novobanco

TCFD REPORT 2022

APRIL 2023

OUR 1ST TCFD REPORT

1. Introduction

Photo by novobanco Group employees

1.1 Messages from the CEO and other senior officers

Chief Executive Officer

Mark Bourke

"Our goal is to establish novobanco as a leading ESG Bank in Portugal, and this can only be achieved by **integrating sustainability** into the core of the Group's business model.

Our strategy emphasises the advancement of the ESG risk management framework with a specific focus on climate and environmental risks. Through rigorous assessment and monitoring of these risks, we align our portfolio to actively support **our customers' transition journeys**.

It is also our goal to continuously improve the financial and social wellbeing of our people, our customers and the communities we serve. We are a responsible bank, acting fairly and maintaining high standards of conduct."

Chief Legal Compliance Officer

Luísa Soares da Silva

"Sustainability is a priority for novobanco. Our commitment to sustainability is driven by the **expectations of our customers**, regulators and the Bank's various stakeholders.

While we acknowledge the numerous challenges ahead, we **have constructed a resilient operating model**, supported by a **comprehensive action plan that encompasses our entire organisation**. With the dedication and commitment from all, this plan will allow us to **manage and mitigate risks, while also leveraging opportunities aligned with the needs of our customers** and with our strategic plan."

Head of ESG Office

Inês Soares

"In 2022, **we reinforced our internal governance of climate and environmental issues and risks within the ESG scope by establishing a dedicated ESG office.** This office reports directly to the Executive Board of Directors, with a clear mission to foster the integration of sustainability and ESG principles into novobanco Group's strategy and operations.

Our objective is to integrate ESG factors into the business, support and foster the **creation of products and services that align with ESG factors**, and incorporate ESG factors into our risk models.

All the while, we will persist in our efforts to promote initiatives aimed at reducing our environmental footprint."

1.2 The novobanco Group

Novo Banco, S.A. ("novobanco" or "the Bank"), together with its subsidiaries and affiliates which constitute the Novo Banco Group ("the Group" or "novobanco Group") develops its core business in the Portuguese banking sector, in the corporate and retail segments, and also in asset management. In addition, the Group has equity holdings in entities that operate in the venture capital, real estate and renting areas. 75% of novobanco's share capital is held by Lone Star through Nani Holdings S.G.P.S., S.A..

novobanco is a Portuguese universal bank that offers the full spectrum of financial products to individuals, corporates and institutions. Covering the entire national territory, we are deeply committed to serving and supporting the Portuguese business community.

These are our main values:

- COLLABORATION with all stakeholders in order to achieve the best results for our clients and for society.
- DYNAMISM: we embrace continuous transformation and reinvention in order to remain relevant.
- DIVERSITY: we reflect customer and employee needs onto solutions and plans that cross-cut all generations.
- TRANSPARENCY: we maintain authentic and open exchanges of information among all stakeholders.
- EMPATHY: we incorporate the voice of clients and society into the way we do business.

In addition to the novobanco brand, we are present in the national market through:

novobanco DOS AÇORES | Best Bank | GNB Gestão de Ativos GRUPO novobanco

Our strategic pillars

The Bank's strategy is based on 4 pillars that form the foundations on which its ambitious medium-term objectives will be achieved:

- **Customer-centric bank**, with distinctive value propositions, leveraging on a digital and omni-channel approach;
- **Simple and efficient operations** that simplify the banking experience;
- **Developing people and culture**, actively attracting and nurturing a team of skilled professionals who embody the core values of our bank;
- **Delivering sustainable performance**, reinforcing the integration of ESG into our business and thereby fostering sustainable growth.

  Under this pillar, the Bank aims for its financial performance to be characterized by sustainability, the strength and quality of its balance sheet structure, and the maintenance of adequate solvency levels.

  This provides the framework into which the entire programme for integrating ESG issues into the organisation is set. It encompasses various dimensions, such as implementing the ESG operating model, conducting organisation-wide training, adapting product and service offerings, and transforming investment and risk management policies.

  novobanco recognises ESG as an opportunity for the financial industry to contribute to the crucial objectives of enabling the economy's energy transition.

1.3 The TCFD

In 2015, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD) to address concerns on insufficient disclosure of climate-related risks and opportunities.

In June 2017, the TCFD released its final recommendations which aim to support companies and organisations to disclose climate-related risks and opportunities effectively and clearly, promoting transparency for the various stakeholders.

We are aware of the importance of using this approach and believe that through the application of these reporting recommendations, climate information will be clearer and easier to compare and contribute to promote more sustainable business strategies. An added benefit is that we approach climate-related issues not only as risks but also as opportunities and consider these two aspects in our business strategy.

This year, we report for the first time on climate-related risks and opportunities, in alignment with the disclosures recommended by the TCFD and following the considerations and recommendations issued by the ECB in its recent thematic review on climate-related disclosures. This year's report has not yet been audited.

The report will be published on the novobanco website.

The TCFD recommendations point to four key thematic areas of analysis for corporate strategy: Governance, Strategy, Risk Management and Metrics and Targets. We will follow this structure in our report.

1.4 Our ESG journey in 2022

In 2022 **novobanco** ESG programme was largely focused on climate and environmental risks:

- From senior management to the different departments, **we continued the execution of our ESG strategic plan**, with a dedicated PMO and monthly follow-up steerings;
- **We reinforced training** – from senior management to all other staff, we developed training paths and content that enable everyone to understand the challenges and risks of ESG, and in particular climate and environmental risks;
- We established our **matrix for classifying green operations**, according to criteria based on the European Taxonomy;
- We announced new green investment **and business targets**, which were communicated to the market;
- For operations that demonstrate 'green' characteristics, **we approved a price differentiation** (discount, albeit limited) that shows our willingness to encourage and support the transition of the Portuguese economy;
- **We designed routines for the regular identification and monitoring of green financing and investment at origination**;
- We launched the **development of ESG risk assessment methodologies (scoring and rating)**, focusing on climate and environmental issues, and this allowed us to start collecting data on the ESG risk profile of our clients;
- We successfully participated in the **first stress test exercise focusing on climate risks**;
- We established **risk monitoring routines** (e.g. risk reporting) using key risk metrics. This included implementing the methodologies supporting those metrics;
- **We strengthened the processes for gathering information on clients/operations and collaterals**; this included adjusting contract provisions to allow the Bank to access and process this data;
- **We have implemented policies to exclude specific sectors and activities** that we believe should not be included in our risk appetite policy, and established minimum safeguards for financing other sectors and activities;
- **We have submitted our scope 1 and 2 commitments to Science Based Targets** and are working towards submitting scope 3 for our financing and investment portfolio.

What we expect in the coming year

In 2023 we will make further progress on the various initiatives already launched, with the aim of increasingly integrating ESG factors into the Bank's strategy and business. Thus, we expect to achieve a significant level of engagement with our clients, using robust risk assessment methodologies that will allow us to begin work on the alignment of the Group's balance sheet. We will also step up the implementation of the organisational, procedural and IT changes that support our approach to ESG and its integration into the business.

Highlights of our performance in 2022

Overall, our ESG journey has enabled us to achieve the following milestones:

+32
Strategic initiatives concluded

#11
ESG strategy monthly steerings

€342 million
Green investment and financing

61.1%
Suppliers with ESG scoring

11 760
ESG training hours

-34.9%
Reduction of scopes 1 and 2 CO_2 emissions

2. Governance

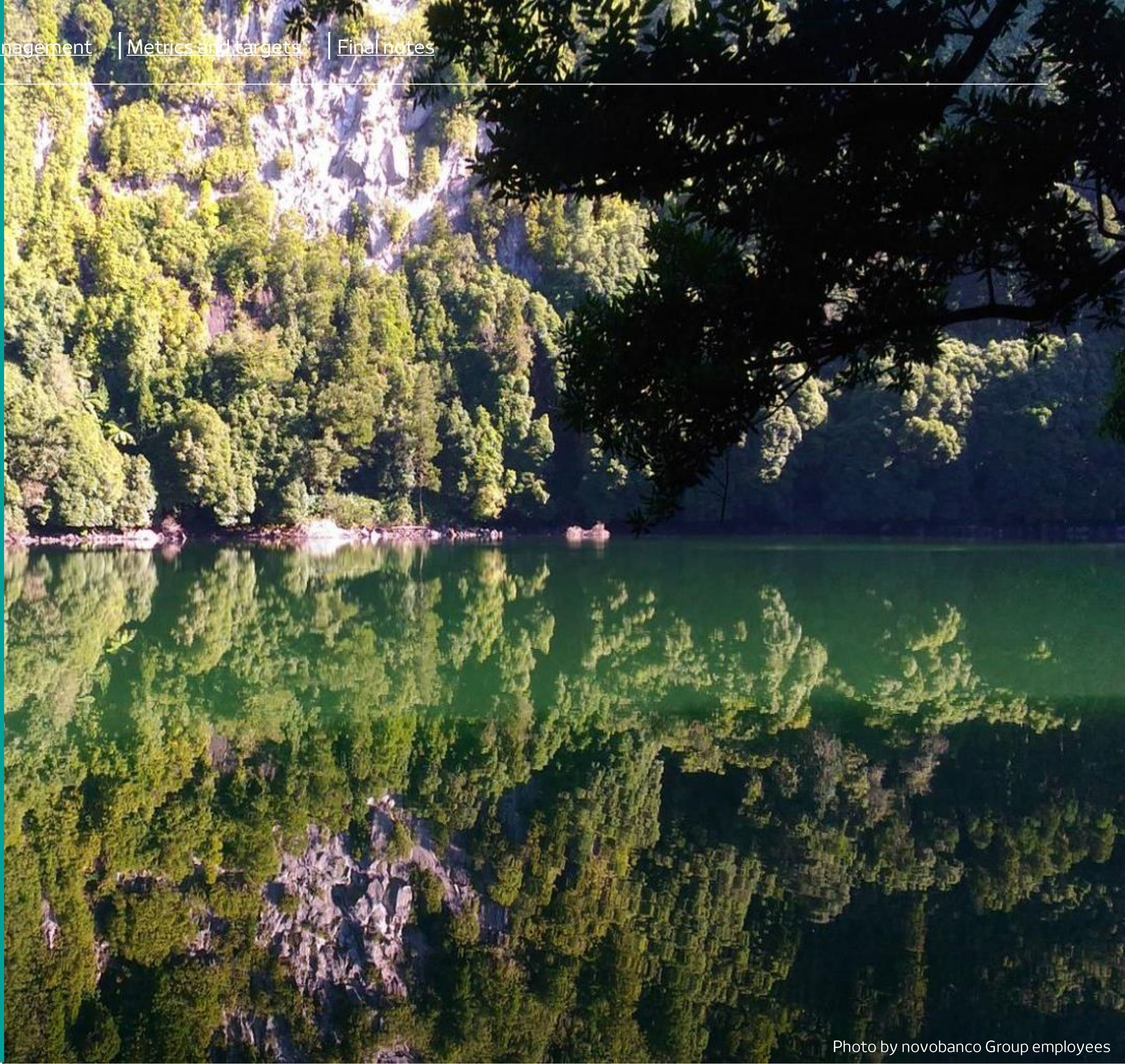


Photo by novobanco Group employees

2.1 Governance framework

An effective governance structure is fundamental to ensure the good execution of the strategy. novobanco manages climate-related issues in line with its Sustainability Governance Model, which establishes clearly defined roles for the identification and analysis of the associated risks and opportunities and guarantees an effective response to climate challenges.

The Executive Board of Directors (EBD) takes direct responsibility for managing climate risks, actively engaging in strategy formulation and action planning. Oversight of these activities is provided by the General and Supervisory Board (GSB).

In 2021, we created the Sustainability Steering, which prepares the background for effective management decision-making on sustainability-related issues. The Steering's tasks include the following:

- Defining and monitoring the implementation of the ESG strategy and policies;
- Integration of ESG issues and risks, including climate and environmental risks, into the business and the risk management models;
- Teams' coordination to ensure the implementation of the strategy;
- Assessment of the initiatives' impacts;
- Monitoring of the environmental, social and governance KPIs and climate-related KRIs.
- Coordination of the liaison with all ESG-relevant stakeholders, both internally and externally.

BOARD

GENERAL SUPERVISORY BOARD
Supervises strategy, positioning and plans for the Global Sustainability Framework

EXECUTIVE BOARD OF DIRECTORS
Involved in decision-making processes related to the implementation of the Global Sustainability framework

SUSTAINABILITY STEERING
Defines strategy, positioning and guidelines, discusses and approves matters related to the ESG and C&E risks, monitors risks and implementation plan

RISK COMMITTEE
Discusses and approves risk management framework, policies, monitoring metrics and analysis

OTHER COMMITTEES
Product and services offer, Data requirements and architecture, among others

MANAGEMENT

ESG OFFICE
Coordinates strategy, positioning and implementation plans to integrate ESG principles in the bank's organization and activity

RISK MANAGEMENT FUNCTION
Develops C&E risks assessment and management frameworks and methodologies

OTHER FUNCTIONS
Marketing, Operational, Data, ...

ESG PMO
Supports ESG Office and remaining Teams in accelerating transformation

BLOCK LEADERS & TEAMS
Implement ESG and C&E risks related initiatives

2.2 Main functions and responsibilities

Management and supervisory bodies

The EBD is the body primarily responsible for managing novobanco Group's ESG plans and climate risks. The GSB has a regular involvement in the supervision of climate risk management, both directly (through *ad hoc* monitoring in its meetings) and through its Risk Committee (quarterly monitoring of climate risk management issues).

To ensure the best condition to fulfil their responsibilities, both the EBD and the GSB participated in training sessions throughout 2022. These sessions focused on deepening their understanding of the key ESG issues and their relevance to the business.

Additionally, the EBD appointed an officer responsible for ESG, who, together with the officers for risk management, credit, and commercial (corporate) business, ensures dedicated monitoring of the Bank's priorities and initiatives in these matters.

Sustainability Steering

novobanco acknowledges that it is still in the initial phase of its ESG strategic plan (the transformation phase), during which the main methodological developments are taking place to prepare for ESG's full integration into the business. This phase will be completed in 2024.

To streamline the discussion and decision-making process as well as to ensure effective management of the transformation plan, the Steering meets monthly, or more frequently if necessary, being attended by the four members of the EBD responsible for the ESG, Risk, Credit and Corporate Segment portfolios.

The Steering has approval powers on matters related to the implementation of the ESG strategic plan and climate and environmental risks. The CEO and a member of the GSB also attend these meetings on a quarterly basis.

Upon completion of the development phase of the ESG strategic plan, the Steering will be converted into a formal governance forum, similar to other committees within the Bank.

ESG Office (GESG)

The ESG Office performs dual roles, supporting both the Bank's business and its risk management. It collaborates on product development and commercial initiatives, as well as on the development of risk methodologies and controls. In general, the ESG Office is responsible for coordinating the Bank's ESG strategy, including the implementation of various internal initiatives. It also provides guidance to the management and supervisory bodies on all ESG-related matters.

Risk Management Function (DRG)

The Risk Management Function is responsible for the overall risk processes, which include risk monitoring and assessment, as well as the development of the policies, methodologies and data required for this purpose.

ESG Project Management Team (PMO)

We also created a PMO to support the ESG Office and all departments and teams involved during the transformation phase of the strategic plan, with the aim of increasing the capacity and pace of delivery during the transformation period and expanding the organisational commitment.

Target Organisational Model (TOM)

In 2022, we also defined and approved the governance and organisation model for the integration of ESG issues into the business, as well as for the management of climate risks across the entire organisation, based on 2 key principles:

- To identify all existing or planned activities that are affected or changed by the ESG programme;
- To establish an operational model that builds upon the existing structures (principle of regular integration of ESG into the Bank's everyday operations) and the division and complementation of ESG-related duties among the various Bank and Group departments.

Internal policies and standards

The management of climate risks is supported by the 'Global Policy for ESG Risk Management', which establishes the organisation, responsibilities, procedures and methodologies required for the good management and control of ESG risks and, in particular, climate and environmental risks.

The remuneration policies of the management bodies already include elements linked to the ESG performance of novobanco. Specifically, the following measures have been implemented under these policies: a) in 2022, indicators and objectives were established to gauge the execution of the bank's ESG agenda, including the progression of ESG risk management frameworks; and b) in 2023, ESG business indicators and individual objectives will be introduced for each director concerning their contribution to the Bank's ESG agenda.

3. Our ESG strategy

Photo by novobanco Group employees

3.1 Strategic approach

Making a positive contribution, through its activity, to the entire ecosystem within which it operates is an essential goal for the novobanco Group. In our Sustainability Policy we assume a clear commitment to developing a sustainable business and contributing to the transition to a low-carbon economy.

Our sustainability policy adopts a dual approach, encompassing both internal management practices and banking activities. It focuses on key macro-priorities such as "Sustainable Business," "Social and Financial Wellbeing," and "Responsible Banking", which are driven by specific targets aimed at promoting more sustainable operations, responsible investment, and a positive contribution to society, and reinforced by a sustainable corporate culture.

In terms of climate, we have identified the following strategic pillars as the most pressing:

- **Reducing the carbon footprint of our operations**

  To act within an operational model that minimises the direct impact on the environment, reducing consumptions and CO_2 emissions. We have implemented various measures with specific targets that are monitored on a monthly basis.

- **Reducing the carbon footprint of our portfolio**

  The first step in our path was to consider the exclusion from our loan and risk appetite policy of financing to certain environmentally-sensitive activities and sectors, and to ensure that, as a prior condition to lending, clients guaranteed minimum safeguards in their activity.

  We are concentrating our efforts on the development of methodologies for the analysis and assessment of ESG risks in companies.

  We are also assessing the impact of environmental and climate risks on the bank's operations and portfolio and defining the management framework to address these risks, and also analysing the portfolio's exposure to specific sectors, with the aim of reducing the environmental impact and contributing to the European objectives of carbon neutrality.

- **Financing the Energy Transition**

  We support our customers through loans whose purpose is aligned with the environmental objectives of the European Taxonomy, through financial products and services, and also through financial literacy. We have also partnered with external agents with experience and expertise, reinforcing the competitiveness of our offer.

Main tools for the implementation of the strategy

Several steps have already been taken to implement this strategy. Those related to climate risk management are analysed in chapter 4 of this report. In addition, we have also defined targets for

- Reducing internal consumptions and streamlining the use of energy.
- We are developing a range of financing products designed for both individuals and companies, incorporating ESG criteria, including Eco Home Loans and the Sustainability Credit Line, among others.
- We also provide microcredit to finance projects that foster social inclusion and the creation of self-employment, in close collaboration with the entities that promote entrepreneurship on the ground.
- We have clear objectives and a demanding concept of green investment production, where we verify if the purpose of financing or the activities financed are included in the EU Taxonomy (taxonomy eligible activities), determine to which objectives they contribute substantially, and which criteria they must meet, going beyond mere taxonomy eligibility.
- We have incorporated ESG factors into our investment advisory services and we have developed investment solutions (Funds) that promote sustainability.
- We have implemented a supplier relationship model that is based on a commitment to internationally recognised good practices and principles and on our awareness of the economic, environmental and social impacts generated by this group of stakeholders, as we understand the importance of ensuring the transversality of our sustainability policy throughout the entire value chain.
- We have also implemented several internal policies to establish and advance our diverse ESG commitments, namely the "Sustainability Policy", the "Environmental Statement", the "Supplier Relationship Principles", and the "Financing Principles - Exclusions and Minimum Safeguards".

Sustainability as a strategic pillar

novobanco's strategic plan is steered by the following premises: "Customer-centric bank, simple and efficient operations, development of people and culture, and sustainable performance".

With a focus on climate risk management, we thus strive to:

- Achieve sustainable results through disciplined management of risk, capital and funding sources.
- Strengthen the integration of ESG into our business and support the sustainable growth of our key stakeholders.

The Sustainability strategy is implemented and monitored on a monthly basis through 8 blocks of initiatives consisting of various deliverables, with specific objectives, deadlines and responsibilities established for their execution:

E1	To define a new **internal ESG culture**, adjusting the governance and control models
E2	To apply the **European Taxonomy** to the Bank's portfolio and ensure its integration in the business
E3	To adapt the **risk management framework to Climate and Environmental risks**
E4	To implement a **strategy to manage and reduce emissions from our operations**
E5	To **align commercial and investment business strategies to ESG objectives**
E6	To align the policy **on investment products and advisory services with ESG principles**
E7	**To adapt the MIS to ESG requirements and ensure a** new internal and external reporting / disclosure model
E8	To ensure that the **Bank's brand management and communication promotes its ESG positioning**

In accordance with the governance model described above, each block is:

- Led by a senior manager of the Bank, with the participation of several departments, depending on the developments/ deliverables to be executed;
- Supported by an operational plan, which establishes the scheduled initiatives and deliverables for the period of 2021-2024;
- Responsible for driving the developments and deliverables required to achieve the established objectives;
- Controlled through the fulfilment of dedicated KPIs, aimed at monitoring and tracking the proper execution of the plan;
- Supervised by the ESG PMO, in terms of execution pace and timetable;
- Responsible for monthly reporting on its activities to the Sustainability Steering.

The initiatives relating to the development of climate risk management approaches, the proposals on the strategy for managing these risks and the monitoring of their results are first implemented according to this structure and then incorporated into the Bank's normal management routines.

3.2 Commitments and adhesions

In the ESG journey and execution of the sustainability strategy, collaboration with relevant partners is a priority. While commitments to environmental initiatives can be very challenging, we believe in their significant impact towards creating a more sustainable future.

To this end, novobanco participates in the following climate-related initiatives:

- **Business ambition for 1.5º C**

  We have endorsed the objective of reducing our own as well as financed GHG emissions and contributing to a low-carbon economy in the long-term. In pursuit of this objective, we have made a commitment to establish science-based targets aimed at reducing the Bank's GHG emissions, having joined the Science Based Targets Initiative (SBTi).

- **UN Global Compact**

  We assume our commitment to the ten fundamental principles of this initiative, in the areas of human rights, labour practices, environmental protection and anti-corruption. These principles aims to promote businesses' public and voluntary commitment to endorse these principles.

- **Commitment Letter for Sustainable Finance in Portugal**

  The letter aims to contribute to the promotion of sustainable investment practices in the country, with the objective of accelerating the process of transition to a carbon neutral economy by 2050.

3.3 Climate-related risks

Climate change, which can have significant impacts on business models and the economy as a whole, is one of the greatest threats currently faced by society,

The double materiality perspective is commonly used when assessing climate impacts on the operations of financial institutions: a) on the one hand, there are indirect financial impacts, i.e., the impacts of climate-related risks on the performance of our clients and counterparties; and b) on the other, there are environmental and social impacts that arise directly from the Bank's activities.

novobanco's approach to environmental and social materiality (e.g. direct) is addressed through a specific strategy – the Social Dividend Model –, which is presented in section 3.4 of this chapter.

The approach to financial materiality is explored here, and its risks are analysed in more detail in chapter 4.

Climate risks in financial materiality

The risks stemming from climate change mainly encompass physical risks, such as extreme weather phenomena (storms, droughts, floods), and transition risks, which arise from the effort to adapt economic activities to more circular models with lower carbon footprints.

Generally speaking, these risks primarily affect financial institutions through their impact on the activity of their clients and counterparties: physical risks can cause damage to companies' production assets, interruptions in operations or even the loss of revenue associated with disruption in supply chains. Transition risks can affect the value of financial assets directly (e.g. assets related to fossil fuel energy) or indirectly, through the effort and cost of the adaptation required from companies.

At the same time, climate change-related opportunities can be relevant. For instance, supporting the transition of companies or the development of infrastructures that are more resilient to physical risks can give rise to new products and services or even lead to increased turnover. While we know we are only at the beginning of this journey, we aim to support our clients in managing their own climate-related risks and opportunities by providing them sustainable financial solutions and the necessary guidance on the path to a low-carbon and more circular economy.

novobanco seeks to understand and manage climate-related risks and opportunities by identifying these risks and assessing their impact on its loan and investment portfolio.

From a strategic discussion perspective, the bank adopts a systematic vision (as shown in the table to the right and described in the next section) of climate risks, which allows discussing their implications for business strategy and planning the best response to them. On the other hand, we have adopted a more granular approach to the management and control of these risks, using more detailed definitions (v.g., internal taxonomy) that allow for a comprehensive assessment of climate risk factors in the other financial and non-financial risk categories.

Typologies of physical risk	Horizon
Acute risks Caused by one-off events such as droughts, floods and storms	M, L
Chronic risks Risks caused by gradual changes in climate patterns such as rising temperature and sea levels, increased pressure on water resources, loss of biodiversity, or changes in land use	M, L

Typologies of transition risk	Horizon
Public policy, legislation and regulation The bank's obligation to integrate sustainability criteria into its products and services faces mounting pressure from regulatory requirements	S, M, L
Technological The need to incorporate new technologies into production processes may affect competitiveness and production costs	M, L
Market Shifts in supply and demand for products and services as the effects of climate change become increasingly mainstream	M, L
Reputational Perception by clients, stakeholders and society at large of the Bank's approach to ESG factors and their integration into the business	S, M, L

C Short-term M Medium-term L Long-term

Strategic analysis of main climate risks

We describe below how we analysed the main climate risks in terms of their potential impact on the Bank's strategy, business and activity and the most significant measures we have adopted (or are in the process of adopting) in order to prevent or mitigate the risks and challenges identified.

Risks	Potential impact on the Bank's strategy and business	Our mitigation measures
Physical risks **Acute typology**	• Possible costs arising from damage to the Bank's physical assets, including business disruption • Possible increased absenteeism of the Bank's employees • Business disruption for clients and counterparties due to damage to production assets or limitations in the value chain • Potential devaluation of collaterals on loans granted by the Bank	• Business continuity planning that ensures an adequate assessment of physical risks to the Bank's main assets and activities and the establishment of the necessary contingency measures • Based on the reinforcement of physical risk assessment and quantification methodologies: a) adoption of a collateral acceptance policy that encompasses additional or differentiated requirements for formalising insurance policies on received collateral; and b) establishment of covenants and conditions for acceptance of financing that allow the inclusion of aspects pertaining to the continuity of the businesses being financed
Physical risks **Chronic typology**	• Decrease in productivity and/or increase in operational and production costs in exposed sectors, impacting the financial performance of customers and counterparties or projects financed by the Bank	• Development of risk assessment methodologies, including strengthening contact/engagement with clients (and gathering information on their activity and projects) • Integration of climate risk assessment into loan and pricing decision processes
Transition risks **Policies and legal framework**	• Limitations on the development of business strategies, increase in the Bank's compliance costs (or process inefficiency costs) as a result of inadequate implementation of legal and regulatory requirements, especially those of a prudential nature • Increased operating costs for exposed sectors and companies • Inability to invest (due to restrictions on access to financing) with an impact on the commercial activity of companies/ counterparties	• Changes to the governance and organisational model to ensure a dedicated monitoring of ESG issues • Increased interaction with companies and counterparties, for a better insight into their transition and business adjustment challenges • Development of products and services with structuring conditions and rationale aligned with our customers' transition needs

Risks	Potential impact on the Bank's strategy and business	Our mitigation measures
Transition risks **Technology**	• Inability of the Bank's corporate clients and counterparties to adapt, due to limited investment capacity or restricted access to financing • Unavailability of the most suitable technologies (at a reasonable cost) necessary to meet the new standards of business operations • Business transformation and conversion costs, with an impact on the financial performance of customers and counterparties	• Increased interaction with companies and counterparties, for a better insight into their transition and business adjustment challenges • Development of products and services with structuring conditions and rationale aligned with our customers' transition needs • Establishment of partnerships that allow keeping abreast of market developments and offerings of solutions/ technology
Transition risks **Market**	• Changes in supply and demand for ESG-oriented banking products and services, with an impact on the Bank's commercial competitiveness • General increase in market prices of technology and production factors with an impact on the competitiveness and financial performance of companies • Limitations on the growth of companies and sectors exhibiting greater misalignment with efficiency and decarbonisation standards, resulting in reduced demand for their goods and services	• Promotion of awareness initiatives for the Bank's customers and counterparties, encouraging them to proactively address transition challenges • Development of risk assessment methodologies, including strengthening contact/engagement with clients (and gathering information on their activity and projects) • Increased interaction with companies and counterparties, for a better insight into their transition and business adjustment challenges • Development of products and services with structuring conditions and rationale aligned with our customers' transition needs
Transition risks **Reputational**	• Risk of failing to meet stakeholders' expectations regarding the Bank's performance on critical climate change issues • Constraints on investors' and stakeholders' perception of the Bank's brand image • The Bank's involvement in instances of non-compliance with new ESG requirements, with an impact on its image and reputation • Association of the Bank with clients, counterparties, suppliers and other third parties with sensitive ESG profiles	• Development, implementation and ongoing monitoring of a strategic ESG plan aimed at enhancing the Bank's readiness to effectively respond to the challenges posed by climate risks • Adoption of conservative policies and criteria to ensure the highest level of rigour and compliance in the Bank's decisions and results • Rigorous communication with the market • Implementation of supplier selection and monitoring controls • Reputational risks identification and assessment exercise

3.4 Social Dividend Model

The strategy defined by novobanco for sustainability gave rise in 2022 to the second edition of the Social Dividend model. The Social Dividend Model embodies a commitment assumed by the Bank to give back to society and its employees.

This model integrates into the business model the three dimensions of sustainability: environmental, social and governance.

It consists of three programmes, defined on the basis of the material issues identified by the Bank's stakeholders. It comprises different initiatives with specific objectives for 2024, with 15 indicators that permit to monitor the Bank's ESG performance. We publicly disclose the outcomes of these objectives on a quarterly basis.

The current model is in place for the 2022-2024 three-year period. It encompasses a vision on the Bank's internal reality but also incorporates external concerns, including communication initiatives. It focuses on the following strategic priorities:

#Environment	#Social&Wellbeing	#ResponsibleBanking
We are focused on reducing our negative impact on the environment and promoting a more sustainable, low-carbon economy, supporting our customers' transition.	We will run our business based on social criteria, promoting the wellbeing of our employees and contributing to the financial wellbeing of the community we serve.	We hinge our activity on a responsible business model emphasising values such as equity, equal opportunities and gender, and prioritising ESG concerns throughout our value chain.

Our goals for 2024 under the Social Dividend, i.e. our commitment to society:

ENVIRONMENT	+ €600 mn of Green Investment[1] (vs. 2021)	€0 mn of financing to excluded sectors[2]	30% of investment products with ESG[3] characteristics	- 30% of Paper consumption[4] (tonnes, vs. 2021)	-28% Of CO_2 emissions from own operations[5] (tonnes, vs. 2020)
SOCIAL AND FINANCIAL WELL-BEING	40% of the employees benefiting from the social Well-being programme[6]	+ 3 p.p. of employees with psychosocial risk assessment of "Healthy"[7]	+ 8 p.p. in employee engagement level[8] (vs. 2021)	+ 11.8 points in clients NPS indicator[9] (vs. 2021)	+ 9.594 hours of employees' voluntary service hours[10] (vs. 2021)
RESPONSIBLE BANKING	+ 2.5 p.p. of Women in senior leadership positions[11]	- 0.9 p.p. in gender pay gap[12]	+ 3 Partnerships with organisations to promote the employment of people with disabilities[13]	90% of suppliers with sustainability score[14]	+ 39.160 ESG training hours to the employees

1. Origination of financing or own portfolio investments in companies whose main economic activity is eligible to the European Taxonomy and origination of financing or own portfolio investments where the use of funds by the borrower or the projects are directed to economic activities eligible to the European Taxonomy or are aimed at investments in energy transition or the transition of the company's business model towards green activities; 2. Economic sectors not financed by novobanco: Arms, Prostitution, Pornography, Coal (mining and energy production) and Trade in wildlife and endangered species; 3. Investment Funds, Financial Insurance and Structured Products; 4. Reduction of photocopy paper consumption thanks to the implementation of the Phygital programme in the commercial network (started in 2019) and the dematerialisation of processes in the central services; 5. Scope 1 and 2 GHG emissions; 6. Percentage of employees who attended at least 2 programme initiatives per year. Programme of initiatives to promote a balance between personal and professional life, mental and physical health, healthy living, etc.; 7. Annual psychosocial risk assessment study of novobanco's employee base; 8. Assessment of the level of employee engagement carried out through the Pulse survey (average % of employee engagement); 9. Net Promoter Score calculated for Individual Clients - BASEF; 10. Promotion of volunteering actions in strategic areas of social impact of the bank. Each employee can take 1 day leave per year to engage in volunteer work; 11. First line managers and Executive Board of Directors; 12. "Gender pay gap weighted by the representativeness of each Performance Function" 13. Number of organisations with active partnerships being promoted by the Bank; 14. Recurrent suppliers to novobanco Group with annual turnover above 10 thousand euros.

3.5 Main opportunities inherent to risks

The incorporation of climate-related issues into the Bank's strategy leverages various opportunities. We aim to navigate the advantages in new obligations and emerging challenges, converting them into opportunities, not only to improve the internal management of novobanco's business but also to enhance a relationship or partnership with our clients. Examples of some of the main opportunities identified:

MARKET S M L
Brand and reputation

Maintaining our position at the side of companies

- Strengthening our position as "the bank for businesses" by accompanying, challenging and supporting our clients in their energy transition and reinforcing our relationship of partnership with our corporate clients
- We stand out from our competitors due to the quality, rigour and innovation of our approach to ESG.

COMMERCIAL OFFER S M L
Financing products & services

Offering the best support solutions for companies

- Development of financial products and services to support the transition - structured finance catering to the needs of clients and meeting robust technical criteria
- Implementation of external partnerships to strengthen our offer and deliver a comprehensive solution to our clients

INVESTMENT OFFER S M L
Investment and production of products

Reinforcing our investment offer

- Adoption of investment policies that integrate climate risk management considerations
- Implementation of an ESG rating matrix for operations
- Establishment of controls and procedures aligned with regulatory requirements in the design and provision of sustainable investment products

EFFICIENCY OF THE OPERATIONS S M L
Management of resources and energy efficiency

Sustainable and efficient operations

- Moving to new, energy-efficient premises (novobanco campus)
- Strengthening efficiency and saving programmes (in use of paper, water, electricity, other consumables)
- Promoting the efficiency of business travel to reduce energy costs
- Increasing the green fleet integration

COMMERCIAL POSITIONING S M L
Relationship with clients and counterparties

Communicating and interacting with our clients

- Promoting information and awareness actions with customers, such as conferences and other events
- Adapting the engagement models - from large to small companies
- Establishing partnerships and programmes with business and sector partners, reinforcing the proximity with our companies

RESILIENCE S M L
Internal policies, corporate responsibility

Promoting the resilience of our processes

- Implementation of assessment and acceptance models for suppliers and other third parties
- Development of new routines and information reports to monitor climate risk
- Training our employees to foster a mature management of climate risks

S Short-term M Medium-term L Long-term

3.6 Our objectives ahead

In the coming year, our ESG strategy encompasses the following main activities:

Areas	Strategic guidelines	Our next challenges
Business strategy	• To understand the short, medium and long term impact of climate and environmental risks on the business environment in which we operate, so that we can make informed, consistent and strategic decisions • To strengthen the integration of climate and environmental risks affecting the business environment in the short, medium or long term	• To assess and monitor the business environment in which we operate, particularly in terms of products and services, and to strengthen the Bank's offer tailored to support our client's journey towards climate transition • To identify the risks arising from climate change and environmental degradation in key industry sectors, geographic areas and related products and services, i.e., to strengthen our sectoral policies • To define and monitor key performance indicators (KPIs) at the level of business lines (cascading down) • To determine which climate and environmental risks affect business strategy in the short, medium and long term, e.g. using scenario analyses and stress testing
Risk governance and risk appetite	• To consider climate and environmental risks when developing the business strategy and objectives • To ensure a climate risk management formal model • To guarantee the existence of an appetite for climate risks	• To define a policy on exclusions and minimum safeguards for financing and investment in specific sectors and activities and transpose it to the risk appetite policy (already implemented) and to build robust control and implementation processes • To enhance the integration of climate and environmental risks within the risk appetite policy (RAF/RAS) • To complete the internalisation of climate risk management responsibilities within the responsibility framework of each department (structure and organisational manual) and to ensure their effective incorporation into activity plans and budgeting processes • To continue to develop appropriate key risk indicators and to set appropriate limits to effectively manage climate and environmental risks • To ensure effective monitoring of institutions' exposures and responses to climate and environmental risks • To collect data and assess the Bank's portfolio in light of the taxonomy (reported in Sustainability Report)
Risk management	• To incorporate climate and environmental risks into risk management, with the objective of monitoring and mitigating these risks over a sufficiently long timeframe • To continuously monitor the effect of climate change and environmental factors on current market exposures	• To further enhance our risk materiality assessment, adopting a holistic and well-documented approach to evaluate the impact of climate and environmental risks on the existing risk categories • To implement an enhanced approach to risk identification/assessment and to the development of risk methodologies, including methodological definitions and customer ESG scoring results (segmentation model) • To strengthen mitigation measures for C&E risks • To adopt a strategic approach to measure and mitigate climate and environmental risks in accordance with the risk appetite strategy, and accordingly adapt policies and procedures, risk limits and risk control

Areas	Strategic guidelines	Our next challenges
Credit risk management	• To consider climate and environmental risks at all relevant stages of the credit granting process and portfolio risk monitoring	• To ensure full integration of C&E risks into the financing origination framework (already started) • *This phase corresponds to the development of risk methodologies that will serve as the foundation for adjusting integration procedures and the decision-making framework to incorporate climate and environmental risks* • To guarantee customer Soft and Hard ESG Rating questionnaires (initiated) • To design methodologies to provide integrated assessment of client/transaction risk profile and EU Taxonomy rating (alignment) • To consider climate-related risks in collateral assessments • To consider C&E risk assessments in the financing pricing framework
Operational risk management	• To consider the possible adverse impacts of climatic and environmental events on business continuity and also on reputational risks	• To assess the impact of physical risks on all operations, including the ability to recover quickly and continue to provide services • To ensure that remuneration policies and practices incentivise behaviour aligned with our climate and environmental approach (risk), as well as with the voluntary commitments undertaken by the institution • To preemptively identify future sources of climate-related risks and/or litigation related to its own activities, to undertake an assessment of these risks and to adopt mitigation measures for the risks identified
Quantification methodologies and stress testing	• To enhance stress testing approaches • To develop methodologies for quantifying climate risks	• To develop stress testing models focusing on climate risks • To start the development of climate risk quantification methodologies

4. Management of climate and environmental risks

Photo by novobanco Group employees

4.1 Risk identification and assessment

In 2020 **novobanco** introduced the ESG risk category into its risk taxonomy. ESG risks represent the potential negative impacts deriving from the current or future effects of possible ESG risk factors implicit in clients and counterparties or in the Bank's assets and liabilities. The impacts of ESG risks are usually transmitted through ´traditional' financial and non financial risk categories.

The integration of ESG risks within the taxonomy means that this category of risk, consistently with the other risks, is subject to processes of identification and materiality assessment. Once the materiality of these risks has been established, the standard formal management and monitoring processes are applied. The internal taxonomy comprises the following components where ESG risk factors are described as follows:

- Climate and environmental risks: the main component of ESG risk, it concerns the quality and functioning of the environment and natural systems, including factors relating to climate change, biodiversity, pollution and waste management
- Social risks: relate to social rights and the wellbeing and general interest of society and communities, and include factors such as equality, health, inclusion, labour relations, health and safety at work, human capital and communities' development.
- Governance risks: relate to aspects of internal governance, including the management and supervisory bodies, internal organisation, remuneration policies, internal control, tax practices, conduct and transparency.

Each of these components is individually recognised and assessed as to its impacts on the other risk categories, with a particular focus on a) factors with an external origin, and b) climate and environmental-related factors.

The internal impacts of risk factors are largely recognised and controlled under the risk management framework already established for the other risk categories: e.g., factors relating to the Bank's governance risks are managed under **novobanco**'s governance and internal control model and compliance management, and the impacts of physical risk factors on the Bank's activity and facilities are managed under the business continuity management framework.

A granular definition of each of the risk factors is adopted for a better identification, understanding and assessment of the risk factors, as shown in the scheme presented in the table to the right.

Our ESG risk taxonomy

Transition risk factors	Factors associated with the challenges, and respective impacts, resulting from the transition to a **low GHG emission economy**, including the effort required to **change the energy mix (i.e., change to renewable sources)** and the adoption of **more circular business models**.
Physical risk factors	Factors arising from the **physical manifestation of climate change and environmental degradation**, analysed under two categories: a) **acute** - which result from climatic and meteorological events with immediate negative impacts; or b) **chronic** - which are determined by gradual changes in climatic and meteorological conditions, leading to progressive ecosystem degradation.
Biodiversity factors	Factors that relate to the **quality and normal functioning of natural systems**, including climatic factors, loss of biodiversity (**impact rationale**) or consumption of physical and energy resources (**dependency rationale**).
Social risk factors	Factors that relate to the **basic components of wellbeing, security and the evolution** of society and the economy.
Governance factors	Factors pertaining to the good governance of institutions and companies, which should ensure good management and control principles, including recognition of ESG challenges.
Greenwashing factors	These factors cross-cut all the other risk factors, and are related to the possible misalignment between the announced and the actual objectives and purpose of a given counterparty, issuer or instrument, with regard to ESG issues.

Climate and environmental risks | Other environmental risks | Other ESG risks

4.2 Climate scenarios

novobanco recognises that the characteristics of climate and environmental risks advise that their assessment, management, and monitoring take into consideration the potential scenarios for the evolution of their factors and the respective timeframe for their materialisation.

For instance, the impact dynamics of transition and physical risk factors is dependent on the success of the implementation of policies and legislative proposals currently under execution (or still under discussion): for example, their success may lead to higher transition risk (due to economic activity adaptation or conversion efforts) and lower physical risk (through the ability to control the increase in global temperature).

Scenarios serve as a reference point for risk approaches by providing insights into the evolution of climate change and the associated impacts. In other words, depending on the scenario being considered, different assumptions are considered for climate risk management strategies, methodologies, and procedures.

Therefore, at the proposal of **novobanco**'s sustainability and risk management functions, the bank adopts annual scenarios (along with corresponding timelines) for the evolution of climate risk. These scenarios encompass the following:

- The design of the scenario (v.g., the main variables and underpinning narrative); and
- Each scenario's probability of occurrence.

Acknowledging that our understanding, assessment, and management of climate risks are still in their early stages, in 2022 we embraced the scenarios outlined by the NGFS[1]. These scenarios were attributed equal value, assuming an equal probability of occurrence for each, as indicated in the matrix on the right.

Based on the chosen scenarios, **novobanco** assesses different timeframes for the materialisation of risks, in a forward-looking perspective: by utilising projections of risk variables and metrics outlined in the scenarios, the bank assesses the evolving dynamics of risks over time. The year 2030 was selected as the reference year for the assessment of the materiality of the risks.

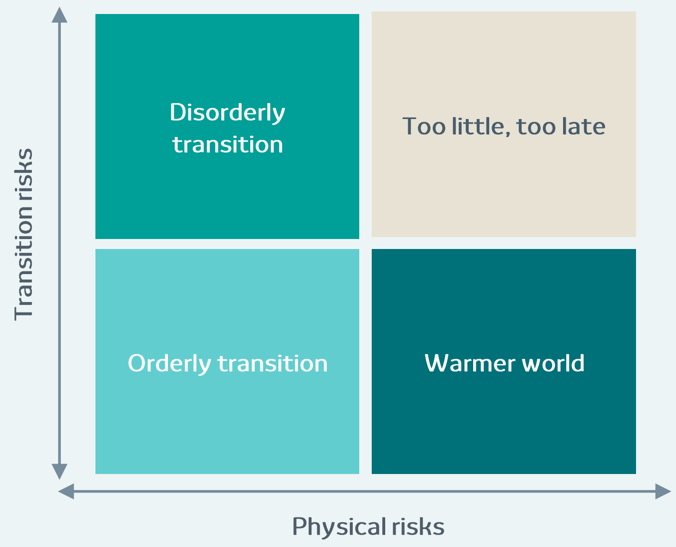
Materialisation of climate risks up to 2030

The year 2030 was selected for the materiality assessment for the following reasons:

- It is a public policy milestone at European level;
- It provides a sufficiently long time horizon to assess the manifestation of risks but is still close enough to determine management measures with predictable effects and, to that extent, normally included in the Bank's planning and management processes; and
- The year 2030 will be the timeframe considered for the establishment of plans and metrics for the Bank's balance sheet alignment/ transition[2].

[1] NGFS – Network for Greening the Financial System. 2 Still under definition, with completion expected by 2024. 3 NGFS – Climate Scenarios Portal.

NGFS[3] Scenario Matrix



Each of the scenarios mapped above was considered to help understand the dynamics associated with the materialisation of physical and transition risks.

Each of the represented scenarios is further elaborated through complementary scenarios that expand their narratives:

- **Orderly transition - net-zero 2050 scenario**: global warming is limited by up to 1.5º C through stringent climate policies, allowing to reach net-zero status in 2050.
- **Disorderly transition - disorderly scenario**: Nationally Determined Contributions (NDCs) are maintained until 2030 and transition efforts are accelerated from them onwards. The level of global warming stays at 2°C.
- **Warmer world – current policies**: this scenario simulates the greatest impacts from physical risks, assuming that only currently known policies are implemented.

Use of climate scenarios by type of risk

As far as possible, the assessment of ESG risks (and in particular of climate and environmental risks), adopts a forward-looking approach that acknowledges the dynamic nature of risk factors and consequently the varying resulting risk assessments.

As shown in the table to the right, in the identification and assessment of the materiality of risks, novobanco considers climate scenarios for the components of a) transition risk, and b) physical risk.

The other components, due to methodological limitation and/or unavailability of information, are assessed on a point-in-time basis, i.e., only the exposure at risk on the reference date of the assessment is considered, which is determined, in most situations, by the historical analysis of the main risk factors identified.

The following main variables were considered for the assessment of transition risks:

- Evolution of energy prices (and respective impact on the operational costs of industries and companies to which novobanco provided financing / invested in;
- Evolution of carbon allowance prices and respective impact on industries and companies subject to the Emissions Trading System (ETS) market;
- Expected additional financial investment effort for companies' technological and business adaptation (CAPEX).

novobanco will continue to strengthen its risk assessment approach, developing additional rationale to analyse / project the dynamics of climate impacts.

Risk components scenarisation matrix - timeframes considered and main variables assessed

Transition	2025	2030	2035	2040	2045	2050	Point-in-time (hist.)	Evolution of GHG emissions, carbon prices, green CAPEX estimates
Physical	2025	2030	2035	2040	2045	2050	Point-in-time (hist.)	Time and space evolution of each risk factor (e.g. floods, forest fires, drought and extreme heat)
Biodiversity	2025	2030	2035	2040	2045	2050	Point-in-time (hist.)	No scenarisation - point-in-time assessment based on exposure characteristics at the reference date
Social	2025	2030	2035	2040	2045	2050	Point-in-time (hist.)	No scenarisation - point-in-time assessment based on exposure characteristics at the reference date
Governance	2025	2030	2035	2040	2045	2050	Point-in-time (hist.)	No scenarisation - point-in-time assessment based on exposure characteristics at the reference date
Greenwashing	2025	2030	2035	2040	2045	2050	Point-in-time (hist.)	No scenarisation - point-in-time assessment based on exposure characteristics at the reference date

4.3 Risks materiality

Cross-cutting assessment

novobanco conducts its risk identification and assessment exercise on an annual basis. In this exercise, all the relevant risks for the banking activity are analysed and their materiality is assessed through specific methodologies (considering the probability of occurrence and the significance of their impacts), with the following objectives:

- To determine the relationship/ integration rationale between ESG risks and the Bank's other risk categories;
- To justify, in a qualitative manner, the material (or immaterial) impact of ESG risk factors, informing, for example, the ICAAP; and
- To identify which risk categories and factors should be specifically managed and controlled in the framework of risk appetite and strategy.

Those risks which prove to be material are subsequently subject to formal quantification, management/control and regular monitoring procedures.

ESG risks are integrated in this exercise through recognition that their factors impact 'traditional' risk categories, using the following approach:

- Matrices of ESG risk factors and metrics: the metrics are based on the components and factors previously described, and, whenever possible, adjusted by business area and/or portfolio. The metrics permit to make an objective assessment of the relevance of the Bank's exposure and, when applicable, to determine the scenario for the respective risk factor.
- Cross-cutting mapping of ESG risk factors and metrics for traditional risk categories: ESG risks are recognised as having the potential to materialise through the impact (or increase in risk) revealed in financial and non-financial risk categories.
- Risk materiality assessment scale, integrated into the (traditional) risk categories, to rank the potential for materialisation (present and long-term) of the risk factors.

This integration can be visualised in the table to the right, where ESG risk factors are correlated with traditional risk categories.

Description of traditional risk category							
Credit risk	Losses of capital (or remuneration) on banking book operations due the inability of a counterparty to meet its obligations. Includes sovereign and concentration risks.	●	●	●	●	●	○
Liquidity and funding risk	Losses arising from the Bank's present or future inability to settle its liabilities as they mature.	●	●	○	○	○	○
Interest rate risk on the banking book	Losses in the Bank's financial results or economic value due to unfavourable changes in market interest rates.	●	●	○	○	○	○
Market risk	Impacts from fluctuations in market prices or prices of factors that influence the valuation of instruments measured at fair value (e.g. credit spread, interest rate, exchange rate).	●	●	○	●	●	●
Operational risk	Financial impacts resulting from inadequacy or failures in processes, information systems or human conduct. Includes compliance, reputational and information systems risks.	○	●	●	●	●	●
Pension fund risk	Impacts resulting from the revaluation of Pension Fund's assets or liabilities that lead to liabilities exceeding the value of assets.	●	●	○	○	○	○
Strategy risk	Current or future impacts arising from changes in the Bank's strategy or restraints on its execution, or related to adverse impacts of business decisions.	●	○	○	○	○	○

● Category affected by ESG risk factors. ○ Category not affected by ESG risk factors.

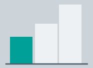
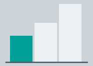
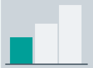
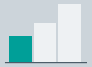
Materiality assessment results

novobanco has for the first time conducted a comprehensive assessment of the materiality of the impact of ESG risks on its risk profile and activity. The reference date of this assessment is 31 December 2022.

This exercise, whose results are summarised here, now incorporates risk management and control methodologies. For instance, the materiality assessment for credit risk within the credit segmentation model (ESG) determines the prioritisation of customers for information gathering and additional risk analysis.

Due to the impact of transition and physical risk factors, ESG risks particularly affect credit and strategy risk:

- The adaptation effort of some industry sectors to which the Bank is exposed is reckoned to be particularly significant in the medium and long term, impacting the creditworthiness of these companies. On the other hand, the impact of physical risks on companies' activities (impact on business continuity) may be relevant due to the lack of mitigation measures.
- For the same reasons and given the weight of the most exposed sectors in the Bank's results, it was concluded that ESG risks have a relevant impact on strategy risk.

Categories	Main risk factors and metrics	Main mitigation measures	Assessment
Credit risk	• GHG emissions intensity, carbon prices • Energy intensity, energy costs • Green CAPEX financial effort • Disruption in value chains (social risk) • Physical risk in real estate collateral and (location) of business activity • Energy performance of real estate collateral • Country risk variables (physical, transition, social & governance)	• Insurance policies/collateral coverage • Sectoral approaches and policies • Sectoral diversification	
Liquidity and funding risk	• Profile of main counterparties (physical risk, reputational risk) • Location of depositors (physical risk) • Employment sectors of depositors (transition risk)	• Limited exposure to financial counterparties, namely insurance sector entities • Geographical diversification of depositors	
Interest rate risk on the banking book	• Approach similar to that adopted for liquidity risk, including assessment of possible impacts on contingent lines/commitments	• Limited exposure to financial counterparties • Geographical diversification of depositors	
Market risk	• Replication of the analyses for credit risk • Reputational profile of main counterparties • Robustness of ESG-labelled instruments - greenwashing risk	• Risk profile of issuer and counterparties • Limited exposure to ESG-labelled instruments	
Operational risk	• Location of the Bank's main facilities - physical risk • ESG profile (reputational rationale) of novobanco's main suppliers and counterparties.	• Robustness of the Bank's business continuity planning and management framework • Supplier/third party management model (ESG ratings)	
Pension fund risk	• Replication of market risk analysis • Energy performance of real estate assets • Location of real estate assets	• Risk profile of issuers and counterparties • Limited exposure to ESG-labelled instruments • Low weight of real estate assets	
Strategy risk	• Level of income (e.g. net interest income and fees and commissions) dependent on sectors exposed to high transition risks	• Management controls and regular streamlining of the Bank's business plans and budget • New products and approach to clients (transition finance)	

4.4 Analysis of the main climate risks

Transition risk and financed emissions

novobanco acknowledges the direct correlation between the GHG emissions level of its counterparties and their transition risk: all else being equal, companies with higher GHG emission intensity tend to have greater adaptation or transition needs. Hence, without disregarding alternative methodologies for assessing transition risk, in 2022 we commenced the measurement of emissions from our portfolio of companies (i.e., Scope 3 emissions). Whenever feasible, we try to obtain information reported by our clients. Where not available, we adopt estimation-based approaches.

The methodology we employ for measuring emissions is based on the "Partnership for Carbon Accounting Financials" (PCAF) global standard for the accounting and disclosure of GHG emissions financed through loans and investments.

To calculate emissions, we apply an allocation factor to the GHG emission values of counterparties (actual or estimated) in order to determine the share for which novobanco is responsible through its financing of the company's activity.

In summary: novobanco GHG emissions = company GHG emissions x allocation factor.

We have adopted the following PCAF data quality hierarchy to calculate the emissions of our counterparties:

- **Score 2**: counterparty emissions calculated as reported by counterparties (5% of total financed emissions).

$$\sum_{c} \frac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Unverified\ company\ emissions_c$$

- **Score 4**: this score already incorporates financial information at counterparty level (revenues, equity and debt). This information was obtained from the IES2021 database. Sectoral carbon intensity ratios (tCO2/€m revenues) were subsequently applied at division level (80 applicable divisions)

$$\sum_{c} \frac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Revenue_c \times \frac{GHG\ emissions_s}{Revenue_s}$$

- **Score 5**: lowest data quality level, with sectoral carbon intensity ratios (tCO2/€m assets) applied at division level (80 applicable divisions).

$$\sum_{c} Outstanding\ amount_c \times \frac{GHG\ emissions_s}{Assets_s}$$

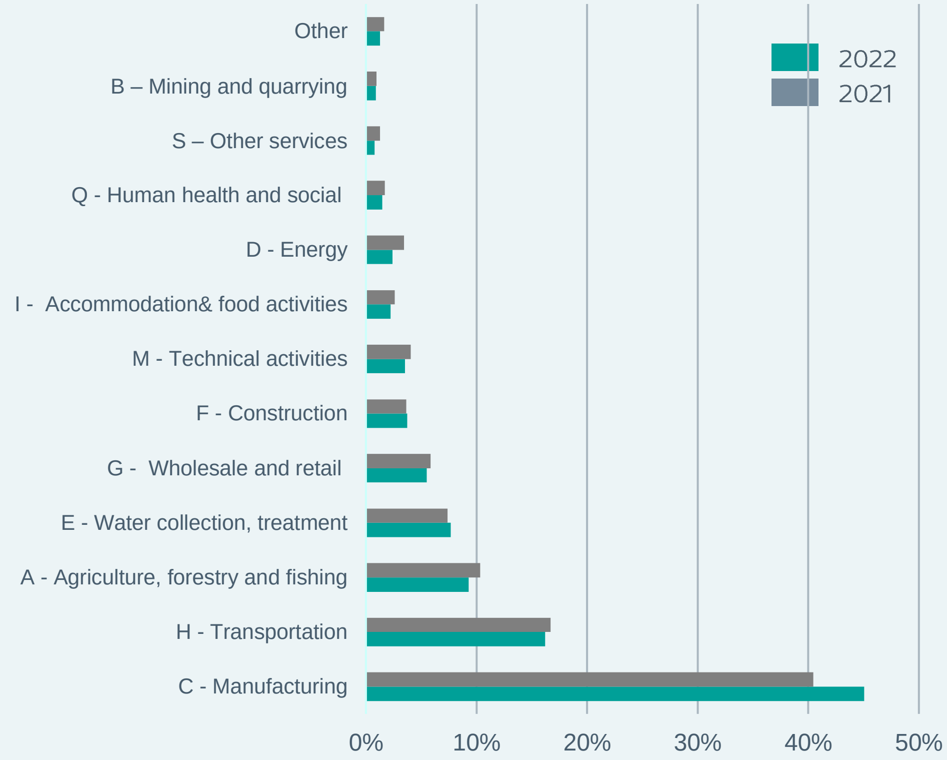
Sectoral emission factors (Scores 4 and 5) were used to estimate counterparties' scope 1 and 2 emissions (and some scope 3 categories). The results are shown in the chart to the right.

1.7m
Loan portfolio financed emissions (tCo2e), 2022

0.5m
Financed emissions in investments (tCo2e)[1] 2022

145
Carbon intensity (tCo2e) per €1 million

Breakdown of sectoral contribution to carbon footprint (loans and investment)



[1] Calculation based on a best effort approach, excluding companies in the sectors "Financial and insurance activities" and "Public administration and defence; Obligatory Social Security".

We estimate that our emissions related to loans to companies, in 2022, amounted to 2.3 million tonnes of CO_2 equivalent, covering approximately 99.6% (exposure value) of our corporate portfolio (excluding financial activities and public administration).

The portfolio's financed emissions are heavily concentrated in three carbon-intensive sectors:

- C - Manufacturing;
- H - Transportation and storage; and
- A - Agriculture, forestry and fishing.

These account for 71% of total emissions (and correspond to an exposure of only 34% of the analysed portfolio).

Based on this methodology our intensity is approximately 145/tCO_2 per million euros financed.

This quantification still includes a large estimated component. Nevertheless, we believe it is essential to disclose financed emissions data and their impacts on our transition strategy. As customers start disclosing their GHG emissions, the reporting quality of our financed emissions will improve.

The calculation of the impact of our mortgages (e.g. home loans) is under development, which is why it is not disclosed here. Nevertheless, their transition risk is already monitored through their energy performance classification (discussed next).

Transition risk additional methodologies

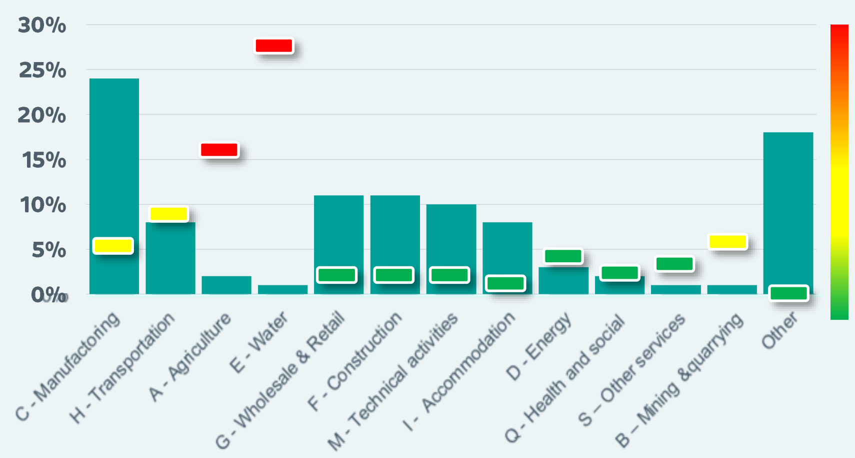
As a complement to the analysis of GHG emissions, we use additional classifications of our corporate loan book (and a proprietary scoring model, described in the next section). **novobanco** uses the Climate Policy Relevant Sectors (CPRS) methodology to better assess and monitor transition risk, focusing on sectors negatively affected or on which the impact is uncertain. This methodology takes into account: direct and indirect contribution to GHG emissions (e.g. production and distribution of fossil fuels or renewable energy); relevance for climate policy (e.g. cost structure sensitivity to regulatory or fiscal changes based on GHG emissions); and importance in the energy value chain (production, use, consumption).

Carbon intensive sectors

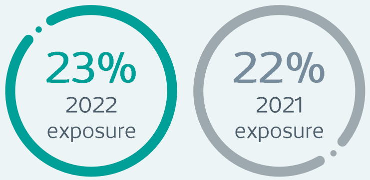
As a complement to the previous analyses, we also consider: a) possible exposure to companies with the highest level of GHG emissions globally; and b) exposure to sectors excluded from the benchmarks aligned with the Paris agreement.

This assessment - negative screening - has revealed that **novobanco** has limited exposure to companies and sectors with the most harmful activities in terms of climate change.

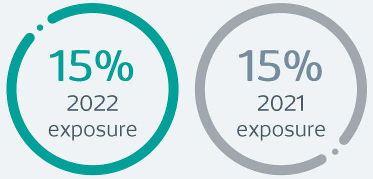
Exposure (%) by sector and respective GHG emissions intensity



Sector exposure: CPRS



Exposure to higher GHG intensity sectors



Exposure to sectors excluded from the benchmarks aligned with the Paris Agreement

Transition risk in real estate collateral

As we transition to a low carbon economy, market policies and trends may indirectly impact the financial value of real estate - demand for properties with lower energy efficiency levels may diminish and these may also become less competitive in comparison to the development of more energy-efficient alternatives (to which the legislative changes under discussion contribute).

Therefore, the transition risk is also assessed and monitored at the level of the real estate collateral on the Bank's credit operations.

The energy classification of properties will also affect the alignment of novobanco's credit portfolio with its commitments to reduce its carbon footprint.

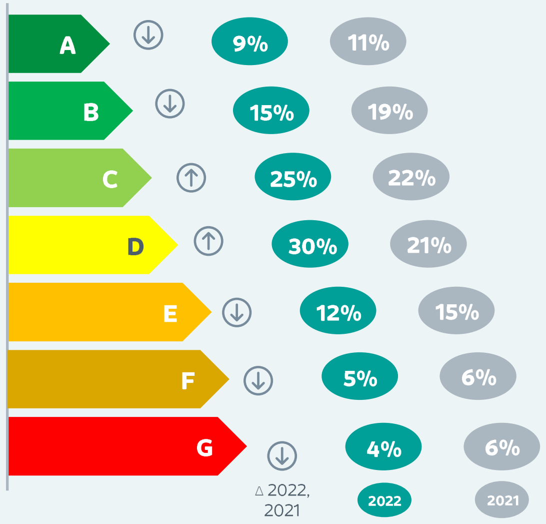
The availability of data on energy certificates is still limited: although the Bank has long been collecting such documentation, it has not yet been digitalised in its IT system.

In order to overcome this limitation, novobanco:

- Digitalises and incorporates the certificates' data into its systems for all new operations;
- Uses an estimation methodology for existing operations, which considers: a) size and number of divisions, b) location, c) year of construction; and d) the property's type of use.

Property collateral by energy class

% of number of properties (residential class)



Ongoing IT developments will allow us to generate information on the energy performance of properties financed in the past.

It is worth noting that novobanco proactively manages the energy efficiency of collaterals and has long offered financing solutions with favourable terms for properties with high energy performance levels.

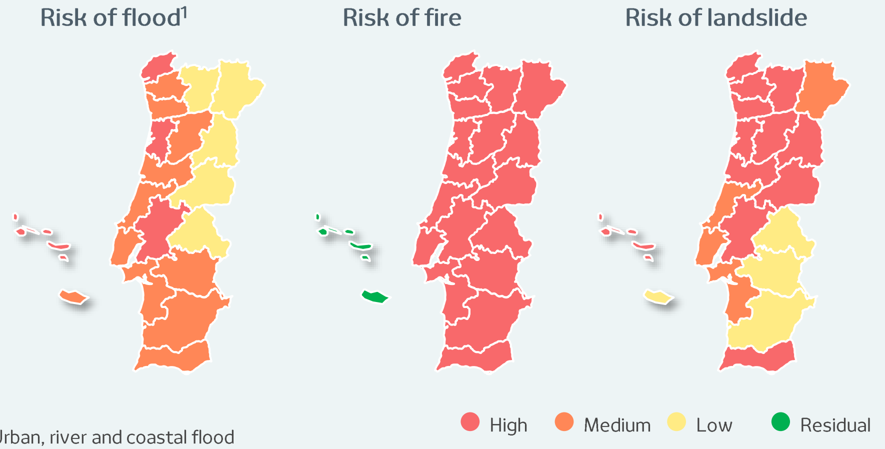
Assessment of physical risks

In addition to transition risk, novobanco also devotes special attention to monitoring physical risks. To this end, the Bank uses methodologies based on the classification of risks by geographical location, following regulatory recommendations.

The methodology used to calculate the results reported here is based on public information - ThinkHazard! - which is prepared by an initiative led by the World Bank. Of the various physical risk typologies available, we use those with the greatest impact on the structure of the properties financed, i.e., a) floods, b) fire, and c) landslides, as shown by the colours in the maps below.

The maps are used individually, to showcase a specific risk typology, or together, for a global understanding of the exposure to risk. It should be noted that this is a conservative approach, insofar as a district's classification represents the most severe classification within its municipalities.

Maps of physical risk in Portugal - external information



[1] Urban, river and coastal flood

Exposure to physical risks

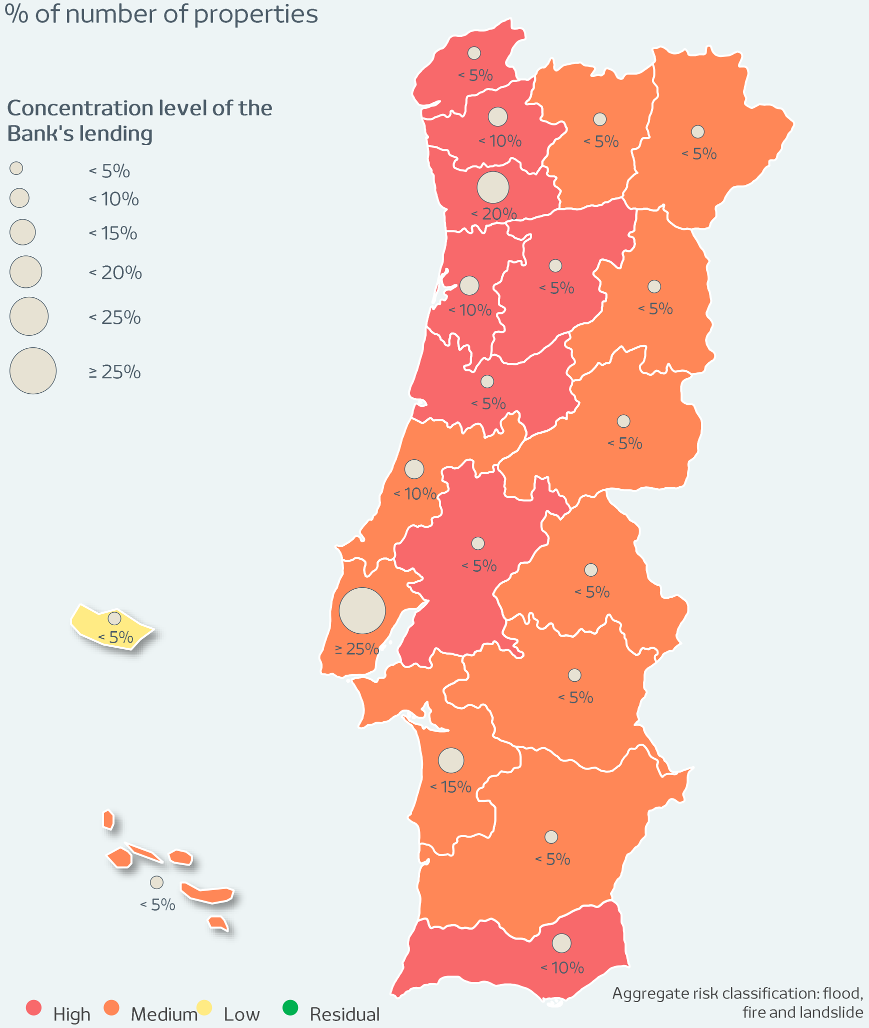
The exposure to physical risks presented herein results from the aggregate assessment of the typologies of a) floods; b) fires; and c) landslides. The risk level is depicted by the colour of the district, while novobanco's risk exposure is indicated as the percentage of concentration of real estate collateral (residential and commercial). This concentration is measured by the number of properties serving as real estate collateral as of 31 December 2022.

Overall, the following results are to be considered:

- Due to demographic factors, real estate financed tends to concentrate in major urban areas, which, given the nature of the national territory, are predominantly situated along the coast, and therefore exposed to specific risks such as flooding and landslides.
- Fire risks are more pronounced in the central and interior areas of the country, where there is no significant concentration of properties financed by the Bank.
- The assessment presented here takes a conservative approach by representing a district's level of risk based on the most severe classification among its municipalities. Nevertheless, the exposure to physical risks may be relevant, given the characteristics of the national territory. The Bank's insurance policies and requirements therefore play an important role in protecting the value of collaterals.

Concentration of real estate collaterals

% of number of properties



Internal methodology for physical risk assessment

novobanco acknowledges the limitations of physical risk methodologies that rely on external information, given the simplification of assumptions and outcomes.

Consequently, we have developed an internal methodology for assessing physical risks that provides a more precise representation of the actual exposure at risk. This approach incorporates a forward-looking component tied to climate scenarios. This methodology combines hazard, exposure, and vulnerability indicators, collectively representing the projected impact of physical climate hazards across various locations (applicable at the Postal Code level) and economic activity sectors.

The physical risk score covers 9 climate hazards, which are assessed using the following categories of risk metrics:

- Risk: representing the intensity and frequency of each climate hazard in a specific location (municipality);
- Risk exposure: represented by the exact location, when infrastructures are located in Portugal, and by the country of location, when infrastructures are located outside national territory; and
- Vulnerability: represented by the susceptibility of a specific location (and land use by different economic activities) to the consequences arising from climate hazards; it encompasses a granular analysis at the municipality level, based on the vulnerability of the Portuguese territory to flooding, forest fires and water shortage.

4.5 Integration into the business

Our transition finance model

Our climate risk management strategy assumes that we will maintain business and lending relationships with sectors and companies facing relevant transition challenges. novobanco has consistently shown a leading role in supporting the Portuguese business community. Therefore, our approach is centred on providing direct support to facilitate our clients' transition.

To this end, we consider it essential to know and assess the challenges that the climate and energy transition will pose to the companies we finance. Based on this assessment, we intend to a) strengthen the offer of products and services better adapted to the specific transition or conversion needs of each company; and b) identify the possible impacts of these challenges on the finances of each company.

We anticipate that the companies that better prepare for their transition will demonstrate enhanced capabilities for operational and financial performance. This should be acknowledged in terms of their access to financing and the associated conditions. In time, novobanco aims to reflect this better performance in the conditions of access to financing.

Conversely, the identification of ESG challenges that are not compatible with the evaluation of the viability and financial capability of the company and the Bank's clients, may lead to decisions to restrict financing or to increase prices.

In this way, novobanco embraces a transition or balance sheet alignment strategy based on the transition trend observed among its customers, which will be promoted, whenever possible, by the offer of products and services.

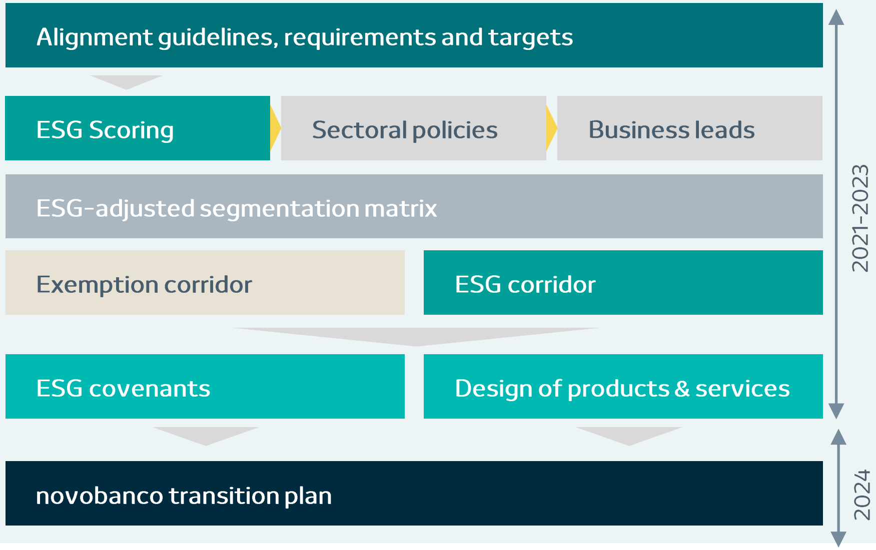
Methodologies for balance sheet alignment

As part of its strategic planning, novobanco has been developing methodologies since the end of 2021 that will allow it to set objectives to progressively align its balance sheet.

Firstly, we recognised the need for methodologies that would provide us with an encompassing view of climate risks (including ESG) within our portfolios, such as scoring systems. Next, we proceeded with the development of methodologies that would allow us to conduct an effective risk assessment based on information collected from our clients and the specific characteristics of each company (including its performance and strategic planning) - the ESG corridor.

Finally, the implementation of this approach should allow us to identify priority clients and operations for our transition finance model: that is, clients with financial capability and viability but facing a relevant transition challenge.

The implementation of these components follows the structure outlined below, which is driven by: a) the alignment targets to be adopted (such as emissions or other factors pertaining to risk reduction or mitigation); b) sectoral financing policies and strategies; and c) the Bank's strategic priorities (commercial and internal organisation).



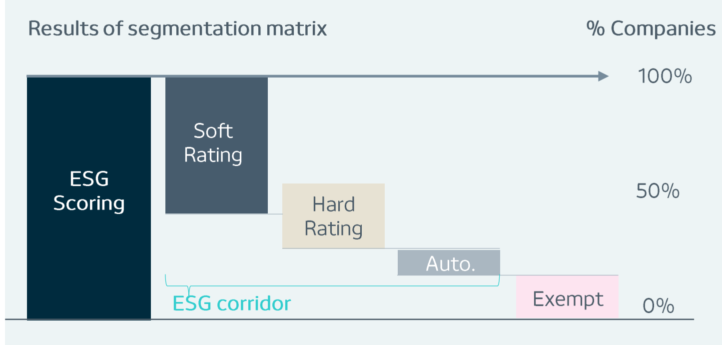
First phase of developments (2022-2023): ESG scoring, segmentation model and design of ESG risk assessment methodologies (v.g., ratings).

In this phase, an ESG risk scoring assessment was conducted for all customers in the non-financial corporate segment, providing a comprehensive overview of the portfolio's overall risk profile. Subsequently, the segmentation criteria were revised to facilitate the operationalisation of the different methodologies, including initiating customer contacts for risk assessment purposes.

In the final phase (2023 and 2024), the methodologies operate at a regular pace, enabling the assessment of customers and operations, with the results being incorporated into the decision-making processes related to risk and/or pricing.

The integrated operation of the model

The ESG segmentation matrix is calibrated based on the Bank's balance sheet alignment objectives and risk appetite. All corporate customers undergo ESG scoring, and those requiring individual analysis (ESG corridor) are selected based on an ESG rating:



The business leads identify priority sectors or, in the long term, priority customers based on a transition business rationale. This approach guides the commercial strategy and ensures the continuous updating of the ESG data system, namely identifying customers requiring additional information collection, thus enhancing the internal risk assessment and business decision processes: for the relevant sectors and customers thus identified by the segmentation rules, an (internal) ESG rating is attributed, which classifies the transition challenge of each customer and operation.

novobanco uses a simplified (soft) rating and an extended (hard) rating approach, which enables not only the assessment of ESG risks but also the application of the European Taxonomy's technical criteria.

With this approach, the Bank conducts an ESG risk assessment for all its corporate clients, following the model outlined below. This model also establishes the structure of the ESG scoring (with the difference that it is based primarily on sector-specific information).

The results of the ESG analysis may influence (or not) the credit decision and, specifically, the determination of conditions for structuring operations. The integration of this dynamic represents the final phase (2023-2024) of the Bank's ESG integration approach to loan granting.

In this regard, it should be noted that **novobanco** has already established an internal matrix for classifying operations (financing and investments) according to their alignment with the transition requirements of the European economy, as defined by the European Taxonomy criteria. This matrix is used to support the credit decision-making process. Over time, the matrix will undergo continuous development to enhance its ability to guide the structuring of the Bank's commercial offer, based on the transition objectives of its balance sheet and business.

Monitoring of climate risks

novobanco has established a formal strategy and risk appetite based on a medium and long-term perspective, while ensuring that short-term effects are anticipated and mitigated.

This strategy and the indicators that support it are incorporated in the Bank's RAF-RAS.

The analysis of the main climate risks-related metrics is reported on a monthly basis to the Bank's main management bodies.

Both the risk strategy and the risk appetite serve as guidance for the Bank's incentives system and remuneration policies, ensuring alignment with key risk metrics and corresponding objectives. Currently, the remuneration policy of novobanco's management body includes assessment metrics for the Bank's ESG performance.

Monthly monitoring

- Green production (financing, investment)
- No exposure to excluded sectors
- Operations with Minimum Safeguards
- Exposure to taxonomy eligibility
- Exposure to climate-exposed sectors
- Sectoral exposure by carbon intensity
- Exposure to physical risk

5. Metrics and targets

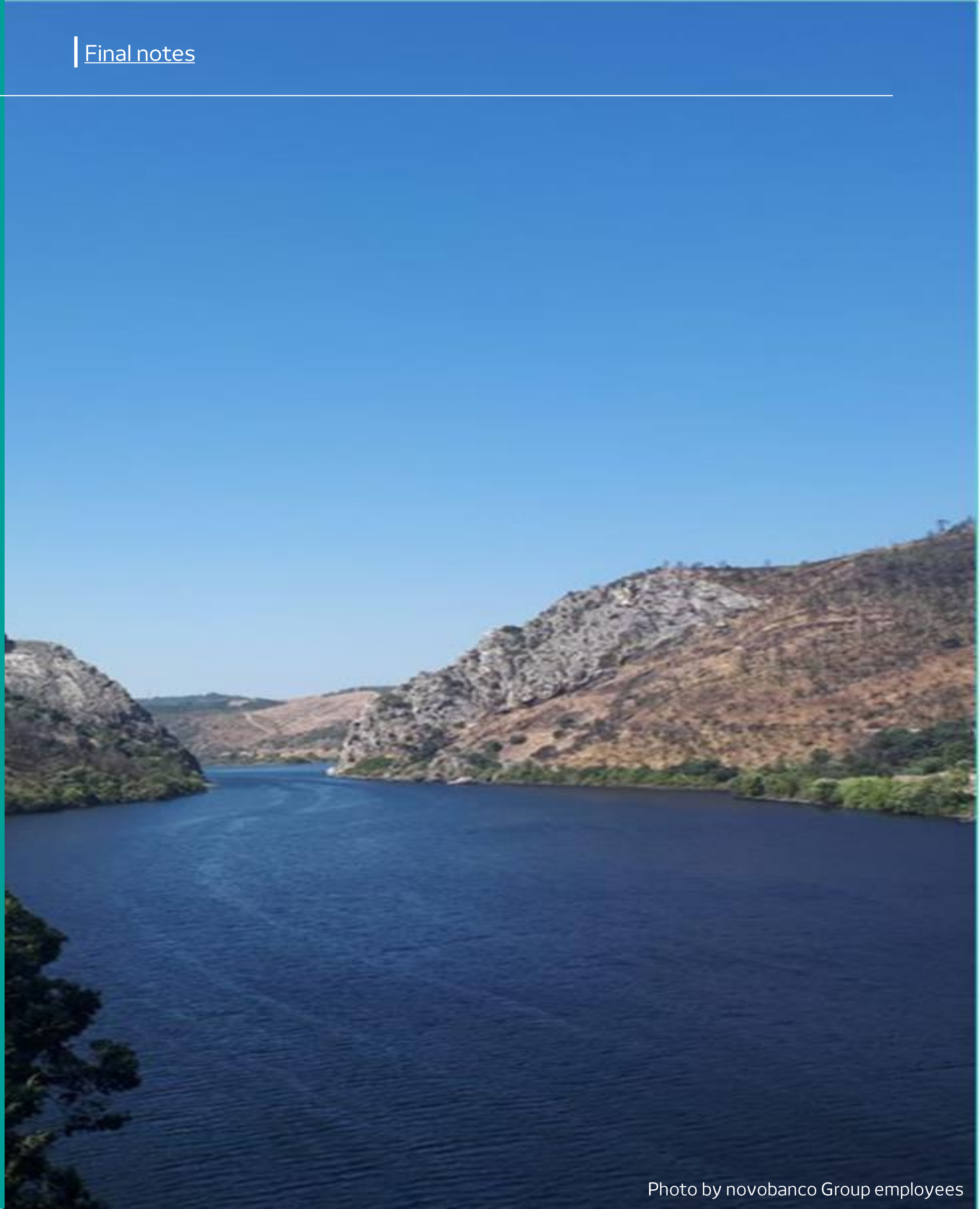


Photo by novobanco Group employees

5.1 Our metrics and performance

At **novobanco**, we are committed to reducing our climate impact: this is one of our key strategic priorities.

We regularly monitor our climate performance throughout the year and make six-monthly disclosures.

We have developed a set of key metrics and targets to track the progress of our climate strategy. These metrics and targets are aligned with our goal of reducing the Bank's climate impact and conducting the business with responsibly.

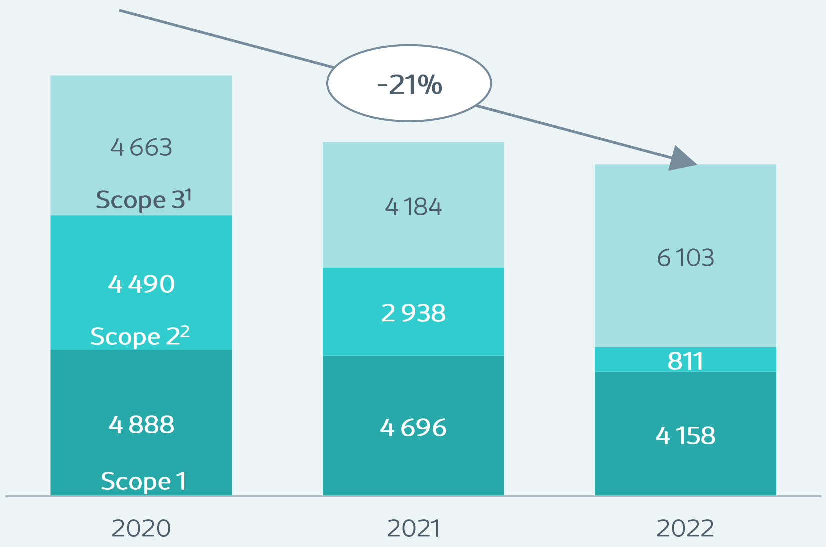
Carbon footprint

Our carbon footprint is calculated in accordance with the requirements of the Greenhouse Gas Protocol (GHG Protocol) and includes the quantification of Scope 1, 2 and 3 Greenhouse Gas (GHG) emissions, which are disclosed in our Annual Report and Sustainability Report.

novobanco is committed to making its operations more sustainable and responsible and has been working to reduce water and paper consumption and improve waste management.

In 2022, it reduced its scope 1 emissions by 5.4% compared to 2021. The increase in scope 3 CO2 emissions (own operations) in 2022 is essentially due to the return of the employees to their offices and the increase in air travel after the end of the lock-downs, but we are making every effort to ensure that this increase is limited to this year only.

GHG emissions from our own operations - without taking into account financed emissions



Notes:

Emissions from the Bank's own activities, excluding those financed (which are analysed in Chapter 4. Risk Management)

[1] includes the following categories of emissions: air travel, employees' commuting, waste, life cycle of paper consumed, paper recycling process, water consumption and wastewater treatment

[2] The total (A1+A2) was calculated using the Market-Based approach.

-34.9% Scope 1 and 2 CO2 emissions, YoY

-19.1% Electricity consumption YoY

95% Consumption of electricity from renewable sources

2.8% Incorporation of hybrid and electric vehicles in the fleet

Other dimensions

In 2022 we developed several initiatives and made progress towards meeting the objectives we set ourselves to reach by 2024.

Highlights:

- 1.4 tonnes of expired bank cards forwarded for recycling and used in the production of urban furniture.
- ESG Talks conference cycle addressing sustainability issues, with over 700 participants.
- Launch of the Employee Volunteering Programme - 4 environmental and social initiatives.
- The novobanco and novobanco dos Açores service accounts support social responsibility causes: a) Social - Projeto Semear (Sowing Project); b) Cultural - *Este Espaço Que Habito*, and; c) Environmental (Creative Recycling of Toys Project).
- New Sustainability Credit Line: €250 million to support the transition of companies to a more sustainable and low carbon economy.
- novobanco finances up to €175 million of Sonae Group's Commercial Paper Sustainability programme, and coordinates the issuance of €70 million sustainability-linked bonds for Mota-Engil.
- New Personal Loans for the acquisition of hybrid and electric vehicles and investment in renewable energy solutions.

2.3m
Total financed emissions (tCo2e) in 2022

145
tCo2e by million euros financed or invested, 2022

+3%
Increase in financed emissions (tCo2e/ 1m euros) in 2022 (*vs.* 2021[1])

€343m
in green financing and investment

+700
Participants in customer awareness-raising sessions

#2
Article 8 (SFDR) investment products produced by the Group

€172m
Article 8 (SFDR) investment products produced by the Group

>€750m
Customers investment in ESG products (Articles 8 and 9 of SFDR)

-4.5%
Reduction of paper consumption

1.4 tonnes
Tonnes of bank cards recycled

#148 thousand
Carbon-neutral bank accounts

140 tonnes
CO_{2e} neutralised in carbon-neutral accounts

[1] The increase in financed emissions is explained by a short-lived exposure in the investment portfolio to a manufacturing industry company

5.2 The targets we set out to reach

We recognise the importance of integrating sustainability into our business model and we aim to be a benchmark ESG organisation in Portugal.

In line with this objective, we have defined a set of commitments that incorporate the ESG issues deemed essential by the Group, including its climate-related targets.

We commit to:

- Invest in and finance up to €600 million in green projects and companies until 2024 (cumulative compared to 2021).
- Adopt science-based GHG emission reduction targets for our key business segments. These targets will be established by the first half of 2024.
- Ensure that by 2024 all our main corporate business lines have adjusted targets and metrics, and, whenever possible, designated limits for new business and climate risk management.
- Increase our ESG product offering. We aim to have 8 new ESG products in our offering by 2024 and play a role in supporting our clients on their journey towards sustainability.
- Ensure that 30% of investment products have ESG features.
- Reduce our own operations' GHG emissions (scope 1 and 2) by 50% until 2030. Reduce them by 28% until 2024 (versus 2020).
- Consume 30% less paper (versus 2021).
- Increase the share of low emission vehicles (electric and hybrid) in the Group's fleet to 20% by 2024 and 100% by 2030.
- Consume 100% of electricity from renewable sources by 2024 (in locations where this is possible, and the contract is signed by the group).

€600m
Green finance and investment, 2024

fy24, 1H
Deadline to achieve science-based GHG reduction targets

fy24, 1H
Deadline to define ESG metrics for corporate business lines

30%
ESG incorporation into investment products, 2024

100%
ESG 21-24 Strategic Plan completed on schedule

-28%
Reduction of CO_{2e} emissions until 2024, versus 2021

20%
Incorporation of electric and hybrid vehicles in the fleet, 2024

-30%
Paper consumption up to 2024, versus 2021

6. Final notes

Photo by novobanco Group employees

Final notes

In this 2022 TCFD report, **novobanco** disclosed for the first time information on the management of climate and environmental risks. This disclosure complements the information presented under Pillar 3 (Market Discipline).

In its preparation, we took into consideration the applicable guidelines, as well as the supervisor's expectations and recommendations on the disclosure of information.

The information and data presented throughout the report were prepared on a consolidated basis (prudential scope). The report and its disclosures were not subject to independent audit.

This reporting exercise will be conducted annually, with a commitment to continuously enhance the information presented and disclose new developments, in accordance with the prevailing guidelines and best practices.

Contacts:

Investor Relations

Email: investidor@novobanco.pt

Phone: (+351) 21 359 73 90

2022 TCFD Report

Novo Banco, S.A., with registered office at Av. da Liberdade, no. 195, 1250-142 Lisboa, registered in the Lisbon Commercial Registry with corporate registration and taxpayer number 513 204 016

Available at:

[Sustentabilidade | novobanco]