



Climate Finance Report

2021-June 2022

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1. Introduction

The invasion of Ukraine, the energy crisis, inflation: the world has changed a lot over the last year. But two things have not changed: climate change remains a global emergency, and Santander remains committed to have net zero carbon emissions by 2050. We remain focused on doing all we can to support our customers in an orderly, just transition, working with others – in the Glasgow Financial Alliance for Net Zero (GFANZ), for example – both to cut emissions and to realise the opportunities that transition presents.

If the transition is to be orderly, we need to ensure growth and decarbonization go together, hand in hand. That means accelerating the drive to renewable energy, so that we both cut emissions and improve energy security. It also means reducing the demand for fossil fuels and help people and businesses go green. And we cannot lose sight of other related challenges – such as the need to protect biodiversity, and address social needs. All this requires massive investment which will create new jobs and opportunities – critical if we are to ensure that people are not left behind.

For a number of years, Santander has been working to support the transition. Our first task was reduce our own CO₂ emissions: our operations are now carbon neutral - we have

reduced CO₂ emissions by 75% since 2011, and 39% in the last year alone. Meanwhile, we have built up considerable expertise and experience in financing renewable energy: we are consistently one of the top lenders in renewable energy projects. In 2019, we set a new target: to mobilize or facilitate over EUR 120 bn in green finance by 2025 and EUR 220 bn by 2030: so far, we have mobilized EUR 74.4 bn.

Now we are going up another gear, working across the Group to develop more products and services to help our 155 million customers transition to net zero - from SMEs to global corporates, from first-time home buyers in developed countries to micro businesses in developing countries. Green buildings, clean mobility, renewables, circular economy and sustainable agro: all these have a key role to play.

To help us identify which financial purposes are green, we are implementing our Sustainable Finance Classification System. Meanwhile, in the Amazon, we are working closely with our clients and other banks to contribute to stop deforestation and promote sustainable agricultural practices. We expect beef processing clients in the Amazon to have a fully traceable supply chain that is deforestation-free by 2025, including indirect suppliers of cattle, as a prerequisite for granting credit.

As we finance the green transition, we also are stepping up our efforts to align our portfolios to net zero, and support businesses to decarbonize. Last year we committed to end providing financial services to power generation customers by 2030 if over 10% of their revenues depend on coal; and to cut our exposure to thermal coal mining to zero by 2030. We set a target to reduce the emissions intensity of our power generation portfolio by 2030. In this report, we are setting out how we will engage with power generation clients to assess their transition plans and help them traction. We also set new decarbonization targets for energy, steel and aviation – which, together with power generation, are some of the most carbon intensive sectors in our portfolio.

Overall, our responsibility is to support a just and orderly transition. A transition that leaves no one behind, in the developing and the developed world. A transition that is fair to all our stakeholders. And to accelerate that transition, we need to be clear about roles and responsibilities. It is up to governments and regulators to create the law and regulations, and ensure that companies abide by them. Clear national roadmaps and policy frameworks to net zero will provide the certainty and incentives needed to change behaviours to plan and to invest. Global coordination on issues

such as taxonomies helps accelerate financial flows moving in the right direction. Banks like Santander have a responsibility to work with governments, regulators and others to support the transition. That's why we are committed to working further with GFANZ, Net Zero Banking Alliance, the Net Zero Asset Managers initiative as well as the UN Global Investors for Sustainable Development. Meanwhile, we will build on our achievements, which this report sets out.

Ana Botín, Executive Chairman

2021 - JUNE 2022 HIGHLIGHTS

- We've set **new decarbonization targets** for 2030 against 2019, for the energy (-29% absolute emissions), aviation (-33% emissions intensity) and steel sectors (-32% emissions intensity).
- We're **disclosing the financed emissions** (absolute and emissions intensity) for the financed sectors we have set decarbonization targets: power generation, energy, aviation and steel.
- To help deliver on our **green finance target**, we raised or facilitated EUR 32.3bn in 2021 (EUR 74.4 bn from 2019 up to June 2022) and harnessed climate finance opportunities through several initiatives.
 - The volume of greenfield renewable energy projects we have financed or advised represents enough installed capacity to power 9.2 million homes in a year and avoids 251 million tons of carbon dioxide (CO₂) emissions during the useful life of those projects.
 - We developed and disclosed our sustainable finance classification system (SFCS), which enables us to identify
- lending for economic activities that contribute to climate change mitigation and adaptation and to track these volumes consistent across the Group.
- We're expanding our range of **Socially Responsible Investments (SRI)** products in Wealth Management. As of June 2022, we had over EUR 30.1 bn Assets under Management (AuM).
- The AGM approved a Board resolution proposal to include **ESG metrics in most senior executives' long-term incentives**, including decarbonization and green finance targets, consistent with our commitments.
- Santander continues embedding **climate risks** in its Internal Capital Adequacy Assessment Process (ICAAP). In 2022, for the first time, our ICAAP included a full climate stress scenario, assessing the impact on P&L, capital requirements and solvency.
- Santander Group has been **subject to a demanding supervisory agenda** in recent quarters: the Bank of England's Climate
- Biennial Exploratory Scenario (CBES), in which Santander UK has participated along with the ECB Climate Risk Stress Test. These exercises assess how prepared banks are for dealing with financial and economic shocks stemming from climate risk. Because it is meant to be learning exercises for both supervisors and financial institutions, its results are not expected to have any direct capital implications.
- **Climate change risks and opportunities assessments** are part of our financial planning (three-year time horizons) and strategic processes (five years). In 2021, our financial planning considered our decarbonization targets and the green finance targets.
- Santander participated in the **Taskforce for Nature related Financial Disclosures (TNFD)** and project coordinated by Global Canopy and UNEP FI, and joined the TNFD Forum.
- We continue to **fight deforestation** and its damage to climate and biodiversity (especially in the Amazon). Thus we
- expect beef processing clients in the Amazon to have a fully traceable supply chain that is deforestation-free by 2025, including indirect suppliers of cattle, as a prerequisite for granting credit.
- Santander UK was a founding member of the **UK National Parks 'Net Zero with Nature' project**. It seeks to attract funding to scale up peatland and woodland restoration across the UK. The project will generate verified high quality carbon credits and biodiversity units.
- In 2021, we issued our third EUR 1 billion **green bond** to finance and refinance renewable wind and solar power.
- We reduced and offset **CO₂ emissions from our own operations**, after becoming carbon neutral in 2020. Furthermore, 75% of our electricity comes from renewable energy sources.
- Santander's **employee pension funds** began to consider employee pension plans' alignment to net zero.

2. Strategy

Our approach

Tackling climate change is a key objective at Santander. We support the Paris Agreement goals and our ambition is to be net zero carbon emissions by 2050. We do this in four ways:

Aligning our portfolio to meet the Paris Agreement goals



Align portfolios to contribute to limiting temperature increases to 1.5°C in line with NZBA and NZAMi

Supporting our customers in the green transition



Help our customers transition to a low carbon economy

Reducing our environmental impact



Remain carbon neutral and source electricity from renewable energy by 2025

Embedding climate in risk management



Remain integrating climate-related and environmental risks ensuring adherence to regulatory and supervisory expectations

Our climate and environmental commitments

	2018	2019	2020	2021	1H 22	2021 target	2025/ 2030 target
Electricity from renewable sources	43%	50%	57%	75%	✓	60%	100%
Carbon neutral in our own operations		→ ✓	✓	✓	✓		Every year
Green finance raised and facilitated (EUR)		19 bn	33.8 bn	65.7 bn	74.4 bn		120 bn by 2025 220 bn by 2030
AuMs in Socially Responsible Investments (EUR)				27 bn	30.1 bn		100 bn by 2025
Thermal coal -related power & mining phase out (EUR)				7.0 bn			0 by 2030
Emissions intensity of power generation portfolio		0.21	0.17				0.11 tCO ₂ e / MWh in 2030
Absolute emissions of energy portfolio		23.84					16.98 mtCO ₂ e in 2030
Emissions intensity of aviation portfolio		92.47					61.71 grCO ₂ e/ RPK in 2030
Emissions intensity of steel portfolio		1.58					1.07 tCO ₂ e/ tCS in 2030

→ From...To
 Cumulative target
 Commitment Achieved

1. Power generation portfolio 2019 baseline reinstated using a methodology more consistent with PCAF. (More details in Chapter 5. "Metrics and Targets")

2. CO₂e: Carbon dioxide equivalent. The amount of carbon dioxide that would cause the same integrated radiative forcing (a measure for the strength of climate change drivers) over a given time horizon as an emitted amount of another greenhouse gas (GHG) or mixture of GHGs.

Our commitment

In February 2021, the Group's board of directors approved an ambition to be net-zero in carbon emissions by 2050. This applies to the Group's operations (which have been carbon neutral since 2020) and emissions from our lending, advisory and investment services.

We're working to align our climate relevant portfolios with the Paris Agreement goals and set decarbonization targets for the climate-material sectors in our portfolio.

We became a founding member of the Net Zero Banking Alliance (under the United Nations Environment Programme Finance Initiative, NZBA), committing the Group to:

- i. transition operational and attributable greenhouse gas (GHG) emissions from lending and investment portfolios towards pathways to net-zero by mid-century;
- ii. set intermediate targets for priority GHG-emitting sectors for 2030 (or sooner); and
- iii. prioritize client engagement with products and services that facilitate the necessary transition in the real economy.

We are working on our decarbonization action plans, defining and implementing the risk and business levers needed to deliver on our portfolio net zero targets.

Santander's climate change project is one of our strategic projects. Progress is reviewed every quarter at Group Level by the Responsible Banking Forum and at least twice a year by the Responsible Banking, Sustainability and Culture Committee, a board-level committee. Also, at a senior management level, the strategy committee, chaired by the Executive Chairman, and the management meeting, chaired by the CEO, conduct a progress check several times a year.

Santander Asset Management (SAM) joined the global Net Zero Asset Managers initiative (NZAMi) in March 2021 as part of its commitment to fighting climate change. To deliver on this commitment, in November 2021, SAM set an interim target to halve net emissions for 50% of its AuM in scope 3 by 2030. It is also participating in investors' climate initiatives as a tool for driving change, delivering on its engagement plan, defining a sectoral strategy to reduce pollution, shifting portfolio construction gradually towards net zero, developing climate investment solutions and maintaining leadership in climate stewardship and advocacy in its core markets.

Disclosing our approach is key to helping markets and other stakeholders assess how we embed climate in our processes and policies and report on our climate-related performance. We use the Task force on Climate-related Financial Disclosures (TCFD) as reference.

Our strategy

At Santander, we are playing our part in supporting our customers and the global economy to be net zero by 2050.

We are offering our customers decarbonization solutions to help them fulfil their climate goals. We are aligning our portfolios with the Paris Agreement and keeping our operations carbon-neutral. Integrating climate within our risk management is key to delivering our plan.

Building on our NZBA commitments, we have a four-pronged climate strategy and public commitments to:

- 1) Align our portfolio with the Paris Agreement Goals and set sector portfolio alignment targets in line with the NZBA and with NZAMi: to ensure projected carbon emissions will help limit warming to a 1.5°C rise above pre-industrial levels.
- 2) Help customers transition to a low-carbon economy, with the commitment to raise or mobilize EUR 120bn in green finance between 2019 and 2025 and EUR 220bn by 2030; offer our customers guidance, advice and specific business solutions; and enable them to invest in a wide-ranging ESG proposition according to their sustainability preferences, with the commitment of reaching EUR 100 bn ESG Socially Responsible Investment AuM.

3) Reduce our impact on the environment by remaining carbon neutral and sourcing all our electricity from renewable energy by 2025.

4) Embed climate in risk management; understand and manage the sources of climate change risks in our portfolios.

Santander Asset Management's (SAM) strategy:

Santander Asset Management aims to achieve net zero greenhouse gas emissions with its assets under management by 2050, and it was the first asset manager in Spain and Latam (excluding Brazil) to join the NZAMi. This is consistent with Santander's push for leadership in sustainability and the Group's commitment to be net zero in carbon emissions by 2050.

Climate risks and opportunities

Climate risks

Climate risks are the negative financial impacts stemming from environmental factors, with physical and transition risks as main drivers.

Physical risks from climate change can be acute (event-driven) or chronic (long-term). They tend to materialize in the medium-to-long term:

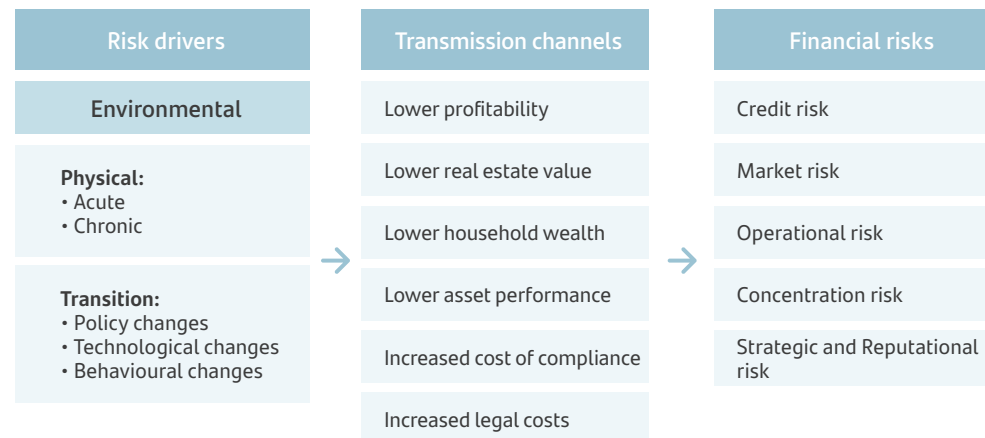
- Acute physical risks include more severe natural disasters, such as coastal floods, droughts, heat waves, heavy precipitation, floods, landslides, hurricanes/cyclones, storm surges, water scarcity and stress, and wildfires.
- Chronic physical risks include extreme precipitation and weather shifts, higher average temperatures, chronic heat waves and higher sea levels.

Physical risks may have these financial impacts:

- Lower revenues owing to transport problems, supply chain disruption and other things that strain production;
- Lower revenues and higher costs owing to workers' health, safety, absenteeism and other workforce-related problems;
- Write-offs and early retirement of assets owing to property damage and "high-risk" locations;
- Higher operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants);
- Wind pattern shifts that reduce energy production;
- Agricultural damage;
- Higher capital costs (e.g., damage to facilities);
- Lower revenues from declining sales;
- Higher insurance premiums and less insurance for assets in "high-risk" locations.

Transition risks arise from policymaking, technology, market sentiment changes and reputation in response to climate change:

- Government policymaking and action can give rise to higher operating costs for carbon-intensive customers; reporting obligations (data collection), especially on emissions (e.g. scope 3) and green taxonomy disclosures; and new EU directives on financial reporting.
- Potential prudential treatment for high carbon-related exposures, which could also raise financing costs for customers. These impacts appear in the short-to-medium term.
- Technological advances in renewable energy, energy storage, energy efficiency and carbon capture and storage to aid the transition to a low-carbon economy could render companies' systems obsolete and make them less competitive in the medium-to-long term.
- Market sentiment can impact on supply and demand in the medium-to-long term as customer preferences, companies' sales mix, energy pricing and asset revaluation change.
- Reputation can mean a sudden drop in demand for the goods and services of discredited sectors and companies.



Source: "Discussion paper on the role of environmental risks in the prudential framework" - EBA/DP/2022/02

The financial impacts of these risks may be affected by lower profitability and real estate value, demand destruction, lower asset performance, increased cost of compliance and legal costs, effects in household wealth among others.

Grupo Santander's risk management has tools and techniques to recognize, monitor and mitigate ESG risks early, especially climate risk. The following chart summarizes pre-mitigation of climate risk under various categories:

OVERALL MATERIALITY ASSESSMENT SYNTHESIS

Climate Risk Type	Climate Drivers	Main affected Time Horizon
Transition Risk	Market & Customers → Change in consumer behaviours including deliberate move to more sustainable products → Potential loss of competitive advantage with our green product proposition or pricing risks → Increased market volatility and cost, sourcing restrictions for carbon heavy raw materials	Short - Medium Term
	Policy-Making → More demanding policy environment affecting our customer's business operations → Increased green house gas (GHG) emissions pricing to foster movement to renewable sources	Short - Medium - Long Term
	Technology & Data → Investment in technology to reduce emissions or improve energy efficiency ratings → Lack of procedures and systems to obtain and store reliable data for risk assessments and disclosure	Medium Term
	Regulatory Pressure → New public disclosure products which increase the risk of misrepresentation, increased regulatory requirements which increases the potential of non-compliance, increased use of external analytics providers which increases the potential for data privacy breaches, all of which could result in fines, payment of damages and the voiding of contracts → Increasingly demanding banking regulation (disclosure, stress testing, taxonomies, etc) → Inefficiencies as consequence of different climate regulations, with special attention in those financial entities with international scope	Short - Medium Term
	Reputational → Risk of slow, lack or not sufficient reaction from financial entities impacting its reputation; extreme events that would cause damages to financial entities and employees own sites could challenge, if readiness response plans fail, the ability of the banks to prompt react to restoration of service and customers attention in vulnerable situations due to the damages → Increased scrutiny from different stakeholders (e.g. supervisors, regulators, media, NGO's, shareholders, investors, etc) → Perceived not to be meeting, sufficiently progressing, or providing transparency on climate-related commitments and transitioning → Liability implications as an intermediary in several value chain (e.g. data, products, financial services) → Reputational impact from potential misalignment of emissions reduction commitments with performance in specific portfolios	Short - Medium - Long Term
Physical Risk	Acute → More frequent and severe climate events such as flooding, drought, etc, that could affect financed assets and the value of the collaterals	Short - Medium - Long Term
	Chronic → Alterations in weather patterns and stability of local ecosystems affecting food production and living environment. → Rising temperatures affecting working conditions, living conditions and local infrastructure. → Rising sea levels affecting local ecosystems, increasing subsidence and flood risks	Long Term

Climate opportunities

In our push towards net zero, working with customers to support their transition to reduce carbon emissions will be key to achieving our ambition. Grupo Santander is actively engaging with customers, with support from specialist environmental, social and governance (ESG) teams in Santander Corporate & Investment Banking (SCIB) and Wealth Management & Insurance (WM&I).

Moreover, Grupo Santander is working with the Banking Environment Initiative to develop a framework for client engagement and is a signatory to Climate Action 100+, to promote action on climate change among the world's largest corporate greenhouse gas emitters.

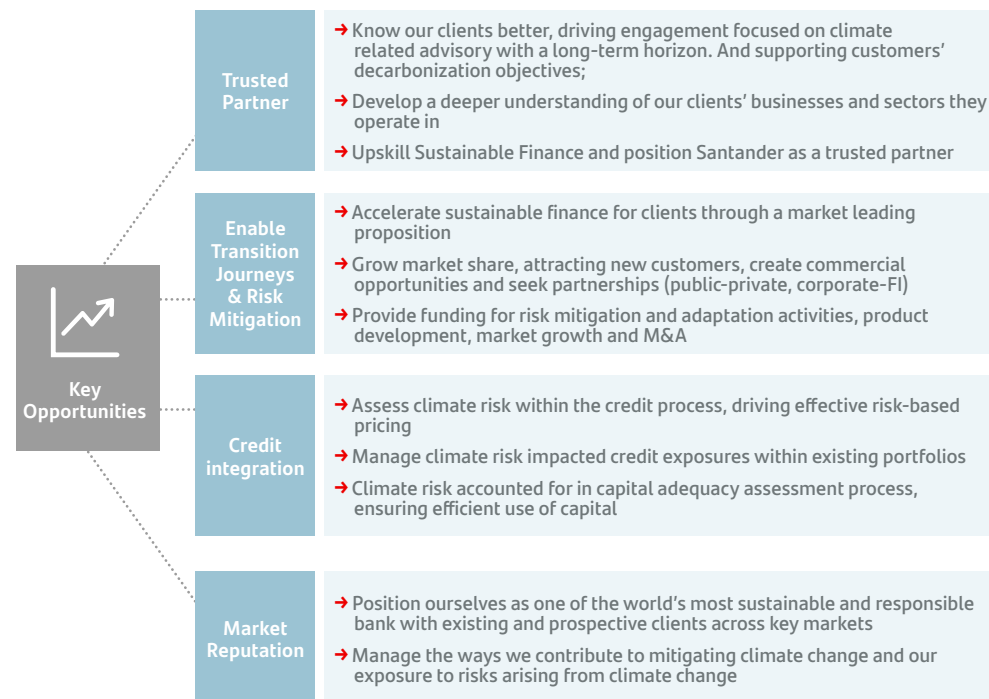
The transition to a low-carbon economy creates real commercial opportunities for the bank to:

CLIMATE OPPORTUNITIES OVER THE SHORT, MEDIUM AND LONG TERM

Sector / asset	Opportunities	Time Horizon
Mortgages	Green mortgages	MT
	Lending and advisory offering to help clients identify real estate retrofitting solutions	MT
Energy	Growth in wind and solar renewable energy financing and advisory	ST
	Financing and advisory to facilitate EV ^a charging infrastructure build-out	ST
Automotive	Financing and advisory to enable shift to EVs	ST
	Financing to establish and integrate battery supply chains	ST
	Financing of additional technologies that enable low-carbon mobility solutions	ST
Agriculture	Incentivize and support clients across the value chain to decarbonize and to adopt low-carbon practices	MT
	Financing and advisory of on-farm emission reduction technologies	MT
Voluntary Carbon Markets	Provide advisory services and solutions to enable clients to access carbon market opportunities	MT
	Offering of green products to individuals and companies with offsetting options	MT
Cross sector	Growth in green bonds, green loans and sustainability-linked financing instruments	ST
	Financing for scaling of new technologies such as hydrogen, CCUS ^b , biofuels as well as energy storage more broadly	MT
	Financing and advisory for early-stage companies focused on energy transition-enabling solutions	ST

a. EV = Electric Vehicles

b. CCUS = Carbon Capture, Utilisation and Storage



Climate risks and opportunities identified in Santander Asset Management:

The transition to a low-carbon economy will require significant investment, generating opportunities. Because Santander Asset Management is exposed to many asset types and sectors, we have a duty to always act in the best long-term interest of our clients, therefore we have included climate change risks in our extra-financial ESG analysis of all sectors.

The 3 top climate-related risks considered in our proprietary ESG analysis model are:

- regulatory risks, such as the increasing price of GHG emissions;
- technology risks linked to more efficient low- carbon technology alternatives; and
- market risks from higher costs and shifting consumer demands, which could result in stranded assets, higher operating costs, lower demand for products and services, and the higher cost of, and limited access to, capital.

The 3 top climate-related opportunities embedded in within our analysis model are:

- new climate solutions in the form of products and services that entail diversification, competitive advantage and higher revenue;
- lower-emission energy sources that benefit from less exposure to GHG emissions, lower costs, policy incentives and reputational benefits; and
- efficient production and distribution of resources to lower operational costs and raise both production capacity and the value of fixed assets.

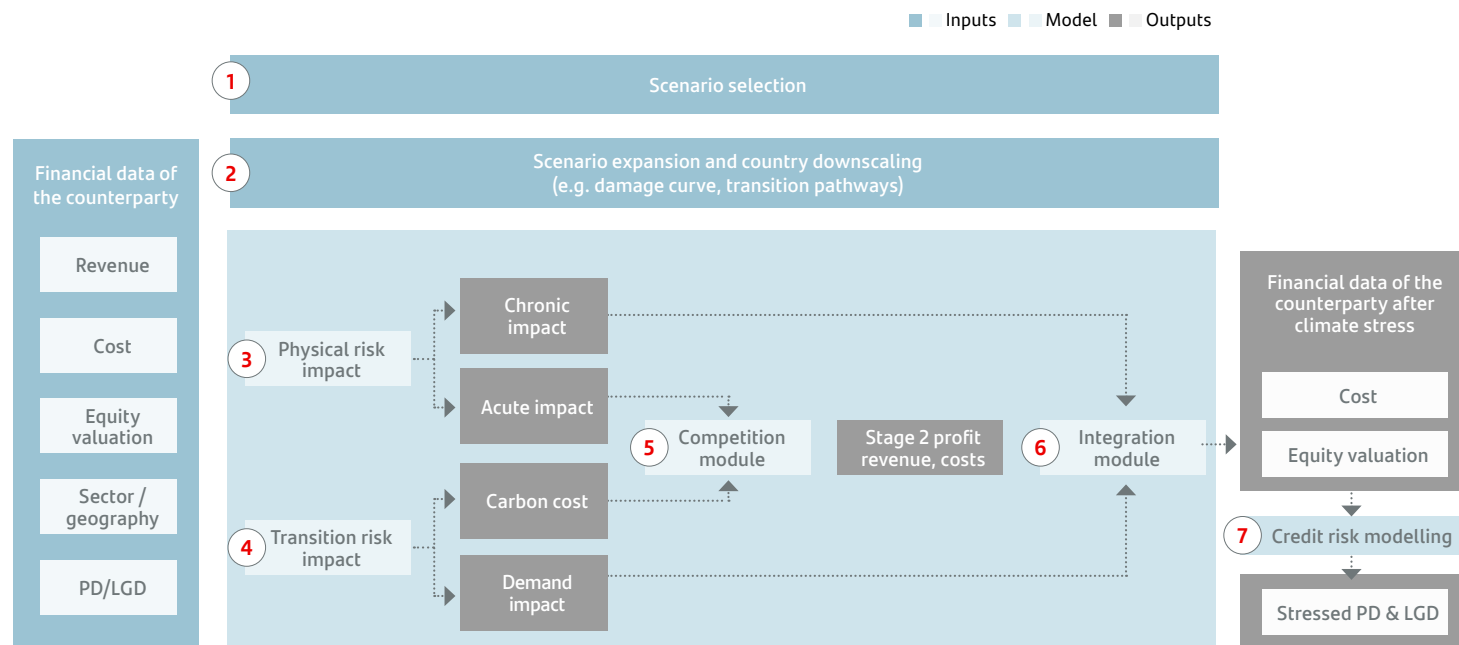
Resilience of Santander's strategy: Scenario analysis

Grupo Santander incorporates climate change risk management in its one-year budgeting, three-year planning, overall strategic planning, ICAAP/ ILAAP and Recovery and Resolution plan. It also takes part in the BoE CBES Stress Test and the ECB Climate Risk Stress Test.

To evaluate climate-related risks, one of our main tools is scenario analysis. We integrated

in-house developments with vendors' applications (i.e. Planetrics³) to quantify the financial impacts of physical and transition risks from climate change on portfolios and on each counterparty using climate scenarios. Planetrics' modelling methodology translates climate scenarios into economic shocks and models financial impacts on the main credit metrics such as PDs and LGDs. Our

approach follows a bottom-up analysis of each customer's drivers, financial situation and technology; in addition, we can also take a top-down approach by sector and geography when customer information is not available.

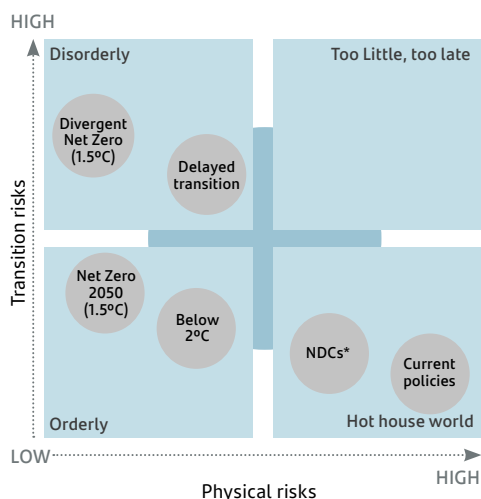


PD: Probability of default. LGD: Loss given default. SSM: Single supervisory mechanism - European Central Bank Banking supervision

3. Planetrics is an external vendor tool by Vivid Economics and McKinsey

Our scenario analysis comprises seven modules:

1. Scenario selection. Santander's Economic Research Department analyses the economic impact of climate change based on the scenarios published by the Network for Greening the Financial System (NGFS) and other external sources (e.g. the IEA-Net Zero scenario we used for Portfolio Alignment). The chart below shows the NGFS's climate scenarios:



Source: NGFS – New Climate Scenarios Framework
*Nationally Determined Contributions

Below is a high-level description of the features of each subset:

Orderly:

- Climate policies involve early, ambitious action.
- Result: low physical and transition risks.

Disorderly:

- Climate policies are not introduced until 2030.
- Result: Higher transition risk.

Hot house world (current policies):

- Climate policies are limited.
- Result: Severe physical risks and irreversible changes arise, including higher sea levels.

2. Scenario expansion and country downscaling to model the impact of global scenarios with a range of variables by country and sector.

3. Physical risk impact, which reveals the financial impact of extreme weather and long-term shifts in climate patterns.

- Chronic impact: impact on company's revenue due to chronic physical effects (e.g. change in productivity).

- Acute impact: increase in cost due to damages to company's assets from extreme weather events.

4. Transition risk impact, which reveals demand patterns (e.g. increase in low-carbon products) and carbon-related cost (e.g. carbon tax).

- Carbon cost: changes in carbon for emission intensive companies.
- Demand impact: change in company's demand and profit.

5. Competition module, which examines the interplay between risk exposure and company responses.

6. Integration module, which aggregates previously estimated impacts on business units to obtain the financial impact by geography and sector.

7. Credit risk modelling, which translates the changes in a company's market capitalization into effects on PD/LGD.

We upgraded the Planetrics model to use the ECB's climate stress test methodology and scenarios to run regulatory and internal climate projections. The ECB stress test covers credit, market, reputational and operational risks, and requires financial entities to state revenues, exposure and emissions from relevant sectors, as well as how prepared their

climate-scenario analysis framework is. Some Santander subsidiaries also participate in stress tests conducted by their country's competent authority.

With regard to the upcoming regulatory requirements, in early 2023 Grupo Santander will disclose its Pillar III ESG, with transition and physical risk data.

To deliver on all our commitments and requirements, we have enhanced data collection, filling in gaps and assuring quality, with NACE codes, EPCs, insurance and emissions used in the 2022 ECB Climate Stress test.

Lastly, Santander has continued to embed climate risk in its ICAAP. In 2022, for the first time, our ICAAP included a full climate stress scenario. This scenario's main trigger was a carbon tax increase. We assessed the impact on P&L (including credit losses), capital requirements and solvency for a 3-year time horizon covering the main geographies where Santander is operating.

CBES in Santander UK

Santander UK (representing c.25% of Group's total lending portfolio) participated in the Bank of England's (BoE) Biennial Exploratory Scenario for Climate Change (CBES). The CBES is an exploratory exercise to help the BoE size the finance sector exposure to the risks posed by climate change across 3 climate scenarios; Early, Late and No Addition Action (detailed below). The exercise aimed to help firms understand the challenges to their business models and likely responses to climate change risk. The CBES was not intended to test capital adequacy or establish capital requirements.

The CBES started in June 2020 where Santander UK defined the Target Operating Model for executing it and developed internal climate risk models. Partnering with third-party climate modelling experts, Santander UK sourced vast internal and market datasets to feed into the models, outreached to some 230 of Santander UK's largest corporate clients and then modelled the impact of climate risk on almost GBP 250 bn of balance sheet assets across the climate scenarios. The increase in modelled provisions was driven mainly by the underlying regulatory guidance; including the macroeconomic variables and the assumption that defaulted loans remain on the static balance sheet. Following analysis of the outputs, Santander UK defined more than 60 strategic "Management Actions" that Santander UK could take in each scenario to mitigate the impact of climate change on the portfolios.

In January 2022, the BoE requested participants to perform a qualitative follow-up exercise.

Questions focused on qualitative responses and a request to give a high-level sizing of potential loan book changes that might arise by 2050 from management actions and opportunities. The industry wide CBES results were published by the BoE on 24 May 2022. The key findings across the finance sector and across all three scenarios were:

- A 10%-15% drag on annual profitability, including a c. GBP 110 bn of losses in the banking sector across the 30-year horizon.

- Losses were worst in the late action scenario (30% higher than early action); the no action scenario impacts would likely be felt more after the 30-year timeframe.

- Banks should continue to assess their exposure to climate-related risks through by building their internal scenario analysis capabilities, and there are no current plans for an immediate repetition a CBES-type exercise.

- The BoE stressed that potential climate-related losses should not be subject to provisioning under the current capital regime.

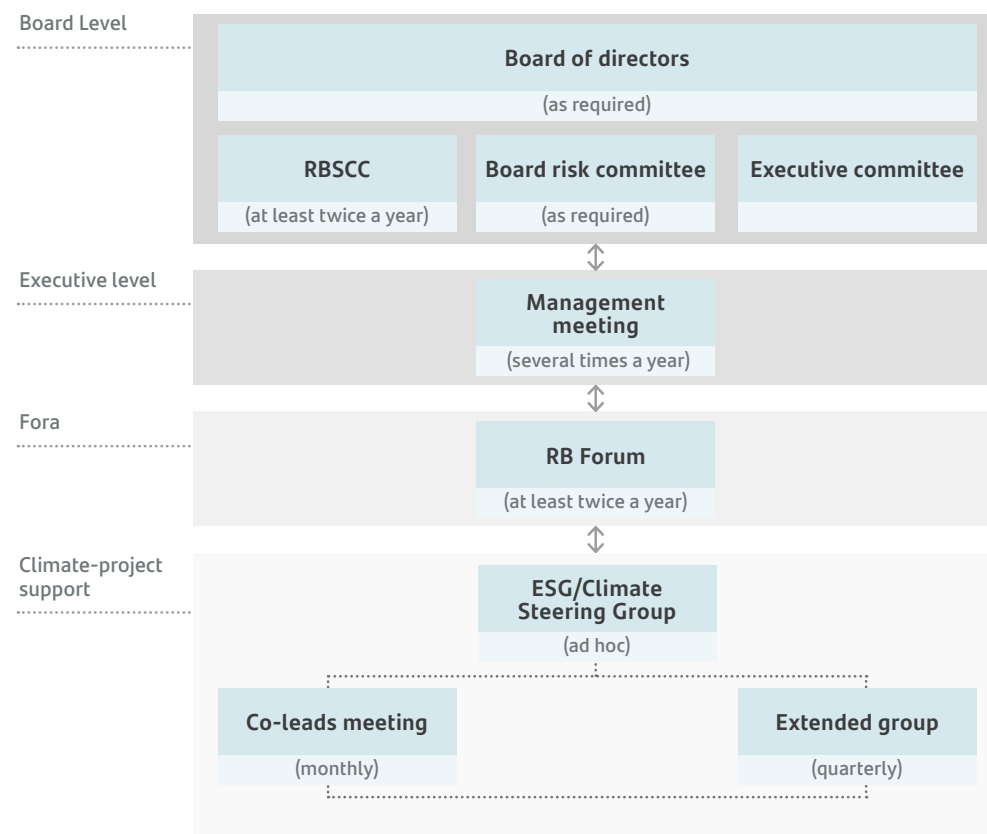
Additionally, throughout 2022 Santander UK is developing a Climate Internal Scenario Analysis (CISA) programme. It will generate qualitative scenarios pertinent to the climate risks prevailing on the balance sheet and will be used to generate quantitative stress tests.

CBES Stress Test Climate Scenarios

	1	2	3
	Early Action	Late Action	No Additional Action
Overview	→ Early and decisive action to reduce global emissions in a gradual way, with clearly signposted government policies implemented relatively smoothly → These actions are sufficient to limit global average temperature increases to below 2°C	→ Action to address climate change is delayed by ten years → To compensate for the delayed start, a deeper adjustment is required → Steeper increase in global carbon prices in a late attempt to meet the climate target	→ Governments fail to introduce policies to address climate change other than those already announced → Companies and consumers do not change their behaviour to reduce emissions compared to current trends → There is also limited technological transition
Physical Risks	Limited – global warming levels of 1.8°C in 2050	Limited – global warming levels of 1.8°C in 2050	High – global warming levels of 3.3°C in 2050, a "hot-house"
Transition Risks	Medium – early and orderly transition starting in 2021	High – late and disorderly transition starting in 2031	Limited – only policies from pre-2021 impact the transition
Macro-economic Impacts	Limited – 1.4% drop in UK GDP by 2050 against a counterfactual scenario	Medium – 4.6% drop in UK GDP by 2050 against a counterfactual scenario	High – 7.8% drop in UK GDP by 2050 against a counterfactual scenario

3. Governance

Governance bodies involved in climate change management and how often climate change is discussed (in brackets)



The Internal audit function conducted the first review of the climate change project in 2021, proposing new control measures to reinforce governance. As the internal audit risk assessment already covers C&E risks, the 2022 audit plan includes climate risk reviews for the Group and core subsidiaries.

The Responsible Banking, Sustainability and Culture Committee (RBSCC) reviews and challenges environmental considerations, including climate change strategy. It's an advisory body that assists the board with overseeing the climate change-related components of the responsible banking strategy. It contributes to more informed board decisions and enhances strategic focus on risks and opportunities.

In 2021, the RBSCC held four meetings, including three on climate change (at least two meetings covering climate are required). It discussed climate change project updates; climate-related financial risks and opportunities; roadmaps to fulfil TCFD and ECB expectations; discussions to approve the net-zero ambition and fulfilment of the bank's net-zero commitments; Santander's sustainable finance proposition to help our customers' transition to a low-carbon economy; plans for business lines; and progress on our carbon footprint and green finance commitments.

The Responsible Banking forum (RB Forum) executes the responsible banking agenda across the Group, drives decision-making and

ensures the execution of mandates from the RBSCC, other board committees and the board of directors. It also ensures alignment on key issues, as well as the review and escalation of reports to the RBSCC.

The RB Forum meets at least six times per year. It reviews climate change and net-zero strategy before they are deliberated by the RBSCC. In 2021, the RB Forum met four times and addressed such climate-related topics as net-zero strategy, sustainable finance and carbon offsetting. At the time of this report's release, it had met three times, discussing climate change and green finance in each session.

The Forum's 11 permanent executive and non-executive members are the Regional head of Europe (rotating chair); the Regional head of North America (rotating chair); the Regional head of South America (rotating chair); Group Head of Strategy, Corporate Development & Financial Planning; Group Head of Human Resources; Group Chief Risk Officer; Group Chief Compliance Officer; Global Head of Wealth Management & Insurance; Global Head of Santander Corporate and Investment Banking; Group Head of Communications, Corporate Marketing and Research; and the senior adviser to the executive chairman on responsible business practices.

The Group's Management meeting, chaired by the CEO, receives progress reports on the responsible banking agenda and on climate change several times a year.

Specialist working groups cascade Santander's climate change agenda on TCFD implementation, supervisors' expectations, climate commitments and governance. The climate project and working group, co-led by SCIB, Risk and Responsible Banking and with members from several functions and geographies, meets weekly to monitor and drive progress with the climate change project roadmap; monthly with the corporate areas involved to ensure headway; and quarterly with all subsidiaries and areas.

The ESG/Climate Steering Group meets on a needs basis, receiving feedback from executive directors as part of the RB Forum and facilitates progress in the climate project tasks, including seizing synergies. It is composed of the Group Chief Credit Officer, the Global Head of Enterprise-wide risk management, the Chief of Staff to the Global Head of Santander Corporate and Investment Banking, the Global Head of Responsible Banking, the Head of the chair's office, the Director of Group strategy and the Senior Adviser to the executive chair on responsible business practices; and receives feedback from executive directors as part of the RB Forum.

Santander has several working groups that meet regularly to drive the climate change agenda: Santander España's climate change project, coordinating all local climate initiatives; Santander UK's climate leadership group, aiding the UK's senior leaders with the bank's

ambition to lead the sector in climate matters; the public policy sustainability working group, advising on climate, regulatory developments and the Group's positioning in policy debates; the footprint working group, overseeing how we measure and reduce our internal carbon footprint; and the sustainable bond working group, managing sustainable bond issuance.

Since 2020, progress made towards ESG objectives (e.g. green finance) became a determining factor in general short-term variable remuneration scheme that generally applies to Group employees.

In 2022, the AGM approved a Board resolution proposal to include ESG metrics in the long-term incentives of senior executives, consistent with our commitments. These commitments cover green finance, decarbonization, namely setting targets for ten sectors before 2024 to fulfil NZBA requirements; aligning our Power Generation portfolio gradually to ensure delivery on our decarbonization target.

Policies and guidance

In December 2021, the board approved the Responsible Banking framework. It is the Group's highest-level regulatory document and raises ESG to a material issue, with monitoring at subsidiary board level to boost opportunities and improve our competitive position.

The Group's policies and guidance set the standard for all units. We systematically review the scope of policies on integrating ESG criteria to ensure compliance with international best practice. In 2021, the Responsible Banking function started to promote the need to incorporate ESG criteria in the approval of all corporate policies, although the most critical ones were already being monitored. Guidelines are being developed to help sponsor functions that draft policies or procedures to incorporate these criteria, and the document is expected to be approved in 4Q2022.

The General Sustainability Policy and the Environmental, Social & Climate Change Risk Management Policy, updated in 2021 and 2022 respectively, embeds climate change factors in lending standards.

Management and ESG training for employees

We're working to familiarize all employees with sustainability, Sustainable Development Goals and Climate Change and its relevance to the Group on three training levels for global businesses and subsidiaries:

- The first is multidisciplinary and common for all employees. We launched a global, mandatory course to familiarize all employees with sustainability and its relevance to the Group, with topics on sustainability, sustainable development goals and climate change.
- The second level is for all functions involved in our sustainability agenda, with an introduction to sustainability/ESG, ESG Talks, and special programmes for each business and function.
- The third includes expert knowledge in ESG aimed at those employees who actively participate in the Responsible Banking agenda. Internal and external certification may be included (e.g. CFA, EFPA, GARP, CESA, IASE level 1 and 2 and others).

Additionally, some subsidiaries and global businesses provided additional training on climate change, sustainability, sustainable finance, sustainable investment, diversity and inclusion.

Training modules and resources include:

Climate training for board members

In January 2022, the board of directors completed its third climate change training programme, with modules on the Paris Agreement, net zero, portfolio alignment and climate risk management. It complemented exercises on climate risk and stress tests completed by the Santander UK board and senior executive and climate change training done by Santander España's board and senior executives in 2021 and in July 2022.

Climate dialogues

Launched in 2020, "Climate Dialogues" for senior managers to discuss critical climate-related topics held four sessions during 2021 with renowned experts Alzbeta Klen (IFC Director and Global Head of Climate business), Andy Marsh (President and CEO of Plug Power Inc.), Hakan Samuelsson (President and Chief Executive of Volvo Cars) and David Antonioli (Verra CEO).

Training for risk analysts

In March 2021, we held a CDP-sponsored workshop on climate change for risk analysts. Over 182 attendees talked about the physical and transition risks of climate change. A follow-up CDP webinar on climate change (held in April with around 80 attendees) delved deeper into the TCFD's reporting standards and recommendations.

In December, RBCC chairs from across the Group's footprint attended a climate change and net zero training session.

ESG training for SCIB

In 2021 we created our Environmental, social and climate change (ESCC) training course on the implementation of the European Banking Authority's Guidelines on loan origination and monitoring. The main objective was to present Santander's latest work on climate change and show the 128 attendees how climate change factors were embedded in the SCIB customer risk assessment.

ESG Talks

In 2022 Santander launched ESG Talks, one-hour lectures that our ESG teams give about Santander's commitments and projects. As of the publication of this report, eight talks have taken place on the subject of climate strategy alignment, climate risk management and stress tests, ESG investment, our Sustainable finance classification system, ESG regulation, Santander Finance for All and other topics.

Group-wide newsletters

To raise employees' awareness of environmental issues and keep up to date on ESG issues, Responsible Banking, SCIB, Research & Business Intelligence and other departments send out climate-related newsletters and specific reports.

ESG training in subsidiaries

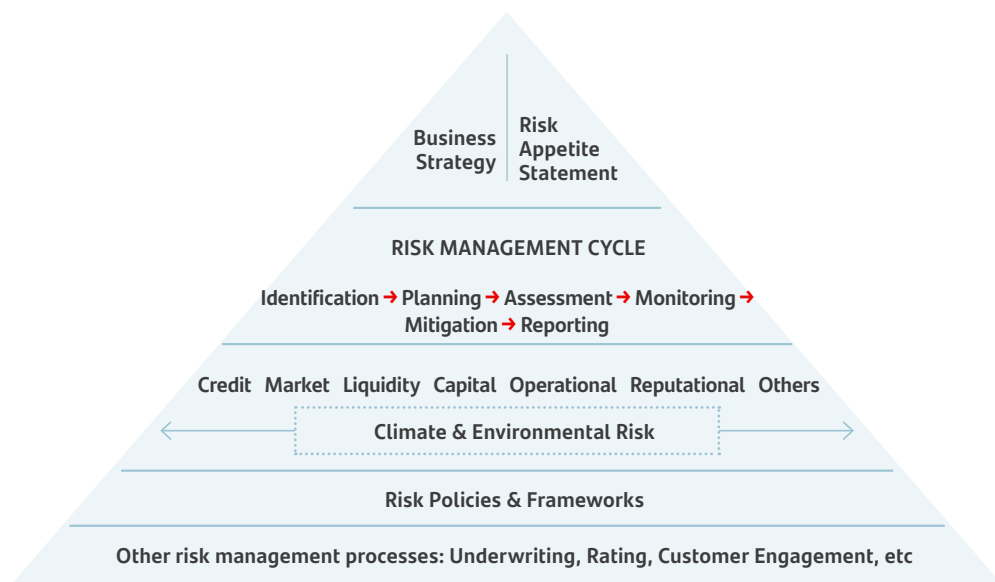
As part of the third level-module, some business units provide additional training. As an example, at Santander UK, our Sustainability Business Partners and colleagues in key functions are starting to take sustainability training courses adapted to their technical needs, with the Chartered Banker Institute (since Q4 2021) and the Cambridge Institute for Sustainability Leadership (since early 2022).

4. Risk management

Grupo Santander remains focused on managing the risks associated with climate and environmental change, which have been subject to a demanding supervisory agenda in recent quarters across the financial industry. An example of the aforementioned is the Bank of England's Climate Biennial Exploratory Scenario, in which Santander UK has participated (for further details see section 2.3 Scenario analysis), the ECB Climate Risk Stress Test exercise and the ECB Thematic Review.

After the ECB published its Guide on climate-related and environmental risks in November 2020, Grupo Santander performed a self-assessment of our current practices against the expectations set out in the guide in 2021. We informed the ECB of plans to further enhance our climate-related and environmental risk management. Grupo Santander took part in the ECB's 2022 Thematic Review to assess our progress and delve deeper into our management of climate-related and environmental risks.

The chart below illustrates how climate-related and environmental risks are embedded in our key processes:



The risk management cycle consists of these phases:

I. Identification

Risk identification enables effective categorization and control of risks. The risk profile assessment (RPA) and top and emerging risk identification are two core processes that help Santander identify climate-related risks.

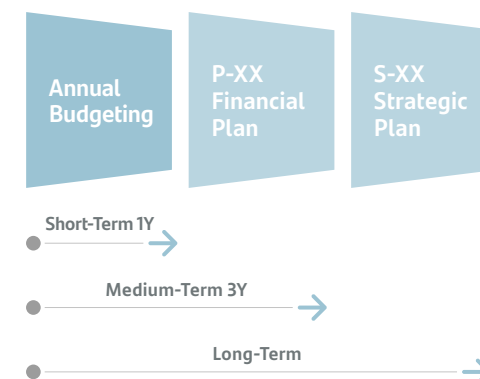
Santander conducts regular RPAs. They cover all risk types and reveal potential threats to our business plan and strategic targets, helping us monitor our risk profile consistently across subsidiaries. In 2021, we added to the RPA a specific climate and environmental questionnaire that covers the Corporate Centre's and subsidiaries' strategic planning, execution, control and monitoring, governance and staffing. Results enabled risk teams across Grupo Santander to evaluate their climate and environmental risk management and potential gaps based on best practices. The assessment evolves as we learn from experience, new data, methodologies, and regulation.

Additionally, we identify and measure all top and emerging risks threats to profitability, capital adequacy and strategy. Recently, we have included biodiversity loss in the exercise due to the growing concerns in this regard. Our analysis covers both qualitative and quantitative factors, and the findings from the top and emerging risks exercise inform our ICAAP and ILAAP.

II. Planning

Grupo Santander introduced decarbonization targets into strategic financial planning as a consequence of our public commitments regarding sustainability, without forgetting that we became a founding member of the Net Zero Banking Alliance (further details in Chapter 2 – Strategy).

Our main strategic financial planning comprises annual budgeting, our three-year financial plan and the Group's long-term strategic plan.



These core strategic financial processes; with different time horizons, enable us to identify threats and changing conditions that could hinder our ability to achieve our targets. Such processes are reviewing climate-related and environmental risk and the transition to a low-carbon economy more extensively, in keeping with our risk appetite and policies.

Climate-related time horizons have been defined and embedded into our strategic process. We define short term as 1 year aligned with budget; medium term as 3 years aligned with financial planning; long term as 5 years aligned with strategic planning; and, for ad hoc analysis, we define longer term as beyond 5 years.

III. Assessment

Grupo Santander regularly performs a materiality assessment to determine the most significant climate-material portfolios. It enables us to manage the emergence of climate change risks by sector. It is essential in determining our strategy and priorities.

The assessment covers climate-related and environmental risks to material and non-material businesses over specific time horizons (from short to long), to reflect them in the Group's risk appetite, top risks, credit limits and stress tests. It treats climate risk as a regular balance-sheet risk.

Methodology



Build a taxonomy of sectors

Based on UNEP-FI TCFD guidelines
Including physical and transition risks



Assess vulnerabilities with a Heat Map

5-level scale to assess vulnerability of each sector to physical and transition risks



Calculate portfolio exposures

Estimation of Santander's exposures for portfolio in scope

Risk taxonomy, heatmaps and exposures calculation form the basis for classifying portfolios and their potential impact from climate risks. They are designed to show the value chain of business activities, regardless of their original NACE classification. The internal climate change risk taxonomy recognizes sectors directly exposed to physical and transition climate risks. It classifies sectors based on guidelines issued by the Task Force for Climate Related Financial Disclosures (TCFD) and the United Nations Environment Programme Finance Initiative (UNEP FI), enriched with credit expert knowledge and industry best practices.

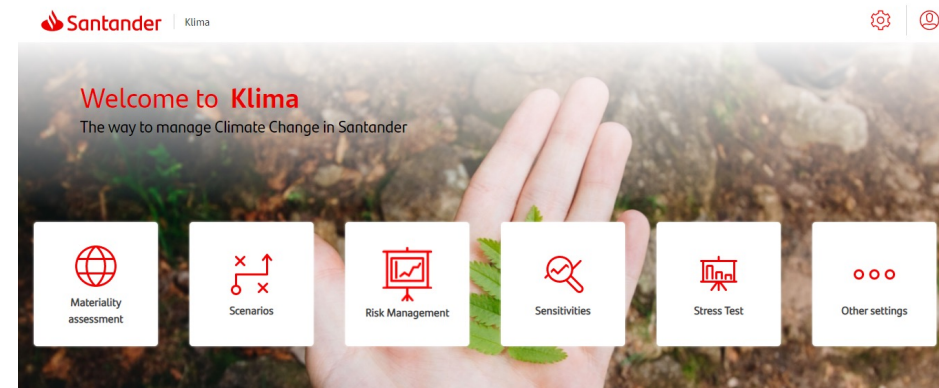
The heatmap reveals the degree of a sector's financial risk. It indicates exposure to physical risk or a "rapid" and "disorderly" transition to a low-carbon economy with a qualitative and quantitative 5-level RAG (red-amber-green) rating for each sector and subsector in a granular, highly accurate manner:

RAG classification for physical and transition risk

Physical Risk	Overall Score	Transition Risk
Sector has low vulnerability to present and future climate events (chronic or acute).	Low	Sector has low emissions intensity, is not reliant on fossil fuels and is closer than other sectors to achieving net zero.
Sector's current and future vulnerability from climate events (chronic and acute) is more moderate than others.	Moderately low	Sector has lower emissions per unit of production than others and is less carbon-intensive; needs a much lower level of investment to achieve net zero and is unlikely to suffer significant changes in consumer sentiment or policy.
Sector has medium vulnerability, from the physical impacts of a changing climate, with some disruption caused by climate events that could last for weeks.	Medium	Sector needs significant investment to transition to net zero. Sector will experience some impact from changing customer sentiment and be more exposed to policy and technological changes.
Sector is highly exposed to physical risks and costs relating to climate events in the long term	High	Sector has higher emissions per unit of production than others and will experience adverse demand. Sector requires targeted low-carbon policy, technological innovation, and/or investment to transition to net zero.
Sector severely affected by climate events that become more severe and frequent, causing significant economic losses, hazards for the local population and environmental damage.	Very High	Sector relies heavily on fossil fuels and needs significant investment and targeted policy to transition to net zero. Focus on action from wide range of stakeholders. Higher risk of premature write-downs on assets. Net zero position is still unclear, suggesting a long transition.

The 2022 materiality assessment reviewed climate risk by sector and geography in Grupo Santander's loan book for SCIB, Corporates, retail banking, Santander Consumer Finance, institutional lending, and Wealth Management & Insurance. We selected the most adequate methodology to evaluate impacts and prioritize a roll-out plan.

We developed an in-house tool, "Klima", to identify, monitor, quantify, assess and report environmental and climate-related risk. Klima facilitates integrated management at both Group and subsidiary level. As it is phased in, it covers the materiality assessment module first, then sensitivities and a scenario review.



We have enhanced the materiality assessment with scenario analysis to calculate quantitative heatmaps. They reflect the PD and LGD portfolio's trends with orderly, disorderly and hot house world scenarios in various time horizons from now until 2050. We already use qualitative and quantitative heatmap information to recognize the best positioned customers and portfolios and how strategic risk is evolving, and to monitor, measure and

develop new metrics for risk management, credit policies and business strategy.

Our materiality assessment covers more than the 80% of our balance sheet. It delves deep into financial loss from loan defaults and credit impairment. We also subject residual value, strategic, market and liquidity risks, and other risk factors to close scrutiny.

MATERIALITY ASSESSMENT - CLIMATE RISK ANALYSIS AND HEAT MAPPING OF PORTFOLIOS

December 2021 - EUR billion

		TR	PR	SCIB	Other segments
Power (Conventional)				24	2
of which power generation clients with > 10% of revenues coming from coal				3	0
Power (Renewables Project Finance)				11	0
Oil & Gas				19	0
Mining & Metals				9	2
of which Coal Mining				4	0
Transport				27	96
Real Estate				6	370
Other Climate-related sectors	Agriculture			2	4
	Construction			20	7
	Manufacturing			35	14
	Water Supply			2	1
Total Climate Sectors				156	496
Other sectors				61	182
Total				218	678

Low Moderately low Medium High Very High

TR: Transition Risk. PR: Physical Risk

SCIB : REC (on and off balance sheet lending + guarantees + derivatives PFE),

Other segments : Drawn amount

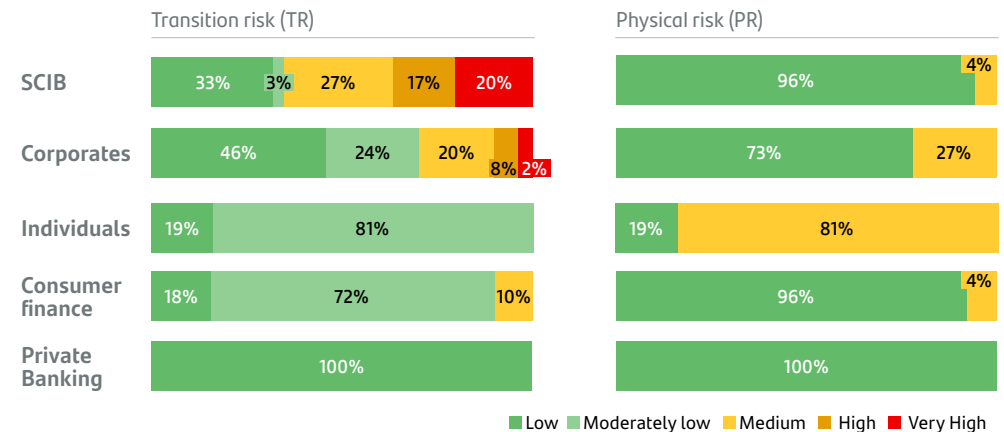
Other sectors: SCIB and Corporate NACES outside of risk taxonomy perimeter //

Individuals and SCF: Cards and Other Consumer

Other segments: Individuals, SCF, Corporates and Institutions

0 exposure amounts to exposures below EUR 500 mn

EXPOSURE BY RISK LEVEL, %



In Digital Consumer Bank, SCF is particularly sensitive to climate with businesses particularly affected by climate (such as auto lending). We ran a special assessment for credit risk, residual value risk, reputational risk and strategic/business model risk, and split SCF's portfolio by auto loans, consumer loans, exposures secured by mortgages and corporate loans and scored each segment following the abovementioned 5-level RAG.

Our analysis considered the regulatory environment, mitigating actions and consumer sentiment in addition to low credit risk residual value risk (mainly considering the portfolio's limited maturity and diversification) and other

specific risk types. We concluded that SCF's climate risk mainly stems from its retail auto lending, a segment that contributes significantly to Santander's profit and could become at-risk without careful management. In addition, we found auto lending could have a moderate reputational risk; however, we do not expect their impact to materialize in less than 5 years.

Our materiality assessment of SCF's business model (mainly retail, good-quality, short-term and diversified portfolios) found that credit risk would have no material impact from climate since average maturity (mainly for auto loans) is short and its climate risk score was low, based on external benchmarks and providers.

We also conducted deeper business analyses with a similar methodology to consider each segment's specificities and behaviour in the short, medium and long term.

IV. Monitoring

Grupo Santander uses risk appetite, scenario analysis and other tools to monitor climate-related and environmental risk.

Risk appetite and climate-related policies enable us to monitor and achieve related targets and commitments. Risk appetite has expressly considered climate since 2019. The board's qualitative risk appetite statement on climate links climate change management to our policy to prohibit or restrict financing in the energy, mining and metals, and soft commodity industries to avoid negative environmental or social impact. We regularly review our policies to make sure our standards remain consistent with our strategy and sound banking practices.

In line with our ambition to finance the transition to a low-carbon economy, in February 2021 Grupo Santander made its first decarbonization commitments to reach net-zero emissions by 2050. A quantitative metric that we have introduced into our risk appetite statement will limit our exposure to coal-mining customers and power generation customers who make 10% of their revenue from thermal coal and do not have a credible transition plan after an initial grace period. We are confident that we will achieve this phase-out by 2030,

through regular communication with affected customers to share Santander's strategy.

In line with our established governance, we are working to include the power generation sector within our risk appetite statement as we continue to set targets for sectors identified in the action plan of the Net Zero Banking Alliance.

Another tool we use for monitoring climate-related and environmental risks is scenario analysis for both management and supervisory purposes. For management, see section

"scenario analysis" in chapter 2. The ECB has a bottom-up Climate Risk Stress Test, which it performed before mid-2022 to assess how prepared banks are for dealing with financial and economic shocks stemming from climate risk. Because it is meant to be a learning exercise for both supervisors and financial institutions, its results are not expected to have any direct capital implications.

It covered Grupo Santander's consolidated perimeter and comprised three modules:

The three modules of the ECB Climate Risk Stress Test

1 QUALITATIVE QUESTIONNAIRE

11 sections (78 questions):

1. Existence and use of ST exercises
2. Governance and inclusion in Risk Appetite
3. Integration into strategy
4. Methodology used
5. Scenarios
6. Data and sources of information
7. Inclusion on the ICAAP
8. Future development plan
9. Role of Internal Audit
10. EU subsidiaries of non-EU institutions
11. Methodological assumptions and choices

2 CLIMATE RISK METRICS

Non-financial corporates
22 sectors (NACE level 2)

2 metrics:

- 1) **Income from GHG intensive sectors**
- 2) **Financed GHG emissions** (scopes 1, 2, 3)
Top 15 companies per sector

Additional documentation:

- Actions previously carried out by the bank
- Methodological approach

3 BOTTOM-UP STRESS TEST PROJECTIONS

It covers **credit, market, operational and reputational** risk.

Transition risk:

- EU/Non-EU
- 2 time horizons
 - 3y: static balance sheet (BS)
 - 30y: dynamic BS (2030, 2040, 2050)

Physical risk:

- EU, 1y time horizon
- 2 hazards: drought & heat + flood

Operational and Reputational Risks based on qualitative assessment (no projections)

V. Mitigation

Grupo Santander's Environmental, social and climate change (ESCC) policy to further our strategy regarding sensitive, special-attention and prohibited industries helps management mitigate climate change risk. And our loan approval policies are consistent with EBA guidelines on loan origination and monitoring, and continue to take climate and environmental factors into account. They include:

- Credit committees, which embed environmental, social and climate change factors in transaction review.
- Corporate customer ratings, which inform the environmental, social and climate change analysis gradually being introduced into pricing. Specifically, pricing for green mortgages and other special products already includes discounts under certain conditions.
- Collateral, the assessment of which should consider physical risk and energy efficiency.

Our first line of defence conducts proper due diligence through specific questionnaires that help it review transactions with identified Environmental, Social and Climate Change or reputational risk (e.g. human rights violations). It helps business remains within our risk appetite. As a preventive measure, key decisions can be escalated to the Reputational Risk Forum and, even the board of directors. Also, we analyse all project finance undertaken by SCIB according to the Equator Principles.

Our internal taxonomy, the Sustainable finance classification system (SFCS), is our guide on green and social financing. It has a blanket approach for monitoring operations, creating solutions for customers and preventing greenwashing. It is key to designing our sustainable financing proposition. Moreover, its standardized definitions provide for consistent

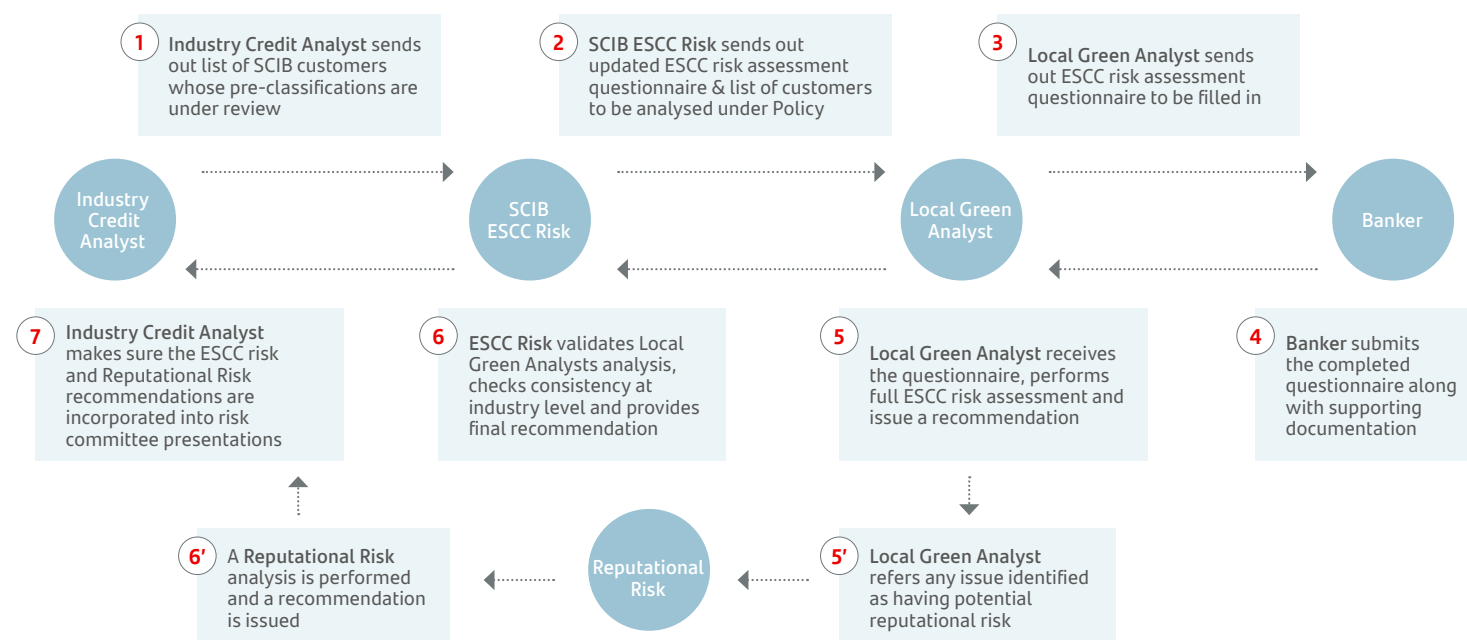
tracking, reporting and management of sustainable finance in the Group.

Furthermore, a corporate multidisciplinary working group reviews and monitors significant claims and disputes, even ones that entail climate change management and could impact on Santander's reputation. It works on

mitigation plans and escalations according to established governance protocol.

Santander's involvement in industry groups (international for a, associations, etc.) also helps us anticipate and be prepared to mitigate adverse impacts.

SCIB's ESCC Risk analysis workflow



Last, the Risk function has been given resources to manage and monitor climate and environmental risk. Specialist training proved fundamental (see section 3 – Governance “Management and ESG training for employees” for further details). And we are making progress with incentive schemes, as remuneration policies and incentives now consider risk management (see Chapters 3 “Governance” and 5 “Metrics & Targets”).

VI. Reporting

Our reporting aids in monitoring and managing climate-related and environmental risks, with timely, regular disclosure of transparent and accurate information to senior management and stakeholders.

Grupo Santander is working on the regulatory Pillar 3 ESG disclosures. It includes templates for data on climate-material sectors and will show how climate risk drivers may impact on our balance sheet, how we are mitigating them, and our exposure ratio to EU taxonomy-aligned business activities. This will allow stakeholders to compare our performance in sustainability against other peers.

Tackling environmental crime

The Financial crime compliance function understands the importance of recognizing that “behind every environmental crime there is a financial network”, not only because of the large sources of revenue that organized crime draw from these activities, but because crimes like illegal deforestation have a significant impact on carbon sequestration. Industries we consider “restricted” due to exposure to environmental crime risk include (but are not limited to) logging, pulp and paper mills, palm plantations, commercial fishing, trapping and transport of live animals and waste management. Given their “restricted” status, Santander entities that provide services to companies in those industries must respond to their elevated financial crime risk by implementing enhanced controls. Furthermore, our customer screening tools include specific terms on environmental crimes to help us flag issues and conduct assessments, and our global and in-person senior management training also includes environmental crime case studies and trends.

Additionally, we engage in several public-private partnerships as part of our commitment to detecting, disrupting and deterring environmental crime. In 2021, our financial crime compliance function chaired the United Nations Office on Drugs and Crime’s (UNODC) Private Sector Dialogue on Disruption of Financial Crimes Related to Forestry Crimes, which brought together financial institutions, authorities, investigative law enforcement units and supranational governmental bodies to discuss intelligence sharing, typologies and policy strategies on disrupting the financial crime networks behind illegal deforestation. The inter-governmental Financial Action Task Force (FATF) — the “global money laundering and terrorist financing watchdog” — also asked the function to represent the private sector in an awareness-raising, global webcast on environmental crime. Santander also remains an active member of the United for Wildlife’s Financial Taskforce against illegal wildlife trade.

Our approach to nature and biodiversity

Biodiversity underpins what nature provides, supports and regulates, like provision of food and raw materials, water, air quality and climate regulation, pollination, and genetic resources for food security, medicines and virus prevention.

The economy depends on this provision of ecosystem services, and biodiversity plays a key role in climate change mitigation and adaptation and can also suffer significant impacts from climate change. The financial sector has a crucial role to play in reducing damage to biodiversity and guiding the sustainable use, protection and restoration of nature.

As a financial services platform, Santander must understand and evaluate the ways our financing impacts nature and how our business depends on it.

We closely follow various initiatives and frameworks, considering them for future implementation and mapping available tools and approaches to continue acting responsibly.

We are also part of the Task force on Nature-related Financial Disclosures (TNFD) Forum and other working groups.

Due to our operations in Brazil, Santander's sustainability efforts have paid special attention to the Amazon and are aimed at promoting

sustainable development in the region, but we acknowledge this topic is much broader and will continue to add relevant regions and sectors to our nature roadmap.

Our global policy

Santander has established in its global Environmental, Social and Climate Change (ESCC) Risk policy prohibited activities that will not directly invest in and/or provide financial products and/or services regarding biodiversity issues:

- any projects or activities for oil & gas extraction, power generation or transmission, mining, manufacturing, plantations or other major infrastructure projects located in areas classified as Ramsar Sites⁴, World Heritage Sites or by the International Union for Conservation of Nature⁵ (IUCN) as categories I, II, III or IV.
- any projects, or expansion of existing oil and gas facilities, north of the Arctic Circle.
- extraction of native tropical wood species not certified to Forest Stewardship Council (FSC).
- palm oil processors that are not certified to Roundtable on Sustainable Palm Oil (RSPO).
- developments in forested peatlands in High-Risk Geographies⁶.

We also conduct annual reviews of our clients and pay particular attention to potential deforestation risk with agribusiness clients

in the Amazon biome as our global ESCC Risk policy establishes, among other activities we pay particular attention to the environmental, social and climate change risks

Examples of how our due diligence with projects assessed last year accounts for biodiversity risk:

- **Large greenfield infrastructure project in Southeast Asia.** The due diligence conducted by the ESCC Risk team found that the project would affect nearby wetlands that qualified as "Critical Habitat"⁷ for birdlife and other species. After a comprehensive analysis, the team concluded that the proposed mitigation and compensation measures did not meet the bank's standards. So Santander declined to provide financing.
- **Lithium mine in South America.** Santander declined to participate in this project, as it is going to be located inside a Ramsar site, a habitat for multiple endemic species and IUCN Red List threatened species. The site is a highly vulnerable and fragile ecosystem, threatened by overgrazing, unregulated tourism, mining prospecting and flamingo egg extraction. Our ESCC risk policy includes our commitment to not providing financial products to mining and projects located in areas classified as Ramsar Sites.

4. The Convention on Wetlands, called the Ramsar Convention, is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources.

5. The International Union for Conservation of Nature (IUCN) classifies protected areas according to their environmental management objectives: Category I: Nature Reserve and Wilderness Areas, Category II: National Park, Category III: Natural Monument or Feature, Category IV: Habitat/Species Management Area

6. High Risk Geographies are defined as: Any country in Africa, Argentina (only the Provinces of: Chaco, Formosa, Santiago del Estero, Salta and Tucumán) Bolivia; Brazil (only the Legal Amazon and Northeast regions); Cambodia; China; Colombia; Ecuador; Estonia; Guatemala; Guyana; Honduras; India; Indonesia; Laos; Latvia; Lithuania; Madagascar; Malaysia; Mexico; Myanmar; Nicaragua; Panama; Paraguay; Papua New Guinea; Peru; Russia; Solomon Islands; Thailand; Vietnam; and any customer stating "unknown". The High-Risk Geographies will be reviewed in light of expansion of agribusiness in new regions

7. Under IFC Performance Standards: Critical habitats are areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered 11 species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.

Santander and the Brazilian Amazon

Santander is committed to protecting the Amazon rainforest and promoting sustainable development, critical to tackling climate change and conserving biodiversity. We need economic growth, but it must be green.

Deforestation in the Brazilian Amazon has been taking place for several decades. While logging, mining and large infrastructure projects in the region have all played a role, property speculation and a lack of clear land titles are the key drivers.

In line with Santander's global ESCC Risk policy and our commitment to the Equator Principles, we take extra care when lending to Brazilian clients with operations in the Amazon.

Santander's approach to the Brazilian Amazon

We've been working with our customers to promote sustainable development in the Amazon for years. In 2002, Santander became the first private-sector bank in Brazil to run credit analysis on environmental and social risk. In 2016, we were the first bank to formally incorporate a sustainability score into our corporate clients' credit rating. We also:

- check all farmers and ranchers applying for loans for embargoes issued against them because of illegal deforestation.
- make sure their properties do not encroach on government-protected indigenous land.

- conduct annual ESG reviews of more than 2,000 customers, including beef processors, soy traders and logging companies.
- expect beef processing clients in the Amazon to have a fully traceable supply chain that is deforestation-free by 2025, including indirect suppliers of cattle, as a prerequisite for granting credit.

Farmers and ranchers

We work with a satellite-imaging firm that monitors some 17,000 properties that we finance or take as collateral. We receive daily information on government embargoes against production on illegally deforested land; modern slavery; and incursions into government-protected indigenous land, parks and conservation areas.

In 2022, we added a new layer of verification that tells us if the client has cut down native vegetation on land that we are financing.

If we spot any issues, we'll request an explanation from the client. If we uncover a material breach of environmental laws and regulations, our standard contracts dictate that we can demand the early repayment of loans.

Santander also uses Internet-based satellite-imaging tools Global Forest Watch and MapBiomas to see the detailed loss of tree cover on clients' farms and ranches over time.

Environmental and social reviews of companies

For corporate clients across Brazil (not just in the Amazon), Santander analyses ESCC risks to determine if the client is in compliance with the law and employing best practices.

Over the past decade, Santander Brasil has annually reviewed more than 2,000 corporate client groups with operations in the Amazon, including large soy producers, beef processors and logging companies. For beef producers, we follow their supplier practices closely.

Working with others to stop deforestation

Santander Brasil participates in three external initiatives that propose solutions to stop deforestation. It was a founder of The Roundtable on Responsible Soy (RTRS), which it also chaired from 2006 to 2009. The bank also founded the Brazilian Roundtable on Sustainable Livestock (GTPS, in Portuguese), a multi-stakeholder initiative to promote better ranching practices in Brazil. Santander Brasil is also a member of Febraban's (Brazilian banking association) committee on forestry and agribusiness.

Plano Amazônia

In July 2020, Santander Brasil announced its "Plano Amazônia" plan to promote sustainable development in the Amazon alongside the two other largest private-sector banks in Brazil. It is implementing the part of the plan to end deforestation by the supply chain of cattle in the Amazon.

Plano Amazônia also prioritizes understanding land ownership and promoting local farming, as well as including these 10 measures:

- Ending deforestation in the beef chain
- Planting sustainable crops
- Promoting sustainable transport infrastructure
- Facilitating investment in basic infrastructure
- Promoting green financial instruments
- Adding climate information to credit and investment policies
- Providing financial guidance and inclusion
- Regulating land
- Fostering social and economic development
- Boosting the bioeconomy

To support the plan's implementation, we created an advisory board of seven experts. It offers perspectives on opportunities and risks in the bank's initiatives in the Amazon.

North Amazon Branch Region

In 2021, we created the North Amazon Network, a commercial network that covers the Brazilian states of Acre, Amazonas, Roraima and Rondônia. It's enabling us to bring our services closer to local communities, raising their potential for sustainable businesses. By the end of 2023, we will double our presence in the region, collaborating with our customers to promote a low-carbon, resilient and inclusive economy.



More details on Santander and the Brazilian Amazon.

Some of our initiatives to protect biodiversity

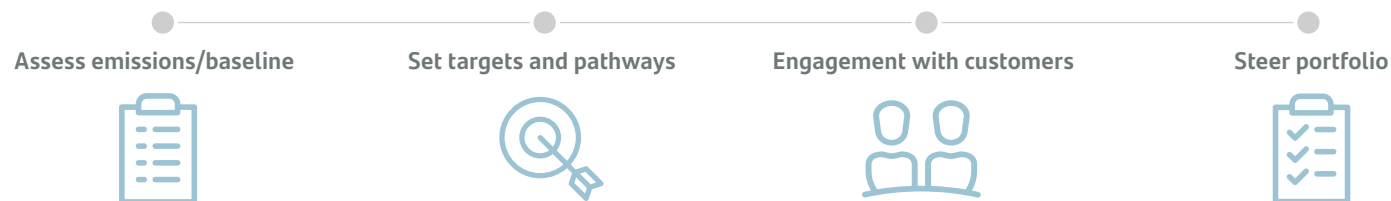
- Carbon markets and nature-based solutions.** Santander announced a new and exciting partnership with UK National Parks to support their “Net Zero with Nature” initiative. This innovative venture was awarded “Nature-based Project of the Year” by the prestigious Business Green Leaders Awards. SCIB and Santander UK are helping fund the restoration of 220 hectares of damaged peatland in Scotland's Cairngorms National Park. Furthermore, with global impact firm Palladium, Santander will be exploring its role in the carbon and biodiversity credit market.
- Santander Natura.** In 2019, Banco Santander launched Santander Natura, a volunteer programme to conserve the environment and raise awareness in the face of climate change. Since 2021, the programme has run an array of activities, from cleaning beaches to rehabilitating an eco-courtyard of the Bobath Foundation to mitigate and adapt urban spaces to climate change.
- Restoration of the s'Estany des Ponts wetland.** Banco Santander donated nearly 500,000 squared metres of wetlands to the town of Alcudia in Mallorca, Spain to restore s'Estany des Ponts, a wetland supported by WWF Spain that has been degraded for many years by waste dumping and unregulated use.



5. Metrics and targets

Aligning our portfolio to the Paris agreement

Alignment strategy



Decarbonization targets:

Emissions accounting and science-based decarbonization target methodologies are relatively new areas that are improving quickly to meet climate ambitions. Though Santander is using up-to-date and most widely accepted methodologies to decarbonize our portfolios, more methodologies need to be developed so that all financial institutions have the right tools to effect positive change in the economy.

We set new decarbonization targets according to our internal roadmap from last year's Climate Finance Report. They target the most carbon intensive and material sectors. In this year's report, we reveal additional decarbonization targets for energy, aviation and steel. The targets were presented at our key climate governance bodies and approved by our board of directors.

Sector	Scenario	Emissions	Metric	2019 baseline	2030 targets
Power generation	IEA Net Zero 2050	Scope 1	tCO ₂ e/MWh	0.21*	0.11 (-46%)
Energy	IEA Net Zero 2050	Scope 1 + 2 + 3**	mtCO ₂ e	23.84	16.98 (-29%)
Aviation	IEA Net Zero 2050	Scope 1 + 2	grCO ₂ e/RPK	92.47	61.71 (-33%)
Steel	IEA Net Zero 2050	Scope 1 + 2	tCO ₂ e/tonne steel	1.58	1.07 (-32%)
Thermal coal	Phase-out targets to eliminate exposure by 2030 to: • Power generation customers with a revenue dependency on coal of over 10% • coal mining				

* In last year's Climate Finance Report, we assessed the 2019 financed emissions of our power generation portfolio, including guarantees and other types of off-balance exposure to our customers that do not entail current funding. Because, according to the PCAF standard, such exposure should not be calculated if its attribution factor is "outstanding", we were over-attributed with our corporate customers' emissions. Therefore, the 2019 baseline emissions intensity has been restated from 0.23 to 0.21. The target and climate ambition remains for this sector.

** Use of sold products.

In setting our sector net zero targets, we aim to follow the NZBA Guidelines for Climate Target Setting, below we describe how we are delivering against these guidelines:

Santander's activities covered by our targets (asset classes): According to the PCAF's global GHG accounting and reporting standard, we assess the financed emissions of the sectors our targets cover based on on-balance credit exposure.

Sector boundaries: The scope selection (indicated before) and sector boundary selection aim to target the activities with the highest emission intensity.

- For the power generation sector, we're analysing upstream/generation business in the value chain.
- For energy, we're focusing on upstream companies and integrated companies undertaking their own upstream production in oil and gas.
- Our analysis also covers companies that attribute over 10% of their revenue to steel production.
- The aviation sector's climate change impacts involve emissions of CO₂e, nitrogen oxides and water vapour as well as cirrus cloud cover.

Choice of target types: As we believe financial institutions with strong climate commitments can support industries' decarbonization, emissions intensity is our preferred metric. Our climate strategy to help our customers' transition to a low-carbon economy prioritizes engagement over divestment. Decarbonization targets should not push us to divest in certain sectors only to be replaced by other financial institutions with weaker climate ambitions. For the energy sector, we must take on a different measurement approach. On the one hand, it lacks a clear transition pathway. On the other hand, under a science-based approach to net zero, production would have to be abruptly cut, with a shift towards new technologies. Therefore, we assess the sector with an absolute emissions target. See more details about our position on the Energy sector in [next page](#).

Choice of base year: Our customers' emissions data takes longer to become available than regular financial information. We're using 2019 as the baseline for calculating financed emissions because 2020 proved a clear outlier in many sectors due to the Covid-19 pandemic. This is consistent with industry practice, as 2019 is more representative of normal production levels.

Scenario: To set science-based decarbonization targets for our financed sectors, we choose a credible scenario that draws a pathway to reach net zero emissions by 2050 and will limit temperature rise to 1.5° C. The scenario we have chosen for sectors for which we have released decarbonization targets is the "International Energy Agency - Net Zero Emissions by 2050 Scenario" (IEA-NZE). Our aviation target is aligned to the expected adoption of current technologies, while our expectation is that breakthrough innovation could further accelerate its achievement.

Target coverage: We're including the on-balance exposure for our wholesale business in the target because it represents the significant majority of the credit exposure to all concerning sectors, according to our climate materiality. The target scope of lending is:

Sector	2019 lending exposure assessed (EUR bn) *
Power generation	10.7
Energy	7.7
Aviation	1.5
Steel	1.5

* Exposures are based on design choice for target setting for each sector (see explanations above). They might differ from exposures cited in previous chapters, which are based on risk management criteria and include guarantees, undrawn lines of credit and derivatives.

From our total lending on the balance sheet, about 3.5% of our exposure are from sectors with published decarbonization targets (power generation, coal, energy, aviation and steel). And these sectors are around 74% of SCIB credit risk exposure of total SCIB's climate concerning sectors.

Financed emissions: In line with the methodology and design we chose, based on PCAF⁸, the 2019 financed emissions metrics we used to set targets were:

Sector	Absolute emissions (mtCO ₂ e)	Physical emissions intensity	Financial emissions intensity (mtCO ₂ e/EUR bn lent)	Overall PCAF score *
Power generation	5.41	0.21 tCO ₂ e/MWh	0.51	2.67
Energy	23.84	73.80 mtCO ₂ e/TJ	3.10	3.40
Aviation	1.81	92.47 grCO ₂ e/RPK	1.17	3.30
Steel	2.62	1.58 tCO ₂ e/tons steel	1.74	3.00

* Obtaining emissions data from our customers is a challenge. As they disclose more non-financial information worldwide, the quality of our reporting on financed emissions will improve. The PCAF scores illustrate the data quality used to calculate the financed emissions (with 1 being the best). Financed emissions information relies on a wide range of sources for emissions, physical intensities and production data. Trucost is the main source for fossil fuels emission and production. Asset Resolution and annual reports filings have been used as secondary sources in order to cover information gaps. As third option, Transition Pathway Initiative is used for gathering physical emission intensity for certain sectors, including O&G and Steel.

8. PCAF: "Partnership for Carbon Accounting Financials" is a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the greenhouse gas (GHG) emissions associated with their loans and investments. Santander joined PCAF in 2021.

A BRIEF NOTE ON THE ENERGY SECTOR:

"We cannot afford to ignore either today's global energy crisis or the climate crisis, but the good news is that we do not need to choose between them – we can tackle both at the same time." Fatih Birol, Executive Director of the International Energy Agency (22nd June 2022)

The energy sector as a whole represents around **73% of the CO₂ emissions and 83% of the GHG emissions worldwide**. Fossil fuels are the main source of these emissions.

The IEA-Net Zero emissions (IEA-NZE) is one of the most used scenarios for decarbonization targets and is used as a reference to a net zero trajectory (i.e. EBA – Pillar III reporting). The IEA-NZE assumes some **profound changes to the global economy** to reach net zero: more renewables, greater energy efficiency, the electrification of the economy, more Carbon Capture Utilization and Storage technology, greater use of hydrogen and widespread behavioural changes.

As the global economy changes, it is **critical that the transition is just** (for example, the

price of energy and electricity is affordable for everyone) **and orderly** (for example, ensuring energy supply is secure, which has recently become an acute issue thanks to the current Ukraine-Russia war).

Current policies take us to a +2.7°C of global warming. This means a NGFS-Hot House scenario. As well as corporates setting targets and having transition plans, **governments need to have ambitious plans** (NDCs) and supporting policies, laws and investment plans (i.e. their own transition plans) to reach net zero, and for 1.5°C to become the central scenario. In setting our energy targets, we need to balance some critical factors, as explained below.

Our Energy target:

- **Climate change is an emergency.** We need to ramp up the world's renewable energy capacity and act now to decarbonize the economy. Given the global energy sector powers the global economy and society, its decarbonization will require the transformation of all sectors and activities that consume energy.

- **Our role is to support our customers in this transition.** Our focus is not simply to create new green products and services, but to help customers – individuals, small and large businesses – to decarbonize and go green. **We are one of the top lenders in renewable energy**, and we are increasing the volume of green finance to support the transformation in several sectors (auto-transport, power generation, residential and commercial real estate, etc.). Although the transition path may not be linear, we understand the trend towards renewable sources will remain.

- **We are determined to ensure the transition is just.** In tackling climate change we do not want anyone to be left behind. In our Group's footprint, economies and communities are at different stages on the path to net zero: we want to help them all in the transition to a low carbon economy - mindful of their starting point, the challenges they face, and the need for economic growth to help finance the transition.

- **Energy security is key if the transition is to be orderly.** It is critical that as we increase renewable capacity, energy supply is affordable and reliable. As the IEA states, oil and gas will continue to play a role in powering the world's economy during the transition. Geopolitical tensions and other factors are now driving the energy prices up to very high levels in some geographies we operate in. We will therefore continue to fund renewables and support the decarbonization of the world economy, while supporting measures that will deliver energy security in a responsible way. We do not exclude financing oil and gas in the future. If we do so, we will pay special attention to the **credibility and robustness of our customers' transition plans** to get to net zero, aligned with NDCs. As we look ahead, we will continue to monitor climate scenarios closely, and will review our scenarios in light of them.

Updated roadmap for delivery on Net zero

- Our materiality assessment of physical and transition risks has enabled us to focus on high GHG emission intensity sectors to start formulating specific decarbonization strategies for each sector.
- We are working to set initial targets for mortgages, auto-loans, auto-manufacturing and cement in 2023.
- We will set decarbonization targets for the remaining of NZBA sectors: commercial real estate, agriculture and some sub-sectors no later than March 2024.
- We will also update previously set targets as needed as new methodologies and more precise and timely information becomes available in the market.

The decarbonization of any portfolio, and in particular retail, will require well developed scenarios, 1.5°C aligned NDC's and supportive policies for an orderly transition.

Action plan - Power generation sector alignment

One year after setting the power generation alignment target, the emissions intensity of our power generation portfolio has decreased from 0.21 tCO₂e/MWh and 5.41 mtCO₂e (2019-baseline) to 0.17 tCO₂e/MWh and 4.59 mtCO₂e in 2020.

We are putting in place multiple levers to implement our sectoral emissions intensity targets for the power sector. These levers include customer engagement; dedicated portfolio steering governance; data collection as part of the risk analysis process; exclusion policy reviews, as well as linking targets to remuneration for senior managers. We consider customer engagement a priority tool for reaching our targets, through products, services and advice in supporting our customers' transition.

Our customer engagement approach aims to facilitate the achievement of our emissions targets while enabling us to develop a deep understanding of our customers' transition strategies and support their transition to low-carbon business models. The approach will be supported by clear governance processes, involving various internal stakeholders, such as front office teams, the risk reporting functions, as well as senior management to guide the potential portfolio steering actions. It is structured around four main steps: Collect, Assess, Engage and Review. We have used various internationally recognized references, including the Cambridge Institute for Sustainability Leadership (CISL) "Let's Discuss Climate" guide as input and adapted these to our requirements and objectives.

Collect

We rely on the information we obtain from ongoing dialogue between our relationship managers and customers. We source information from our customers through tailored ESG questionnaires that contain transition-focused elements that are designed to help us better understand their decarbonization strategies. We are also sourcing reliable and consistent information from credible third parties to complement our understanding. This information will be collected and updated both at the client onboarding stage, but also annually as part of the annual business and risk assessment with each customer.

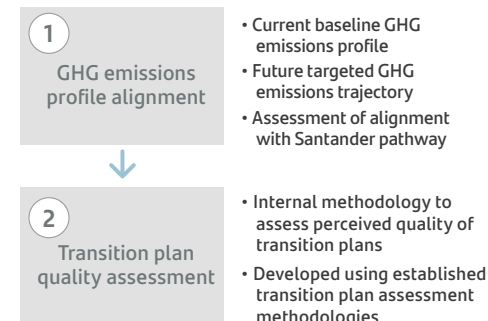
Assess

Assessment consists of a two-step approach designed to categorize our customers according to their emissions intensity pathway and perceived quality of their transition strategy. The assessment will be based on ongoing interaction and monitoring of our customers, and we update it at least annually.

Our first step is assessing how our customers' emissions trajectory aligns with our current and future alignment targets for the power sector. The second step is assessing the perceived quality of each customer's transition plan. Our methodology focuses on four items: Targets, Action Plan, Disclosure and Governance. We draw on established transition plan assessment methodologies, such as TPI (Transition Pathway Initiative), CDP, ACT (Assessing Low Carbon Transition), Climate Action 100+, as well as other

climate risk disclosure frameworks such as the TCFD. How strong we perceive each customer's transition plan to be across each pillar will influence how we ultimately tier them. Our assessment is also vital for identifying material engagement topics that will support future engagement dialogue.

Tiering system based on two factors



Transition Pillar	Overview
1. Targets	Quality and ambition of quantitative targets to reduce GHG emissions
2. Action plan	Depth of decarbonization strategy to achieve GHG emissions reduction targets
3. Disclosure	Transparency on GHG emissions reporting across relevant scopes
4. Governance	Management oversight and governance of transition strategy

The Targets assessment focuses on the quality and ambition of the customer's quantitative GHG emissions targets. We assess short- and long-term, absolute and intensity targets when possible, the scopes they cover, and their alignment with the goal of limiting warming to 1.5°C.

The Action Plan assessment focuses on the credibility of the customer's decarbonization strategy to achieve their emissions reduction targets. We assess their policies on climate change action; business strategy consideration of climate change risks and opportunities; and time-bound action plans to achieve their decarbonization targets.

The Disclosure assessment focuses on the transparency of the customer's reporting on past emissions performance across all relevant scopes, the level of assurance, as well as the degree of reporting alignment with the TCFD. Where possible, it may also include assessment as to whether or not previous GHG emission targets were achieved.

Lastly, the Governance assessment focuses on the level of management oversight and governance of a customer's transition strategy. We assess the level of seniority of executives accountable for climate strategy; board committee oversight of climate change issues;

and how executive remuneration is aligned with climate change performance.

Our transition plan assessment approach leads to a tiering system with four categories that will inform how we prioritize engagement topics and enrich dialogue with our customers, while contributing to meeting our own portfolio emissions targets. Tiering will allow for tailored, meaningful transition dialogue, with the expectation that initially lower-tiered customers will migrate to higher tiers over time.

Engage

We aim to engage our customers through insightful transition dialogue, offering compelling sustainable financing solutions and sharing expertise in sustainable technologies enabling the energy transition. Our dialogue is informed by transition assessment tiering in the previous phase.

Engagement will be grounded in our understanding of our customers' business models as well as transition risks and opportunities. Our sustainable finance offering includes not only deep expertise in renewable financing demonstrated by our strong leadership in this field, but also a range of sustainable finance solutions at entity level that can be deployed to support our customers' overall sustainability objectives.

Our sustainable tech advisory offering led by our global team of experts in green technologies allows us to provide bespoke strategic and

corporate finance advice on opportunities to accelerate adoption of low-carbon technologies. Examples of our focus in this area include our partnership with EIT InnoEnergy, the innovation engine for sustainable energy supported by the European Institute of Innovation & Technology (EIT), a body of the European Union to support innovation in green energy across the continent. We also recently acquired 80% of WayCarbon, a Brazilian consultancy firm that has been advising public and private organizations on climate change and helping create and implement strategies to improve sustainability outcomes.

Relationship managers, in particular, will play an important role in our client engagement approach. Therefore, there is a need for ongoing training in sustainability and energy transition topics to acquire and maintain appropriate knowledge and understanding of both evolving risks and opportunities in relation to energy transition. We are developing a comprehensive training plan for SCIB employees, with a particular emphasis on sectorial ESG knowledge.

The client engagement approach will be part of our portfolio steering governance designed to identify client or portfolio related actions to achieve our power sector portfolio target. A portfolio steering forum will operate at the core of the governance process, its scope includes monitoring progress towards the achievement of our portfolio targets, as well as identifying and deciding on required actions at portfolio level.

Tier Categories		Description
Tier 1	Leader	- Emissions profile fully aligned with Santander pathway - Strong transition plan
Tier 2	Strong	- Emissions profile fully aligned with Santander pathway but improvement needed in transition plan; or - Strong transition plan but emissions profile partially aligned with Santander pathway
Tier 3	Moderate	- Emissions profile partially aligned with Santander pathway, but improvement needed in transition plan; or - Emissions profile not aligned with Santander pathway, but strong transition plan
Tier 4	Weak	- Emissions profile not aligned with Santander pathway - Weak transition plan

Generally speaking, we consider the following approaches⁹ to be supportive of enabling the real economy net zero transition: financing or enabling the development and scaling of climate solutions to replace high emitting technologies or services, including the responsibly managed phase-out of high emitting physical assets;

financing or enabling companies that are already aligned to a 1.5°C pathway; as well as financing or enabling the transition of real economy firms according to transparent and robust net-zero transition plans in line with 1.5°C aligned sectoral pathways.

Net zero for Santander Asset Management:

In March 2021, SAM became the first asset manager in Spain and Latin America (excluding Brazil) to sign up to the Net Zero Asset Managers initiative, pledging to become net zero by 2050 and setting in November 2021 the tentative goal of halving net emissions for 50% of our assets under management - AuM (within the scope of net zero¹⁰) by 2030. As new methodologies become available and data granularity and coverage improve, more financial instruments will be added to our AuM in scope.

We are working under the “Paris Aligned Investment Initiative Net Zero Investment Framework” and structuring our estimates in terms of portfolio emissions intensity, calculating its carbon footprint using EVIC (tCO₂e/USD mn invested). To support the transition of the real economy, we’ve been closely working with our main data provider to develop a custom-built solution to assess the alignment of assets according to the methodological approach defined by the Net Zero Investment Framework. According to initial calculations, the portfolio’s emissions with 2019 baseline are 95.7tCO₂e/USD mn invested.

Our Net Zero commitment highlights the importance of our engagement actions as we will need to work with those companies representing at least 65% of owned emissions in the portfolio. Additionally, we’ve been proactive in providing our asset-owner clients with expertise and analysis on net-zero investing and in encouraging them to give net-zero mandates.

9 June 2022 GFANZ Recommendations and Guidance for Financial Institution Net-zero Transition Plans

10. Assets in scope are assets with a defined Net Zero methodology, which currently amount to 54% of total AuM. For c.50% of those, SAM has carbon metrics available today. This objective might be reviewed upwards depending on data availability

Fossil fuels financed in 2021:

The Banking on Climate Chaos: Fossil Fuel Finance Report 2022, endorsed by over 300 organizations from 50 countries, analyses the world’s largest banks’ financing of the fossil fuel sector. Santander was one of the analysed banks, and the figures contained here show our relative position versus our peers and other banks, measured in terms of our total fossil fuel financed, and its weighting when compared to total lending.

Ranking way below most of our peers and other banks, Santander’s low fossil fuel financed, in both absolute and relative terms, is further evidence of our commitment not to finance sectors that have a negative impact on climate change.

Our fossil fuels financed over our total lending barely reaches 1% and is one of the lowest ratio among our nine peers. Our volume of fossil fuel finance is more than 7 times smaller when compared to the leading bank.

RANK	BANK	Fossil fuels financed (Billion USD)	Fossil fuels financed over total lending
1	Bank 1	61,732	5.73%
2	Bank 2	46,215	5.16%
3	Peer 1	41,351	6.35%
4	Bank 3	38,757	9.65%
5	Bank 4	31,978	3.27%
6	Bank 5	31,899	3.26%
7	Peer 2	30,402	4.94%
16	Peer 3	17,976	1.72%
19	Peer 4	14,745	1.53%
24	Peer 5	10,753	1.45%
28	Peer 6	9,946	1.48%
35	Santander	7,920	0.69%

Ranking by Fossil fuels financed.

Exposure over total lending not provided in the Report mentioned in the text, but calculated with data from the banks’ official reports.

Peers are banks whose size and market capitalization are comparable to Santander, including BBVA, BNP Paribas, Citi, HSBC, ING, Itaú, Scotiabank and UniCredit.

Our environmental footprint

Santander's group-wide strategy to reduce the environmental impact of our operations consists of three dimensions: reducing and offsetting CO₂e emissions, reducing and handling waste responsibly and raising employees' and other stakeholders' awareness about environmental issues.

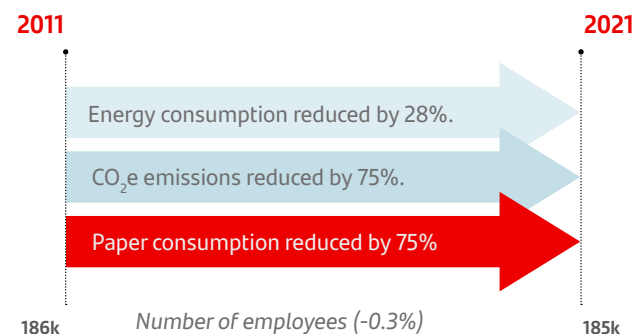
We've been measuring our internal environmental footprint (energy consumption, paper and water consumption, waste generation and emissions) since 2001. Since 2011 our strict energy efficiency and sustainability initiatives have helped us in striving to have the lowest possible impact on the environment. In executing our 2019-2021 Plan, we reduced our electricity consumption by 4% and our CO₂e emissions by 2%.

Our **2022-2025 Energy Efficiency and Sustainability Plan** will include more than 100 measures, enabling us to **reduce our electricity consumption by 2.6% and our absolute CO₂e emissions by 35.4%**. Some measures are:

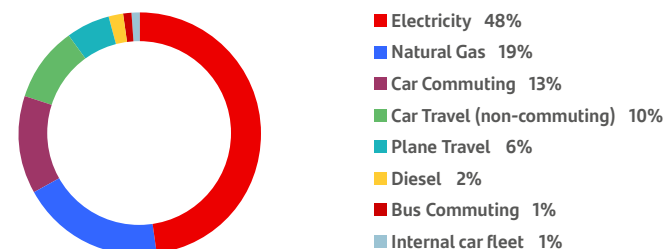
- raising awareness among employees and potentially outside core geographies.
- increasing office space efficiency.
- using more efficient HVAC, lighting and water technologies.

- constructing sustainable buildings.
- installing 7 MW solar panels in our buildings to generate our own renewable energy for self-consumption.
- purchasing certified renewable electricity.¹¹
- implementing more practices to reduce and reuse waste.
- using new technologies as much as possible to reduce paper consumption and waste
- obtaining ISO14001, ISO 50001, LEED, BREEAM and WEALTH certifications for our buildings.
- installing 1,250 free EV charging stations in our buildings; and shifting to hybrids and electric vehicles and making them more available to employees to reduce our emissions from business travel and commuting.
- offsetting the remaining emissions through verified projects.

2011-2021 Plan Results



2021 Emissions by Source



11. In countries where electricity from renewable sources can be verified.

Carbon neutral

In 2020, we became carbon neutral¹² in our own operations, fulfilling the goal we had announced at the COP 25 in Madrid. We've been offsetting the emissions we're unable to reduce through other initiatives. Each business unit oversees its own emissions and offsetting costs. Five projects certified by the industry's most well-known standards such as VCS-Verra, Gold Standard or CDM UNFCCC were selected in 2021 to offset all the Scope 1, 2 and 3 emissions within our environmental footprint (as defined below) that we were unable to previously reduce through other means.

For more details about how we measure and offset our emissions, check out the "2021 Grupo Santander Carbon Footprint Procedure and Report" and the "Independent limited assurance report on Greenhouse Gas Statement 2021" on our corporate website.

Use of renewable energy

In 2021, 75% of our buildings and branches' electricity came from renewable sources (100% in Germany, Spain, Mexico, Portugal and the UK). In line with our public commitment, we're working towards sourcing 100% renewable electricity by 2025¹³.

The green energy we purchased caused emissions from electricity consumption to fall 56%. Overall, this enabled us to reduce our emissions by 37%.

Implementation and certification of environmental management systems

An environmental management system assures that building management is eco-friendly. Santander aims to have an environmental management system in place at all our main buildings in our core markets, with ISO 14001 certification. We currently have 30% of our employees working in ISO14001/ISO 50001 certified buildings, and the 2022-2025 Energy efficiency and sustainability plan aims to increase this number by 6%.

We're also working to obtain LEED Platinum, LEED Gold and other certifications for other buildings we occupy, in addition to the Zero Waste Certification for the Group's and Santander España's Madrid headquarters.

In 2020, we began to remodel our Pereda and Hernán Cortés buildings in the city of Santander. Both buildings will have BREEAM certification.

Climate awareness

Santander organizes subsidiary-level and global employee awareness campaigns on reducing our environmental impact. Each subsidiary posts news and topics of interest about the environment and the Group's initiatives at their locations.

For the twelfth year running, we took part in the Earth Hour, switching off the lights at our most emblematic buildings.

Other initiatives

We installed 150 additional electric car charging stations at our corporate centre, the Santander Group City in Boadilla del Monte (Madrid, Spain), bringing our total to 340. This will be further increase with the 1,250 planned in our 2022-2025 Plan. In Portugal, UK, Germany, and the US some of our buildings also have electric car charging stations.

Furthermore, some buildings in Chile and Brazil began to generate their own renewable electricity directly and 500 kW of photovoltaic panels are being installed at Grupo Santander's headquarters at Boadilla del Monte in Madrid. We also distributed 2,544,161 "eco-cards" (made out of materials such as PVC and PLA19) in 16 geographies and expect to issue more in the next few years.

Single-use plastics

As part of our public responsible banking commitments, we also set out to remove all unnecessary single-use plastic from offices and buildings in our core markets in 2021. By the end of the year, we had achieved that goal. Now, we're making sure that the materials used in the Group's dining areas, vending machines and delivery service are environmentally friendly.

12. In our core geographies (G10), which represent >98% of greenhouse gas emissions

13. In countries where electricity from renewable sources can be verified.

2021 Environmental Footprint

YoY Change 2020-2021 (%)

1,808,668 m³

water consumed from the
supply system

-12.4%

903
million kWh
total electricity



75%
renewable
energy

-1.9%

7,345 tonnes
total paper
consumption



82%
recycled or
certified
paper

-18.1%

6,324 tonnes
paper and card waste

-6.7%

3,714,227 GJ
total internal energy consumption

-1.2%

YoY Change 2020-2021 (%)

118,517 tonnes

CO₂ equivalent

total emissions (market-based)

-39.0%

Scope 1

25,672 tonnes

CO₂ equivalent

direct emissions

Scope 2

57,425 tonnes

CO₂ equivalent

indirect emissions from electricity (market-based)

Scope 3

35,420 tonnes CO₂
equivalent

indirect emissions from employee travel

PROJECTS TO OFFSET CO₂ EMISSIONS



Reforestation in Borela, Galicia

The 35-year project is located in Borela, Galicia, Spain.

78.34 hectares of land will be reforested with native species in an environmentally friendly way, regenerating degraded and natural areas that have lost their vegetative tree cover.

Included in the MITECO¹⁴ registry, the project is estimated to absorb a total of 107,772 metric tonnes CO₂ equivalent.



Oaxaca III Wind Energy Project

The project will construct a wind farm with 102 MW installed capacity. Renewable energy will be provided to Mexico's grid system, reducing greenhouse gas (GHG) emissions from the fossil fuels the grid normally uses.

Certified by the Clean Development Mechanism (CDM-UFCCC), the project will avoid 231,751 metric tonnes CO₂ equivalent emissions per year.



Maracanã Small Hydropower Project

10,656 MWh hydroelectric power for electricity production in Nova Marilândia, Mato Grosso in Brazil's mid-west.

The project reduces greenhouse gas emissions (GHG) that would have occurred otherwise in the absence of the project activity by avoiding electricity generation by fossil fuel sources in the grid and it's expected to reduce an average of 17,183 tCO₂ per year.

This project is certified by the Clean Development Mechanism (CDM-UFCCC).



Forest Conservation

The project "Reduction of deforestation and degradation in Tambopata National Reserve and Bahuaja-Sonene National Park within the area of Madre de Dios region -Peru" will prevent deforestation and protect degradation in these areas in Peru's Madre de Dios region.

It has been verified by VCS-Verra and is estimated to generate 457,750 carbon credits annually.



Vichada Climate Reforestation Project

The climate and reforestation project is in Colombia's Orinoco Department. It will create natural forests that can produce high-quality hardwoods, trap carbon, and stabilize and restore fragile, degraded areas in a way that is economically, socially and ecologically viable.

It is a Gold Standard Certified Project and has issued more than 835,000 credits since 2017.

¹⁴ Spanish Ministry for Ecological Transition and the Demographic Challenge

OUR CONTRIBUTION TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Helping society tackle global challenges: 2030 agenda

Our activity and investments contribute to several United Nations' Sustainable Development Goals and support the Paris Agreement.

Our climate strategy and our ambitious roadmap to be "Net Zero" by 2050 directly aid in the achievement of UN SDGs 7 and 13.



We tackle climate change by reducing our own carbon footprint and environmental impact, while helping our customers' transition to a low-carbon economy. We are a member of Net Zero Banking Alliance and Net Zero Asset Managers initiative.

TARGETS WHICH BANCO SANTANDER CONTRIBUTES TO

- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
- 13.2 Incorporate climate change measures in national policies, strategies and plans.
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change.



We're the global leader in renewable energy financing and finance energy efficiency projects; low-emission, electric and hybrid vehicles; and other cleaner transport solutions.

TARGETS WHICH BANCO SANTANDER CONTRIBUTES TO

- 7.1 By 2030, ensure universal access to affordable, reliable and modern services.
- 7.2 Significantly increase the share of renewable energy in all energy sources.
- 7.3 Expand infrastructure and improve technology to provide modern and sustainable energy services.



For more details, see the 'Banco Santander and the SDGs' brochure on our corporate website.

6. Financing the green transition

Tackling climate change is a global challenge at Santander, we want to play our part to address it. Our ambition is to become a world leader in green finance as a high-quality provider of world-class solutions to help our customers tackle the green transition. We have committed to supporting our 155 million customers and the global economy to become net zero by 2050 with advice and business solutions. We are also mobilizing EUR 120 bn in green finance by 2025 and EUR 220 bn by 2030.

Our customers' transition represents a unique opportunity for Santander, as we see green finance grow exponentially in our core markets.

A Global Green Finance Team has been set up in 2022 to embed green finance in all business areas, ensure consistency and make the most of the Group's scale, unifying our retail, commercial and investment banking green finance business proposition under the same umbrella¹⁵.

Our ambition is to become a world leader in green finance. We have strengthened our current commitment by appointing a Global Head of Green Finance and creating a dedicated green finance team.

The new Global Head of Green Finance's main priorities are:

1. Building the infrastructure that will support green finance across the Group. This means implementing the Sustainable finance classification system (SFCS); strengthening the controls to assess and manage greenwashing risk; and executing the data strategy to measure and monitor green finance results.
2. Growing the green finance business, which entails defining a complete green finance strategy for the Group; delivering a best-in-class value proposition for our customers; and deploying well-trained commercial teams to capture the opportunity.

"Our green commitment is overseen at a highest level in the Group, and our strategy will cascade down to all businesses"

We're committed to helping our customers — big and small — transition to a low-carbon economy, with solutions, capital and advice"

Lucas Arangüena, SCIB's Global Head of ESG and Sustainable Tech, took up the role of Global Head of Green Finance. He regularly updates the CEO's management committee and participates in the Responsible Banking Forum and the Responsible Banking, Sustainability and Culture Committee.

¹⁵. The Green Finance Team will lead the SCIB and have oversight over the Commercial Banking; Wealth Management and the Digital Consumer Bank will continue to develop their ESG/green strategy as of today.

Providing our clients with global and local green solutions in SCIB, retail and commercial banking and raising awareness in our local communities

Becoming sustainable finance leaders in our markets would not have been possible without our units' joint efforts to raise awareness, collaborate and offer our customers timely sustainable solutions.

Santander UK

Transport Offsetting Partnership: Santander Consumer UK has fully offset the fleet's 2020 emissions and is in talks with a car retailer group in the UK to partner in an initiative to offset first-year emissions for the used cars the retailer sells.

Green Buildings: Santander UK is launching additional green loan products that will support current mortgage customers planning green retrofits. It is also kicking off the first phase of its new online Green Homes Hub.

Battery Storage: Santander UK has become a market leader in financing battery storage projects. With more than GBP 250 million in funding between 2019 and Q2 2022, the bank has proved to be the nascent market's top lender.

"Best Sustainable Supply Chain Finance Solution" in TMI's 2021 Treasury4Good Awards: SCIB UK partnered with Tesco in a relevant transaction that enabled the supermarket chain to become the first UK retailer to offer sustainability-linked supply chain finance (SCF) to its suppliers.

Financing of Dogger Bank C: Santander was mandated lead arranger in the financing of Dogger Bank C, a 1.2 GW wind farm being built off the coast of Yorkshire - the largest offshore wind project financing to date, and is due to be the largest offshore wind farm globally.

Santander Bank Polska

"Here I live, Here I make eco-changes"

grant programme: The programme, organized by Santander Fundacja for International Earth Day, is set to finance original, environmentally friendly initiatives submitted by communities in Poland.

Santander Consumer Finance Europe

Electric vehicles: In 2021, we financed over 140,000 electric vehicles in Europe and over 190,000 hybrid vehicles.

Other clean solutions: We are working to enhance our green finance proposition by adding solar panels (>23,000 financed in 2021), green heating systems, electric vehicle chargers, bicycles and other products. In 2021, SCF provided EUR 230 million in green finance solutions.

Emissions: We are working to capture emissions of the new business we have financed, with a dashboard to check emissions metrics every month.

Cards: Several SCF countries are working to replace plastic credit cards with more sustainable materials (over 10,000 sustainable cards issued in 2021).

Additionally, we are an active issuer in the **green bond market**, with 5 issuances in 2021.

Santander Portugal

MERECE: This joint initiative aims to recycle cards with electrical components. For every card recycled, a tree will be planted and looked after for five years. By July, 553 kg of cards will have been recycled, resulting in 533 trees planted

First sustainability-linked supply chain finance in Portugal's retail sector: SCIB launched a sustainability-linked supply chain finance programme with Sonae and global sustainability rating platform EcoVadis to incentivize better sustainability performance by Sonae's suppliers in Portugal and Spain. The first programme of its kind for a Portuguese retailer, it is directly linked to Sonae's sustainability goals and its purpose of "creating today a better tomorrow, for all"

Santander España

Santander Green Investment: Santander Spain has created Santander Green Investment, a platform to invest in renewable energy projects under development and construction.

Carbon footprint calculator for our customers: A new feature on Santander website and app has been enabled to support our retail customers in Spain in their transition and measure the carbon footprint of their direct debits and purchases with Santander cards.

Rehabilitation of buildings and homes program: a new service through which our customers can discover and apply for public aid for the rehabilitation of their homes, calculate the energy efficiency that can be achieved with the renovation and many others.

Agreement with emovili: Santander Spain has signed an agreement for the electrification of its entire renting fleet.

Card recycling: Santander España will make it easier for its customers to recycle credit and debit cards at its ATMs. These cards will be recycled into various kinds of street furniture.



Santander US

Earth Day: We took part in a footprint-wide service initiative to celebrate Earth Day and commemorate the organization's commitment to environmental sustainability. In total, some 600 Santander US employees logged nearly 2,000 volunteer hours in over 40 events to perform community garden maintenance, waterway and public space cleanups and the planting of erosion-control vegetation.

Santander México

2021 ATM drive for Reforestamos México: Reforestamos fights to protect woodlands and boost social and economic development in communities that depend on forests. In 2021, our 14th year of partnership, our drive raised MXN 1,233,940 through our ATM network, supporting 6,800 people.

First sustainability-linked bond in Mexico: Santander acted as sustainability coordinator for Coca-Cola FEMSA in the first sustainability-linked bond in the local debt market in Mexico.

ARCA CONTINENTAL Green Bond: Santander Mexico acted as an ESG consultant in the green bond issuance for MXN \$4.6 billion of Arca Continental, a Coca-Cola bottler - first green bond issued the Mexican market performed by a company from this sector.

Sustainability-Linked Syndicated Loan (Coppel): The team at ESG Solutions Mexico jointly led the ESG consultancy process for the issuance of a sustainability-linked loan totaling MXN \$40 billion tied to the participation of women in leadership positions and total installed capacity of solar energy.

Santander Chile

Mide lo que importa ("Measure what matters"): Santander Chile and Sistema B returned with Mide lo que importa, a programme to raise awareness among SMEs about why measuring environmental impact matters.

Green mortgage consolidation: housing loans for new buildings with low environmental impact certificate with a spread reduction and since 2022 as well under fixed rate and with a 30-year repayment term.

Santander Brasil

Partnership with responsible agribusiness: We provide customers with credit lines, including our own and on-lending products. They finance low-carbon practices, more efficient equipment and traceability certifications and other solutions. In 2021, we disbursed BRL 346 million.

Energy + Agro: To promote solar energy systems in rural areas, we created the Energia+ Agro programme. Its special conditions for agrobusinesses include a 120-days payment grace period, payment in up to 96 months and a fully online application process.

Sanitation: In 2021, our advisory and financing services for sanitation projects amounted to BRL 5.6 billion. In early 2021, we held three days of debates about sanitation. The sector should generate BRL 600 billion in investment in the coming years.

Santander Uruguay

Beach cleaning in Montevideo: In the summer, Banco Santander Uruguay continued to clean up beaches in Montevideo, alongside employees, children and families.

Santander Argentina

Agreement with Gentos: agro loans and training sessions for the sustainable land management.

SUSTAINABLE FINANCE CLASSIFICATION SYSTEM

The Sustainable Finance Classification System (SFCS) is an internal guide with harmonized criteria to classify green, social and sustainable assets in all the Group's units and businesses. Sustainable finance is key to our ambition to be net zero by 2050 and a key lever for implementing the green finance strategy. Reviewed by Sustainalytics

and available at www.santander.com, it draws on such international industry guidelines, standards and principles as the EU Taxonomy, ICMA, LMA Principles, UNEP FI framework and Climate Bond Standards. It also ensures a consistent approach to sustainable finance across Santander, enabling us to track activities, support product development, mitigate

the risk of greenwashing and reinforce our transparency and commitment to promoting and increasing our green, social and sustainability-linked activity. It also allows us to adopt a wider approach in formulating our sustainable finance proposition and adding purpose and sustainability-linked financing to our "Green Book" (completed in 2020).

International industry guidelines, standards and principles that the SFCS draws upon:

EU taxonomy	ICMA Green/ Social Bond Principles	LMA Green Loan Principles	LMA Sustainability Linked Loan Principles	ICMA Sustainability Linked Bond Principles	Febraban taxonomy (Brazil)	UNEP FI framework	Climate Bond Standards
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Eligible products must satisfy the following criteria:

Dedicated purpose	Sustainability linked financing
→ Transaction proceeds go towards eligible green or social projects → Eligibility criteria: Specific activities and thresholds, based on industry principles and guidelines (ICMA, LMA, Climate Bond Standards) and the EU Taxonomy	→ Sustainability-linked transactions designed to incentivize customers to set and work towards ambitious ESG targets → Transaction structured according to pre-determined sustainability performance targets (KPIs and/or ESG ratings) → Alignment with recognized industry principles and guidelines (ICMA and LMA)

Added value



Green and social finance standards aligned with international standards



Ability to meet growing demand for ESG products and services



Green alternatives to the most in-demand traditional products



New product development

GREEN, SOCIAL AND SUSTAINABILITY FUNDING GLOBAL FRAMEWORK PUBLISHED IN 2022

Published in June 2022, our Green, Social and Sustainability Funding Global Framework is the reference for all green, social and sustainability labeled funding instruments traded in sustainable capital markets and allow all Santander Group entities to issue out of it. It replaces our previous Global Sustainable Bond and Green bond frameworks. Consistent with best market practices and the changing expectations of investors, it covers use of proceeds, process for project evaluation and selection, management of proceeds and reporting, in line with the International Capital Market Association's (ICMA) and Loan Market Association's (LMA). It is complemented by our Sustainable finance classification system (SFCS), which outlines our classification rationale, eligibility parameters for green and social activities and verification methodology for sustainable finance transaction data.

Green Book	Dedicated purpose financing	Sustainability-linked financing
• Special green products, in line with SFCS • Intended for Individuals, SMEs and other customer types • Products: • PV leasing • Eco renting and auto-loans • Green mortgage • Home retrofitting loan • Agri machinery loan • Agri EIB line	• 100% of funds used for green or social investment • Intended for Large Corporates / Institutions/ SMES in any sector • Products: • Loans • Credits • Guarantees • Leasing • Renting	• General corporate-purpose loans • Intended for corporates in any sector • Commitment to improve: • Predetermined KPIs and associated Sustainability Performance Targets • Comprehensive validation process of KPIs and Performance Targets. Validation based on structuring guidelines and SFCS panel review

Our sustainable finance proposition combines specific green products in our Green Book, with dedicated purpose and sustainability-linked financing

Our governance enables us to review and approve global transactions according to the SFCS and other international standards; introduce the SFCS into the regular business and risk approval processes; and ensure all green and social dedicated-purpose or sustainability-linked transactions are consistent.



"Technical Screening Criteria" and "Do No Significant Harm" for "green" transactions according to the European Taxonomy.

SCIB's contribution to green finance

To build on our strong track record of renewable energy finance and advisory services, SCIB aims to further Santander's commitments and embed ESG and sustainability in products for all sectors, as demand from corporates and investors grows. We want to build a strong financial platform for energy transition-enabling technologies that supports our clients in achieving sustainability objectives and transitioning towards more responsible, social and environmentally sustainable business models.

In 2021, SCIB appointed a Global Head of ESG and Sustainable Tech to lead a team for:

- ESG solutions, covering ESG analytics, sustainable capital markets/financing and ESG product development;
- Corporate finance, led by a global team of experts in green technologies to offer bespoke strategic advice; and
- ESG "factories", to develop specific solutions for other segments alongside the Group's businesses.

SCIB plays a key role in fulfilling Santander's green finance commitments, having raised and mobilized EUR 74.4 bn in green finance between 2019 and June 2022.

We have doubled our green finance volumes raised and mobilized year on year in comparison to last year results

GREEN FINANCE VOLUMES FROM 2019 TO JUNE 2022

Raised or facilitated. EUR *

	74.4 bn	120 bn
2019		2025

*. Information obtained from public sources, such as Dealogic, Infraction news, TXF or Mergermarket league tables. All roles undertaken by Banco Santander in the same project are accounted for. Other sustainable finance components, such as financial inclusion and entrepreneurship, are excluded.

2021 GREEN FINANCE VOLUMES SPLIT BY PRODUCT

EUR billion

PF advisory	9.0
M&A	8.0
Green bonds	7.6
PF lending	4.5
Equity capital markets	2.9
Project bonds	0.3
Export finance	0.07
Total	32.3

Financing renewable energies

During the first half of 2022, the activity in renewables has been somehow affected by the supply chain tensions, geopolitical environment and market conditions (notably increase of inflation and interest rates), which might have delayed the closing of some transaction. Nevertheless, Santander has been the world leader in financing renewables projects

across the globe during that period, with 33 transactions closed and a 6.4% market share according to Infralogic (see table below).

For the last 10 years, we've been a leading bank in renewable energy finance. We're top 3 in number of deals and top 5 in deal value globally. The greenfield renewable energy projects that we financed and advised on in 2021 have a total installed capacity of 13,604 MW and prevent the emission of 251 million tons of CO₂¹⁶. We also helped expand, improve and maintain renewable energy brownfield projects

that have a total installed capacity of 1,776 MW (more details in the graphs on next page).

Our renewable energy greenfield and brownfield portfolio totalled more than EUR 12.9 billion by the end of the year. Spread over 326 transactions, it accounts for approximately half our project finance portfolio.

Santander Corporate & Investment Banking (SCIB) aims to be a leading bank in sustainable finance and ESG solutions

GLOBAL AND REGIONAL RANKINGS 1H 2022, GLOBAL RENEWABLE LOAN ARRANGEMENTS BY VALUE

Rank	Company	Vol. (USDm)	%share
1	Banco Santander	2,492	6.4
2	Bank 1	1,636	4.2
3	Peer 1	1,223	3.1
4	Bank 2	1,170	3.0
5	Bank 3	1,133	2.9
6	Bank 4	1,129	2.9
7	Bank 5	1,073	2.8
8	Bank 6	989	2.5
9	Bank 7	921	2.4
10	Bank 8	865	2.2

In the lead arranger category of Infralogic league tables for project finance

Peers are BBVA, BNP Paribas, Citi, HSBC, ING, Itaú, Scotia Bank and UniCredit, which are similar in size to Santander.

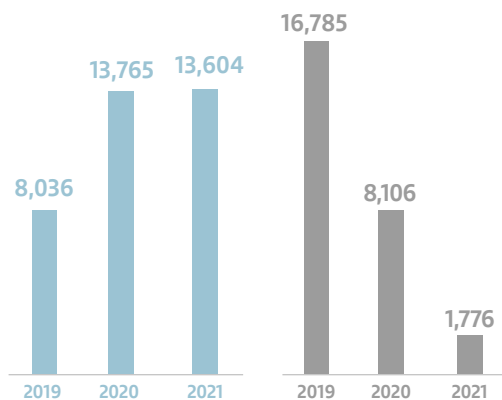
16. Emissions prevented over the projects' useful lifespans, in 2021 based on emissions factors figures from the International Energy Agency (updated in 2021 with data from 2019). 66.7 million tons of CO₂ is the estimated part allocated to Santander.

17. Based on final electricity consumption data published by the International Energy Agency (updated in 2021 with data from 2019).

The renewable energy projects we financed or advised on in 2021 can power 9.2 million households per year.¹⁷

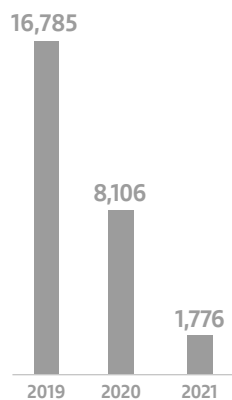
GREENFIELD FINANCE¹⁸

(MW Financed)²⁰

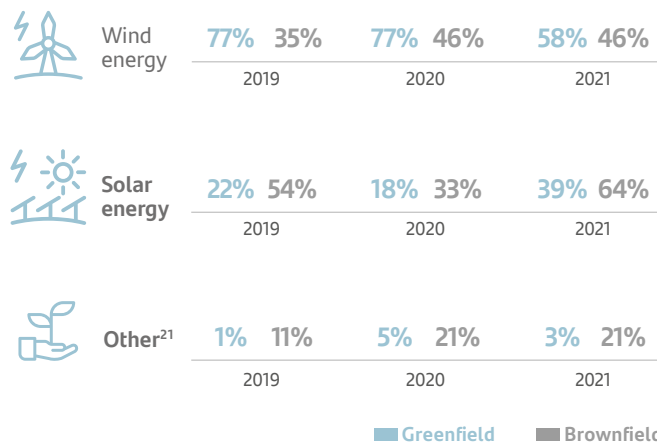


BROWNFIELD FINANCE¹⁹

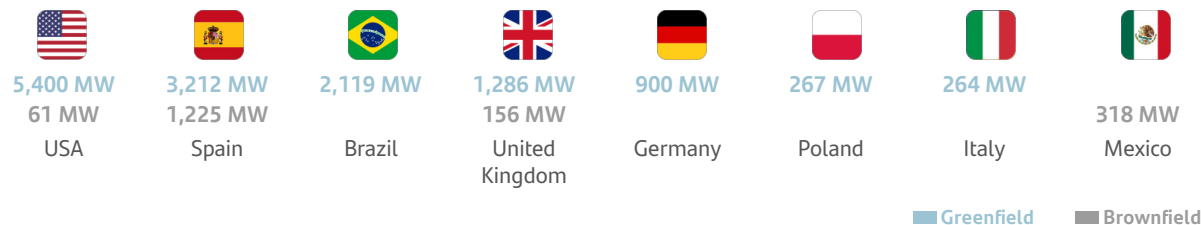
(MW Financed)²⁰



BREAKDOWN OF MW FINANCED BY TYPE OF RENEWABLE ENERGY



BREAKDOWN OF GREENFIELD AND BROWNFIELD FINANCE BY COUNTRY IN 2021²²



Sustainability is part of what we do

As part of our commitment to renewable energy, in 2021 we invested in the El Escudo wind farm project in Cantabria, Spain. The license for the 105MW farm, which will be the

region's biggest renewable energy initiative, is expected for 2022. It will also provide the region with the means to execute a rural development plan, drive energy transition to reduce CO₂ emissions by 45,000 tons per year and generate enough energy to power 95,000 homes.

18. New projects to be built.

19. Projects already existing and producing electricity at the financing date.

20. Of the megawatts attributable to Banco Santander in 2021, 33% were from greenfield finance and 36% were from brownfield finance.

21. Includes hydropower in 2019, solar and wind energy in 2020 and battery energy storage, mix solar-biomass and energy from waste in 2021

22. Other greenfield finance: Chile (81 MW), Portugal (53 MW) and France (24 MW). Other brownfield finance: Portugal (18 MW)

Renewable energy projects financed and advised in 2021



Santander was the sole financial advisor and green loan coordinator in a landmark transaction to finance Vineyard Wind I, an 800 MW offshore wind project off the coast of Massachusetts and the first large scale offshore wind farm in the US.



Santander was mandated lead arranger in the financing of Dogger Bank C, a 1.2 GW wind farm being built off the coast of Yorkshire. It is the largest offshore wind project financing to date, and is due to be the largest offshore wind farm globally. Each phase will produce enough electricity to supply 5% of the UK's energy demand.



Santander advised on the financing of enfinium Ltd, a waste to energy (WtE) firm which is a leading operator in the sector, with an annual waste capacity of 2.3 million tonnes and gross capacity of 265MW.



Santander was mandated lead arranger in the financing for the Darwin Project, a 900MW offshore wind farm, to be built in the German North Sea, close to the Netherlands and some 72km from mainland Germany. It is the first offshore wind transaction with private PPAs in Germany and continental Europe.



Santander acted as Financial Advisor for the company, leading also the structuring and bookrunning of the institutional tranche in the refinancing of Project Ares, a portfolio of two concentrated solar power plants with a total installed capacity of 99.8 MW owned by Celeo.



Santander acted as Mandated Lead Arranger of Provence Grand Large's first floating offshore wind farm being financed by commercial banks globally. The 24 MW project is located in France and is supported by three key entities with track record in the French offshore wind market.



Santander was mandated lead arranger and hedge provider in the financing of the Alpino Project, to build and operate two groundmounted solar PV projects in Lazio with a combined capacity of 118MW. The project will be a key milestone in the Italian renewable space, since it will be one of the first corporate PPA-backed projects in the country.

Partnering with customers to drive their transition

Santander acted as sole financial adviser to US-based global fuel cell systems and hydrogen-related services leader Plug Power in its launch of a 50-50 joint venture with Groupe Renault. The resulting company, “Hyvia”, will lead the way towards a complete ecosystem of fuel cell powered light-commercial vehicles, green hydrogen and refuelling stations across Europe. Santander also exclusively advised Plug Power on its partnership with Acciona, a Spain-based global renewable energy operator, in order to create a leading green hydrogen platform in Spain and Portugal.

We advised French start-up Verkor on a strategic partnership with Groupe Renault. The two companies will co-develop and manufacture low-carbon and high-performance battery cells to foster the emergence of a competitive, sovereign and sustainable battery supply chain in Europe.

As part of Santander’s new alliance with Scuderia Ferrari, we aim to offer Formula 1’s team a wide range of advice and support to help them in their strategy to decarbonize. Ferrari committed to become carbon neutral in 2030, to set science-based targets in line with 1.5°C, to unveil its first fully electric vehicle in 2025 and to have 40% of powertrains to be electric by 2030.



Selected examples of Strategic Partnerships and Investments

Partnership with InnoEnergy to accelerate the energy transition

Santander signed a strategic long-term agreement with EIT InnoEnergy, the European innovation engine for sustainable energy, to accelerate the development of the EIT InnoEnergy portfolio of start-ups, encourage investment, reduce the skills gap and create solutions to support sustainable innovations. Santander Corporate & Investment Banking identified six technologies in which we aim to become a world-class adviser and financier to drive the energy transition, including green hydrogen, energy storage, clean fuels and renewable energy.

Enel and Santander promote collaboration to support clients’ clean energy transition

Enel and Santander signed a memorandum of understanding (MoU) to promote collaboration between the two groups, accelerate their clients’ energy transition towards more sustainable models, support them in optimizing their energy consumption; and supply and finance solar facilities, lithium batteries and energy efficiency solutions. As a result, Enel X Global Retail (Enel’s advanced energy services business line) will design customized, turnkey solutions for clients, while Santander will provide them with tailored financing.

Moreover, we supported Grupo Enel in restructuring its business in Latin America. We

advised it on two landmark transactions: the merger of Enel Green Power Latam with Enel Americas, the largest listed pan-American utility company; and the integration of Enel Green Power Central America into Enel Colombia, Enel’s joint venture with Grupo Energía de Bogotá for the business in Colombia and Central America.

Santander raises its ESG expertise by acquiring WayCarbon

Santander acquired 80% of WayCarbon (short for WayCarbon Soluções Ambientais e Projetos de Carbono), a leading Brazil-based ESG consultancy firm. This deal will allow us to engage in the voluntary carbon market, reforestation and forest conservation programmes, and other emissions trading schemes to better support customers’ energy transition. For over 15 years, WayCarbon has been advising public and private organizations on climate change and helping them develop strategies to become more sustainable.

Other notable ESG transactions

First large-scale EV charging network transaction in Europe

Santander was mandated lead arranger and hedge provider in the first project finance for a large-scale electric vehicle (EV) charging network in Europe, due to be powered entirely by green energy and installed at select Carrefour hypermarkets in France by 2023.

First social project bond in Latin America

Santander was the sole structuring agent for Latin America’s first social project bond issuance, which is linked to the Puerta de Hierro-Cruz del Viso roadway project in Colombia.

First sustainability-linked, global operating leases for an airline

SCIB recently acted as the sole ESG structurer on a sustainability-linked operating lease for Boeing 787 and Airbus A350 aircrafts with Crianza Aviation. The deal won the “Sustainability Lease Deal of the Year 2022” at the Airline Economics Aviation 100 Global Leaders awards.

Santander’s innovation, structuring and response to clients’ needs recognized by Global Trade Review

In a deal with Hyundai Engineering & Construction Co., Ltd to finance a fully electric metro line connecting Panama’s Oeste and Este provinces, Santander acted as sole green financing facility lead arranger and mandated lead arranger. It won “Deal of the Year” at the Global Trade Review (GTR) awards.

First SOFR-based USD green syndicated loan in offshore China market

SCIB Asia acted as global green loan coordinator, mandated lead arranger, bookrunner and underwriter in a USD 270m dual-tranche green syndicated loan for five Argentine subsidiaries of China Goldwind, the second largest wind turbine manufacturer in the world, dual-listed in Hong Kong and Mainland China.

Retail and commercial banking

As a leading retail and commercial banks, we have responsibility to help SMEs and individual clients go green.

Building on our current offering of ESG products (launched in 2019), we continue to strengthen our sustainable finance proposition with dedicated purpose and sustainability-linked financing. Our green financing products and services are designed around five key verticals, adapted to the specific needs of our customers in all geographies.

Green solutions for our individual, SME and corporate customers

	What we finance	Our customers need...	Key geographies
Green buildings 	Purchase, construction and refurbishment of energy-efficient buildings. Installation and refurbishment of renewable power systems that use 30% less energy.	Developer loans, private solar panel installation, smart meters, energy-efficient lighting, mortgages with an "A" or "B" energy rating.	
Clean mobility 	Clean transport and infrastructure.	Leases of electric and hybrid vehicles (<50 g CO ₂ per passenger/km) and financing for charging stations and bicycle lanes.	
Renewables 	Renewable energy production and transport. Energy storage.	Financing for solar panels, wind farms, and battery and storage battery production.	
Agro 	Sustainable and protected agriculture. Land and forest conservation. Sustainable farming.	Financing for greenhouses, reduced irrigation systems, efficient machinery, reforestation and reduced fertilizer use.	
Circular economy 	Activities to adapt to, or mitigate, climate change; preserve biodiversity; and boost the circular economy.	Financing for water, waste and soil treatment; greater energy efficiency; lower emissions; and conservation.	

In 2021, we became sustainable finance leaders in our markets thanks to multiple new partnerships, products and projects in the field of green finance.

By implementing the SFCS, not only have we managed to ensure a consistent approach to our sustainable financing, but we've also been able to track and capture funds supporting our customers in their transition.

Working with multilateral institutions

Since 2018, Grupo Santander has signed 80 financing agreements with Multilateral Development Banks (MDBs), worth a total of EUR 12.225 billion. Santander has also received financing from the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), the International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), Council of Europe Development Bank (CEB), the Development Bank of Latin America (CAF) and IDB Invest, in order to support the liquidity and investment needs of customers, including many micro, small and medium-sized enterprises. The agreements cover renewable energy,

innovation, digitalization, specialized financing in supply chains, health, education, transport and agriculture. And they have aided financial recovery and growth in countries where the Group operates.

In 2021, financed green projects that contribute to a low-carbon economy and environmental sustainability amounted to EUR 1.71 billion. They covered energy efficiency in buildings, clean transportation and renewable energy generation in Spain, Brazil, Chile, Italy, Peru, Portugal, Poland and Uruguay.

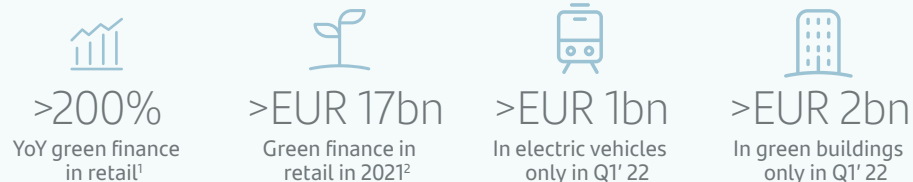
Santander has continued to work with MDBs. Last year, we offered 18 new debt facilities with improved financing conditions, ensuring companies had the funds to keep their business afloat and support their green transition. Our climate financing amounted to EUR 800 million. In Spain, Santander signed ten agreements, worth a total of EUR 1.7 billion, with the EIB and the EIF to increase liquidity and investment capacity for SMEs and Midcaps so they could tackle the pandemic, renew transport fleets or become more sustainable. Two guarantee agreements we signed with the EIF in Portugal enabled us to support SMEs and entrepreneurs, with up to EUR 800 million in working capital and investment capacity. In Brazil, Santander partnered with the IFC through a USD 150 million loan to foster solar PV technology

investment, particularly among SMEs and entrepreneurs. A synthetic securitization agreement signed with the EIB Group in Poland enabled us to provide around PLN 2 bn in new finance for Polish SMEs. Santander also signed several guarantee agreements with MIGA, allowing the Group to provide support in Peru and Chile with EUR 250 million worth of loans in climate finance activities.

Sanitation project in Rio Pinheiros (Brazil)

One of the sectors most in need of investment in Brazil is sanitation. In 2021, we provided basic sanitation projects with BRL 5.6 billion in advisory and financing. In May, we allocated USD 25-million line from the International Finance Corporation (IFC) to the São Paulo government's Rio Pinheiros project for reducing sewage, improving water quality and recovering surrounding areas; part of the funds will go to collector cooperatives that will help remove recyclable waste from local streams and tributaries. In August 2021, we advised the Marco Zero Consortium, led by Equatorial Energia, and helped organize a bid that ultimately won the first major tender for the services of CAESA, the public water and sewage company of the Amapá state (where only 7% of people get their sewage collected and one out of every three has access to clean water); the project will increase access to basic sanitation for around 750,000 people across 16 municipalities for 35 years.

Developing a green value proposition for our customers



1. All segments, minus SCIB and WM&I

2. Includes retail, Commercial Banking, Sustainability Linked Loans and Collaboration Revenues

Santander Wealth Management & Insurance

In the past few years, environmental, social and corporate governance (ESG) investing has grown from niche to mainstream, particularly in Europe. It's been mostly driven by investors' demand and regulatory developments. Despite the current state of geopolitics, a new investment paradigm has emerged, as ESG risk factors (particularly on climate) gain importance for risk-adjusted return analysis and investment opportunities to address climate adaptation and mitigation and other challenges become more relevant. Moreover, active stewardship and decarbonization initiatives, such as "net zero", have been key to promoting stakeholders' commitment to sustainability along the investment value chain.

At WM&I, we have a clear goal to embed sustainability in our growth strategy and decision-making process (with special focus on climate). We are also working on expanding and strengthening our sustainable product offering in alignment with the Group's standards.

We've strengthened our ESG teams to create a centre of expertise and excellence. This has allowed us to increase our sustainable products and services offering, build internal frameworks, incorporate best practices, create ESG content to increase awareness, earn top-level accreditation for our teams and network and develop strategic partnerships with other divisions and third parties. In 2022 we announced our first public commitment to increase our SRI (Socially responsible investments) AuMs²³ from current c. EUR 30.1 billion to EUR 100 billion by 2025.

Santander Asset Management

ESG governance in Santander Asset Management

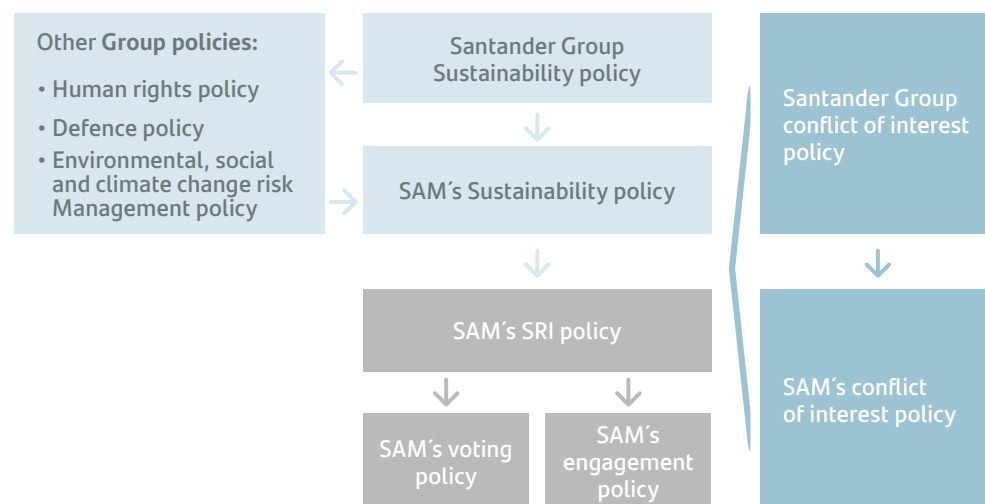
Santander Asset Management's (SAM) policy framework and governance structure guarantee an adequate execution of its SRI strategy. It follows environmental (including climate change), social and corporate governance (ESG) criteria.

An SRI governance committee, an SRI strategy and supervision committee, a voting and engagement committee, an investment and sustainability committee, and our global expert

SRI team form our governance. As the highest governing body, the SRI governance committee approves and oversees SAM's global SRI strategy and is chaired by the global head of Wealth Management & Insurance.

Santander Asset Management's SRI policies outline our approach to applying ESG factors to investment. Our engagement policy explains our principles for individual and collaborative ESG initiatives with investees or companies we invest in. Our voting policy sets out the rules for voting at the annual general meetings of the companies SAM invests in.

SAM ESG policies and link to Group's sustainability documents



23. AUMs classified as Article 8 and 9 funds (SFDR) from SAM, plus third-party funds and other ESG products according to the EU taxonomy from Private Banking. We apply equivalent ESG criteria to SAM's funds in Latin America.

Climate change in our ESG methodology

Climate change indicators and weighting are embedded in our propriety ESG analysis to clearly ascertain risks and opportunities with clients. Our ESG scores assess issuers' performance on climate change according to its materiality in each sector. Climate change analysis includes metrics on CO₂ emissions, emissions target and alignment with TCFD recommendations.

We use the ESG score to select investments and manage our SRI product portfolio according to our strategy. We regularly update our ESG framework to account for the latest findings and trends, strengthen our model and enhance our analysis.

SRI products

Our proposition includes a full SRI product line. We have EUR 14.5 billion in 35 SRI funds, plus 84 mandates (18 SAM funds, 14 SAM pension funds and 3 funds mandated to third parties through Santander Go). SAM pioneered these products for local markets when launching our first SRI fund in 1995. Our flagship strategies include the Santander Sustainable range (two balanced funds), a sustainable European equity fund and a sustainable fixed-income fund. We're also focusing on transforming our fund offering to maximize the number of Article 8 and 9 funds

under the EU Sustainable Finance Disclosure Regulation (SFDR) and on embedding ESG criteria in our pension plans in Spain.

Over the past eight years, our solidarity funds have donated 22.7 million euros to more than 25 NGOs and projects for social welfare, job training, health and financial literacy. In 2022, Cáritas and CONFER, the two main fund recipients, will focus on green projects (aligned with the European Green Pact) and digital training projects (within the European Next Generation Plan) respectively.

ESG criteria examples included in our rating

	Analysis for companies	Analysis for governments
Environmental	• Strategy and environmental management • Climate change • Natural resources • Pollution prevention and control	• Energy • Climate change • Natural capital • Emissions and pollution
Social	• Human capital • Client and product • Community • Products and services with social focus	• Health and nutrition • Education and wellbeing • Employment and equality
Governance	• Corporate governance • Business ethics	• Civil rights • Corruption • Government effectiveness

SAM SRI offering

• San Sostenible RF 1-3 • San Sostenible Bonos • San Gestion Global Crecimiento • 3 Pension Funds • San Respons Solidario • Inveractivo Confianza • San Sostenible 1 • San Sostenible 2 • 6 Pension Funds • San Sost. Acciones • San Equality Acciones • San Indice Euro ESG • 4 Pension Funds • San Iberia renewable energy • 84 mandates	• San Ethical Ações • Go Global Equity ESG • 1 Pension Fund	• San Sustentável
• SAM RV Global • SAM ESG	• San Sostenible RF 1-3 • Go Global Equity ESG	
• Acciones Global Desarrollado	• Go Global Equity ESG	

● Fixed income
● Balanced
● Equity
● Private Equity
● Portfolios

Products to help fight climate change

We became Spain's first asset manager to launch a sustainable bond mutual fund, Santander Sostenible Bonos. It invests in green bond issuances (corporate debt to finance clean energy, emissions reduction, and other green projects) and other types of sustainable bonds, while targeting a conservative investor profile.

In 2022, we launched Santander Iberia renewable energy fund, a private equity fund for private banking clients that focuses on renewable energy generation companies.

Our standards and stewardship

We follow ESG criteria in our stewardship activities. We're dedicating more resources to our engagement and voting strategy. We're also working with others and promoting global bilateral action with companies to increase their transparency. Apart from our commitment with NZAMi (see page 32 for detail) we are also signatories of the following initiatives:



→ UN PRI. In July 2020, we adopted the UN-backed Principles for Responsible Investment (PRI), joining a global community committed to building a more sustainable financial system. The Santander employee pension fund in Spain is also a signatory.



→ International Investors Group on Climate Change (IIGCC). In 2020, Santander Asset Management became a signatory to the IIGCC, the European membership body for investor collaboration on climate change and the voice of investors taking action for a prosperous, low-carbon future.



→ Climate Action 100+. In January 2021, Santander Asset Management joined Climate Action 100+ to promote action on climate change among the world's largest corporate greenhouse-gas emitters. Signatories engage with a company included in its scope to ensure it takes action on climate change. Five regional investor networks coordinate the movement, including the IIGCC and PRI.

→ Training. We work with universities and educational centres to organize and participate in SRI events and training days (virtual EFPA classrooms, UNED/Spainsif MOOC, etc). We also run internal informative sessions for our employees about the UN Sustainable Development Goals and climate change as key drivers for promoting SRI.

Private Banking

We're embedding ESG in our private banking advisory services to meet our clients' investment needs. In 2022, Euromoney named us the best private bank in ESG and sustainable investing in Latin America and in Chile, Mexico, Poland, Portugal, and Spain for the third consecutive year.

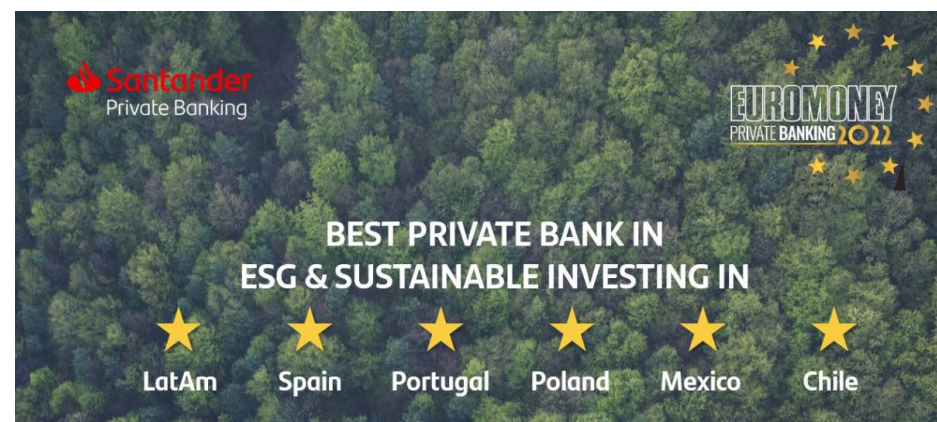
Our SRI private banking value proposition

Our ESG products include a wide range of traditional mutual funds, alternative investment vehicles and ETFs. We continue to add new products in all asset classes, including impact investment options. We're also transforming our list of third-party funds under advisory, over 60% of which are classified as Socially Responsible Investments (SRI) products. We continue to run due diligence on investment strategies for products subject to the SFDR, even if they're

reported under article 8 or 9. Future Wealth, a thematic investment initiative we launched in 2020 and one of our flagship products, complements clients' traditional strategies with innovative and sustainable sources of growth and returns. We have nearly EUR 18.4 billion in AuM through SRI products, including SAM and 136 third-party funds.

Engaging with our clients on ESG

Understanding our clients' sustainability preferences is essential. We are building the capabilities to provide them with tailor-made portfolio reviews, with qualitative and quantitative indicators on impact (CO₂ emissions, water footprint, waste increase and energy savings), as well as SDG alignment and performance according to our ESG methodology.



ESG expertise

In 2020, our bankers and advisers received internal training from our ESG teams. In 2021, we reinforced ESG communications and learning materials. We also designated specialists in each country and set up a governance model for better ESG products and advisory services. In 2022, we launched specific training and external accreditations for 1,400 people including our ESG champions and many bankers, advisers and product and investment teams across our footprint.

Insurance

We aim to have a sustainable insurance proposition in all our markets by 2024. We're working on a framework in line with the Group's Sustainable finance classification system (SFCS)²⁴ and the European taxonomy. Our proposition is based on these principles:

- Insuring assets and activities that the Group classifies as sustainable (electric vehicles, green homes, renewables, etc.). We have focused on coverage that can sustain these activities or generate measurable additionality.
- Supporting types of insurance that address social challenges and increase the well-being of people, such as microinsurance, health

and life insurance for vulnerable collectives, etc. Our focus on these types of sustainable products is increasing the eligibility and affordability in the insurance products we offer in our communities.

- Investing our insurance policies in sustainable assets: life-savings AuM invested under ESG.
- Promoting insurance-based investment products that follow SFDR requirements (and equivalent criteria outside the EU) to be classified as sustainable.

We'll continue to adopt the UN's Principles for Sustainable Insurance (PSI) in our joint ventures.

24. Sustainable finance classification system - [link](#)

7. Partnerships

Sector working groups

Partnerships with others in business and government is critical if we are to tackle climate change and protect biodiversity. Santander participates in different organizations, alliances and working groups: we engage with international and local stakeholders (sector associations, think tanks, universities, peers and others) to progress in global and company goals covering various in lines with SDG 17 on Partnerships for Goals.

These are the main initiatives with leading organizations to improve how banks manage climate change and biodiversity include:

United Nations Environmental Programme Finance Initiative (UNEP FI), NZBA

Santander was a founder member of the UN Principles for Responsible Banking (PRB). We are also a founding member of the Net Zero Banking Alliance (NZBA) and we are engaged in the different working groups driving the development of further sector alignment and implementation guidelines to support the initiative in its goal. UNEP FI has recently launched the PRB Biodiversity Community, which have also joined.

Glasgow Financial Alliance for Net Zero (GFANZ)

GFANZ is a global coalition of leading financial institutions committed to accelerating the decarbonization of the economy. We are an active member, in particular in the Advocacy Group with our Executive Chairman as one of the two Principals leading this working group.

GFANZ is an umbrella organisation including financial sector net zero initiatives, including two in which we directly participate: NZBA and Net Zero Asset Management initiative (NZAMi), the latter led internally by Santander Asset Management.

World Business Council for Sustainable Development (WBCSD)

We continue to participate in the Banking for Impact on Climate in Agriculture (B4ICA) initiative, coordinated by WBCSD and in partnership with the United Nations Environment Programme Finance Initiative (UNEP FI), the Partnership for Carbon Accounting Financials (PCAF) and Environmental Defense Fund (EDF) along with member banks. The Partnership is working to develop guidelines for setting net zero targets in the agricultural sector, one of the most challenging in the net zero journey.

Banking Environment Initiative (BEI)

Supported by the Cambridge Institute for Sustainability Leadership and its members, the work at BEI has been making progress in several themes but with a strong focus on nature. Further to this we are also engaging in a series of innovation sprints with the BEI, CISL and Business for Social Responsibility (BSR). The sessions focused on the decarbonization barriers faced by small and medium enterprises (SMEs) and explored innovative incentives to enable their transition to net zero by 2050.

World Economic Forum Alliance of CEO Climate Leaders

Santander continues its engagement within the World Economic Forum Alliance of CEO Climate Leaders as an important network to influence stakeholders, including policymakers, and drive change towards meeting net zero targets. Additionally we are also following the work at the "Financing the Transition to a Net-Zero Future" initiative.

United Nations Global Investors for Sustainable Development Alliance (GISD)

We are an active member of the GISD Alliance, a working group created as part of the UN's strategy for financing the 2030 Agenda for Sustainable Development. SCIB collaborates with one of the task forces that aims to develop investment platforms and vehicles to catalyse finance and investment flows to developing countries in support of the SDGs. The focus of this working group is to accelerate the flow of capital into emerging market and developing economies (EMDEs), where needs and SDG impact are the greatest.

Financing the Just Transition Alliance

Led by the Grantham Research Institute within the London School of Economics, the goal of the Alliance is to stimulate and support system-level innovation that enables investors and the financial sector more broadly to deliver a just transition in the UK. From Santander we will be engaging in this initiative with particular focus on the implications for the mortgage sector in the UK.

Partnership for Carbon Accounting Financials (PCAF)

Since 2021 we are members of PCAF and thus committed to disclose our financed emissions according to the PCAF standard. We also engage in their different regional and sectoral working groups.

Engagement with regulators, industry bodies and other stakeholders

Santander's purpose is to help people and businesses prosper. By delivering on this purpose, we grow as a business and can help society address its challenges.

Engaging with our stakeholders is important to understand their concerns, help us to set our priorities and to identify opportunities and areas for improvement. Part of this engagement focuses on collaborating with other organizations whose activities are aligned with Santander's overall positioning and our strategy, business values and commitments. These include peers, industry associations and think tanks, among others.

This engagement is carried out both globally, by the corporation, and locally, in the countries where we have a significant presence. This is important to ensure we are participating in the debates and developments that are most relevant to the bank, its employees, customers and the communities in which we operate.

We contribute to the policy debate as a thought leader on relevant issues that impact our sector, the society and the environment. The climate change challenge and the support to businesses and individuals in the transition towards a sustainable economy is one of the issues we are most closely involved in, participating in formal consultations on key regulations locally, in Europe and globally. We also take part in sector forums and workshops on the transition to a low-carbon economy.

As part of this, we actively engage with the Basel Committee, the Financial Stability Board,

the European Banking Authority, the European Central Bank, as well as the Bank of Spain and the Bank of England among other key players defining the sustainable finance framework to better support the UN Sustainable Development Goals and the Paris Agreement target on climate.

We work very closely with industry bodies – including the Institute of International Finance, European Financial Services Round Table, the Association for Financial Markets in Europe and the European Banking Federation – to reach common positions on such issues as the implementation and continued development of the EU framework for identifying sustainable economic activities (the so-called Taxonomy), the framework for ESG disclosures and reporting, the definition of standards and labels for sustainable products, as well as the ongoing work on the identification and management of climate-related risks.

In addition, Santander has been part of the European Banking Federation - UNEP FI partnership on the banks' application of the EU Taxonomy to core banking products. The first stage of this collaboration resulted in voluntary guidelines and recommendations issued in April 2021 to banks and policymakers. We have also participated in the second stage of the project on the analysis related to use of proceeds, KPIs, retail and SMEs and transition that resulted in the publication of the practical approaches to applying the EU Taxonomy to bank lending in February 2022. Through our involvement, we aim to contribute to our sector's and wider economic sectors understanding of the Taxonomy as a tool to guide the transition of the economy, helping

build an effective framework that drives the sustainability agenda and ensures it is consistent with Santander's responsible banking ambitions and priorities.

Santander also maintains an open dialogue and engages with NGOs on studies and initiatives

Our position on some key issues

We want to help achieve sustainable development and pledge to play an active role in supporting the green transition. It is vital that the transition is just and inclusive, taking into account regional and sector specificities to avoid isolating communities and stranding assets. It must provide clarity and certainty for each sector. Governments should set clear pathways on how key sectors will meet the targets of a low-carbon economy, backed by policies and incentives that enable banks to support companies in their transition.

We aim to contribute constructively to the transition debate by supporting policymakers and regulators to achieve a global, common approach to regulation – especially as regards the green taxonomy, disclosure and reporting standards.

The EU Taxonomy is a step forward in the sustainability agenda. We need to build on this approach in other regions that seek to create taxonomies to align the understanding of what is sustainable, and avoid regulatory fragmentation.

Disclosure: transparency to the market is necessary to understand how companies are embedding sustainability into their strategy and business models. As the financial sector complies with a growing number of new climate-related

This year, we also contributed to the joint report by UNEP FI and the European Banking Federation titled **Practical approaches to applying the EU Taxonomy to bank lending** in order to ensure that it would be useful to our customers in their transition and applied uniformly. Based on discussions with banking peers, banking associations and observing organizations, the report explores banks' disclosure requirements, EU Taxonomy use for gathering information and compliance with minimum safeguards.



disclosures (particularly the upcoming Taxonomy related disclosures and ESG disclosures in the Pillar 3 report), these requirements must take into consideration the information readily available. Non-financial corporate disclosures must be well-defined and reinforced. The upcoming Non-Financial Reporting Directive review could be instrumental in achieving this. Banks and authorities need this information to spot and assess risks and opportunities from climate activities and ensure compliance, as well as understanding the composition of their portfolios.

We support efforts to ensure a global approach to companies' ESG-related disclosures. We support the ISSB work to develop a global baseline for sustainability reporting and we encourage authorities across jurisdictions to work closely together so that the frameworks they design are as aligned as possible and enable companies to disclose sustainability information in a comparable way.

Specific initiatives to tackle climate change and protect the environment

The Group undertakes or financially supports a number of local initiatives to tackle climate change and protect biodiversity. Here are some examples.

Fundación Banco Santander

Recovery of natural spaces

At Fundación Banco Santander, since 2004, we annually support projects aimed at restoring or recovering plant and animal species in Spain. The environmental initiatives undertaken since then have been focused on the recovery of threatened Iberian flora and fauna and the restoration of particularly fragile areas considered to be of high ecological value and essential for the conservation of biodiversity.

[\(link\)](#)

Projects map:



Projects supported in 2021:

- **Production innovation at salt flats to drive marine biodiversity and the blue economy** (Cádiz Bay):

In association with Mar Cristal Marilum a project will be carried out to manage the San José del Puerto salt flat, a critical site on the Africa-Eurasia migration route, as it hosts fourteen different Eastern Atlantic bird populations.

This 15-hectare estate was abandoned in the 1960s, later used as a dump and subsequently restored by this very association. Since then, no maintenance work has been done there, thus leading to a drop in the water levels required to keep the wetland in good condition.

The environmental enhancement actions for this ecosystem include the use of gates to manage the sheets of water and tidal flats; the creation of a salt "orchard" to produce virgin sea salt and fleur de sel; the reforestation of the surroundings and several educational and volunteer activities (guided visits, workshops, etc.).

- **Polinator Mission** (Madrid City):

Together with the association, Brinzal, work was done in 2021 to restore and sustainably manage greenfields in Madrid with a view to increasing the presence of pollinators and other insects there.

These insect reserves were created at the Parque del Retiro, the Parque del Oeste, Dehesa de la Villa, Quinta de Torre Arias, the municipal Casa de Campo nursery and the Richard Schirrmann youth hostel.

The measures adopted have improved the functioning of these urban ecosystems thereby avoiding them becoming traps for the species that inhabit them. Moreover, they can serve as a precedent for similar initiatives in other big cities.

They have also made it possible to increase public awareness of the important ecological role played by these insects in nature and the problem that will arise should they disappear.

- **Reintroduction to strengthen the red kite population** (Southeastern Spain)

The foundation will collaborate with "Acción por el Mundo Salvaje (AMUS)" over the next two years to improve the state of conservation of the red kite, a species listed as in danger of extinction.

Southeastern Spain is the area of action for this project, specifically the provinces of Badajoz and Huelva, as these are the areas where the biggest drop in the population has occurred. The project seeks to ensure the long-term survival of these populations by reintroducing kites from thriving colonies.

Scientific studies will be carried out under the initiative throughout all phases of the process (reintroduction methods, monitoring, selection of release habitats, control of threats, etc.) so that the experience gained will serve as an example for future reintroduction actions in other locations in Spain.

Other initiatives (developed in 2021 and previous years) can be found here.

Santander for the seas

In 2021 the Fundación extended the scope of the Recovery of natural spaces initiative by launching Santander for the seas, aiming to contribute in the conservation of unique sea and ocean habitats and species. Every year, three innovative, two-year-long initiatives will receive a maximum contribution of 150,000 EUR each.

Annex

Soft Commodities Report

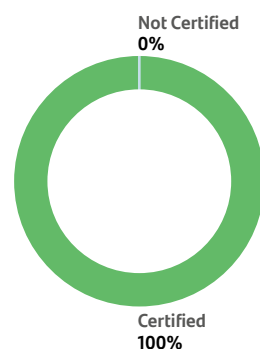
Reporting on our progress

We have reviewed our list of active CIB clients in the Soft Commodity sectors of soy, palm oil, and timber products as of December 2021. The following charts reflect the level of certification^a achieved by these clients as of Q1-22. For each of the commodities, we have analysed the extent of the operations of the clients in the following areas:

- **Palm oil:** Oil Palm plantations, Palm Oil processing, Palm Oil trading.
- **Soy:** Soy plantations, Soy processing, Soy trading
- **Timber products:** Plantations, pulp & paper manufacturing.

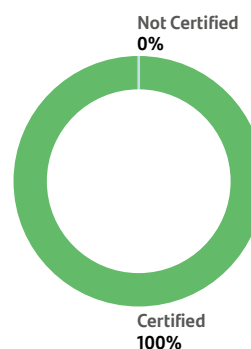
Palm oil: All CIB clients are RSPO certified across their Oil Palm or Palm Oil activities.

Palm Oil



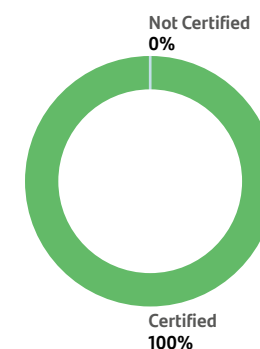
Soy: All clients are either RTRS certified, RTRS members or buy RTRS/ISCC-certified soy.

Soya



Timber products: all clients are FSC certified.

Timber Products



a. To prepare this report we have consulted publicly available records, without independent verification. This report is for information only and does not constitute an appraisal of the assets, stock or business of any of the companies included in it.

ENVIRONMENTAL FOOTPRINT 2019-2021^A

	2021	2020	2019	Var. 2020-2021 (%)
Consumption^B				
Water (m ³) ^C	1,808,668	2,064,113	2,938,024	-12.4
Water (m ³ /employee)	9.76	11.07	15.2	-11.9
Normal electricity (millions of kwh)	227	395	548	-42.6
Green electricity (millions of kwh)	676	526	517	28.5
Total electricity (millions of kwh)	903	920	1,064	-1.9
Total internal energy consumption (GJ) ^D	3,714,227	3,758,183	4,322,838	-1.2
Total internal energy consumption (GJ/employee)	20.04	20.16	22.37	-0.6
Total paper (t) ^E	7,345	8,966	16,497	-18.1
Recycled or certified paper (t) ^E	6,020	7,336	13,784	-17.9
Total paper (t/employee)	0.04	0.05	0.09	-17.6
Waste				—
Paper and cardboard waste (kg) ^{F,J}	6,323,866	5,926,139	9,705,579	6.7
Paper and cardboard waste (kg/employee)	34.11	31.79	50.22	7.3
Greenhouse gas emissions				—
Direct emissions (CO ₂ teq) ^{H,J}	25,672	24,818	27,673	3.4
Indirect electricity emissions (CO ₂ teq)-MARKET BASED ^K	57,425	128,633	183,745	-55.4
Indirect electricity emissions (CO ₂ teq)-LOCATION BASED ^L	269,615	282,216	322,414	-4.5
Indirect emissions from employee travel (CO ₂ teq) ^{L,M}	35,420	40,708	120,969	-13.0
Total emissions (CO ₂ teq)- MARKET BASED	118,517	194,159	332,387	-39.0
Total emissions (CO ₂ teq/employee)	0.64	1.04	1.72	-38.6
Average number of employees	185,379	186,429	193,261	-0.6

A. The scope of information includes the main countries of operation: Argentina, Brazil, Chile, Germany, Mexico, Poland, Portugal, Spain, United Kingdom and the United States (excluding Puerto Rico and Miami), representing >98% of emissions

B. The decrease in consumption levels was partly due to the extension of the pandemic situation during the year, which has kept the occupancy of offices and branches at low levels throughout 2021, in contrast to the previous year, 2020, which recorded normal occupancy levels during the first months of that year. This was also the result of the Group's efforts to promote savings in the consumption of resources, especially paper.

C. Information is provided exclusively on water withdrawal from the public network.

D. It is also reported that the external energy consumption resulting from employee travel and business trips has been: 500,311GJ in 2021 and 579,155 GJ in 2020.

E. The figure for total paper and certified or recycled paper for 2020 has been recalculated from that published in 2020 report, based on information provided by the USA.

F. The data for 2019 and 2020 do not include waste from the commercial network in Brazil. The amount of paper and cardboard waste reported is managed in its entirety by authorised waste managers and is collected separately, which guarantees its proper recycling. Grupo Santander will work in the near future to ensure that all this waste undergoes recycling operations.

G. The increase in managed paper and board waste is mainly a consequence of the branch concentration process carried out in the Spanish branch network in 2021.

H. These emissions include those derived from the direct consumption of energy (natural gas and diesel, and additionally, in the particular case of Mexico, gasoline and diesel for automobiles and LPG) and correspond to scope 1, defined by the GHG Protocol standard. To calculate these emissions, the emission factors DEFRA 2021 for 2021 and DEFRA 2020 for 2020 were applied

I. The slight increase between 2020 and 2021 is mainly due to the implementation of measures to increase air recirculation in offices and branches in the context of the Covid-19 pandemic situation.

J. These emissions include those derived from electricity consumption and correspond to the scope 2 defined by the GHG Protocol standard. In both 2021 and 2020 the IEA (International Energy Agency) emission factors for 2017 have been used.

-Indirect Electricity Emissions - Market-based: zero emissions have been considered for green electricity consumed in Germany, Spain, Mexico, Portugal and UK; also, it has been considered that in Argentina, Brazil, Chile, Poland and USA, part of electricity consumption is green energy. This altogether has meant a reduction of 212,190 tons of CO₂ equivalent in 2021 and 153,582 in 2020. For the rest of the electrical energy consumed, the emission factor of the IEA corresponding to each country has been applied.

-Indirect emissions of electricity - Location-based: the emission factor of the IEA corresponding to each country has been applied to the total electricity consumed, regardless of its source (renewable or non-renewable).

K. The reduction in indirect electricity emissions has been mainly due to the increase in the purchase of green energy in 2021 in the countries that make up the G10

L. These emissions include emissions from employees travelling from central services in each country to their workplaces by individual car, collective vehicle and rail, and from employees' business travel by air and car. The distribution of employees by type of travel has been made on the basis of surveys or other estimates. The conversion factors DEFRA 2021 for 2021 and DEFRA 2020 for 2020 were used to calculate emissions from employee travel. - The number of employees travelling to work in their own vehicles was estimated taking into account only the number of parking spaces in the central services buildings in each country and the diesel/petrol consumption mix of the vehicle fleet in each country. Data on employee travel by individual vehicle from Argentina, Poland and the United Kingdom are not reported, as the information is not available. - Employees' journeys in collective vehicles were calculated on the basis of the average distance travelled by the vehicles rented by Grupo Santander for collective transport of its employees in the following countries: Germany, Brazil, the US, Spain, Mexico, Poland, Consumer and Portugal, and within the central services of Spain (CGS) - Data on business trips by car from USA Consumer are not reported, as the information is not available. - Emissions derived from the use of courier services are not included, nor are those derived from the transport of funds, nor those from any other purchase of products or services, nor those indirect ones caused by the financial services provided.

M. Indirect emissions from displacement of employees have suffered a significant decrease. The main factors for this decrease are the reduction in mobility because of the covid-19 pandemic, in contrast to 2020, where the number of displacement of employees remained at normal levels at the beginning of the year. The reduced occupancy levels in 2021 have also contributed to the lower GHG emissions recorded.

TCFD INDEX

	TCFD Recommendations	Chapter Reference	Section Reference	Pages
Governance	a. Describe the board's oversight of climate-related risks and opportunities.	3. Governance		14-15
		5. Metrics and targets	Action plan - Power generation sector alignment	30-32
	b. Describe management's role in assessing and managing climate-related risks and opportunities.	3. Governance		14-15
		6. Financing the green transition	ESG governance in Santander Asset Management	47
Strategy	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	2. Strategy	Climate risks and opportunities	7-10
	b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.			
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	2. Strategy	Resilience of Santander's strategy. Scenario analysis	11-12
Risk Management	a. Describe the organization's processes for identifying and assessing climate-related risks.	4. Risk management	I. Identification	17
	b. Describe the organization's processes for managing climate-related risks.	4. Risk management	II. Planning; III. Assessment; IV. Monitoring; V. Mitigation; VI. Reporting	17-23
	c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.			
Metrics and Targets	a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	5. Metrics and targets	Aligning our portfolio to the Paris agreement	27-29
	b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	5. Metrics and targets	Decarbonization targets - Financed emissions	28
		5. Metrics and targets	Our environmental footprint	33
		Annex	Environmental footprint 2019-2021	56
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	5. Metrics and targets	Decarbonization targets	27-29

