIAL IMPACTS AND DESIGNING ADAPTATION AND MITIGATION PLANS.



#### 2 Identification and Quantification of Climate Risks | Dictionary of Climate Risks and Opportunities



IN RELATION TO THE CLIMATE RISKS AND OPPORTUNITIES RECOGNISED BY TCFD, THOSE CONSIDERED MOST RELEVANT TO EGF'S BUSINESS WERE IDENTIFIED AND DISCUSSED DURING INTERNAL WORKSHOPS, WITH THE AIM OF ASSESSING AND QUANTIFYING THEIR POTENTIAL IMPACTS.





CLIMATE SCENARIOS AND TIME HORIZONS WERE DEFINED BASED ON SCENARIOS FROM THE IEA, IPCC AND NGFS; TWO OF THEM ESTIMATE THAT THE TEMPERATURE WILL NOT INCREASE BEYOND 2°C IN 2100. THE SCENARIOS WERE DEFINED IN ACCORDANCE WITH TCFD RECOMMENDATIONS AND BEST MARKET PRACTICES.

		SUSTAINABILITY			
PROPOSED SCENARIOS	SCENARIO 1: SSP1 - 1.9 + NZE	SCENARIO 2: SSP1 - 2.6 + APS	SCENARIO 3: SSP5 - 8.5 + STEPS		
REFERENCE SCENARIOS	SSP1 + RCP 1.9 Sustainability (below 1.5°C)  NZE NZE + LD Net Zero emissions by 2050  Remissions by 2050  & Low Demand	SSP1 + RCP 2.6 APS 2°C Sustainability (1.5-2.0°C) Announced pledges Below 2°C	SSP5 + RCP 8.5 Fossil fuel-driven development (~5.0°C) + CC +		
SCENARIO DESCRIPTION	<ul> <li>Net-zero emissions by 2050 are assumed through reduced energy demand, international cooperation and social engagement.</li> <li>Unprecedented investment in sustainable technologies and high levels of innovation, accompanied by a rapid decline in the use of fossil fuels and high CO<sub>2</sub> prices.</li> <li>Global temperature increase limited to no more than 1.5°C by 2100.</li> </ul>	<ul> <li>It is assumed that only economies aiming to achieve net-zero emissions by 2050 will succeed, through international cooperation and social engagement.</li> <li>Gradual decrease in both the use and price of fossil fuels, while CO<sub>2</sub> prices will become increasingly higher.</li> <li>A temperature increase limited to no more than 2°C by 2100 is anticipated.</li> </ul>	<ul> <li>Developed economies will not reach zero net emissions by 2050.</li> <li>There is no major drive from policymakers, who merely meet existing commitments.</li> <li>Demand for fossil fuels remains high, and investment in renewable energy is conservative.</li> <li>A temperature increase limited to no more than 2°C by 2100 is assumed.</li> </ul>		
	2026	2030	2050		
TIME HORIZONS	Short Term: Internal Objectives of the Mota-Engil Group (GME)	Medium Term: UN Sustainable Development Agenda and Internal GME Objectives	Long Term: Paris Agreement Objectives and Internal GME Objectives		



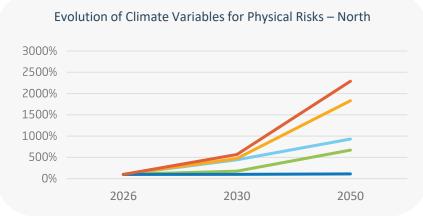
EACH OF THE THREE PROPOSED SCENARIOS PRESENTS ITS OWN SOCIAL, POLITICAL-REGULATORY, ECONOMIC AND TECHNOLOGICAL-ENERGY CONTEXT, WITH SIGNIFICANT DIFFERENCES AND CONSEQUENCES IN TERMS OF CLIMATE CHANGE AND ENERGY TRANSITION.

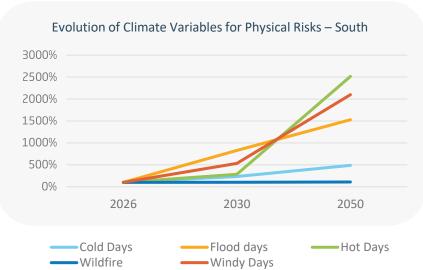
	Scenario 1 (SSP1 - 1.9 + NZE)	Scenario 2 (SSP1 - 2.6 + APS)	Scenario 3 (SSP5 - 8.5 + STEPS)
SOCIAL	Rapid socio-economic growthis expected, driven by the creation of thousands of jobs linked to the energy transition towards renewables. On the other hand, society is more environmentally engaged and enjoys a better quality of life. The SDGs are achieved, particularly in terms of global access to energy and improved air quality.	Societal engagement improves, with widespread support for achieving the SDGs. In terms of quality of life, there is significant investment in health, education and access to clean energy programmes in low-income countries, which is expected to generate employment for the deployment of renewable energies and the achievement greater energy efficiency.	No effort is made to achieve a <b>sustainable energy system</b> , and the world continues along its current trajectory. <b>Population growth drives increasing energy demand</b> , with emissions rising steadily and tensions escalating.
POLITICAL- ATORY	Governments comply with the Paris Agreement and the global target of net-zero emissions by 2050, with international cooperation playing a key role in achieving this goal. A regulatory framework is introduced that includes incentives towards reducing the sale and consumption of fossil fuels, the implementation of a carbon pricing mechanism and the development of clean technologies.	Increase in policies, initiatives and new regulatory frameworks to meet the climate agreements established by each country. International cooperation is carried out to support economic growth and the transition to sustainability across various economic sectors, promoting the use of green alternatives. Only the economies that currently aim to be carbon neutral by 2050 will succeed in achieving this goal.	The implementation of current policies alone may not be sufficient to meet the desired climate goals. While these may help reduce physical risks, such as the impacts of climate change, they could lead to an increase in transition risks. However, the early implementation of climate policies can help mitigate these transition risks by enabling a smoother and more predictable shift towards sustainable technologies and behaviours.
ECONOMIC	Reduction in regional disparities in per capita income is expected; additionally, average GDP growth is projected at approximately 3% per year. There are investments in the energy sector, including the development of electric transport, low-emission fuels and clean energy production technologies (wind and solar, among others).	Average global GDP projected to grow at an annual rate of 3.3%. Governments and companies around the world are adopting better environmental practices and investing in clean energy. Achieving universal energy access and transforming energy production will require significant investment, particularly in the sectors most closely linked to fossil fuels.	The policies adopted to reduce the use of fossil fuels are limited and CO₂ prices are expected to increase across regional programmes over the projected period, although this increase is significantly lower than that predicted under the SDS and STEPS scenarios.
TECHNOLOGICAL- EGIC	The regulation provides for an <b>orderly transition in the energy sector</b> , ensuring electricity supply. Progress is being made for this purpose, through the use of batteries, hydrogen-based fuels and biofuels. <b>Electricity generation is expected to be 100% renewable by 2050</b> .	In the energy sector, solar and wind power are being prioritised, while carbon capture, utilisation and storage are on the rise, as well as nuclear power. On the other hand, investment in sustainable technologies in sectors such as transport is increasing.	Innovation in low- and zero-carbon technologies is essential to support and accelerate a sustainable transition. There are various technologies available to capture and store $\mathrm{CO}_2$ emissions, which can reduce or remove the amount of $\mathrm{CO}_2$ in the atmosphere. However, these technologies vary in maturity and the feasibility of large-scale implementation remains uncertain.



# THE VARIABLES ASSOCIATED WITH THE MATERIALISATION OF PHYSICAL RISKS WERE GEOLOCATED AND EXTRACTED FROM THE LATEST CLIMATE MODELS DEVELOPED AND USED IN THE IPCC'S AR6. (1) (2)







- Using 2026 as the baseline year (with values stabilised at 100%), the trend in the probability/frequency of physical risk materialisation was analysed for the years 2030 and 2050, considering the highest-emissions scenario (scenario 3).
- A significant increase is observed in the occurrence of extreme events with the potential to impact EGF company infrastructures, assessed collectively for the north and south of the country.
- The physical variables used in this analysis were collected based on the latest climate models (CIMP6) employed by the IPCC in its most recent report (AR6).
- The variables were geolocated, taking into account the exact locations of the facilities operated by the Group's companies.
- The differences between the north and south are reflected in the prevalence of extreme wind, rainfall and cold spells in the north, while the south is more affected by extreme heatwaves, wind and rainfall.



# FROM A PHYSICAL RISK PERSPECTIVE, RISKS WITH THE POTENTIAL TO IMPACT EGF FACILITIES WERE IDENTIFIED, ALONG WITH THE THRESHOLDS BEYOND WHICH SUCH IMPACTS MAY OCCUR, AS WELL AS THE EXPECTED IMPACTS ON CAPEX AND OPEX IN THE EVENT OF EACH OCCURRENCE.

IMPACT THRESHOLDS BYPHYSICAL RISKVARIABLE	Depending on the asset, number of days with wind gusts exceeding:  • 80 km/h or 100 km/h (OPEX)  • 80 km/h, 100 km/h or 130 km/h (CAPEX)	Number of days with more than 60 mm of precipitation	Number of events with 5 consecutive days above: • 34°C (North) • 36°C (South)	Number of events with 5 consecutive days below: • 5°C (North) • 7°C (South)	Number of days with a high wildfire risk (FWI - Fire Weather Index > 45)
TYPE OF FACILITY	Extreme Winds	Extreme Rainfall	Heatwaves	Cold Spells	Wildfires
Sanitary Landfill				•	<b>#</b>
Municipal Waste Treatment Plants (CDR, TRI, TMB)		<b>#</b>	*	*	<b>#</b>
Photovoltaic Power Plant		*	*	*	
Bottom Ash Processing Plant		*	*	*	
Eco-centre/Transfer Station		*	*	*	
Leachate Treatment Plant			*	*	
Waste-to-Energy Plant (incineration)			*	*	*
Organic Recovery (composting / AD)		<b># @</b>		•	<b># ©</b>

Asset Damage



\* Not material or not applicable. December 2024



#### FROM A TRANSITION RISK AND OPPORTUNITY PERSPECTIVE, THE FOLLOWING WERE IDENTIFIED AS HAVING THE POTENTIAL TO DIRECTLY OR INDIRECTLY IMPACT THE BUSINESS.

	Carbon pricing potential charges for emissions produced and the resulting impact on tariffs.  Product and service mandates and regulations  Citigation and sanctions related to adverse climate impacts.  Citigation and sanctions resulting from litigation and sanctions related to adverse climate impacts.  Difficulty in attracting co-financers or investors due to uncertainty				OPPORTU
	TRANSITION RISKS	IMPACT		TRANSITION	
ks		potential charges for emissions produced and the resulting impact	rgy	Use of new technologies and	Possibility of gen
Political affu Legal Kisks	Product and service mandates and	municipal waste management, particularly restrictions on landfill	Energy	energy sources	using available la
	Litigation and sanctions		Products and Services	Development, expansion and diversification	The development insurance risks ca drive innovation a
	related to adverse climate impacts.		Proc and Se	Solutions for climate adaptation	Marketing compo waste into a sour
S	Failure to attract co- financers and/or investors	Difficulty in attracting co-financers or investors due to uncertainty surrounding climate-related risks.	Market	Use of public sector incentives	The possible use transition will ena
Risks	Limited risk transfer capacity	Scarcity or limited availability of risk transfer mechanisms, due to possible difficulties in obtaining insurance or eventual exposure to climate-related risks.	Mar	Favourable changes in raw material prices	Changes in raw m the energy transi
sks	Sector stigmatisation	Risk arising from stakeholder and public concern regarding the	Resource	Use of recycling	MW recycling by the extend the useful
	over climate impacts company's contribution to the impacts of climate change.	Resilience	Adoption of energy efficiency measures	Participation in rei	

OPPORTUNITIES					
TRANSITION OPPORTUNITIES		IMPACT			
Energy	Use of new technologies and energy sources	Possibility of generating electricity for self-consumption and sale using available land and areas.			
Products and Services	Development, expansion and diversification	The development of solutions for climate adaptation and insurance risks can reduce exposure, optimise insurance coverage, drive innovation and enhance business sustainability.			
	Solutions for climate adaptation	Marketing compost presents an opportunity to transform organic waste into a source of sustainable income.			
Market	Use of public sector incentives	The possible use of public sector incentives to promote the energy transition will enable greater access to financing, diversification and cost reduction.			
Mar	Favourable changes in raw material prices	Changes in raw material prices resulting from climate change or the energy transition, with a positive impact on the organisation.			
Resource efficiency	Use of recycling	MW recycling by the company helps reduce GHG emissions and extend the useful life of products.			
Resilience	Adoption of energy efficiency measures	Participation in renewable energy and energy efficiency programmes aimed at increasing the company's resilience.			







In line with the Group's risk management model and ensuring alignment with the TCFD, the analysis of climate risks and opportunities involved – and continues to involve – the Group's entire structure, and covered – and continues to cover – all current and planned facilities and locations intended to meet the national strategic plan for municipal waste.

The managers responsible for the various processes and facilities were involved in the identification of risks and the estimation of the corresponding impacts.

Risk assessment was carried out based on a Value@Risk Climate model, combining the projections and other constraints of the identified climate scenarios, namely the collection of physical variables appropriate for estimating the probability and frequency of physical risks, as well as market variables associated with each scenario, with the quantification of associated losses and gains through variations in OPEX and CAPEX, in order to determine the net present value of expected and maximum future losses.



THE TREND IN RESULTS IS CLOSELY ALIGNED WITH THE GROUP'S MOST SIGNIFICANT TRANSITION RISK, NAMELY THE POTENTIAL COST OF EMISSIONS, WHICH RESULTS IN THE GREEN SCENARIO PRESENTING A CONSIDERABLY HIGHER RISK.

#### EXPECTED NET VALUES (€)

Scenario 1: Physical

Expected Loss vs. Expected Gain

#### 7 000 000 7 000 000 RISKS AND OPPORTUNITIES - NET VALUE 6 000 000 6 000 000 5 000 000 5 000 000 4 000 000 4 000 000 3 000 000 3 000 000 2 000 000 2 000 000 1 000 000 1 000 000 2026 2050 2026 2050 2030 2030 -1 000 000 -1 000 000 Scenario 2: Total Scenario 1: Total Scenario 3: Total Scenario 2: Scenario 1: Transition Scenario 3: Transition

Transition

Scenario 2: Physical

MAXIMUM NET VALUES (€)

Scenario 3: Physical

Maximum Loss vs. Maximum Gain

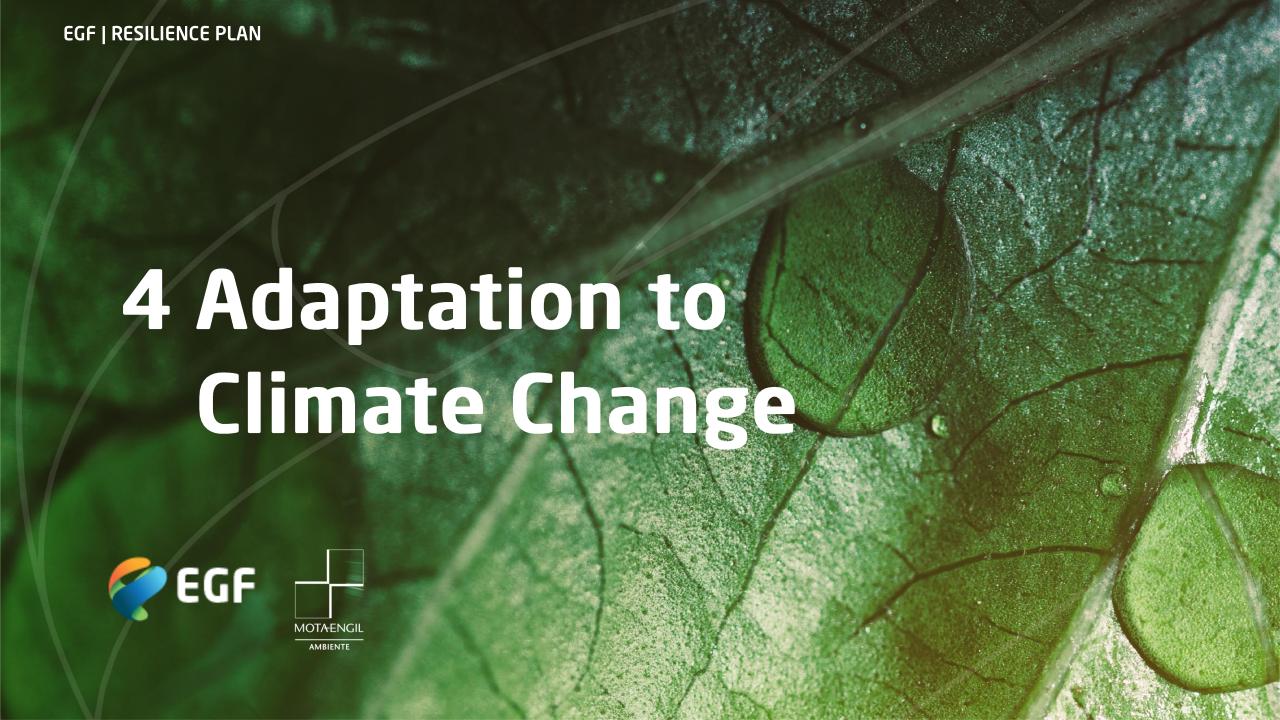
- The analysis of the total net value between losses from physical and transition risks and gains from opportunities (both expected and maximum) reveals that the loss effect associated with risks outweighs the gain effect associated with opportunities overall.
- In Scenario 1, a rise in net value is observed over time, driven by the evolution of the transition risk.
- Scenarios 2 and 3 show a similar trend and have comparable impacts, due to the combined effect of reduced gains (opportunities) from S2 to S3, alongside increased losses associated with both physical and transition risks.



"WILDFIRES" REPRESENT THE MOST SIGNIFICANT OVERALL RISK, WHILE "EXTREME WINDS" SHOW THE HIGHEST VARIABILITY, BECOMING INCREASINGLY RELEVANT OVER TIME AND EMERGING AS THE MOST SIGNIFICANT RISK BY 2050.



- The "cold spells" risk shows the lowest losses, which may be considered nonmaterial.
- The "extreme rainfall" has little significance in 2026 but shows a higher maximum loss in 2050.
- The "heatwaves" risk also has little impact across all time horizons.
- The risks associated with "wildfires" and "extreme winds" dominate in terms of impact, with the former showing some constancy over time and across scenarios, while the latter displays greater variability.





ALTHOUGH ATTENTION IS FOCUSED ON THE TWO PHYSICAL RISKS WITH THE HIGHEST POTENTIAL IMPACT – WILDFIRES AND EXTREME WINDS – ADAPTATION MEASURES HAVE BEEN IDENTIFIED FOR ALL CLIMATE RISKS, INCLUDING GREEN AND NATURE-BASED SOLUTIONS ALIGNED WITH LOCAL, SECTORAL, REGIONAL AND NATIONAL ADAPTATION STRATEGIES. MANY OF THESE MEASURES ARE ALREADY FULLY OR PARTIALLY IMPLEMENTED WITHIN THE EGF GROUP, FORMING PART OF ITS ROUTINES AND PROVIDING A HIGH LEVEL OF MONITORING AND MANAGEMENT OF THESE RISKS.

PHYSICAL RISKS	MITIGATION AND ADAPTATION MEASURES
Acute   Extreme winds	<ul> <li>Reinforcement of monitoring and maintenance operations in the areas surrounding industrial buildings, in order to ensure their structural integrity*</li> <li>Development of contingency plans for operational disruptions caused by extreme weather events</li> <li>Rehabilitation of vegetation around the facilities, in order to mitigate the effects of strong winds and prevent soil erosion</li> </ul>
Acute   Extreme rainfall	<ul> <li>Reinforcement of monitoring and maintenance operations concerning the stormwater infrastructures at the facilities*</li> <li>Ensuring that work fronts at landfills are kept to a minimum area*</li> <li>Rehabilitation of vegetation around the facilities, in order to mitigate the effects of soil erosion</li> </ul>
Acute   Heat waves	<ul> <li>Regular and systematic training of local emergency teams*</li> <li>Maintenance and regular verification of the availability – and eventual reinforcement – of local fire detection and firefighting systems*</li> <li>Development of projects and investment in water reuse (rainwater and/or treated industrial effluent)*</li> <li>Rehabilitation of vegetation around the facilities using native, fire-resistant species</li> </ul>
Acute   Cold spells	Provision of Personal Protective Equipment (PPE) suitable for adverse weather conditions*
Acute   Wildfires	<ul> <li>Rehabilitation of vegetation around the facilities using native, fire-resistant species</li> <li>Reinforcement of fuel management procedures in the protection zones surrounding the facilities*</li> </ul>
	Risk classification based on the expected impact under scenario 2 and the intermediate time limit (2030): impact < €1M  (*) actions already in place within the EGF Group



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#### TRANSITION RISKS

#### MITIGATION AND ADAPTATION MEASURES

Political and legal | Carbon pricing mechanisms

Development of the Decarbonisation Plan

Maximisation of biogas capture and energy recovery, and exploration of new opportunities\*

Political and legal | Product and service mandates and regulation

Monitoring and active participation in legislative and regulatory development\*

 Collaboration with research and development institutions on the development and testing of innovative technologies\*

**Political and legal** | Disputes and sanctions related to adverse climate impacts

Systematic environmental monitoring of operations\*

Awareness-raising and education of the communities served on waste separation and good environmental practices\*

Internal capacity building: annual workshops for employees on climate risks and the corresponding impacts

Technology Risks | Limited risk transfer | Failure to attract co-financers and/or investors

- Integration of climate risk assessment into the Group's risk management process and the respective annual review
- Creation of a platform for recording and managing climate-related incidents
- Collaboration with research and development institutions on the development and testing of innovative technologies\*

Reputational Risks | Stigmatisation over climate impacts

- Awareness-raising and education of the communities served on waste separation and good environmental practices\*
- Reinforcement of the communication strategy regarding the Group's environmental performance

Risk classification based on the expected impact under scenario 2 and the intermediate time limit (2030): impact < €1M (\*) actions already in place within the EGF Group

#### 4 Adaptation to Climate Change | Performance Metrics and Indicators



## THE EGF GROUP IS COMMITTED TO THE STRATEGIC OBJECTIVES SET BY THE MOTA-ENGIL GROUP, WHICH ARE ALIGNED WITH THE SDGs AND CLIMATE TRANSITION, REFLECTING THE GROUP'S DEDICATION TO A HOLISTIC AND SUSTAINABLE APPROACH.

In order to monitor the implementation of the mitigation and adaptation measures identified in this Resilience Plan, performance indicators were defined, such as those presented. These objectives are monitored regularly – monthly, quarterly, half-yearly or annually, depending on the case – using one platform for recording and processing sustainability information and another for managing corporate risk.

SDG	ESG OBJECTIVES	REPORT		GOAL		PROGRESS
3DG	ESG OBJECTIVES	2022	2023	2022	2023	PROGRESS
8 manufactors 10 manufactors (colored Colored	Local talent in management positions	71%	71%	<b>7</b> 5%		No progress
B (MALIAMATIC) (COLORISO) (COLORISO)	Reduction in lost-time injury frequency rate (VS 2020 BU E&C and VS 2021 ME Group)	4.39 BU&C 11.62 ME Group	2.69 BU&C (-51%) 8.21 ME Group (-32%)	2.76 BU&C 6.07 ME Group (-50%)		Positive progress
13 diamo.	Reduction in GHG emissions (scope 1, 2 and 3) vs 2021	4 MtCO2e	4 MtCO2e (+32%)		2 MtCO2 (-40%)	Negative progress
12 House to the second	Global certification (ISO 9001, 14001 and 45001) based on turnover	No reporting	77%	100%		First report
5 SHOWN	Women recruited or promoted to managerial positions vs 2021	19%	21%	30%		Positive progress
9 MORTELL MINICASE MERCITAGESE	Cumulative investment in innovation 22-26 vs 2020	€1M	€5M	€25M		Positive progress
12 processo contractor	Recovered waste	66%	73%		80%	Positive progress
17 PROGRAMMA MANUFACTURE AND M	Entities measuring CSR impact based on the SDGs	No reporting	Methodology under development	10%		First report to be produced

#### PERFORMANCE INDICATORS (EGF)

- Annual review of stormwater drainage systems – at least once a year, by October of each year;
- Compliance with legal obligations regarding fuel management in the protection zones surrounding the facilities – 100%;
- Development of contingency plans for operational disruptions caused by extreme weather events – by December 2025;
- Annual review of fire safety systems at least once a year, by May of each year;
- Development of the Decarbonisation
   Plan (in accordance with the 2025-2027
   Forecast Regulated Accounts).

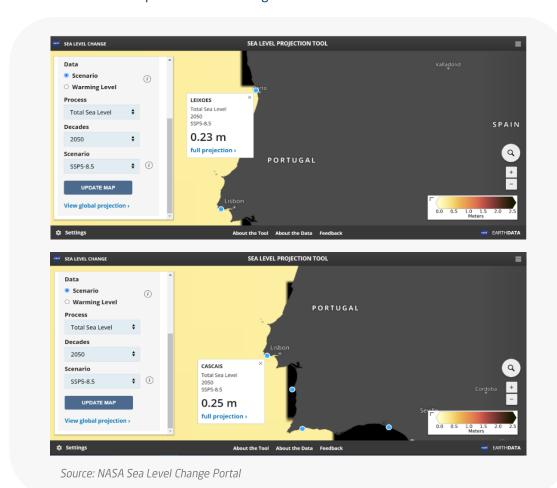


#### A Annex A | Dictionary of Climate Risks and Opportunities | Unassessed physical risk - Rising water levels

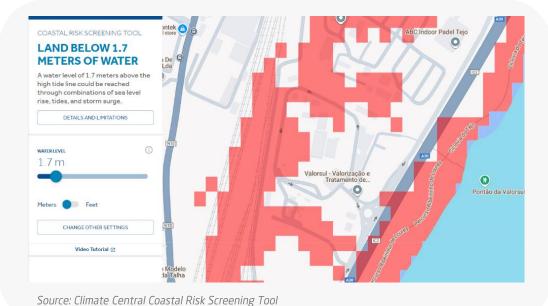


ALTHOUGH ALL POTENTIAL PHYSICAL RISKS WERE STUDIED, NOT ALL WERE ASSESSED. THIS APPLIES PARTICULARLY TO CHRONIC PHYSICAL RISKS, AS AN INCREASE IN THEIR AVERAGE LEVEL DOES NOT AFFECT THE ASSETS, SINCE THEY ARE ADEQUATELY DIMENSIONED.

It is worth noting that the risk of rising water levels was explicitly excluded, as the location of EGF assets was cross-referenced with areas at risk of sea level rise, and it was concluded that EGF is not at risk from the expected rise in Portugal.



- Based on the available climate data, the Valorsul facilities in São João da Talha are considered the most vulnerable to rising average water levels, combined with tides and flooding.
- However, such impact would only be significant in the event of a 1.7-metre rise in water level. Projections for the Lisbon region indicate a maximum rise of 0.3 meters by 2050, under scenario 3.





IN ADDITION TO APPLYING BEST PRACTICES AND AVAILABLE CLIMATE GUIDELINES, THIS STUDY DREW ON THE MOST RECENT SCIENTIFIC KNOWLEDGE, PARTICULARLY THROUGH THE USE OF THE COPERNICUS CLIMATE DATA STORE, WHICH PROVIDES MULTIPLE DATASETS ENABLING THE ANALYSIS OF DIFFERENT VARIABLES ACROSS VARIOUS GEOGRAPHICAL REGIONS AND TIME SERIES, ALIGNED WITH THE RCP SCENARIOS.



#### **Copernicus Climate Data Store**

**Various datasets**: freely accessible climate data via the CDS, adaptable to public or commercial needs, offered in different datasets, and filterable by product type, variable domain, spatial coverage, temporal coverage and sector

**Wide range of variables:** access to historical data or projections, specific to different geographical regions and scenarios, including outputs such as time series graphs and maps showing historical or projected climate impacts

**Use of data with Python:** connection of raw data to online computing power, enabling the creation of Python applications (e.g. Toolbox) to run on the CDS for data retrieval, calculations and results presentation

**CMIP6**: database resulting from the latest stage of collaboration under the Coupled Model Intercomparison Project, which constitutes the most up-to-date global climate data model available. It provides scientifically robust data forming the basis for the Intergovernmental Panel on Climate Change reports

#### **MODELS USED**

**EXTREME RAINFALL** 

COLD SPELLS

#### GFDL-ESM4 (USA)

MRI-ESM2-0 (Japan)

CNRM-ESM2-1 (France)

NorESM2-LM (Norway)

NorESM2-MM (Norway) CanESM5 (Canada)

DSL CMEALD (Canada)

IPSL-CM6A-LR (France)

MIROC6 (Japan)

**HEATWAVES** 

**HEATWAVES** 

MIROC-ES2L (Japan)

#### GFDL-ESM4 (USA)

HadGEM3-GC31-LL (United Kingdom)

HadGEM3-GC31-MM (United Kingdom)

CAMS-CSM1-0 (China)

CanESM5 (Canada)

IPSL-CM6A-LR (France)

MIROC6 (Japan)

MIROC-ES2L (Japan)

MRI-ESM2-0 (Japan)

CNRM-ESM2-1 (France)

NorESM2-LM (Norway)

NorESM2-MM (Norway)

EC-Earth3-Veg-LR (Europe)

#### GFDL-ESM4 (USA)

MRI-ESM2-0 (Japan)

CNRM-ESM2-1 (France)

CAMS-CSM1-0 (China)

CanESM5 (Canada)

IPSL-CM6A-LR (France)

EC-Earth3-Veg-LR (Europe)

MIROC6 (Japan)

FGOALS-g3 (China)

#### GFDL-ESM4 (USA)

MRI-ESM2-0 (Japan)

CNRM-ESM2-1 (France)

CAMS-CSM1-0 (China)

CanESM5 (Canada)

IPSL-CM6A-LR (France)

EC-Earth3-Veg-LR (Europe)

MIROC6 (Japan)

FGOALS-g3 (China)

Dep

Dependent on various variables

# Our legacy inspires and commits us to building a better world

Mota-Engil purpose



