Climate Finance Report

2022-June 2023

www.santander.com
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1. Introduction

The transition to a green economy and a net zero world was never going to be easy. The last year or so has shown just how difficult it is going to be. Russia’s invasion of Ukraine, together with the impact of COVID, has resulted in higher inflation, the end of the period of cheap money, and further pressure on governments’, businesses’ and households’ budgets.

These events should not be allowed to hide the fact that the green transition requires massive finance and presents enormous opportunities for businesses, large and small. As we help more clients decarbonize their operations and activities, right across the world we are seeing - and Santander is financing - innovation and technology that is creating new jobs; providing new sources of reliable and affordable energy; and helping the economy cut emissions.

That said, we need to remember a basic truth: an orderly, just transition depends on growth. Without growth, we cannot afford the investment required. And this is particularly so for many governments, who are struggling to pay down debts while paying for increasing demands to spend more, not just on the green transition, education, health and to support ageing populations.

This is not an excuse to do nothing. Far from it. All of us who have set our ambition to be net zero carbon by 2050 must continue to make progress towards decarbonization. The issue is getting the balance right: supporting our economies growth, but ensuring that growth is green, and that it reaches emerging and developing economies whom we cannot leave behind.

This is not simple, but one thing is clear. The private sector’s role is obviously essential in the journey towards net zero. We are not going to meet the Paris Agreement goals without governments and businesses working together to help companies - and their customers - decarbonize and adapt their business models while ensuring they remain economically viable, and continue to grow.

For this to happen, more governments need to acknowledge that green growth relies on three things. First, we need competitive businesses operating, where necessary, in a regulatory system that is simple, predictable and proportionate. Second, we need energy that is reliable and affordable: of course we want more energy to come from renewable sources, but as we have seen, if energy is not reliable and affordable, growth is undermined - particularly in emerging markets, whose transition is critical. For example, we will continue to rely on gas for some time: thinking that nations can simply unplug from gas imperils their economies’ transition.

Third, we need governments to set out plans as to how public policy will support the transition. Tax, planning laws, market mechanisms to support green tech, skills and the transition at scale: if we are to build investors’ confidence and mobilise the billions required for the transition, governments worldwide need to create clearer plans - and price signals - so that it pays moving green.

Despite these challenges, over the last year Santander has continued to progress towards our ambition for net zero carbon by 2050. As this report shows, we are helping more customers - from individuals to global corporates - to decarbonize and adapt their business models while ensuring they remain economically viable, and continue to grow.

Faster progress towards net zero requires an enormous team effort. Last year, we created a new head of green finance reporting directly to the Group CEO to promote green finance objectives, who continues to strengthen our skills and expertise worldwide. As our clear strategy shows, we have the scale, diversification and customer focus to combine the power of global corporates with the actions of our 164 million customers locally to help to drive the green transition.

Yes, there are challenges - such as lack of data, costly regulation, the lack of government transition plans. But I am hopeful that, if we focus on the need for green growth, and harness the power of individuals and companies, the transition will be orderly and inclusive.

Ana Botín, Executive Chairman
2022 - JUNE 2023 HIGHLIGHTS

Aligning our portfolio with the Paris Agreement goals

- This report describes our progress in sectors where Santander has set decarbonization targets as part of its net zero ambition. It details related action plans, which involve customer engagement on climate goals, planning, and risk appetite limits.
- Our new climate customer engagement framework is designed to help us achieve our emissions targets for the power generation, oil and gas, aviation and steel sectors. It is based on customers’ greenhouse gas emissions profiles and quality assessments of their transition plans.
- We expanded our two-step tiering assessment to the energy, steel and aviation sectors. And we enhanced quality assessments of transition plans, based on updated benchmark methodologies and sector research.
- We took part in several discussions and initiatives. We supported the University of Oxford with funding for a new Transition Finance Centre of Excellence, which will play an important role in developing transition finance, best practice, new tools and insights.

Supporting our customers in the transition

- We are expanding ESG products in Wealth Management & Insurance. As of June 2023, we had EUR 58.6 bn in Socially Responsible Investment (SRI) AuM: EUR 40.5 bn in Santander Asset Management and EUR 18.1 bn from third-party funds in Private Banking.
- In 2022, we raised or facilitated EUR 28.8 bn (EUR 98.6 bn from 2019 to June 2023) in green finance.
- We developed several business opportunities to help clients to transition to a lower carbon economy:
  - The greenfield renewable energy projects we financed or advised on will have enough installed capacity to power 10.1 million homes a year and cut 152 million tonnes of CO$_2$ throughout their useful life.
  - In February 2023, we updated our Sustainable Finance Classification System (SFCS) based on lessons learned and market trends. The SFCS accurately identifies and tracks lending across the Group for business activities that help mitigate or adapt to climate change.

Reducing our environmental impact

- In 2022, 88% of our electricity came from renewable sources. We have been reducing our carbon footprint since 2011, and offsetting remaining CO$_2$e emissions from our own operations since 2020.

Embedding climate in risk management

- Santander keeps embedding environmental and climate factors in policies, risk appetite and risk management. Our risk management cycle is reinforced with initiatives such as "The Climate Race", a target operating model to embed environmental and climate change (E&CC) factors in all stages of credit approval.
- We conducted an internal business assessment of dependencies and impacts, available data and methodologies regarding nature and biodiversity.

Supporting these pillars,

- Senior executives’ long-term incentives now have ESG metrics based on our targets for green finance, decarbonization and other categories.
- Over the past year, we have taken part in several meetings on climate regulations and taxonomies, greenwashing, climate pathways to net zero, and frameworks to assess client transition plans, involving some 300 senior bankers.
- We launched initiatives to develop natural solutions in the Brazilian Amazon: Biomas aims to protect and restore 4 million hectares of native trees; and the Innovative Finance for the Amazon, Cerrado and Chaco (IFACC) Alliance aims to accelerate financing and find synergies to design and scale up sustainable means of production.

1. Emissions prevented during the projects’ estimated useful lifespans, based on emissions factors figures from the International Energy Agency (updated in 2022 with data from 2020). The estimated allocation to the amount financed by Santander is 51.6 million tons of CO$_2$.
2. Strategy

**Our ambition**

Santander aims to be net zero in carbon emissions by 2050. This applies to the Group’s operations and emissions from our lending, advisory and investment services.

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

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

**Our strategy**

At Santander, we are working to support our customers striving to reach net zero by 2050, offering transition solutions to help them fulfill their climate goals.

We are working to align 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 net zero ambition, we have a four-pronged climate strategy to support the green transition:

1. Align our portfolio with the Paris Agreement goals
   - Align our portfolio with the Paris Agreement goals to help limit warming to a 1.5°C rise above preindustrial levels; and set sector-portfolio alignment targets in line with the NZBA and with Net Zero Asset Management initiative (NZAMI).

2. Supporting our customers in the transition
   - Help our customers transition to a sustainable economy, with the target to raise or facilitate EUR 120 bn in green finance between 2019 and 2025 and EUR 220 bn by 2030; offer our customers guidance, advice and specific business solutions; and enable them to invest in a wide-range of products according to their sustainability preferences, with the target of reaching EUR 100 bn AuM in Socially Responsible Investment by 2025.

3. Reducing our environmental impact
   - Reduce our impact on the environment, implementing efficiency measures, sourcing all our electricity from renewable energy¹ by 2025 and remaining carbon neutral in our operational footprint².

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

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¹. In our core markets (G10)
². In countries where we can verify electricity from renewable sources at Banco Santander properties.
Our objectives and priorities

Tackling climate change is a key priority at Santander. We support the Paris Agreement goals. Our ambition is to achieve net zero carbon emissions by 2050. We intend to do this and support the green transition in four ways:

- **Aligning our portfolio with the Paris Agreement goals**
  - Contribute to limiting temperature increases to 1.5°C in line with the NZBA and NZAMI

- **Supporting our customers in the transition**
  - Support our customers transition to a low-carbon economy

- **Reducing our environmental impact**
  - Remain carbon neutral and consume 100% electricity from renewable sources by 2025

- **Embedding climate in risk management**
  - Manage climate and environmental risk according to regulatory and supervisory expectations

Throughout this report, we will provide concrete examples for how our strategic climate ambition is embedded into our business model and is helping us to build our transition plan.

- **Climate targets progress and new actions plans**
- **Action plans to meet decarbonization targets. Including how we engage with customers to help them decarbonize**
- **Key partnerships with leading public and private organizations**
- **New strategic positions and teams created to better embed ESG into decision-making processes**
- **2022-2025 Energy efficiency and sustainability plan**
- **Reducing our environmental footprint since 2011**
- **Target Operating Model - “The Climate Race”- including E&CC risks in all stages of credit granting and monitoring processes**
- **New strategic positions and teams created to better embed ESG into decision-making processes**
Our approach

Our approach to transition is to allocate the adequate resources and focus the capabilities on the decarbonization of the most material, high-emitting sectors portfolios. The methodologies we have developed inform our plans to decarbonize our credit portfolios, especially the ones directly related to fossil fuels.

Further to our alignment approach, the Group’s climate risk management performs a climate transition assessment for the wholesale corporate customers in the oil and gas, power generation, metals and mining, auto manufacturing, aviation and cement sectors. This goes beyond sectors on which we have targets and cover sectors highly prone to transition risk.

We regularly review, at key governance bodies, the progress of our main climate-related projects which consist of: portfolio alignment, sustainable finance classification and climate risk management.

Disclosing our approach is key to helping markets and other stakeholders assess how we embed climate-related initiatives in our processes and policies, and report on our climate-related performance. We use the Taskforce on Climate-related Financial Disclosures (TCFD) as the framework to disclose our approach to integrate climate in our investment strategy.

Santander Asset Management’s (SAM) strategy and approach:

In March 2021, SAM joined the global Net Zero Asset Managers initiative as part of its commitment to fight climate change, becoming the first asset manager in Spain and Latin America (excluding Brazil) to do so. SAM aims to achieve net zero greenhouse gas emissions with its assets under management by 2050 and has set a 2030 interim target to halve net emissions for 50% of its AuM in scope*. Our target represents 27% of SAM’s total AuM.

During 2022, we have worked on developing our Net Zero Engagement Strategy. This strategy aims to deliver our Net Zero plan in our core markets by fostering company engagement through dialogue and voting policies. That in turn, encourages and supports companies’ decarbonization plans and an adequate reporting to create credible track records.

SAM recently joined the International Investors Group on Climate Change (IIGCC) Net Zero initiative, which complements engagement actions on climate transition from Climate Action 100+ in which it is a signatory as well.

*Assets in scope are 54% of SAM total assets, which currently have a defined Net Zero methodology. This objective might be reviewed upwards depending on data availability at least every five years.
### Our climate and environmental targets

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>H1 2023</th>
<th>2025/2030 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity from renewable sources&lt;sup&gt;1&lt;/sup&gt;</td>
<td>43%</td>
<td>50%</td>
<td>57%</td>
<td>75%</td>
<td>88%</td>
<td>→ 100% by 2025</td>
</tr>
<tr>
<td>Carbon neutral in our own operations&lt;sup&gt;2&lt;/sup&gt;</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>Every year</td>
</tr>
<tr>
<td>Green finance raised and facilitated (EUR)</td>
<td>19 bn</td>
<td>33.8 bn</td>
<td>65.7 bn</td>
<td>94.5 bn</td>
<td>98.6 bn</td>
<td>120 bn by 2025 220 bn by 2030</td>
</tr>
<tr>
<td>AuMs in Socially Responsible Investments (EUR)</td>
<td>27.1 bn</td>
<td>53.2 bn</td>
<td>58.6 bn</td>
<td></td>
<td></td>
<td>100 bn by 2025</td>
</tr>
<tr>
<td>Thermal coal-related power &amp; mining phase out (EUR)</td>
<td>7 bn</td>
<td>5.9 bn</td>
<td></td>
<td></td>
<td></td>
<td>0 by 2030</td>
</tr>
<tr>
<td>Emissions intensity of power generation portfolio</td>
<td>0.21</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
<td>→ 0.11 tCO₂e / MWh in 2030</td>
</tr>
<tr>
<td>Absolute emissions of energy (oil and gas) portfolio</td>
<td>23.84</td>
<td>22.58</td>
<td></td>
<td></td>
<td></td>
<td>→ 16.98 mtCO₂e in 2030</td>
</tr>
<tr>
<td>Emissions intensity of aviation portfolio</td>
<td>92.47</td>
<td>93.05</td>
<td></td>
<td></td>
<td></td>
<td>→ 61.71 grCO₂e / RPK in 2030</td>
</tr>
<tr>
<td>Emissions intensity of steel portfolio</td>
<td>1.58</td>
<td>1.40</td>
<td></td>
<td></td>
<td></td>
<td>→ 1.07 tCO₂e / tCS in 2030</td>
</tr>
</tbody>
</table>

1. In countries where we can verify electricity from renewable sources at Banco Santander properties.
2. In our core markets (G10)

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Update on this report
Our net zero journey

In order to be aligned with the Paris Agreement and with the aim of limiting global temperature increase to 1.5°C, we have committed to be net zero in carbon emissions by 2050 also as part of the Net Zero Banking Alliance (NZBA).

1. In countries where we can verify electricity from renewable sources at Grupo Santander properties.
2. Assets in scope are 54% of SAM total assets, which currently have a defined Net Zero methodology. This objective might be reviewed upwards depending on data availability at least every five years.
Climate risks and opportunities

Climate risks

Environmental and climate-related risk drivers are considered as factors that could impact the existing risks, such as credit, market, liquidity, operational, reputational and strategic risks, among others, in different time horizons.

These include elements derived from the physical effects of climate change, generated by one-off events as well as by chronic changes in the environment. Physical risks arise from the acute or chronic effects of climate change on business activities, workforce, communities, markets, assets, investors, etc.

On the other hand, there are elements derived from the process of transition to a development model with lower emissions. Transition risks arise from the transition to a low-carbon economy that includes changes in legislation, technology or market trends.

We assess how transition and physical risks impact on the economy, our customers and our business, especially in terms of: impaired profitability and property values, revenues that may be affected by rising costs and lower productivity, declining demand, falling asset performance, rising cost of legal and regulatory compliance, declining household wealth and other aspects.

The risk classification is fundamental for effective risk management and control.

The following drivers are considered when assessing potential climate-related risks:

<table>
<thead>
<tr>
<th>PHYSICAL RISKS (PR)</th>
<th>TRANSITION RISKS (TR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
<td><strong>Market sentiment</strong></td>
</tr>
<tr>
<td>Increased severity of extreme weather events, such as drought, hurricanes or floods</td>
<td>May manifest through shifts in supply and demand for certain commodities, products and services, as climate-related risks and opportunities are taken into account, which may entail reputational issues, among others</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td><strong>Policy action</strong></td>
</tr>
<tr>
<td>Changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures, chronic heat waves or rising sea levels</td>
<td>Such as implementing carbon-pricing mechanisms to reduce GHG emissions, shifting energy use toward lower emission sources, adopting energy-efficiency solutions, encouraging greater water efficiency measures, and promoting more sustainable land-use practices</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td><strong>Technology</strong></td>
</tr>
<tr>
<td>Arises from the need to make improvements or innovations to support the transition to a lower-carbon, energy efficient economic system that can have a significant impact on companies to the extent that new technology displaces old systems and disrupts some parts of the existing economic system</td>
<td></td>
</tr>
</tbody>
</table>
We continue improving how we identify climate and environmental risk drivers taking into account potential effects, our response, and next steps for each risk type.

The following chart summarizes pre-mitigation of climate related risks considering different risk types:

<table>
<thead>
<tr>
<th>Risk type</th>
<th>Main climate drivers</th>
<th>Main time horizon</th>
<th>Potential impacts of climate risk factors</th>
<th>What we are doing to manage climate risk factors</th>
<th>Next steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Risk</td>
<td></td>
<td>Medium - Long-term</td>
<td>• Extreme weather leading to higher retail and corporate loan default and lower collateral value. It may lower revenues and cause agricultural damage, as well as raise insurance premiums and coverages. Also, wind pattern shifts that decrease energy production may cause higher operating costs and hinder productivity. Increase of write-offs and early retirement of assets owing to property damage and ‘high-risk’ locations. • If borrowers do not transition their business models to a low-carbon economy it could increase credit risk, and consequently greater risk of revenue decline and business discontinuity, leading to higher default or a loss of business value. • Severe weather causing significant economic losses, hazards for the local population and environmental damage, affecting also collateral valuations. • Market sentiment affecting the demand, technological systems obsolescence, customer preferences, etc. • 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 derived from government policy action.</td>
<td>• Materiality assessment to spot physical and transition risk in the Group’s credit portfolios. • Analysis of short-, medium- and long-term risk concentration per sector and region. • Heatmaps that follow orderly, disorderly and Hot House World scenarios up to 2050. • Application of mitigating measures such as policies, thresholds and insurance to cover the risks and their impacts. • Scenario analysis and sensitivities to forecast changes in ratings, PD and LGD in view of physical and transition risk. • Credit risk metrics definition to monitor and manage the E&amp;CC risks in BAU processes. • E&amp;CC factor analyses to be embedded in the assessment of transactions and clients and their ratings. • Risk appetite limit alerts to manage climate-related sectors.</td>
<td>• Launching ‘The climate race’ Environmental &amp; Climate change credit risk TOM to integrate E&amp;CC risks as decision drivers for credit approval and to identify and mitigate transition and physical risks. • Embedding into the credit strategy (admission and monitoring) the E&amp;CC factors to identify, manage and mitigate transition and physical risks. • Including climate factors in internal physical and transition risk models, and developing tools to monitor physical risk in all the Group’s markets.</td>
</tr>
<tr>
<td>Market Risk</td>
<td></td>
<td>Short-term</td>
<td>• Higher volatility in market factors under stress scenarios.</td>
<td>• Regular reviews of climate stress scenarios and units. • Stress testing using physical and transition risk scenarios. • Portfolio analysis of current exposure to climate-sensitive business activities.</td>
<td>• Enhancing analysis of material climate impact on trading portfolios to help with future sector-based stress testing. • Enriching stress testing and reviewing new scenarios to be included. • Adapting stress testing to best market practices.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long-term</td>
<td>• Changes in market perception leading to wider credit spreads for business in impacted sectors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short - Medium-term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquidity Risk</td>
<td></td>
<td>Long-term</td>
<td>• Market impacts on the value of high quality liquid assets in Santander’s liquidity buffer.</td>
<td>• Qualitative and quantitative climate scenario analyses of impacts on highly liquid assets and financing of exposed companies. • Analysis of higher outflows due to changes in market perception of corporations in climate-sensitive business activities.</td>
<td>• Enhancing stress testing and reviewing new scenarios to be included. • Adapting stress testing to best market practices. • Including new liquidity scenarios to measure their impact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short - Medium-term</td>
<td>• More frequent extreme weather stifling economic growth in countries susceptible to climate change, causing sovereign debt to rise and limiting access to capital markets. • Cash outflows from companies trying to boost their reputation in the market or solve problems with climate scenarios.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Potential impacts of climate risk factors

<table>
<thead>
<tr>
<th>Risk type</th>
<th>Main climate drivers</th>
<th>Main time horizon</th>
<th>Potential impacts of climate risk factors</th>
<th>What we are doing to manage climate risk factors</th>
<th>Next steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Risk</td>
<td>Severe weather events can cause damage to our assets, including branch networks, offices and data centres. It can also affect business continuity, including processes and staff.</td>
<td>Medium-Long-term</td>
<td>• The operational risk &amp; control self-assessment includes ESG reference risks in order to evaluate exposure.</td>
<td>• Provide enhanced reporting of operational risk related to climate risk.</td>
<td>• Evaluate external sources of information and best practices.</td>
</tr>
<tr>
<td>Operational Risk</td>
<td>Climate-related financial risks can also cause operational risk losses from litigation, for example, if a bank is perceived to misrepresent sustainability-related practices.</td>
<td></td>
<td>• Mandatory operational risk scenario analysis covering physical or transition risk events.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Risk</td>
<td>• The ESG risk flag in the operational risk events database allows to classify climate &amp; environmental related incidents and losses.</td>
<td></td>
<td>• The business continuity plan guidelines are updated to include more detail on climate risk threats.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputational Risk</td>
<td>Customers, investors and other stakeholders who perceive banks aren’t doing enough to meet low carbon targets or their own public commitments can pose reputational risk.</td>
<td>Short - Medium - Long-term</td>
<td>• Updated climate and environmental risk policies and procedures.</td>
<td>• Continuous involvement of reputational risk function with other areas to address reputational impacts.</td>
<td>• Methodology to quantify the reputational impact of climate and environmental risk.</td>
</tr>
<tr>
<td>Reputational Risk</td>
<td>Misrepresenting or misleading to customers, investors or other stakeholders, the declarations, actions, communications, policies or sustainability characteristics of products or practices (greenwashing) of an entity.</td>
<td></td>
<td>• Corporate credit committees address reputational risk when assessing sensitive transactions that involve climate and environmental risk.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputational Risk</td>
<td>• Formal meetings scheduled to review reputational issues (including climate matters), involving the legal, responsible banking, investor relations, risk and other teams.</td>
<td></td>
<td>• Proactive measures that show Santander supports companies’ green transition and decarbonization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Risk</td>
<td>Our strategy could be affected if we fail to achieve our net-zero targets, including those related to the activities that we finance as well as those concerning our own operation.</td>
<td>Short - Medium - Long-term</td>
<td>• Monitoring of the Group’s strategic ‘Climate change’ project, with net-zero KPIs.</td>
<td>• Increasing granularity of ESG stressed event impacts in top risk identification exercise.</td>
<td>• Regularly updating ESG KPIs to ensure full alignment with the Group’s strategy.</td>
</tr>
<tr>
<td>Strategic Risk</td>
<td></td>
<td></td>
<td>• Top risk identification with an ESG risk event and analyses of how low-probability stressed scenarios impact on strategic targets to draw up appropriate action plans.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Risk</td>
<td></td>
<td></td>
<td>• Monitoring of ESG-related proposals for Products (CPGF) and Investment forums.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Risk</td>
<td></td>
<td></td>
<td>• Reviewing ESG factors and KPIs for business model performance.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. All climate drivers have an effect in risk factors, although in this table only the main ones have been considered.
2. Short-term: up to 1 year; Medium-term: up to 3 years; Long-term: ≥ 5 years
Climate risks and opportunities identified in Santander Asset Management (SAM):

SAM believes that climate-related factors may represent risks and opportunities for businesses, which have an impact on the long-term risk and return profile of investment portfolios. In analysing climate risk, we can have a better understanding of the assets we invest in, recognize issuers that are better positioned to face future challenges, tap into new opportunities, and create value for businesses and society.

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

- **regulatory risks** involving GHG emissions, such as higher pricing;
- **technology risks** from new efficient low-carbon alternatives that can turn existing technologies obsolete; 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 our analysis model are:

- **new climate solutions** involving products and services that boost diversification, competitive advantage and revenue;
- **lower-emission energy sources** that benefit from less exposure to GHG emissions, lower costs, policy incentives; and
- **efficient production and distribution of resources** to lower operational costs and raise both production capacity and the value of fixed assets.
Climate opportunities

Working with customers to support their transition and to reduce carbon emissions will be key to achieve our ambition to be net zero by 2050. To achieve this, our teams engage with customers, with support from specialist environmental, social and governance (ESG) teams in Santander Corporate & Investment Banking (SCIB), Wealth Management & Insurance (WM&I) and Retail and Commercial Banking.

CLIMATE OPPORTUNITIES

<table>
<thead>
<tr>
<th>Sector / asset</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgages</td>
<td>Green mortgages</td>
</tr>
<tr>
<td></td>
<td>Lending and advisory offering to help clients identify real estate retrofitting solutions</td>
</tr>
<tr>
<td>Energy</td>
<td>Growth in wind and solar renewable energy financing and advisory</td>
</tr>
<tr>
<td></td>
<td>Financing and advisory to facilitate EV(^1) charging infrastructure build-out</td>
</tr>
<tr>
<td>Automotive</td>
<td>Financing and advisory to enable shift to EVs</td>
</tr>
<tr>
<td></td>
<td>Financing to establish and integrate battery supply chains</td>
</tr>
<tr>
<td></td>
<td>Financing of additional technologies that enable low-carbon mobility solutions</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Incentivize and support clients across the value chain to adopt more sustainable practices</td>
</tr>
<tr>
<td></td>
<td>Financing and advisory of on-farm emission reduction technologies</td>
</tr>
<tr>
<td>Voluntary Carbon Markets</td>
<td>Provide advisory services and solutions to enable clients to access carbon market opportunities</td>
</tr>
<tr>
<td></td>
<td>Offering of green products to individuals and companies with high integrity offsetting options</td>
</tr>
<tr>
<td>Cross sector</td>
<td>Growth in green bonds, green loans and sustainability-linked financing instruments</td>
</tr>
<tr>
<td></td>
<td>Financing for scaling of new technologies such as hydrogen, CCUS(^2), biofuels as well as energy storage more broadly</td>
</tr>
<tr>
<td></td>
<td>Financing and advisory for early-stage companies focused on energy transition-enabling solutions</td>
</tr>
</tbody>
</table>

1. EV = Electric Vehicles
2. CCUS = Carbon Capture, Utilisation and Storage
3. Governance

Climate change and green transition oversight

The board of directors and the executive committees review and discuss the Group’s climate change and green transition initiatives. In 2022, they discussed disclosure reports, new alignment targets, the Climate Risk Stress Test Update and other climate change and green transition matters. Additionally, core main subsidiaries and global businesses report on their ESG initiatives to the Group Board Committees and Board every year.

The Board Responsible Banking, Sustainability and Culture Committee (RBSCC) supports the Board of Directors in supervising the Group’s responsible banking agenda and strategy. The RBSCC has five independent board members.

At the time of this report’s release, the RBSCC discussed climate change in the five meetings it held in 2022, and in the three meetings it held in 2023. It reviewed the following topics (among others): progress on power generation and thermal coal portfolio alignment targets; latest targets for disclosure of energy (oil and gas), steel and aviation and progress on other sectors and countries; the organizational model, resources, key priorities, and next steps of the Green Finance unit and the progress of its main initiatives and plans; main results, lessons learnt and expected developments in supervisory activity (including the ECB’s 2022 Climate Stress Test and Thematic Review); data disclosure on the Green Bond Report; ESG regulatory & supervisory developments; ESG policy updates; ESG ratings and results; and future developments and ideas on better climate reporting.

Other relevant areas of ESG were supervised under the roles and responsibilities of the RBSCC, as the main committee that provides support to the Board of Directors on ESG related matters.

Regarding climate finance, the Risk Supervision, Regulation and Compliance Committee, also known as Board Risk Committee (BRC) reviews the proposals for the Risk Appetite Statement (RAS) prior to board approval. The BRC also monitors the RAS every quarter, including climate finance metrics and limits. The BRC works with the RBSCC to review ESG-related conduct risk, data protection risk, customer vulnerability, reputational issues, risk policies and how business units adopted these policies.

The RBSCC interacts with the Board Remuneration Committee to draw up responsible banking metrics for variable remuneration schemes. The RBSCC also exchanges information and interacts with the Board Audit Committee to review ESG reports (such as this Climate Finance Report) prior to publication.

The Board Audit Committee oversees the internal control system, processes and methodologies we use to prepare financial and non-financial ESG information.

The Board Nomination Committee works with the RBSCC to review Santander’s corporate behaviours, culture and talent in relation to the ESG agenda.

The Responsible Banking Forum (RBF), is the executive governance body that reviews implementation of the Group’s responsible banking agenda and presents its findings to the RBSCC. The RBF drives decision-making on responsible banking issues. It enforces mandates from the RBSCC, the BRC, the Board Audit Committee, other committees and the board of directors. Prior to the release of this report, it discussed climate change and green finance at five of its six meetings in 2022 and at the four it had held in 2023. As this body ensures alignment on key issues, it reviewed and escalated to the RBSCC these topics, along with environmental risk policy revision, carbon footprint and offsetting.

The Forum’s 11 permanent executive members are the Regional Head of Europe (rotating chair); the Regional Head of South America (rotating chair); Global Head of Strategy and Exec. Chairman’s office; Group Chief Accounting Officer; 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 Advisor to the Executive Chairman on responsible banking practices.
Main areas involved in the implementation of the climate change strategy

The CEO management meeting, chaired by the CEO, received four status reports on the responsible banking agenda regarding climate change and green finance. In addition to the aforementioned bodies, other executive governance bodies also discuss climate-related matters that stem from the work carried out by the Group’s divisions and businesses.

Since 2020, Santander has assessed green finance, progress made on climate targets and other ESG targets for the Group’s variable remuneration scheme.

In 2023, a board resolution passed at the AGM with ESG metrics that are consistent with our public targets for the long-term incentives for senior executives in 2023-25 passed. These metrics cover raised and facilitated green finance, socially responsible investments, reduced exposure to thermal coal-related power & mining, and other topics.

For more details on ESG in remuneration schemes, see section 6.4 ‘Directors’ remuneration policy’ in 2022 Annual Report

In 2022 we continued to embed climate management in business-as-usual across SCIB, Risk and Responsible Banking. We created two new positions: Risks Head of ESG & New Business (who reports directly to the CRO), and Global Head of ESG & SustainableTech and Global Head of Green finance (who reports directly to the CEO). For more details, please see Global Green Finance unit in Retail and Commercial Banking in section 6.

Corporate working groups meet regularly to implement our climate change agenda and inform on regulation updates: a public policy sustainability working group updates on upcoming climate and sustainability; a regulatory radar governance working group which meets quarterly to monitor the status of implementation of sustainability regulations and to assign responsibility for the implementation of regulatory initiatives to the group’s areas; an environmental footprint working group measures our footprint and reviews ways to reduce it; and a sustainable bonds working group oversees sustainable bonds issues.

SCIB set up a dedicated team for portfolio alignment and strengthened its corresponding governance (see section 5 for more details). Beyond SCIB, a number of local units are involved in a governance structure coordinated by Group Responsible Banking. The objective is to progress on the decarbonization agenda, to promote knowledge and expertise sharing by local teams; and to seek for synergies for the design of reliable transition plans.

A new ESG Reporting & Internal Control team, set up in the second quarter of 2023, in the Financial Accounting & Management Control division oversees the disclosure, supervision and control of the ESG information the Group uses to meet regulatory requirements and stakeholder expectations. This year, the team has been designing and implementing data control and validation capacities. It has also made strides in automating its reporting to boost the quality and traceability of disclosures.

As part of our green transaction assessments, we created global, regional and local panels to provide additional scrutiny and validation, and to enhance consistency across the Group.

Our annual risk assessment and internal audit planning includes climate risk. In 2022, our Internal Audit area audited climate risk management to check that the Group’s initiatives were progressing according to plan. It also suggested ways to strengthen governance and controls, and to roll out initiatives in subsidiaries, which it will continue to monitor in 2023.
The Group’s Corporate Responsible Banking framework was approved by the Group Board of Directors in December 2021 and then by subsidiaries’ boards. The document sets out the Group’s highest-level principles, processes, and responsibilities for managing ESG across Grupo Santander. This framework is operationalised through the Responsible Banking Model, which was approved in February 2023, details the roles and responsibilities for its correct implementation. The Model has been co-created with all functions involved in the key activities which comprises ESG.

The Group establishes ESG policies, procedures and guidelines on ESG that adapt to local regulation and apply to all units. We systematically review the scope of policies for adopting ESG standards according to international best practice.

The Responsible Banking and Sustainability policy and the Environmental, Social & Climate Change (ESCC) risk management policy, which were both revised and approved by the Board of Directors in February 2023, embed climate change factors in lending standards.

Our Responsible Banking and Sustainability policy outlines our principles, commitments, objectives and strategy for our stakeholders, including human rights protection.

Our Environmental, Social & Climate Change (ESCC) risk management policy sets the criteria for investing in, and providing financial products and services* to, companies and customers who engage in sensitive activities in oil and gas, power generation and transmission, mining and metals, and soft commodities.

Key documents related to the climate change strategy

Framework & Model
- Responsible Banking Framework
- Responsible Banking Model

Core policies
- General code of conduct
- ESCC risk management policy
- Resp. Banking and sustainability policy

Documents that support our strategy
- Reputational Risk Corporate Model
- Third-party certification Policy

Detailed technical criteria
- Sustainable Finance Classification System
- Guidelines financed emissions for portfolio alignment
- Materiality assessment guideline

* Defined as transactions giving rise to credit risk, insurance, asset management, equity and advisory services

Policies are available on our corporate website [www.santander.com](http://www.santander.com).
ESG culture and skills development

We’re working to familiarize all employees with sustainability, the UN Sustainable Development Goals and climate change with training for global businesses and subsidiaries:

• Common multidisciplinary training for all employees. We launched “Sustainability for all”, a global, mandatory course to familiarize all employees with sustainability and its relevance to the Group on sustainability, sustainable development goals and climate change.

• Training for all functions involved in our sustainability agenda, with an introduction to sustainability and ESG, and special programmes for each business and function. We also created ESG Talks, a series of online recordings available on our learning digital ecosystem, with internal experts from SCIB, Risk, Human Resources, Financial Regulation, Wealth Management and Insurance, Consumer Finance and Retail Banking and Responsible Banking for the areas involved in our sustainability agenda.

• Expert ESG “knowledge sharing” aimed at employees who are involved in the Responsible Banking agenda. It can include internal and external certification, such as Chartered Financial Analyst (CFA), European Financial Planning Association (EFPA), Global Association of Risk Professionals (GARP), Certified ESG Analyst (CESGA), International Association for Sustainable Economy (IASE) level 1 and 2.

Some subsidiaries and global businesses gave further training on climate change, sustainability, sustainable finance, sustainable investment, diversity and inclusion.

Climate training for board members
In 2022 the board of directors completed climate change training programmes with modules on the Paris Agreement, net zero, portfolio alignment, climate risk management, transition plans, regulation and reporting, supervisor expectations, greenwashing and biodiversity.

In 2023 subsidiary board members and other “key positions” completed training on responsible banking, green finance, and ESG risks.

Climate dialogues
In 2020, we launched “Climate Dialogues” for senior managers to discuss critical climate-related topics. In 2022, we held two sessions with renowned experts Tomas Naucler and Joseba Eceiza (Founder and Partner of McKinsey), and Steve Waygood (Chief Responsible Investment Officer at AVIVA).

"Training Pills", embedding ESCC
“Training Pills” is an initiative to share best practices and expert knowledge across Santander. Topics cover embedding ESCC factors in lending, a materiality assessment, a climate sectors assessment and scenario analyses. With over 150 participants, the pills will continue into 2023 and 2024.

ESG training for SCIB
We implemented a client engagement training program for SCIB, in collaboration with external expert providers. In multiple sessions, 300 senior bankers were trained on topics including: climate regulations and taxonomies; greenwashing; climate pathways to net zero; and frameworks to enable evaluation of client transition plans.

ESG Talks
In 2022 we launched ESG Talks. They’re one-hour seminars delivered by our ESG teams on Santander’s commitment and projects. As of the publication of this report, seventeen talks have taken place on such topics as climate strategy alignment, climate risk management and stress tests, ESG investment, our Sustainable finance classification system, ESG regulation, sustainable insurance, Greenwashing, Circular Economy in Suppliers Management and Santander Finance for All among others.

Group-wide newsletters
To raise employees’ awareness of ESG issues, Responsible Banking, SCIB, Research & Business Intelligence and other departments send out climate-related newsletters and reports.

ESG training in subsidiaries
As part of the third level-module, some business units provide additional training and initiatives.

As an example, Santander UK provided 2,000 colleagues across 14 teams access to Sustainability Unlocked training platform for building a strong understanding of ESG in financial services. Additionally, Santander UK supported several Sustainability Business Partners in completing The Climate Safe Lending Fellowship, which is an international peer-led development programme that enables banking professionals to lead and influence climate transition within their organisations.

Santander Argentina, along with the agro loans granted by Santander, training sessions about sustainable land management are delivered to the counterparties.

In 2023 and for the second year, the Santander Scholarships | Skills for the Green Transition Programme, with Cambridge Judge Business School, is offering 1,000 scholarships to learn about sustainability and climate change.

ESG training in Wealth Management & Insurance
In 2022 we launched a global training plan for Santander Asset Management, Private Banking, and Insurance to credit more than 1,500 employees for ESG knowledge. We offered two types of certifications: internal, through Santander training platform (c.16 hours) and external, through CESGA and CFA (c. 150 hours). In addition, SAM’s Board of Directors completed an ESG investment tailor-made course in June 2022.
4. Risk management

Climate-related and environmental risk management is key if we are to deliver our strategy and meet our commitments, particularly to be net-zero carbon emissions by 2050. By embedding climate aspects in risk management practices, we can implement our sustainability strategy to contribute to the transition to a low-carbon economy.

Existing risks in various time horizons could be made worse by climate change and environmental factors. These include the physical effects of acute events and chronic changes in the environment, as well as the consequences of the transition to a more sustainable economy (e.g. new legislation, new technology and changes in behaviour).

To learn more on our climate and environmental strategy, please see section 2. Strategy.

To pinpoint and manage material risks, Santander runs risk identification and assessments. These processes cover credit, market, liquidity, reputation and other types of risk that emerge in the Group's daily operations.

We have made progress to embed both climate and environmental aspects in our risk management cycle, as regulatory and supervisory demands, like the ECB’s climate stress test (successfully completed in 2022), the Thematic Review and the Pillar 3 ESG report, continue to mount.

One of the elements that helped us to integrate environmental and climate change factors into our strategy is the embedding of these factors in the credit granting process. It is the core risk in terms of exposure and capital consumption. We also consider this in our policies, procedures, data, tools, metrics, governance and culture.

Risk management cycle

I. Identification
Risk identification includes the top risk exercise to analyse potential events that would threaten the Group’s three-year plan and long-term strategic plan. Our methodology consists of a risk event taxonomy, an impact and likelihood matrix, time horizons, sponsorship, action and mitigation plans, early warning indicators, consolidation and standard top risk templates.

Risk identification helps us understand the internal and external threats posed by the environment and climate change to our business model, profitability, solvency and strategy.

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In the top risk exercise, there has been a "climate" subcategory since 2018 and, more recently, a "biodiversity" section. Risk taxonomy, heatmaps and materiality assessment exercises (detailed along this chapter) form the basis for classifying and identifying material environmental and climate related risks of our portfolios.

Also, the risk function’s core strategic exercises identify threats to our targets and support the transition to a low-carbon economy more extensively according to our policies and risk appetite statement.
## II. Planning

Our strategic planning includes decarbonization targets in line with our public commitments on sustainability. Our core planning and strategic processes have different time horizons: “short term” (one year) for budgeting; “medium term” (three years) for financial planning; and “long term” (≥ 5 years) for strategy and ad-hoc analyses.

They allow us to identify threats to our objectives and to low-carbon transition more accurately, according to our policies and risk appetite.

In addition, these processes are supported by decarbonization objectives, financed emissions metrics, analysis of risk exposures to a climate and environmental risks related to our clients and their collaterals, and analysis of climate scenarios that allows for a prospective vision of risks and their financial impacts.

### III. Assessment

Grupo Santander has materiality assessments, qualitative and quantitative heatmaps, scenario analysis and other tools to analyse the potential impacts of climate change related risks in our portfolios. This determines how we categorize portfolios based on exposure to physical and transition risks.

#### Materiality assessment

Our quarterly materiality assessments help us determine climate and environmentally material credit risk and proves essential to decision-making and setting out our strategic priorities for selected sectors, sub-sectors, industries, customers and regions. It covers climate and environmental risk in the Group’s markets over different time horizons.

This helps us to address these risks in our risk appetite, top risk identification, credit analysis, stress testing and other management processes.

The materiality assessment follows the guidelines of the Task Force on Climate-related Financial Disclosures (TCFD) and the United Nations Environmental Programme Finance Initiative (UNEP-FI).

<table>
<thead>
<tr>
<th>Process</th>
<th>Time Horizon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>Short term</td>
<td>12 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Budgeting, the first part of strategic planning, provides inputs for the three-year plan. It includes tasks to quantify annual objectives in the Group subsidiaries’ business plans within the Group’s risk appetite and liquidity, capital and efficiency plans.</td>
</tr>
<tr>
<td>3-year planning process</td>
<td>Medium term</td>
<td>3 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The three-year plan is a key process for medium-term planning in the Group and subsidiaries. Its bottom-up approach and facilitates a consistent, aggregate view of our processes. It is also a basis for preparing the annual budget, the Internal Capital Adequacy Assessment Process (ICAAP) and the Internal Liquidity Adequacy Assessment Process (ILAAP).</td>
</tr>
<tr>
<td>Strategic plan</td>
<td>Long term</td>
<td>≥5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The strategic plan sets out long-term objectives for the main subsidiaries and businesses in Grupo Santander. It covers the Group’s vision and priorities in terms of capital allocation, organic and inorganic opportunities in each region and business unit.</td>
</tr>
</tbody>
</table>
Our taxonomy of industries and sub-industries is based on the EU’s NACE codes (statistical classification of economic activities in the European Community). We compile exposure data that serve as a starting point, along with a five-tier heatmap for physical and transition-based risks, to measure highly material climate change risks, as shown in this table:

Qualitative and quantitative heatmaps help us identify the best positioned customers and portfolios. Analysing the heatmaps is crucial to customer and transaction admission and monitoring, as well as for risk management, credit policies and business strategy.

Throughout 2022, we updated our materiality assessment to reflect the latest industry and regulatory developments. We have made progress in updating the risk taxonomy, extending the scope of sub-sectors, including other segments like SMEs, and analysing impacts through more granular detail in heatmaps.

By using scenario analysis techniques, we are able to measure impacts reflected in quantitative heatmaps, based on different scenarios and time horizons (2030, 2040 and 2050). Scenario analysis is further detailed later in this section.

Santander Corporate & Investment Banking (SCIB), Commercial Banking (Corporates, SMEs, Retail Mortgages) and Santander Consumer Finance (SCF) are the most material business lines included in the materiality assessment exercise. Moreover, the assessment also covers Institutional lending and Wealth Management & Insurance.

### RAG CLASSIFICATION FOR PHYSICAL AND TRANSITION RISKS

<table>
<thead>
<tr>
<th>Physical Risk</th>
<th>Overall Score</th>
<th>Transition Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector has low vulnerability to present and future climate events (chronic or acute).</td>
<td>Low</td>
<td>Sector has low emissions intensity, is not reliant on fossil fuels and is closer than other sectors to achieving net zero.</td>
</tr>
<tr>
<td>Sector’s current and future vulnerability from climate events (chronic and acute) is more moderate than others.</td>
<td>Moderately low</td>
<td>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.</td>
</tr>
<tr>
<td>Sector has medium vulnerability from the physical impacts of a changing climate, with some disruption caused by climate events that could last for weeks.</td>
<td>Medium</td>
<td>Sector needs significant investment to transition to net zero. It will experience some impact from changing customer sentiment and be more exposed to policy and technological change.</td>
</tr>
<tr>
<td>Sector is highly exposed to physical risks and costs relating to climate events in the long term.</td>
<td>High</td>
<td>Sector has higher emissions per unit of production than others and will experience adverse demand. Sector requires targeted low-carbon policy, technological innovation and investment to transition to net zero.</td>
</tr>
<tr>
<td>Sector severely affected by climate events that become more severe and frequent, causing significant economic losses, hazards for the local population and environmental damage.</td>
<td>Very High</td>
<td>Sector relies heavily on fossil fuels and needs significant investment and targeted policy to transition to net zero. Focus on action from a wide range of stakeholders. Higher risk of premature write-downs on assets. Net zero position is still unclear, suggesting a long transition.</td>
</tr>
</tbody>
</table>
The current macroeconomic context of the war in Ukraine and the energy crisis, has affected the increase in the volume of sectors such as Oil and Gas and Mining & Metal, with no significant effect on the final distribution by sector of the Group’s portfolio.

Physical and Transition risks impacts are heterogeneous across sectors, sub-sectors and geographies in the short term and may change depending on the scenarios at medium and long term. For that reason, we perform quantitative assessments across main climate scenarios to identify the credit risk performance of our main portfolios in 2030, 2040 and 2050.

The main results of our credit risk materiality assessment together with our current heatmap distribution for transition and physical risks of our main portfolios can be observed in the following tables:

As a result of this exercise, 11% of the exposure (SCIB + Other segments) has been identified in sectors defined as high or very high transition risk (Mining & Metal, Oil and Gas, Conventional Power and Transport). However, out of the SCIB portfolio, the concentration in our business lines is mainly rated as moderately low and low transition risk.
The materiality assessment has been enhanced with scenario analysis models that are also presented in quantitative heatmaps to measure the impact of transition and physical risks on core credit metrics (mainly PDs & LGDs). It complements our qualitative methodology and provides for forward-looking, geography-based analysis of portfolios in the medium-to-long term.

We refer to the Network for Greening the Financial System (NGFS) to measure financial impact according to its Orderly, Disorderly and Hot House World scenarios (detailed in the following sub-section). This is illustrated by the table below under NACE level 1 drill-down, with the qualitative and quantitative heatmaps at present and in the medium-to-long term for climate sectors in different scenarios and time horizons:

We also have adopted NACE level 4 analysis in our risk management to oversee the composition of our risk taxonomy and our value chain. This accurately shows us sub-sector scores and how they evolve.

We also enhanced our materiality assessment with an updated in-house Klima tool. Klima enables us to spot, assess and manage climate and environmental risk. The common standards it applies help to manage physical and transition risks. Klima also includes our risk taxonomy and heatmaps to measure 2030, 2040 and 2050 exposure, drawing on the same calculation methodology used for all business lines.

### Klima Tool

Klima runs on a multi-stage execution model. Its modules are ‘Materiality Assessment’, ‘Scenarios’, ‘Risk Management’ and ‘Sensitivities’. It produces qualitative and quantitative management information, including risk exposures and concentration metrics, with a drill down view by sector and geography, so we can monitor concentration, trends and impacts everywhere for our business lines.

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Transition Risk</th>
<th>Physical Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR</td>
<td>Orderly</td>
<td>Orderly</td>
</tr>
<tr>
<td></td>
<td>Disorderly</td>
<td>Disorderly</td>
</tr>
<tr>
<td>PR</td>
<td>Hot House World</td>
<td>Hot House World</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Power (Conventional)</td>
<td>2030</td>
<td>Low</td>
</tr>
<tr>
<td>Power (Renewables)</td>
<td>2040</td>
<td>Low</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>2050</td>
<td>Low</td>
</tr>
<tr>
<td>Mining &amp; Metals</td>
<td>2030</td>
<td>Low</td>
</tr>
<tr>
<td>Transport</td>
<td>2040</td>
<td>Low</td>
</tr>
<tr>
<td>Auto Consumer</td>
<td>2050</td>
<td>Low</td>
</tr>
<tr>
<td>Real Estate</td>
<td>2030</td>
<td>Low</td>
</tr>
<tr>
<td>Agriculture</td>
<td>2040</td>
<td>Low</td>
</tr>
<tr>
<td>Construction</td>
<td>2050</td>
<td>Low</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2030</td>
<td>Low</td>
</tr>
<tr>
<td>Water Supply</td>
<td>2040</td>
<td>Low</td>
</tr>
</tbody>
</table>

Low | Moderately low | Medium | High | Very high
Physical Risk Assessment

Santander made significant progress in physical risk assessment in 2022. We worked with an expert insurance vendor to assess the risk of 13 physical hazards (8 acute and 5 chronic). We analysed every market in which Santander operates, with a drill down of more than 1,250 regions (NUTS 3* or equivalent) and covering every economic activity under our Risk Taxonomy, as well as the main business lines such as mortgages and consumer auto.

We monitor each region (NUTS 3) to measure the associated physical risks, scoring them from Low to Very High according to our 5-point RAG scale. To assess the intensity and frequency of natural hazards, we used different atmospheric greenhouse gas scenarios (Representative Concentration Pathways - RCPs) and time horizons (present, 2030, 2050 and 2100).

The RCPs capture future trends from most severe scenarios (RCP 8.5) leading to global warming of over 4°C by the end of the 21st century; intermediate scenarios (RCP 4.5); and moderate scenarios (RCP 2.6).

The methodology we applied to calculate physical scores follows the basics guidelines drafted by UNEP-FI Working Groups, where frequency and intensity determine hazards’ scores and vulnerability factors moderate the physical events’ impact to each economic activity or collateral values.

To help assess physical risks with more granular detail, we are developing a new Klima module to embed physical risk reviews in the credit strategy (admission and monitoring).

Collaterals Risk Assessment

Santander’s Real Estate portfolio accounts for a large portion of our balance sheet. Thus, while we must conduct specific assessments of that portfolio’s climate-related risks, our qualitative heatmaps indicate moderate to low transition risk and medium physical risk.

Additionally, to the physical risks developments explained previously, the transition risk improvements have been focused on the Energy Performance Certificate (EPC).

In the past few years, we have been making efforts to obtain EPC information of the stock collateral portfolios in Europe (region where these certificates are compulsory), and defining plans to reinforce onboarding processes to gather the information for new businesses. For those properties where real data was not available, EPCs estimations have been used to cover a large percentage of the portfolio.

* The NUTS classification (Nomenclature of territorial units for statistics) is a hierarchical system for dividing up the economic territory of the EU and the UK. NUTS 3 classification refers to Socio economic analyses of small regions for specific diagnoses.
Scenario Analysis

Santander uses scenario analyses with different approaches to measure transition and physical risk to our portfolios, considering our business diversification and the geographical characteristics.

For commercial banking and corporate portfolios, Santander applies an integrated vendor model (Planetrics) to quantify the financial impact of transition and physical risks. Planetrics' modelling, based on core credit risk metrics (PD, LGD), estimates the direct and indirect impact of macroeconomic and climate variables, market trends and policy actions.

We capture effects related to carbon cost, physical risk and change patterns in demand, to assess changes in companies’ finances such as costs, revenues, and profits, considering also general aspects referred to sector/sub-sector and geography.

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

The climate model comprises these seven modules, which are set out in the following table:
1. Scenario selection based on the scenarios published by the Network for Greening the Financial System (NGFS), the IEA-Net Zero scenario for Portfolio Alignment, and other external sources.

In addition, the most recent NGFS scenario updates reflect the latest trends in renewable energy technologies and macro variables that consider the snapshot from the IMF World Economic Outlook 2021, with increasing granularity in transport and industry.

The Intergovernmental Panel on Climate Change (IPCC) developed the Representative Concentration Pathways (RCPs) climate scenarios.

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 companies’ revenue due to chronic physical effects (e.g., change in productivity).
   - Acute impact: increase in cost due to damages to companies’ 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 companies’ 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.

For the real estate portfolios, models are being enhanced to integrate physical and transition risks factors. These models estimate financial impacts through LGD and PD using a combination of macroeconomic and climate variables. The main drivers incorporated for transition risk are macroeconomic variables (mainly House Price Index and Gross value Added), as well as the costs to upgrade Energy Performance Certificate (EPC) labels. The main drivers of physical risk are based on locations and collateral valuations, and use the intensity and probability of hazards by location and severities to translate impacts on collateral valuation.

Following the participation in the Bank of England’s Climate Biennial Exploratory Scenario (CBES) in 2021, Santander UK designed a working programme to develop their Climate Internal Scenario Analysis (CISA) capability in 2022. Upon agreeing a strategic pathway to develop long term modelling capabilities that meet regulatory expectations and industry leading practices, CISA will focus in 2023 on assessing the potential impact and probabilities of physical risks as well as exploring detailed long-term horizon stress tests across different climate scenarios.

To learn more on Santander UK CBES and CISA programme, see Annex 1

Sensitivity analysis
Based on scenario analysis techniques, calculates financial impacts in core credit risk metrics (PDs, LGDs and Ratings) to integrate a “what if” tool in the assessment process as well as the monitoring of clients and portfolios by 2030, 2040 and 2050 versus current situation, considering sectors and geography.

This functionality has been included in Klima tool to embed the forward-looking projections into the credit risk management, under a top-down approach allowing to contrast financial evolutions by sectors and geographies from short to long-term, considering the climate scenario selected.

NGFS scenarios | Representative Concentration Pathways (RCPs) climate scenarios
---|---
**Physical and transition risks** | **Physical risk**
Orderly, where climate policies involve early, ambitious action and the impacts are low for both physical and transition risks | RCP 2.6: stringent mitigation scenario with the aim to keep global warming below 2ºC. This is associated with orderly scenarios.
Disorderly, in which climate policies are not introduced until 2030 and the outcome has a higher impact on transition risk. | RCP 4.5: intermediate scenario where emissions reach their peak in 2040 and then decrease. This is a associated with disorderly scenarios.
Hot house word (current policies), with limited climate policies and severe physical risks and irreversible changes, including higher sea level | RCP 8.5: very high GHC emissions. It is a “business as usual” scenario where emissions keep increasing throughout the whole century. This associated with hot house world scenarios.
IV. Monitoring
We use the Group’s risk appetite, which is the aggregate level and types of risk we deem prudent for our business strategy, to monitor climate and environmental-related factors.

The Group follows a three lines of defence model for constant monitoring and oversight, with specialized control functions that report to the board and its committees every month regarding risk profile and our compliance with risk appetite limits.

In 2019, the board approved a qualitative risk appetite statement that links climate and environmental risk management to our sector-based policies.

We announced our first decarbonization target for the thermal coal sector in February 2021 in line with our ambition to be net zero by 2050. Accordingly, by 2030 we intend to cease to provide financial services to power generation customers with a revenue dependency on coal of over 10% and eliminate our exposure to thermal coal mining worldwide.

In November 2021 we enhanced our qualitative risk appetite statement that links climate and environmental risk management to our sector-based policies.

In 2022, the Risk, SCIB and Responsible Banking areas launched initiatives to achieve our first decarbonization target for power generation, which has been included in 2023 risk appetite statement.

Santander continues to set alignment targets for key climate-related industries to meet our objectives. In this sense, we are making progress over 2023 to include new quantitative metrics in the risk appetite statement regarding oil and gas, steel and aviation sectors for effective implementation and follow-up in 2024.

In 2022, Grupo Santander underwent the ECB’s climate stress test for the banking industry. It was a big step to integrate advanced risk management models that cover portfolio forecasts under different scenarios and time horizons.

Also, it served as a learning exercise for both supervisors and banks to introduce climate risk into risk management as a qualitative part of the Supervisory Review and Evaluation Process (SREP). We conducted this exercise through a governance process that involves both the Board level (Board of Directors) and the executive level committees (Risk Control Committee and Responsible Banking Commission).

The areas that have participated in the development and execution of this supervisory exercise are:

- Economic Research
- Credit Risk Forecasting
- Market Risk
- Operational Risk
- Reputational Risk
- Responsible Banking
- EWRM
- ESCC Credit Risk
- Capital and profitability management
- Group Supervisory Strategy
- Management Control
- Methodology Models & Data
- T&O
- SCIB & Business.

The climate stress test exercise has been completed satisfactorily.

V. Mitigation
Policies are a key element in mitigating risks. We updated our environmental, social and climate change (ESCC) policy, which sets out our public commitments and aims to support our strategy for sensitive, special-attention and prohibited activities in the oil and gas, power generation and transmission, mining and metals sectors, and those arising from businesses engaged in soft commodities.

It is aligned with our policies on sustainability and human rights. Together with the ESCC risk management policy, Grupo Santander has various internal policies, frameworks and procedures in place for integrating climate and environment risks into our core risk management processes.
Our loan approval policies are aligned 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.

- **Panels**, analysis of clients and transactions/services from a green perspective (alignment with SFCS) in SCIB, and Commercial Banking (i.e. One Europe panel).

- SCIB customer ratings consider environmental, social and climate change qualitative assessments for climate sectors.

- Pricing for green products (including mortgages) already includes special discounts.

- Collateral management, with reviews of transition and physical risks based on location and energy efficiency.

We follow special procedures to analyse environmental, social and climate change risk. These procedures are required in risk management, control and governance. The board and its committees make sure decisions are made according to our policy on environmental, social climate change, and reputational risks.

The first line of defence runs due diligence with special questionnaires for credit approval. Reputational risk assessment is also included for the decision making. In due diligence, SCIB’s project finance transactions must be evaluated according to the Equator Principles.

Grupo Santander considers insurance another key mitigant in climate risk management. We continue to adapt our use of insurance to changes in the risk environment.

Any significant threat to the group is escalated to senior management in accordance with established governance so that proper mitigating measures can be taken.

The Risk area fosters staff training to increase awareness on climate matters. It requires official certification for teams directly involved in climate risk management (Internal Santander ESG Commitment Fundamentals certification and external International Sustainable Finance Specialist – IASE). It provides general training courses and workshops for most employees. It also assisted in several induction programmes carried out in 2022 for board members and top managers. Our Risk pro culture is an essential part of training.
VI. Reporting

Our disclosure of climate and environmental risk is aligned with regulations and supervisory expectations. In addition, we integrate disclosure into key processes and the board is fully apprised of climate and environmental risk.

Our Annual Report and Climate Finance Report highlight our progress with climate and environmental risk management.

Santander embeds climate risk in its ICAAP; in 2022, it included a full climate stress scenario, whose main trigger was a carbon tax increase, to assess impacts on P&L, credit losses, capital requirements and solvency over a 3-year time horizon in the main geographies where Santander operates.

Furthermore, Santander disclosed its first Pillar 3 ESG in February 2023. The report included physical and transition risks data, as well as information about actions to mitigate climate change.

See our Pillar III disclosures report in our corporate website.

ATOMiC: Environmental & Climate Change Credit TOM

The Credit risk area has launched a target operating model (TOM) called ‘The Climate Race’ which includes environmental and climate change (E&CC) risks in all stages of the credit granting process. The E&CC TOM establishes the common basis to integrate industry advances and regulatory requirements in the credit risk management.

It allows to embed homogeneously E&CC risks as drivers for decision making in the credit granting process, through the identification and assessment of the material portfolios and sectors, the risk management in the admission and monitoring processes of the Group, and the support of the green business initiatives.

The TOM covers our main business lines (SCIB, Commercial Banking and SCF), where mortgages and consumer auto are evaluated as the rest of the economic activities in more than 13 Units, with the aim of strengthen the alignment between the credit risk management and the business strategy along the whole Group. It includes the creation of the Climate community, as a key lever for TOM implementation in a collaborative way, to provide E&CC trainings, share best practices and define guidance to ensure a homogeneous implementation, assuring a correct governance and allocation of responsibilities.
Tackling environmental crime

The Financial Crime Compliance Function at Santander 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 draws from these activities, but because crimes like illegal deforestation have a significant impact on climate change. 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 various public-private partnerships as part of our commitment to detecting, disrupting and deterring environmental crime. Since late 2021, our Head of Financial Crime Compliance Framework & Policies has chaired the United Nations Office on Drugs and Crime’s (UNODC) Private Sector Dialogue on the Disruption of Financial Crimes Related to Forestry Crimes, which brings together financial institutions, competent 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 Dialogue is an extension of the report published in 2021 by the Financial Action Task Force (FATF), titled, Money Laundering from Environmental Crime, to which the Santander Financial Crime Compliance Function provided subject-matter expert support and served as the private sector representative in the FATF’s online awareness campaign. Santander’s contribution in this regard was highlighted in the 2021-2022 FATF Annual Report published in 2023. Recently the Dialogue was expanded to cover all environmental crimes and the Santander Head of Financial Crime Compliance Framework & Policies remains the chair.

Santander has used this platform and role as chair to share typologies with the Dialogue’s members on detecting suspicious activity related to environmental crime, including innovative methods using satellite imagery, as well as demonstrate the synergies within the banking sector on ESG and anti-money laundering controls.

Santander is also a member of United for Wildlife’s Financial Taskforce against the illegal wildlife trade, and is collaborating with United for Wildlife as they establish their Latin America Chapter in 2023. The Santander Financial Crime Compliance Function also continues to provide subject-matter expert input to related studies on the connection between illegal deforestation and financial crime, including for instance the recently published report funded by the European Union, Wildlife Money Trails: Building Financial Investigations from Wildlife and Timber Trafficking Cases in the European Union (published by WWF Belgium and Traffic as part of the UNITE project, which is an EU-funded initiative aimed at disrupting “criminals and organized crime networks trafficking in wildlife, timber, and waste in the EU”).
Our approach to nature and biodiversity

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has spoken of a rapid decline in biodiversity and ecosystems. According to the WWF Living Planet Report (2022), wildlife populations on Earth have plummeted by an average 69% in the past 50 years, causing concern among domestic and international stakeholders. The Kunming-Montreal Global Biodiversity Framework (GBF), which was adopted at COP15, aims to be a catalyst for urgent and transformative action with the involvement of all of society to halt and reverse biodiversity loss, by defining clear and quantitative goals.

According to the World Economic Forum, more than half of the world’s economic output is highly or moderately dependent on nature and biodiversity. Biodiversity underpins the provision of natural assets on which the economy relies, entailing financial risks that the Group understands it must manage. At the same time, biodiversity brings many business opportunities that are consistent with the Group’s strategy and values, and the conservation of nature.

We have continued making progress in our nature and biodiversity assessment, evaluating both nature-related dependencies and impacts. For such purpose, we have developed a first internal exercise based on the LEAP approach combining Science Based Targets Network’s (SBTN) sectoral materiality tool and the Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE) Tool methodologies. We continue building our understanding by monitoring and engaging in the working groups who are defining the future regulatory (Corporate sustainability reporting - CSRD - ERSR) and incoming market (Taskforce on Nature-related Financial Disclosures - TNFD) standards in terms of nature and biodiversity disclosure.

Biodiversity and nature aspects embedded in our ESCC Risk management policy

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

• Any projects or activities for oil and gas extraction, power generation or transmission, mining, manufacturing, plantations or other major infrastructure projects located in areas classified as Ramsar Sites, World Heritage Sites or by the International Union for Conservation of Nature (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 members of the Roundtable on Sustainable Palm Oil (RSPO).

• Developments in forested peatlands in High Risk Geographies

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.

Some of our initiatives to protect biodiversity

• 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. In 2023 different activities took place in different regions of Spain.

• 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.

1. Locate, Evaluate, Assess and Prepare
2. Tool developed by the Natural Capital Finance Alliance in partnership with UNEP-WCMC to help global banks, investors and insurance firms assess the risks that environmental degradation, such as the pollution of oceans or destruction of forests, causes for financial institutions.
3. 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.
4. 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.
Santander and the Brazilian Amazon

Santander is working to protect the Amazon rainforest and promoting sustainable development, which is 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, agriculture, cattle ranching, property speculation and a lack of clear land titles are 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 in all Brazil, including beef processors, soy traders and logging companies.
- In addition to the Plano Amazônia coalition, we have cooperated with Brazil’s banking federation, Febraban, in setting best practices for the financing of the beef sector so that it does not contribute to deforestation (see below for details)

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.

Since Q1 2022, we’ve been running daily checks for recent deforestation on farms and ranches we have lent to (throughout the entire loan term), even before the government has imposed fines.

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.

Working with others to stop deforestation
Santander is working with clients, governments, regulators, and NGOs, to help end illegal deforestation.

Santander Brazil is a member of Febraban’s committee on forestry and agribusiness. In March 2023, Febraban approved a protocol that set the standards for managing the risk of illegal deforestation in the bovine meat chain and defined guidelines to be adopted by its signatories. This is a major step forward as it is the first sector-wide protocol for financing beef processing. Since it will apply to every major bank in Brazil, it is considered a highly effective way of effecting sustainable change and addressing deforestation.

By signing the protocol, Santander has aligned its commitment with that of the Brazilian financial industry to require beef processing clients with slaughterhouses in the Brazilian Legal Amazon region to end illegal deforestation by December 2025 from direct suppliers of cattle and Tier 1* indirect suppliers. Under this requirement, suppliers must meet mid-term milestones, which consist in having a traceability and monitoring system, and continuously disclosing KPIs to demonstrate they are meeting their commitments.

In 2021, well before the publication of the Febraban protocol, Santander Brazil began engaging with more than a dozen beef processing clients about ending deforestation in their supply chain by 2025. This engagement led to several of them declaring commitments online in 2022 and developing plans to check on Tier 1 indirect suppliers and, under Plano Amazônia (see next page for further detail), led Santander to work with other banks to come up with the Febraban protocol.

Santander Brazil takes part in two other external initiatives that propose solutions to stop deforestation. We were a founder of the Roundtable on Responsible Soy (RTRS), and chaired it 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.

*I tier 1 indirect supplier: supplier of the direct supplier.
Environmental and social reviews of companies
Santander analyses ESCC risks for corporate clients across the whole of Brazil (not just in the Amazon) to determine if they comply with the law and employ best practices. In the past decade, Santander Brasil has conducted annual reviews on some 2,000 corporate client groups. Today, these reviews cover Brazilian corporate clients with activities in almost all of the sectors listed by TCFD in energy, transportation, materials and buildings, and agriculture, food and forest products. The procedure starts with a standardized public questionnaire sent to the client that is reviewed by a team of ESCC Risk specialists together with information gathered on the internet, in the form of government permits, fines, embargoes, lawsuits and contaminated land registries, and well as news reports. Analysis may include additional questioning to the client. At the end of the analysis, the ESCC Risk specialist generates a report with a score that covers environmental, social and climate factors separately including aspects such as water stress, climate resilience, contaminated land, human rights, environmental fines and checks on suppliers, and ranges from 1 to 5. We have additional procedures for clients in mining, sugar and beef production.

Plano Amazônia
In July 2020, Santander Brasil announced an alliance with the two other largest private-sector banks in Brazil called “Plano Amazônia” to promote sustainable development in the Amazon. The alliance focuses on promoting three strategic objectives, as follows:

• Ending deforestation in the beef chain
• Boosting the bioeconomy
• Enhancing connectivity

To support the plan’s implementation, we created an advisory board of seven experts to offer perspectives on opportunity and risk in relation to 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. The network enables us to bring our services closer to local communities and raise their potential for sustainable businesses. By the end of 2023, our target is to double our presence in the region and work with our customers to promote a low-carbon, resilient and inclusive economy.
Some of our initiatives in the Brazilian Amazon

IFACC Alliance

In December 2022, Santander became the first bank to join the Innovative Finance for the Amazon, Cerrado and Chaco (IFACC) initiative. IFACC is supported by The Nature Conservancy, the Tropical Forest Alliance, the World Economic Forum, and the United Nations Environment Programme. Launched in Glasgow in November 2021, the IFACC seeks to accelerate financing for sustainable production and bring together complementary capabilities to design and scale up such mechanisms as farm loans, farmland investment funds, corporate debt instruments and capital market offerings. It also shares lessons learned among members, who have committed USD 3 billion in disbursements so far by 2025.

Amazon Journey Platform

The forest bioeconomy has great potential for changing the tide of deforestation, increasing value by planting forests and creating jobs, sources of income and development. However, few businesses can realize that potential at speed and with the necessary scale. Alongside the Amazon Plan coalition, the Certi Foundation and the Vale Fund, Santander launched the Amazon Journey Platform in November 2022 to strengthen the innovation ecosystem associated with the forest bioeconomy. It intends to mobilize 20,000 talented people from the region through innovation and training in bioeconomy entrepreneurship. With 3,000 people expected to complete the training, the 200 most promising nature-based startups will be selected to receive funding, mentoring and technical support. From those 200, we will help 100 startups strengthen their business models and products to reach the market and investors. Furthermore, the platform intends to create a microcorporate venture structure to assist companies interested in investing in and scaling up the startups. Finally, 10 venture builders, accelerators and incubators will receive help to support a growing number of bioeconomy startups from the region. Our partner the Certi Foundation was named “Top Innovator” in the Amazon Bioeconomy Challenge 2022 at the World Economic Forum.

CRA Verde

In January 2023, we joined forces with Grupo Gaia, Conexsus, Belterra, Vale Fund and the Good Energies Foundation to create an unprecedented Green CRA (Agribusiness Receivables Certificate) worth BRL 17 million, which seeks to provide credit aimed at agroforestry and non-timber forest product cooperatives and eco-businesses in five biomes in Brazil, with a strong presence in the Amazon. The certificate will provide working capital for 22 community-led businesses such as cocoa, bananas and cassava and will benefit around 4,500 producers who don’t have access to traditional credit lines. It uses a blended finance model which allows credit takers to access cheaper capital to improve their production practices.

Internet for forest communities

We invested seed money in Instituto Povos da Floresta to enable the launch of an ambitious project that will bring fast, quality internet to around 4,000 remote communities in the Amazon by 2025. Our support will allow the project to be piloted using Starlink’s new service, a battery kit and solar panels that will be installed in 30 pilot communities. Internet access will make several services that are currently not accessible to those communities possible, including health care through telemedicine, education, productive inclusion and environmental control. Under this initiative, Instituto Povos da Floresta will be able to receive government subsidies to help achieve its goals.
5. Metrics and targets

### Aligning our portfolio to the Paris agreement

**Alignment strategy**

- Assess emissions/baseline
- Set targets and pathways
- Engagement with customers
- Steer portfolio

**Decarbonization targets:**

Emissions accounting and science-based decarbonization target methodologies are still 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 have decarbonization targets for five climate material sectors, according to the internal roadmap from our last year’s Climate Finance Report. The targets were presented to our key climate governance bodies and approved by our board of directors.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Scenario</th>
<th>Emissions</th>
<th>Metric</th>
<th>2019 baseline</th>
<th>2020 progress</th>
<th>2030 targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power generation</strong></td>
<td>IEA Net Zero 2050</td>
<td>Scope 1</td>
<td>tCO₂e/MWh</td>
<td>0.21*</td>
<td>0.17</td>
<td>0.11 (-46%)</td>
</tr>
<tr>
<td><strong>Energy (oil and gas)</strong></td>
<td>IEA Net Zero 2050</td>
<td>Scope 1 + 2 + 3**</td>
<td>MtCO₂e</td>
<td>23.84</td>
<td>22.58</td>
<td>16.98 (-29%)</td>
</tr>
<tr>
<td><strong>Aviation</strong></td>
<td>IEA Net Zero 2050</td>
<td>Scope 1 + 2</td>
<td>gCO₂e/RPK</td>
<td>92.47</td>
<td>93.05</td>
<td>61.71 (-33%)</td>
</tr>
<tr>
<td><strong>Steel</strong></td>
<td>IEA Net Zero 2050</td>
<td>Scope 1 + 2</td>
<td>tCO₂e/tonne steel</td>
<td>1.58</td>
<td>1.40</td>
<td>1.07 (-32%)</td>
</tr>
<tr>
<td><strong>Thermal coal</strong></td>
<td>Phase-out targets to eliminate exposure by 2030 to:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Power generation customers with a revenue dependency on coal of over 10%</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Coal mining</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

* 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.

**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 (oil and gas), we’re focusing on upstream companies and integrated companies undertaking their own upstream production in oil and gas.
- The aviation sector’s climate change impacts involve emissions of CO₂, nitrogen oxides and water vapour as well as cirrus cloud cover. We are focussing on commercial passenger airlines.
- For the steel sector, our analysis covers companies that attribute over 10% of their revenue to steel production.
- For thermal coal we include companies with any coal mine and companies active in power generation with a revenue dependency on coal of over 10%
**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 (oil and gas) 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 (oil and gas) 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. We are presenting figures for 2020 emission data further below.

**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 1.5º 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.

**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.

**Financed emissions:** In line with the methodology and design we chose, based on PCAF, the 2019 financed emissions metrics we used to set targets and 2020 financed emissions are:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Absolute emissions (MtCO₂)</th>
<th>Physical emissions intensity</th>
<th>Financial emissions intensity (MtCO₂/EUR bn lent)</th>
<th>Overall PCAF score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power generation</td>
<td>4.59</td>
<td>5.41</td>
<td>0.17 tCO₂ e/MWh</td>
<td>0.21 tCO₂ e/MWh</td>
</tr>
<tr>
<td>Energy (oil and gas)</td>
<td>22.58</td>
<td>23.84</td>
<td>73.60 tCO₂ e/TJ</td>
<td>73.80 tCO₂ e/TJ</td>
</tr>
<tr>
<td>Aviation</td>
<td>1.08</td>
<td>1.81</td>
<td>93.05 grCO₂ e/ton</td>
<td>92.47 grCO₂ e/ton</td>
</tr>
<tr>
<td>Steel</td>
<td>2.14</td>
<td>2.62</td>
<td>1.40 tCO₂ e/ton steel</td>
<td>1.58 tCO₂ e/ton steel</td>
</tr>
</tbody>
</table>

* 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. These amounts exclude any exposure to Corporates or Project Finance with insufficient data or under construction.

1. From our total lending on the balance sheet, about 2.3% of our exposure are from sectors for which Santander published decarbonization targets (power generation, energy (oil and gas), aviation, and steel) and around 18% of total SOIB lending. (We previously calculated these ratios considering total exposure to affected sectors instead of exposure analysed and included within targets).

2. 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.
Update on decarbonization targets

In this report we provide an update on the progress we have made towards achieving our decarbonization targets.

**Power:** the carbon intensity of the power portfolio reduced from 0.21 in 2019 baseline to 0.17 tCO$_2$e/MWh in 2020. Roughly three quarters of this reduction is explained by the increase in exposure to renewable project finance and other less carbon intensive clients while roughly one quarter is driven by the operational emissions reductions on a client level. Overall, this demonstrates the positive impact from our strong competitive positioning in financing renewable energy, which helps clients achieve their transition objectives.

**Energy (oil and gas):** the absolute financed emissions reduced by 1.2 Mt CO$_2$e in 2020 compared to the 2019 baseline (23.8 MtCO$_2$e). This is mainly driven by the reduction of the GHG emissions of our clients (1.0 Mt CO$_2$e) due to reduced economic activity during the COVID crisis. A favourable change in portfolio mix also had a positive impact (0.2 Mt CO$_2$e). Given the post-pandemic recovery and the need to finance the transition to a low carbon economy, the future evolution of our absolute financed emissions for the sector may not be a linear reduction but entail temporary increases in financed emissions.

**Aviation:** the carbon intensity of the aviation portfolio increased slightly by 0.58 gCO$_2$e/RPK in 2020 compared to the 92.47 gCO$_2$e/RPK 2019 baseline. Driven by the COVID crisis and associated decrease in airline passenger load factors, the intensity on a client level increased on average by 9.1 gCO$_2$e/RPK. A shift in exposure towards less carbon intensive clients almost completely compensated this effect.

**Steel:** the carbon intensity of our steel portfolio fell by 0.18 tCO$_2$e/t steel in 2020 compared to the 1.58 tCO$_2$e/t steel 2019 baseline. This was purely driven by the portfolio composition, while average intensity on a client level showed minimal change.

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**Note on energy sector**

The world needs to ramp up renewable energy capacity and act now to decarbonize the economy. But for the global energy sector to decarbonize, all energy-intensive sectors and activities must be transformed. Our role is to support our customers’ transition and, as one of the world’s top lenders in renewable energy, we’re increasing the volume of green finance to support this transformation.

Energy security is key to an orderly transition. While we increase renewable capacity, energy prices must be 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.

Across the Group’s footprint, economies are at different stages on the path to net zero. We aim to ensure the transition is fair for all communities.
We will also update previously set targets as needed as new methodologies and more precise and timely information becomes available.

The decarbonization of any portfolio, and in particular retail segment, will require well developed scenarios, 1.5°C aligned NDC’s and supportive policies for an orderly transition (more information in 4. Risk Management section).

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

As introduced in last year’s climate finance report, we have put in place levers to implement our sectoral financed emissions targets. These levers include customer engagement; dedicated steering governance; data collection as part of the risk analysis process; exclusion policy reviews, as well as linking targets to remuneration for senior managers. During the last year we have implemented this approach for additional sectors beyond Power, where targets have been set (Energy - oil and gas, Steel, and Aviation) and adapted where necessary to account for sector differences.

Our approach aims to facilitate the achievement of our emissions targets and to develop a strong understanding of our customers’ transition strategies towards low- carbon business models. This approach is supported by governance processes, involving various internal stakeholders, such as front office teams, the risk reporting functions, as well as senior management to guide the portfolio steering actions (see Portfolio Steering section below for further details). 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 inputs and adapted these to our requirements and objectives.

We collect relevant information as part of regular client dialogue and engagement. In addition, we source specific climate related information through tailored information requests that contain transition-focused elements designed to help us better understand companies’ decarbonization strategies. Furthermore, we also seek to source 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 as part of the regular business and risk assessment review with each customer, which is performed at least on an annual basis.

The first step involves assessing how our customers’ emissions trajectory aligns with our current sectoral portfolio baseline and future sectoral portfolio targets. The second step assesses the quality of each customer’s transition plan. Our transition plan assessment methodology focuses on four pillars: Targets, Action Plan, Disclosure and Governance. We have drawn 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.
The “Targets” assessment pillar focuses on the quality and ambition of the customer’s quantitative GHG emissions targets. Where possible, we assess short- and long-term, as well as absolute and intensity reduction targets.

The “Action Plan” assessment pillar considers the credibility of the customer’s decarbonization strategy. We assess the existence of climate related policies; business strategy integration of climate change risks and opportunities; as well as time-bound action plans to achieve decarbonization targets.

The “Disclosure” assessment pillar focuses on the transparency of reporting on historical emissions performance across all relevant scopes, the level of assurance, as well as the degree of reporting alignment with the TCFD. Where possible, it also includes assessing whether or not previous GHG emission targets were achieved.

Lastly, the “Governance” assessment pillar considers the level of management oversight and governance of the customer’s transition strategy. We assess the level of seniority of executives accountable for climate strategy, board committee oversight of climate change issues, and whether executive remuneration is linked with climate change performance.

Over the last year, the two-step tiering assessment process has been expanded to include Energy, Steel and Aviation. Initial assessments were completed for both steps. Subsequently, transition plan quality assessments were reviewed and enhanced, drawing on updated reference methodologies and sector-specific research. This led to the inclusion of additional sector-specific questions for assessing transition plan quality.

Ultimately, our transition plan assessment approach leads to a four-category tiering system that helps inform how we prioritize engagement topics. Our expectation is that initially lower-tiered customers will migrate to higher tiers over time.

Engage
Our objective is to engage our customers through offering sustainable financing solutions and advisory that enable the energy transition.

Our sustainable finance offering includes, among others, leading expertise in renewable energies, as demonstrated by our long-standing leadership in this field. For further information, please see Section 6. Supporting our customers in the transition.

In addition, on a wider scope of climate-related topics, we are engaging with various public and private organizations (please refer to section 7. Partnerships for more details).

Training
We implemented a client engagement training program for SCIB, in collaboration with external expert providers, specifically designed to educate on transition topics. Over the last year, multiple sessions took place involving 300 senior bankers on topics including: climate regulations and taxonomies; greenwashing; climate pathways to net zero; and frameworks to enable evaluation of client transition plans.

In addition, internally organized sessions were delivered to sector-specific relationship managers and Environmental Social Climate Change Risk (ESCC) analysts. These focused on the gathering of information in order to complete the transition plan quality assessment (the second step in our client tiering system). These sessions were delivered by senior experts representing ESCC, Portfolio Alignment and ESG Solutions teams.
Portfolio Steering
SCIB's portfolio steering governance is designed to identify client or portfolio related actions to achieve our sectoral targets for financed emissions. A quarterly Portfolio Steering meeting operates at the core of the governance process. Its scope includes monitoring progress towards the achievement of our portfolio targets. The relevant SCIB functions are represented in this meeting. In addition, a monthly Portfolio Alignment meeting supports on a technical level, reviewing methodologies and the monthly evolution of critical KPIs.

Furthermore, our risk appetite and lending policies are important tools for monitoring and steering the portfolio towards our financed emissions targets. Our client transition tiering assessment informs our risk appetite for each sector where targets have been set.

Fossil fuels financed in 2022:
The Banking on Climate Chaos: Fossil Fuel Finance Report 2023, endorsed by over 600 organizations from 75 countries, analyses the world’s largest banks’ financing of fossil fuels. Santander was one of the banks analysed in the report. The figures below show our relative position to our peers and other banks, measured in terms of our total fossil fuel financing, and its weighting on total lending.

<table>
<thead>
<tr>
<th>RANK</th>
<th>BANK</th>
<th>Fossil fuels financed in 2022 (USD billion)</th>
<th>Fossil fuels financed over total financing 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank 1</td>
<td>40,626</td>
<td>13%</td>
</tr>
<tr>
<td>2</td>
<td>Bank 2</td>
<td>39,240</td>
<td>5%</td>
</tr>
<tr>
<td>3</td>
<td>Bank 3</td>
<td>37,399</td>
<td>7%</td>
</tr>
<tr>
<td>4</td>
<td>Bank 4</td>
<td>35,467</td>
<td>4%</td>
</tr>
<tr>
<td>5</td>
<td>Peer 1</td>
<td>33,943</td>
<td>5%</td>
</tr>
<tr>
<td>6</td>
<td>Bank 5</td>
<td>29,515</td>
<td>18%</td>
</tr>
<tr>
<td>7</td>
<td>Peer 2</td>
<td>29,469</td>
<td>15%</td>
</tr>
<tr>
<td>12</td>
<td>Peer 3</td>
<td>20,083</td>
<td>5%</td>
</tr>
<tr>
<td>19</td>
<td>Peer 4</td>
<td>11,659</td>
<td>5%</td>
</tr>
<tr>
<td>22</td>
<td>Peer 5</td>
<td>11,074</td>
<td>2%</td>
</tr>
<tr>
<td>34</td>
<td>Santander</td>
<td>6,640</td>
<td>4%</td>
</tr>
</tbody>
</table>

Net Zero for Santander Asset Management
SAM has identified and is assessing the highest emitters based on their carbon performance, robustness of their net zero transition plans based on science, and the quality of their climate strategy. SAM portfolio analysis also helps to assess where each security sits on the alignment maturity scale defined by IIGCC Net Zero Investment Framework, to assess companies’ progress towards aligning their strategies and operations with the goal of achieving net zero emissions by 2050 (or earlier), and to identify areas for improvement.

SAM is working under the “Paris Aligned Investment Initiative Net Zero Investment Framework” to structure its estimates of portfolio’s emissions intensity, and using EVIC (tCO2e/USD million invested) to calculate its portfolio’s carbon footprint. According to initial calculations, the portfolio’s emissions baseline in 2019 is 95.7tCO2e/USD mn invested.

To support the transition of the real economy, SAM has engaged with data providers to develop specific research lines on net zero performance. As new methodologies become available and data granularity is enhanced, financial coverage will improve.
Our environmental footprint

Grup Santander’s strategy to lessen the environmental impact of our operations involves reducing and offsetting CO₂e emissions; reducing and handling waste responsibly; and raising employees’ and other stakeholders’ environmental awareness.

We’ve been measuring energy consumption, paper and water consumption, waste generation and emissions since 2001. Since 2011, our energy efficiency and sustainability initiatives have helped to reduce significantly our environmental footprint:

2011–2022 Plan Results

<table>
<thead>
<tr>
<th>2011</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity consumption reduced by 33%</td>
<td></td>
</tr>
<tr>
<td>CO₂e emissions reduced by 71%</td>
<td></td>
</tr>
<tr>
<td>Paper consumption reduced by 80%</td>
<td></td>
</tr>
</tbody>
</table>

180k G10 average number of employees 194k

Our updated 2022–2025 Energy efficiency and sustainability plan includes more than 100 measures that will enable us to reduce our electricity consumption by 18% and our absolute CO₂e emissions by 68% compared with 2019 (last comparable year prior the pandemic exceptional situation). Some of the measures of the plan are:

- installing solar panels in our buildings to generate our own renewable electricity for self-consumption. 5 MW are already installed in Spain and other projects are ongoing and in review;
- purchasing renewable electricity in every country where its origin can be certified;
- implementing new technologies and more practices to reduce paper consumption and waste;
- obtaining ISO14001, ISO 50001, LEED, BREEAM and WEALTH certifications;
- installing more than 1,250 free EV charging stations in our buildings in various countries and shifting to hybrid and electric vehicles and making them more available to employees to reduce our emissions from business travel and commuting;
- and raising awareness among employees.

Our measures are consistent with Santander’s public target to remain carbon neutral: sourcing all our electricity from renewable energy sources’ by 2025. Reducing emissions remains being our main priority, with offsetting of whatever emissions we’re unable to reduce.

We follow a strict selection process to acquire carbon credits. It includes due diligence on compliance and consistency with our environmental policies. The projects we have chosen meet the industry’s best-known standards, like Gold Standard for the Global Goals or Verified Carbon Standard - Verra.

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We also consider country standards, such as MITECO registry and compensation in Spain.

We’re monitoring the voluntary carbon credit market closely to adapt our offset strategy to best practices in the short term, with third-party project reviews and prioritizing nature-based offsets.

Using energy from renewable sources

88% of the energy our buildings consume comes from renewable sources; in Germany, Mexico, Portugal, Spain and the UK, that figure is 100%. We continue to work on reaching 100% group-wide by 2025.

Comparative with pre-Covid: 2019–2022 (%)

<table>
<thead>
<tr>
<th></th>
<th>YoY Change 2021-2022 (%)</th>
<th>Comparative with pre-Covid: 2019-2022 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total electricity</td>
<td>88% renewable</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Total paper consumption</td>
<td>83% recycled or certified</td>
<td>-20.4%</td>
</tr>
<tr>
<td>Paper and cardboard waste</td>
<td>34.8%</td>
<td>-34.8%</td>
</tr>
<tr>
<td>Total internal energy consumption</td>
<td>-6.5%</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Total emissions (market-based)</td>
<td>134,419 t CO₂e</td>
<td>-58.1%</td>
</tr>
<tr>
<td>Direct emissions</td>
<td>21,967 t CO₂e</td>
<td></td>
</tr>
<tr>
<td>Indirect emissions from electricity</td>
<td>30,917 t CO₂e</td>
<td></td>
</tr>
<tr>
<td>Indirect emissions from employee commuting and business travel</td>
<td>81,535 t CO₂e</td>
<td></td>
</tr>
</tbody>
</table>
Implementation and certification of environmental management systems
The Group aims to have or retain ISO 14001 certification for all the primary buildings it occupies. Currently, over 30% of our employees work in ISO 14001 or ISO 50001-certified buildings. Under our 2022-2025 Energy efficiency and sustainability plan, we aim to increase this percentage to 36%.

Some buildings in Brazil, Germany, Poland and Spain are LEED Gold or Platinum-certified, while the Santander Group City and Santander España's central services buildings have 'Zero waste' certification which is obtained by achieving more than 90% of waste recovery. In 2023, we renewed the certification with a recovery rate higher than 99%.

This year Santa Bárbara in Madrid and two new Workcafé in Chile obtained, for the first time, the ISO 14001 certificate.

Single-use plastics free
Since 2021, our offices and buildings in our core markets have been free of single-use plastics in fulfilment of our public target.

We also substituted single-use plastics in our Work Café by other biodegradable, glass or aluminium materials.

Climate awareness
Santander runs local and global employee awareness campaigns on the importance of reducing consumption and waste. Each subsidiary posts news and feature articles on the environment and the Group’s ESG initiatives on its internal portal. In 2022, for the thirteenth consecutive year, we have observed Earth Hour, switching off the lights at the Group’s most emblematic buildings.

Transforming plastic cards
In Europe, Santander credit/debit plastic cards are being replaced by ECO or sustainable materials. In 2022, we made 46,000 credit cards (+340% with respect to 2021).

Furthermore, in UK and Spain, an in-branch card recycling scheme has been developed for expired or unused plastic cards. In Spain, 680,000 cards have already been recycled, converted into street furniture and donated to public institutions. Santander UK launched their pilot card re-cycling scheme in 28 branches.

Other Santander initiatives to mitigate climate change
Apart from those offsets we use to compensate our own carbon footprint, we’re also running several other offsetting initiatives:

→ At the COP 27 in Egypt, Santander announced the creation of Biomas, a new forest company with shareholders Vale, Marfrig, Suzano, Itaú and Rabobank. With the planting of 2 billion native trees, Biomas aims to protect and restore 4 million hectares in Brazil over the next 20 years and to reduce around 900 million tonnes of CO₂e from the atmosphere. It will generate high-quality carbon credits and employment in the regions most in need. The first stage of the project will be to prospect areas, scale up native tree nurseries, engage local communities, discuss the use of public concessions as project development sites, and implement pilot projects. Each shareholder is initially providing BRL 20 million in equity to set up operations.

→ Santander España through Motor Verde initiative will finance three new Santander forests stretching over 300 hectares, offsetting 82,000 tons of CO₂e. In May 2023, we received the certification of the Spanish Climate Change Office (OECC) - the certifying body of Spain’s Ministry for the Ecological Transition and Demographic Challenge - for the first “Bosque Santander” in Caminomorisco (Extremadura).

→ In 2021, Santander UK became a founding member for National Parks UK ‘Net Zero With Nature’ Initiative. Santander UK funded a pilot project involving the restoration of 220 hectares of damaged peatland in the Cairngorms National Park in Scotland. This restoration site has the potential to avoid more than 16,000 tonnes of CO₂e emissions over its first five years and will help to establish nature-based solutions in the UK at scale.

1. We have ISO 14001 certification on our buildings in Argentina, Brazil, Chile, Mexico, Spain and the UK.
Other Santander initiatives to keep on reducing our environmental impact

**Santander Mexico**

In 2022, Santander México refurbished 100 branches, with HVAC systems updated from SEER 10 to SEER 13. (SEER is a rating of cooling and energy efficiency.)

Also, 10 energy-intensive branches replaced standard thermostats with programmable ones to make sure air conditioning units wouldn’t run at night or at weekends.

**Organic waste** from the dining facilities in our Santa Fe corporate offices are reused to make biomass, reducing our environmental footprint in terms of waste production.

We encourage staff to get round between Santander Mexico’s main buildings — CCS, Distrito Querétaro, Corporativo Santa Fe, Diamante, and Artz Pedregal — on private shuttles instead of their personal vehicles, which also helps reduce our environmental footprint. Santander México also includes environment-related terms in contracts with vendors.

In 2022, the bank also renewed its ISO 14001 certification.

**Santander Chile**

Santander Chile plans to expand its remote energy monitoring system to 103 branches, from the 95 it already has; this will save 900,000 kWh/year.

**Santander Argentina**

Santander Argentina is developing a major project to replace backup generators with lithium battery banks. So far, 27 battery banks have been completed and 19 are under development.

Santander Argentina also invests heavily in energy efficiency, with VRF air-conditioning systems, LED lighting, and building management systems (BMS) to automate offices and buildings. It also plans to change its corporate vehicle policy to promote hybrids over gas and diesel vehicles and install bike stations at its corporate buildings and branches.

Santander Argentina leads the Group in South America in ISO 14001 certification every year. 10 branches get certified, like its main corporate buildings. It also plans to get ISO 50001 certification in the coming years.

**Grupo Santander**

The Corporation has installed 5 megawatts’ worth of solar panels on its main buildings in the cities of Madrid and Santander, and should add 3 megawatts’ worth by September 2023. Because of their enormous capacity for self-sufficient energy consumption, the Santander Group City (SGC) and the COD are some of the most sustainable and energy-efficient office complexes and data centres in Spain.

**Santander UK**

Certification: Santander UK’s new headquarters Unity Place in Milton Keynes will open in September 2023 and aims to be one of the most energy efficient commercial buildings through obtaining a BREEAM certification. Santander UK holds ISO 14001 and 50001 certifications for the administration of its corporate offices and branches in England.

**Santander España**

Certification: Openbank’s headquarters, located in Plaza Santa Bárbara in Madrid, recently got the ISO 14001, becoming the latest Grupo Santander building in Madrid or Santander to get certified. Santander España is building a vast electric car park and installing solar panels at all of its main buildings in Madrid: Luca de Tena, Abelías, Coslada-Loeches and José Valcárcel. It is working to make its key regional offices in Valencia and Seville more energy-efficient.

**Santander Consumer Bank (Germany)**

Energy efficiency at branches: Santander Consumer Bank (Germany) is upgrading HVAC and lighting fixtures, reviewing fleet vehicles and adding to it as many electric cars as new electric charging stations being built.

Certification: Santander Platz was re-certified in LEED for operations and management. It is looking into getting ISO 14001 and 50001 in energy efficiency for the Group’s buildings and branches in Germany.

**Santander Polska**

Energy-efficient branches: Santander Polska has upgraded its HVAC and lighting fixtures and plans to source 100% certified renewable or green energy and transition its commercial vehicle fleet from 100% hybrid to 20% electric.

**Paper:** Santander Polska is undertaking an ambitious digital transformation project for customers and branches to cut back on paper.
6. Financing the green transition

As explained in section 5 of this report, Santander has the ambition to be net zero by mid-century. In the following pages we provide some examples of how we are delivering against this ambition by helping our customers in their transition towards a green economy.

Tackling climate change is a global challenge at Santander and 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 164 million customers and the global economy to become net zero by 2050 with advice and business solutions. In SCIB, 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 was 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 umbrella*.

“Our ambition is to become a world leader in green finance. We have strengthened our current commitment creating a dedicated green finance team.”

Green Finance 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 green finance strategy for different businesses within the Group; delivering a best-in-class value proposition for our customers; and deploying well-trained commercial teams to capture the opportunity.

“The Green Finance Team will lead the SCIB and have oversight over the Commercial and Retail Banking; in addition, Wealth Management and the Digital Consumer Bank continue to develop their ESG/green strategy.

“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”

The SCIB’s Global Head of ESG and Sustainable Tech also took up in April 2022 the role of Global Head of Green Finance and regularly updates the CEO’s management meeting. This role directly reports to the Group CEO.
Providing our clients with global and local solutions to raise awareness, collaborate and offer our customers timely sustainable solutions in our local communities and global operations.

For more details on our green finance products, see the ‘Supporting the green transition’ section in the 2022 Annual Report.

Buying into the Green Homes Revolution: In October 2022, we launched the Buying into the Green Homes Revolution report. The report highlights the main challenges to accelerating energy efficiency retrofitting in UK homes, therefore our drive to develop suitable products and services to support our public policy engagement in the best way to accelerate retrofitting in the UK.

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Supporting the switch to electric vehicles: In 2022 we financed over 150,000 electric and hybrid vehicles. With the new financing, BPSB strengthened its relationship with Zambesi, the UK market leader, and offered over 2,000 home owners and fleet operators a way to accelerate their switch to electric transport.

In 2022 saw CCB develop its first financing facility to support the switch to electric vehicles.

Battery Energy Storage Systems division which provides grid scale battery storage solutions. Consumer Finance provided financing for end solutions for fleet operators moving to zero-carbon fleets. The new financing marks CCB’s entry into a high-growth sector that has delivered financing to support the build and operation of four TagEnergy battery projects in the last 18 months. One is

Santander UK has continued to build its strong position in the market and has provided £150 million of financing since 2019 to support the sector.

CCB has previously provided finance to Zenobē’s end solutions for fleet operators moving to zero-carbon fleets. The new financing marks CCB’s entry into a high-growth sector that has delivered financing to support the build and operation of four TagEnergy battery projects in the last 18 months. One is

One of Santander’s key priorities is to support the transition to a low carbon society, and for the past 10 years, it has been actively supporting the decarbonisation of transport, with £6.5 billion of financing for electric vehicles

Our internal green metrics every month.

As part of green financing Santander Bank Polska offers

As part of green financing Santander Bank Polska offers

Durables: 2% of the new business generated by Santander Consumer Finance Europe in 2022 represents 12% of the new business generated by Santander Consumer Finance Europe (Santander Consumer Finance Europe, 2022). In 2022, 140,000 green finance tickets have been issued (+7% with respect to 2021). Santander Consumer Finance Europe reports EUR 0.3bn in green finance, +29% with respect to 2021.

The project ‘Together for Eco-Change’ is the first nationwide initiative in Poland to integrate the principles of sustainable development with the operation of electric vehicles charging stations. The goal of the project was to deliver a range of benefits for both the electric vehicle charging industry and sustainable development in general. The project involved a network of electric vehicle charging stations, including the Santander Bank Polska charging network, which is one of the largest in Poland. The project aimed to promote the use of electric vehicles as a means of transport and contribute to the development of sustainable mobility in the country.

Leasing green offer: Santander Leasing Poland extends the network of electric vehicle charging stations, including the Santander Bank Polska charging network, which is one of the largest in Poland. The project aimed to promote the use of electric vehicles as a means of transport and contribute to the development of sustainable mobility in the country.

Santander Consumer Finance Europe (SCF) is Santander’s main consumer finance business. As part of Santander’s green finance strategy, SCF has been working to raise awareness and provide green finance solutions to its corporate and institutional clients in Spain. The strategy includes developing new green finance products, such as green credit lines and sustainability-linked bonds.

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One of Santander’s key priorities is to support the transition to a low carbon society, and for the past 10 years, it has been actively supporting the decarbonisation of transport, with £6.5 billion of financing for electric vehicles

As part of green financing Santander Bank Polska offers

As part of green financing Santander Bank Polska offers

Leasing green offer: Santander Leasing Poland extends the network of electric vehicle charging stations, including the Santander Bank Polska charging network, which is one of the largest in Poland. The project ‘Together for Eco-Change’ is the first nationwide initiative in Poland to integrate the principles of sustainable development with the operation of electric vehicles charging stations. The goal of the project was to deliver a range of benefits for both the electric vehicle charging industry and sustainable development in general. The project involved a network of electric vehicle charging stations, including the Santander Bank Polska charging network, which is one of the largest in Poland. The project aimed to promote the use of electric vehicles as a means of transport and contribute to the development of sustainable mobility in the country.

Santander Bank Polska is Santander’s main consumer finance business in Poland. As part of Santander’s green finance strategy, Santander Bank Polska offers green finance solutions to its corporate and institutional clients in Poland. The strategy includes developing new green finance products, such as green credit lines and sustainability-linked bonds.

In 2022, 140,000 green finance tickets have been issued (+7% with respect to 2021). Santander Consumer Finance Europe reports EUR 0.3bn in green finance, +29% with respect to 2021.

In 2022, we financed over 150,000 electric and hybrid vehicles. With the new financing, BPSB strengthened its relationship with Zambesi, the UK market leader, and offered over 2,000 home owners and fleet operators a way to accelerate their switch to electric transport.

In 2022 saw CCB develop its first financing facility to support the switch to electric vehicles.

Battery Energy Storage Systems division which provides grid scale battery storage solutions. Consumer Finance provided financing for end solutions for fleet operators moving to zero-carbon fleets. The new financing marks CCB’s entry into a high-growth sector that has delivered financing to support the build and operation of four TagEnergy battery projects in the last 18 months. One is
**Santander Brasil**

**CRA Belterra:** Santander Brasil acted as Lead Manager on an issuance of Agribusiness Receivables Certificates (CRA) that provided BRL 17 million in working capital to 22 community cooperatives linked to Conexsus, and to Belterra, a startup that develops sustainable agroforestry systems in the North and Northeast regions of Brazil.

**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. Until April 2023, we disbursed BRL 513.2 million.

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**Santander México**

**Automotive:** In February 2023, we signed a strategic alliance to finance BYD automobiles in the Mexican market. Santander and BYD are working to provide more favorable and accessible financial services for Mexican consumers.

**Sustainable construction:** Santander México has recently signed an agreement with the International Finance Corporation (IFC) to promote sustainable construction practices in Mexico. Through this alliance we will offer our real estate clients free advisory services from IFC experts and help them throughout the EDGE (Excellence in Design for Greater Efficiency) certification process. This certification allows buildings to achieve savings in energy, water and maintenance of over 20%.

**Electric buses:** Santander México has financed the purchase of 50 electric buses for the public transport service in Mexico City.

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**Santander Portugal**

**Advisory:** EUR 2.296 millions Finege structuring and placement of renewable portfolio and expansion plan, using an innovative structure of "variable amortization".

**Financing building rehabilitation:** Santander Portugal is leader in the IFRRU program (co funded with public aids), started in 2018, in which financed 245 projects with a total investment of EUR 688 millions (257 millions of Santander Portugal).

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**Santander Argentina**

**SLL for a shipping company:** Santander Chile and Ultranav signed a credit agreement with KPIs linked to carbon emissions intensity and employee safety standards.

**Green Mortgages:** Housing loans for new residential buildings with a certification of energy efficiency. The most frequent certification is CEV (Calificacion Energética de Vivienda). As benefits for the client, we offer a lower interest rates and a contribution/donation to local conservation projects.

---

**Santander Uruguay**

**In 2023 we start offering specific mortgages for buildings with international green certifications.**

**Agreement with the UN, UN Women and UNIDO (REIF trust) to co-finance eligible projects in terms of renewable energy and mobility.**

---

**Santander Chile**

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In 2023 we start offering specific mortgages for buildings with international green certifications.

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SUSTAINABLE FINANCE CLASSIFICATION SYSTEM

Sustainable finance is key to meeting our ambition to be net zero by 2050. We developed our Sustainable finance classification system (SFCS), which was published in February 2022 and has been recently updated. The SFCS is an internal guide that outlines harmonized criteria to consider an asset green, social or sustainable in all the Group’s units and businesses.

Reviewed by Sustainalytics, and available at www.santander.com, it draws on international industry guidelines, standards and principles such as the EU Taxonomy, ICMA, LMA Principles, UNEP FI framework and Climate Bond Standards.

It also enables us to track our sustainable activity, support product development, mitigate the risk of greenwashing and reinforce our transparency and commitment to promote and increase our green, social and sustainability-linked activity.

In February 2023, we updated the SFCS based on lessons learned and market trends. It now features:

- An entity-based approach, which complements the activity-based approach.
- Additional details on manufacturing, real estate, sustainable agriculture and other activities.
- New activities, like solutions to reduce GHG emissions or that relate to energy generation.

The SFCS will continue to evolve as required by new developments on sustainable markets and Grupo Santander’s practices. Beyond green activity, we are also working to identify transition activities to support our customers and contribute to our net zero objective. We are also considering how to evolve these tools considering new European and local taxonomy development and reporting requirements.

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

<table>
<thead>
<tr>
<th>EU taxonomy</th>
<th>ICMA Green/Social Bond Principles</th>
<th>LMA Green Loan Principles</th>
<th>LMA SustainabilityLinked Loan Principles</th>
<th>ICMA SustainabilityLinked Bond Principles</th>
<th>Febraban taxonomy (Brazil)</th>
<th>UNEP FI framework</th>
<th>Climate Bond Standards</th>
</tr>
</thead>
</table>

Eligible products:

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

As a large financial institution, we have a responsibility and an opportunity to help our clients in their transition to low carbon business models. Enhancing our sustainable finance and advisory proposition in all our divisions and regions is critical to meeting our climate transition objectives.

Over the last year, SCIB has continued building its ESG platform and embedding ESG in the organization. We integrated ESG experts within business, risk, portfolio management and compliance areas. Furthermore, we implemented the sustainable finance classification system (SFCS), as well as governance to ensure that our sustainable finance activity is consistent with our core integrity principles.

SCIB plays a key role in fulfilling Santander’s green finance commitments, having raised and mobilized EUR 98.6 bn in green finance between 2019 and June 2023.

## Financing renewable energies

Grupo Santander has been a leader in renewable energy finance for more than the past 10 years. In 2022, we were among the top 2 banks in number of deals and deal value globally, with 78 transactions closed and a 4.4% market share according to Infralogic (see table below).

The greenfield renewable energy projects that we financed or advised on in 2022 have a total installed capacity of 15.6 GW and prevent the emission of 152 million tons of CO₂¹. We also helped expand, enhance and sustain renewable energy brownfield projects that have a total installed capacity of 14.8 GW (more details in the graphs on next page).

### 2022 GREEN FINANCE VOLUMES SPLIT BY PRODUCT

<table>
<thead>
<tr>
<th>EUR billion *</th>
<th>Financial advice</th>
<th>M&amp;A</th>
<th>Green bonds (DCM)</th>
<th>Project finance (MLA)</th>
<th>Equity capital markets</th>
<th>Project bonds</th>
<th>Export finance (ECAs)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>7.16</td>
<td>8.53</td>
<td>5.02</td>
<td>4.78</td>
<td>1.76</td>
<td>0.02</td>
<td>1.52</td>
<td>28.8</td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Information obtained from public sources, such as Dealogic, Inframation 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.

### GLOBAL RENEWABLE ENERGY PROJECT FINANCE VOLUME BY MLA - FY 2022

<table>
<thead>
<tr>
<th>Rank</th>
<th>Mandated Arranger</th>
<th>Vol. (EUR million)</th>
<th>Nº</th>
<th>%share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank 1</td>
<td>5,868</td>
<td>81</td>
<td>4.87%</td>
</tr>
<tr>
<td>2</td>
<td>Banco Santander</td>
<td>5,161</td>
<td>78</td>
<td>4.38%</td>
</tr>
<tr>
<td>3</td>
<td>Bank 2</td>
<td>4,797</td>
<td>58</td>
<td>3.97%</td>
</tr>
<tr>
<td>4</td>
<td>Bank 3</td>
<td>3,171</td>
<td>56</td>
<td>2.63%</td>
</tr>
<tr>
<td>5</td>
<td>Peer 1</td>
<td>3,078</td>
<td>37</td>
<td>2.57%</td>
</tr>
<tr>
<td>6</td>
<td>Bank 4</td>
<td>2,947</td>
<td>41</td>
<td>2.49%</td>
</tr>
<tr>
<td>7</td>
<td>Bank 5</td>
<td>2,719</td>
<td>28</td>
<td>2.26%</td>
</tr>
<tr>
<td>8</td>
<td>Bank 6</td>
<td>2,712</td>
<td>45</td>
<td>2.24%</td>
</tr>
<tr>
<td>9</td>
<td>Peer 2</td>
<td>2,634</td>
<td>33</td>
<td>2.18%</td>
</tr>
<tr>
<td>10</td>
<td>Bank 7</td>
<td>2,457</td>
<td>34</td>
<td>2.06%</td>
</tr>
</tbody>
</table>

¹ Emissions prevented over the projects’ useful lifespans, based on emissions factors from the International Energy Agency (updated in 2022 with data from 2020). The estimated allocation to the amount financed by Santander is 51.6 million tons CO₂.

² Based on final electricity consumption data published by the International Energy Agency (updated in 2022 with data from 2020).
GREENFIELD FINANCE\(^1\)
(MW financed or advised)

<table>
<thead>
<tr>
<th>Year</th>
<th>MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>13,765</td>
</tr>
<tr>
<td>2021</td>
<td>13,604</td>
</tr>
<tr>
<td>2022</td>
<td>14,843</td>
</tr>
</tbody>
</table>

BROWNFIELD FINANCE\(^2\)
(MW financed or advised)

<table>
<thead>
<tr>
<th>Year</th>
<th>MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>8,106</td>
</tr>
<tr>
<td>2021</td>
<td>1,776</td>
</tr>
<tr>
<td>2022</td>
<td></td>
</tr>
</tbody>
</table>

BREAKDOWN OF MW FINANCED OR ADVISED BY TYPE OF RENEWABLE ENERGY IN 2022

<table>
<thead>
<tr>
<th>Energy Type</th>
<th>Greenfield</th>
<th>Brownfield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind energy</td>
<td>21%</td>
<td>45%</td>
</tr>
<tr>
<td>Solar energy</td>
<td>77%</td>
<td>33%</td>
</tr>
<tr>
<td>Other(^4)</td>
<td>2%</td>
<td>22%</td>
</tr>
</tbody>
</table>

BREAKDOWN OF GREENFIELD AND BROWNFIELD FINANCE (MW financed or advised) BY COUNTRY IN 2022\(^2\)

<table>
<thead>
<tr>
<th>Country</th>
<th>Greenfield</th>
<th>Brownfield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>7,421 MW</td>
<td>194 MW</td>
</tr>
<tr>
<td>Brazil</td>
<td>4,048 MW</td>
<td>5,257 MW</td>
</tr>
<tr>
<td>USA</td>
<td>3,225 MW</td>
<td>3,780 MW</td>
</tr>
<tr>
<td>Poland</td>
<td>442 MW</td>
<td>149 MW</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>263 MW</td>
<td>2,400 MW</td>
</tr>
<tr>
<td>Italy</td>
<td>161 MW</td>
<td>299 MW</td>
</tr>
<tr>
<td>Germany</td>
<td>1,250 MW</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>528 MW</td>
<td></td>
</tr>
</tbody>
</table>

1. New projects to be built.
2. Projects already existing and producing electricity at the financing date.
3. Of the megawatts attributable to Banco Santander in 2022, 70% were from Greenfield finance and 30% were from Brownfield finance.
4. Includes, among others, hydropower, battery energy storage, mix solar-biomass and energy from waste.
5. Other greenfield finance or advised in 2022: Argentina (384 MW), Chile (252 MW), Portugal (221 MW), and Netherlands (129 MW).

Examples of renewable energy projects financed and advised in 2022 and 2023

**Intersect portfolio** (Oberon/Lumina solar projects)
SCIB was co-lead arranger in the USD 1.6 Bn construction financing for Intersect portfolio comprised of four solar energy projects totaling 1.5GWdc PV and 1.0GWh Battery Energy Storage System (BESS), located in Texas and California.

**Project Sonic**
SCIB acted as MLA in a construction-phase bridge financing for a portfolio of 11 BESS plants owned by Pulse Clean Energy in the UK.

**Project Bruc Energy**
SCIB supported the Spanish photovoltaic generation company Bruc Energy with a EUR 200 million Equity Bridge Loan.

**Project Feijão**
SCIB acted as Coordinating Lead Arranger, Bookrunner, DSRF and PPA LC provider in the financing for the construction of a 456 MW wind power cluster located in the states of Piauí and Pernambuco, northeast region of Brazil. The project will supply long-term US dollar PPA renewable energy under a self-production structure to Alunorte and Paragominas, Hydro’s alumina refinery and bauxite mine subsidiaries.
Debt Capital Markets (DCM)
SCIB has continued to be active in helping clients develop their sustainable financing capacity, executing ESG-labelled bond issuances and assisting issuers in structuring their ESG funding frameworks.

Amongst these are a number of landmark transactions, in particular our bookrunner and ESG structuring roles for the USD 1.5 Bn 12-year sustainability-linked bond from the Oriental Republic of Uruguay, which issued the first sovereign of this type with a coupon step-up and step-down structure.

SCIB acted as a bookrunner and ESG structurer for USD 1.75 Bn dual-tranche sustainability bonds from Comisión Federal de Electricidad (CFE), the largest ESG transaction at the time by a non-sovereign Latin American issuer, followed by their local currency four-tranche green and social bonds.

SCIB has been recognised by Global Capital’s 2023 Bond Awards, receiving the ‘Most impressive bank for ESG Capital Markets in Latam’.

Global Transactional Banking (GTB)
SCIB continued to embed sustainability in its Global Transaction Banking products. In Export Finance, we financed the largest planned wind farm in the southern hemisphere in Queensland, Australia, with a capacity of 923.4 MW, together with Spanish company Acciona Energia. Grupo Santander also acted as export finance advisor for the development of two gigafactories for battery manufacturing in Europe and the US.

We structured a sustainability-linked Supply Chain Finance solution with Cellnex, a Spanish Telecom company, to improve the adoption of sustainability practices for their supply chain through CDP’s Supply Chain assessment program. The program relies on SCIB to onboard and actively manage more than 3,000 of its suppliers and includes financial incentives for completing the CDP assessment and improving annual assessment results.

SCIB also completed a syndicated sustainability-linked loan for a company specializing in the rental, leasing, repair and maintenance of trailers. We also provided Structured Secured Inventory Finance to one of our clients whose objective was to invest in renewable photovoltaic projects in Spain.

Mergers & Acquisitions (M&A)
The Sustainable Tech team advised BioTech Foods in the sale of a majority stake to Brazilian group JBS. BioTech Foods is southern Europe’s only dedicated cultured meat producer. Its technology to generate meat protein from animal cells produces an ecological and sustainable product without intensive livestock farming. JBS’s investment will enable BioTech Foods to build an industrial plant that will bring its products to the final consumer.

SCIB also acted as sole financial advisor to Cocoon Bioscience S.L. in the fund-raising process for the construction of a new facility. These transactions position SCIB as a key advisor in the alternative protein sector.

Combining our hydrogen expertise and our French execution capabilities, SCIB acted as sole financial advisor to Forvia and Michelin in the sale of a stake in Symbio to Stellantis, one of the largest ever hydrogen transactions globally at the time.

SCIB acted as sole Financial Advisor to Haizea, wind power developer, in the structuring and execution of an equity private placement.

We also acted as sell side advisor to Hornsea One, the largest offshore M&A transaction at the time; and to Wikinger, the largest offshore M&A transaction in the Baltic Sea. We also advised Global Infrastructure Partners on the acquisition of New Suez, a water and waste management company in France.
Retail and commercial banking

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

Building on our current offering of green products, 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, in line with our Sustainable Finance Classification System (SFCS)

<table>
<thead>
<tr>
<th>What do we finance?</th>
<th>What do our customers need?</th>
<th>Key geographies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green buildings</td>
<td>Developer loans, private solar panel installation, smart meters, energy-efficient lighting, mortgages with an “A” or “B” Energy Performance Certificate.</td>
<td><img src="image" alt="Spain" /> <img src="image" alt="United Kingdom" /> <img src="image" alt="Brazil" /> <img src="image" alt="South Africa" /></td>
</tr>
<tr>
<td>Clean mobility</td>
<td>Leasing and financing of electric and hybrid vehicles (&lt;50 g CO₂ per passenger/km), charging stations, bicycle lanes and others.</td>
<td><img src="image" alt="United States" /> <img src="image" alt="Canada" /> <img src="image" alt="Brazil" /> <img src="image" alt="Spain" /></td>
</tr>
<tr>
<td>Renewables</td>
<td>Financing of solar panels, wind farms and storage battery production.</td>
<td><img src="image" alt="Spain" /> <img src="image" alt="Brazil" /> <img src="image" alt="South Africa" /></td>
</tr>
<tr>
<td>Sustainable agro</td>
<td>Financing of sustainable agriculture practices such as more efficient irrigation systems, machinery, and reduced fertilizer use.</td>
<td><img src="image" alt="Spain" /> <img src="image" alt="Brazil" /> <img src="image" alt="Argentina" /></td>
</tr>
<tr>
<td>Circular economy, water and waste</td>
<td>Financing for water, waste and soil treatment; greater energy efficiency; lower emissions; and conservation.</td>
<td><img src="image" alt="Spain" /> <img src="image" alt="Brazil" /> <img src="image" alt="Mexico" /></td>
</tr>
</tbody>
</table>
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 has been mostly driven by investors’ demand and regulatory developments. Despite the current state of geopolitics, a new investment paradigm has emerged. ESG risk factors (particularly on climate) are gaining importance for risk-adjusted return analysis. Demand is growing considerably for investment opportunities that address climate adaptation and mitigation, biodiversity loss and other challenges. Additionally, active stewardship and decarbonization initiatives, such as “net zero”, have been key to improving 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 (with special focus on climate). We continue to expand and strengthen our sustainable product offering, and integrate ESG into our processes, in line with the Group’s standards.

We have strengthened our ESG teams to create a centre of expertise and excellence. This has allowed us to increase our socially responsible products and services offering. Furthermore, we have been able to build internal frameworks and processes, 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) AuM from c. EUR 27.1 billion as of 31 December 2021 to EUR 100 bn by 2025. As of June 30, 2023, our SRI AuM* amount to EUR 58.6 bn between SAM and third-party funds in Private Banking.

Santander Asset Management

ESG governance in Santander Asset Management

Santander Asset Management’s (SAM) policy framework and governance support its execution of SRI strategy. It follows environmental (including climate change), social and corporate governance (ESG) criteria and is structured around the following bodies: an SRI strategy and supervision forum, a voting and engagement forum, an investment and sustainability forum, and our global expert SRI team. At the highest level is the WM&I ESG forum chaired by the global head of Wealth Management & Insurance, which approves and oversees SAM’s global SRI strategy.

In 2023, we updated our voting policy with criteria for voting at the annual general meetings of the companies SAM invests in. The policy is consistent with our ESG principles and net zero ambition. It is also reviewed annually to ensure alignment with our commitments, international and local standards, and best practices.

SAM ESG policies and link to Group’s sustainability documents

* AUM classified as Artisle 8 and 9 funds (SFDR) from SAM, plus third-party funds from Private Banking. We apply equivalent ESG criteria to SAM’s funds in Latin America. Illiquid funds are in terms of committed capital for Private Banking.
Our ESG methodology applied to climate change
SAM carries out an ESG assessment that entails a valuation analysis to evaluate corporates’ sustainability performance based on several ESG factors. We use a double materiality approach, including climate change related topics such as climate risk exposure, CO2 emissions, emissions target and alignment with TCFD recommendations. For this assessment, SAM uses the information provided by external data providers, incorporating it into its own valuation methodology.

ESG criteria examples included in our rating

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Analysis for companies</th>
<th>Analysis for governments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strategy and environmental management</td>
<td>• Energy</td>
<td>• Energy</td>
</tr>
<tr>
<td>• Climate change</td>
<td>• Climate change</td>
<td></td>
</tr>
<tr>
<td>• Natural resources</td>
<td>• Natural capital</td>
<td></td>
</tr>
<tr>
<td>• Pollution prevention and control</td>
<td>• Emissions and pollution</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social</th>
<th>Analysis for companies</th>
<th>Analysis for governments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Human capital</td>
<td>• Health and nutrition</td>
<td>• Health and nutrition</td>
</tr>
<tr>
<td>• Client and product</td>
<td>• Education and wellbeing</td>
<td></td>
</tr>
<tr>
<td>• Community</td>
<td>• Employment and equality</td>
<td></td>
</tr>
<tr>
<td>• Products and services with social focus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>Analysis for companies</th>
<th>Analysis for governments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Corporate governance</td>
<td>• Civil rights</td>
<td>• Civil rights</td>
</tr>
<tr>
<td>• Business ethics</td>
<td>• Corruption</td>
<td>• Corruption</td>
</tr>
<tr>
<td></td>
<td>• Government effectiveness</td>
<td>• Government effectiveness</td>
</tr>
</tbody>
</table>

SRI products
Our proposition includes a full SRI product line. As of June 30th 2023, we had EUR 40.5 bn in 113 SRI funds (81 SAM funds, 28 SAM pension funds, 1 fund mandated to third parties through Santander Go, and 3 local feeders investing in the master fund), plus 90 mandates. SAM pioneered these products launching its 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. In 2022, we focused on transforming our fund offering to maximize the number of Article 8 and 9 funds under the EU Sustainable Finance Disclosure Regulation (SFDR). We also embedded ESG criteria in our pension plans in Spain.

Over the past eight years, our solidarity funds have donated EUR 24.2 million to more than 25 NGOs and projects for social welfare, job training, health and financial literacy. In 2023, Cáritas and CONFÉR, the two main fund recipients, will work to develop green and technology projects in line with the European Green Pact and the European Next Generation Plan.

SAM SRI offering
Products to help fight climate change
Santander Asset Management is the first asset manager in Spain to launch a sustainable bond mutual fund. Santander Sostenible Bonos invests in green bond issuances (corporate debt designed to finance projects for clean energy, reduction of emissions and other green initiatives) and in social, climate change, environmental and other sustainable bonds, intent on making a positive contribution to society and the environment.

In 2022, SAM launched two investment solutions to help tackle climate change. Santander Iberia Renewable energy fund is a private equity fund for private banking clients to invest in companies that operate in the renewable energy sector, including photovoltaic and wind. Santander Innoenergy Climate fund invests in climate tech companies and startups in renewable energy, smart grids, energy efficiency, storage systems, batteries for green energy, mobility, and the circular economy.

Other funds in SAM’s SRI product line apply financial and extra-financial criteria with the aim of integrating sustainability into investments. Financial, environmental, social, and good governance analysis is used to obtain a more complete and comprehensive view of the assets to be invested.

Our standards and stewardship
We are dedicating more resources to engagement and voting. In 2022, we published our first stewardship report and ranked among the top 5 asset managers that improved the most in the Share Action review, mainly due to more robust stewardship practices. We are promoting both collaborative and bilateral actions with companies. In addition to NZAmi, 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.

- **Net Zero Engagement Initiative by IIGCC.** In February 2023, SAM joined this investors group to align our portfolio with our net zero ambition. This initiative promotes corporate engagement by engaging with a larger number of companies not on the Climate Action 100+ focus list.

- **Climate Action 100+.** In January 2021, Santander Asset Management joined Climate Action 100+ to promote action on climate change. This initiative entails engagement with a company included on its list to ensure necessary action is being taken against climate change. As a Climate Action 100+ member, SAM is helping accelerate the transition to net-zero emissions by 2050.

- **Training.** We work with universities and educational centres to organize and participate in SRI events and training days (UNED, MOOC, Bank of Spain, etc). We also run workshops and courses for our employees on the UN Sustainable Development Goals and climate change. See page 18 for further information on our training initiatives for employees and Board.

We focus on incorporating ESG in our private banking advisory services. In 2023, Santander Private Banking was named “Best Private Bank for ESG Investing” in Chile by Euromoney and “Best Private Bank for Sustainable Investing” in Latin America by Global Finance.

Socially Responsible Investment (SRI)
Our SRI 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. We are also transforming our list of third-party funds under advisory, over 80% of which meet our definition of Socially Responsible Investments (SRI)*. We carry out due diligence on investment strategies for Article 8 or 9 products under SFDR to ensure a consistent, comprehensive SRI product offering.

As of June 30, 2023, we had EUR 18.1 bn in SRI AuM from third-party funds. We also offer SRI mandates in five countries and intend to expand to more geographies in the coming years.

Engaging with our clients on ESG
Understanding our clients’ sustainability preferences is key. We have built the capabilities to provide them with bespoke portfolio reporting, which covers CO₂ emissions, water footprint, waste generation and energy savings. We are also working to offer our clients their portfolio performance according to our ESG methodology and SDG alignment.

Private Banking

* AUM classified as Article 8 and 9 funds (SFDR) from SAM, plus third-party funds from Private Banking. We apply equivalent ESG criteria to SAM’s funds in Latin America. Illiquid funds are in terms of committed capital for Private Banking.
ESG expertise

In 2022, we launched a global training plan for our bankers and advisers to credit them with internal and external certifications (see “Governance” section). We are also working to enhance our ESG communications and learning materials. Our international network of ESG specialists and governance model ensures the quality and transparency of our ESG products and advisory services.

Insurance

Our sustainable insurance proposition is available in 8 markets. We aim to expand it to all our markets by 2024. Moreover, we developed an internal classification system in line with the Group’s sustainable finance classification system (SFCS)\(^1\), which allows us to identify insurance products that protect risks associated with assets, activities or vulnerable populations across our geographic footprint. It includes the following categories:

- Insuring risks from assets and activities that the Group classifies as sustainable (electric vehicles, green homes, renewable energy infrastructure, etc).
- Insuring risks from people or activities to increase society’s well-being. The goal of these products is to increase the eligibility and affordability of insurance products. These include, for instance, micro insurance, health for the elderly, life insurance for low income, or insurance for new or existing activities that can generate social challenges.
- Promoting socially responsible insurance-based investment products according to existing regulation\(^2\).

We invest our life-savings insurance policies with ESG criteria. Furthermore, our target is to continue to adopt the UN’s Principles for Sustainable Insurance (PSI) in our joint ventures.

Insurance products aligned with SFCS

<table>
<thead>
<tr>
<th>Core insurance products in our geographies(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spanish</strong></td>
</tr>
<tr>
<td>Personal accident insurance for Seniors</td>
</tr>
<tr>
<td>ECO Auto Insurance</td>
</tr>
<tr>
<td>Dependency Insurance</td>
</tr>
<tr>
<td>Senior Home Insurance</td>
</tr>
<tr>
<td><strong>Brazilian</strong></td>
</tr>
<tr>
<td>Life Insurance for low income</td>
</tr>
<tr>
<td>Health Insurance for self-employed or low income</td>
</tr>
<tr>
<td><strong>Japanese</strong></td>
</tr>
<tr>
<td>Life Insurance for low income women</td>
</tr>
<tr>
<td>Life Insurance for micro-entrepreneurs</td>
</tr>
<tr>
<td><strong>British</strong></td>
</tr>
<tr>
<td>Life Insurance for low income</td>
</tr>
<tr>
<td><strong>Portuguese</strong></td>
</tr>
<tr>
<td>Life Insurance for low income</td>
</tr>
</tbody>
</table>

1. Sustainable finance classification system.
2. AUM classified as Article 8 and 9 funds (SFDR). We apply equivalent ESG criteria to assets in Latin America.
3. We have added sustainable insurance offering in 2 additional geographies: UK and Portugal.
Working with multilateral institutions

Santander continues to actively collaborate with multilateral development institutions to finance the investment and liquidity needs of the Group’s clients in Latin America and Europe, many of which are micro, small and medium-sized enterprises.

Since 2019 Grupo Santander has signed 84 financing agreements worth a total of EUR 12,672 million. During this period Santander has partnered with the European Investment Bank Group, the EBRD (European Bank for Reconstruction and Development), the IFC (International Finance Corporation), MIGA (Multilateral Investment Guarantee Agency), CEB (Council of Europe Development Bank), CAF (the Development Bank of Latin America) and the Inter-American Development Bank Group to support renewable energy, innovation, digitalization and specialized financing in supply chains, health, education, transport and agribusiness, thereby contributing to economic recovery and growth in countries where the Group operates.

The volume of financing dedicated to green objectives exceeded EUR 2,900 million, including the construction or retrofitting of high energy performance buildings, clean mobility, and renewable energy generation.

Some notable agreements signed in the last twelve months include:

• A framework loan with the EIB to support USD 300 million in solar PV investments made by individuals and SMEs in Brazil.

• A new unfunded participation agreement with the IFC to provide up to USD 150 million equivalent worth of finance to Chilean SMEs at favorable conditions, including available finance earmarked for women-led enterprises.

• A EUR 200 million framework loan with CEB to finance in wind and solar power plants in Spain.

• A synthetic securitization agreement with the EIB Group in Poland that enables Santander Consumer Bank to provide around PLN 1 bn in new finance for Polish SMEs, small midcaps, private individuals and climate finance related projects.

• A portfolio guarantee agreement with the EIF to enhance SME projects that contribute to a more sustainable, circular and carbon-neutral economy in Portugal.

• Santander also signed the extension of a USD 300 million guarantee agreement with MIGA in Argentina, allowing the Group to provide climate finance lending in the country and increase access to credit to WSMEs.

PLN 1.9 bn issuance in Santander Polska in the form of sustainable bond

On March 30th 2023, Santander Bank Polska S.A. successfully issued the first PLN 2NC1 Senior Non-Preferred bond in Poland with the total amount of PLN 1.9bn. Bonds have been placed as Sustainable issuance under Grupo Santander Green, Social & Sustainability Funding Global Framework and were the first issuance of this type in the country.

The funds obtained from the issuance will be used to finance or refinance Eligible Green Assets and/or Eligible Social Assets in accordance with our Green, Social and Sustainability Funding Global framework.

Santander plans to allocate obtained funds mostly to Renewable Energy, Green Buildings and Affordable Housing assets.

Out of the issuance, PLN 300m were acquired by EBRD, whose objective was to continue supporting Green Economy Transition in Poland.
7. Partnerships

Sector working groups

Partnerships with others in business and government is critical if we are to tackle climate change and protect biodiversity. Grupo 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, in line with the SDG 17 (Sustainable Development Goal) on Partnerships for Goals.

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

**United Nations Environment Programme Finance Initiative (UNEP FI), NZBA, PRB**

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.

Santander is part of the Core Group for the 2030 Principles for Responsible Banking review process.

UNEP FI also launched the PRB Biodiversity Community, which we have also joined. As part of this community we recently joined the PRB Biodiversity Target Setting Working Group, which aims to align the existing industry guidance with the Kunming–Montreal Global Biodiversity Framework.

**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. Within GFANZ, we co-led the Net Zero Public Policy and their call to action launched in October 2022.

**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 also engaged in a series of innovation sprints with the BEI, Cambridge Institute for Sustainability Leadership (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. We also continue to participate in the various programmes with particular focus on integrating climate and nature.

**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)**

This 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.

We also joined the workstream on Sovereign SDG bonds established in 2023 by the United Nations Department of Economic and Social Affairs (UNDESA) and the United Nations Development Programme (UNDP), joining top-tier investors, agencies and banks, whose purpose is to produce an integrated guidance aimed at investors and developing countries interested in sovereign SDG bonds. The guidance will seek to enhance the integrity and quality of sovereign SDG bonds through an assessment that identifies lessons and best practices from both country and investor experiences.
International Capital Market Association (ICMA) Principles
ICMA Principles champion global green, social and sustainability bond (and related) markets to finance progress towards environmental and social sustainability. The initiative outlines best practices through global guidelines and recommendations, that ensure integrity, and promote transparency and disclosure, when issuing bonds serving social or environmental purposes. The Principles were established in 2014 and Santander has been a member since then.

During this 2022-23 period, Santander has actively participated in multiple working groups and taskforces organised under the Principles, covering Climate Transition Finance, Impact Reporting, Social Bonds, Sustainability-Linked Bonds, Sustainable Repos and Sustainable Commercial Paper.

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.

United Nations Office on Drugs and Crime (UNODC)
Santander is collaborating with the UNODC and its network since 2021. In 2023, our Head of Financial Crime Compliance Framework and Policies continued to chair the quarterly Private Sector Dialogue on the Disruption of Financial Crimes related to Environmental Crime (see “Tackling Environmental Crime” section for more information). The Dialogue was highlighted at COP27 in Sharm al Sheikh by the Executive Director of the UNODC for bringing together top financial institutions with financial intelligence units and law enforcement around the world to combat illegal deforestation.

At the most recent Dialogue (June 2023), Santander Brazil announced the Febraban agreement on due diligence for the meatpackers, making headway in private-public collaboration towards transparency on deforestation related risks and crimes while sharing leading practices with government authorities from other countries facing similar challenges.

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. Our focus is on the implications for the mortgage sector in the UK.

TNFD Forum
We follow the publication of the different versions of the framework for the management and disclosure of nature-related risks and opportunities and the guidelines published for market participants on pilot testing for reporting under the TNFD framework which will be published in September 2023.

International Institute of Finance (IIF)
The International Institute of Finance, based in Washington, identifies and promotes capital markets solutions that support the development and growth of sustainable finance, with transition finance and blended finance as key components. Grupo Santander Executive Chairman is currently Chair of the IIF and the bank participates in several sustainability-related working groups – including the Sustainable Finance Policy Expert Group and the Sustainable Finance Data, Disclosure & Classification Expert Group – that contribute to shaping official sector initiatives that address the environmental, social and governance priorities relevant to the finance industry. In addition, the IIF advocates for sustainable finance policies that prioritize prudential risk management, financial stability, and economic growth.

European Banking Federation (EBF)
The European Banking Federation endorses and is a promoter of the Principles for Responsible Banking, as an enabler to accelerate the banking industry contribution to Paris objectives and SDGs.

Sustainable finance is an EBF strategic priority and Santander participates in several working groups – such as the ESG Risk Taskforce, which we chair; the Sustainable Finance SteerCo; or the Chief Sustainability Officers roundtable – that aim to encourage the development of a coherent and enabling sustainable finance framework that fosters the banking sector’s ability to support the transition of all actors of the real economy, as well as the resilience of the sector to ESG risk.
Engagement with regulators, industry bodies and other stakeholders

Santander’s purpose is to help people and businesses prosper. By delivering on this purpose, we can help all our stakeholders address their challenges and build their business for the future.

Engaging with our stakeholders is important to understand their concerns, help us 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 Group, 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 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 fora and workshops on the transition to a low-carbon economy.

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.

Regarding the taxonomies, those are useful tools to help to support the flow of green finance into the economy towards the 1.5ºC scenario. We have learnt, and keep learning, a lot from the implementation of the EU Taxonomy to date, focusing on the climate objectives. As practitioners, and aiming to constructively contribute to this debate and ensure that the Taxonomy achieves its purpose of supporting green financing, we would encourage a simplification of the framework to ensure that banks and non-financial companies alike can implement the requirements in a more straightforward way, and hence contribute to the channelling of funds to green activities.

Transparency to the market is necessary to understand how companies are embedding sustainability into their strategy and business models. As the development of the reporting and disclosure framework progresses, especially in Europe, we encourage policymakers to ensure that the requirements are balanced, including in depth and speed of implementation, and do not impair the competitiveness of businesses.

We support efforts to ensure a global approach to companies’ ESG-related disclosures. As much as possible the standards developed internationally by the ISSB and the ones developed in Europe by the EFRAG must be aligned to ensure interoperability and comparability across companies’ information.

In addition, we believe that capital requirements linked to ESG risks should not be imposed as the prudential framework (Pilar 1) already enables taking into account their potential impact. Higher capital requirements could jeopardise the transition of the economy.

Finally, as tackling climate change is a global challenge, authorities should coordinate as much as possible when defining the regulatory framework. This will allow to maximise the impact of the response and support the transition of the global economy, while avoiding fragmentation across markets.
Community support programmes 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.

### Santander US

Santander US won the SAS Global Hackathon for the banking industry for building an online carbon-footprint tracker that connects merchant codes to S&P ESG scores to show real-time carbon impact.

### Santander Brazil

Getnet Brazil, a payment technology and solutions company, subsidiary of PagoNxt (owned by Santander), has just launched Brazil’s first card machine made from recycled parts from waste electrical equipment. This initiative is a partnership with Newland, Mobyan, Brasil Reverso and other players in Getnet’s supply chain.

Since August 2022, all Getnet Wi-fi-enabled POS 3G machines (known as “Get Clássica”), one of the most popular models, have manufactured using recycled components. To date, around 260,000 recycled POS are in Brazilian retail market. Over the same period, Getnet managed to recycle approximately 42% of its devices that would usually go to waste. For the next years, Getnet plans to expand to other POS devices and suppliers, prioritizing the Long Tail customers.

### Santander Portugal

- Fundación Banco Santander was the partner event of PlanetEer’s World Gathering 2022, the world’s largest sustainable innovation event that brings together the most innovative startups, communities and cities with a social and environmental impact.

- Santander Portugal launched a new feature in banking App, innovative in banking sector to help customers knowing and measuring their carbon footprint, based on purchases with a banking card or direct debit. The carbon footprint maybe consulted in a monthly basis, presented in kg of CO₂ or equivalent in number of trees.

### Santander Consumer Finance (SCF)

- SCF Spain cooperated with the Spanish Federation of Domestic Appliance Merchants (FECE) to plant a tree for every Class A appliance financed in FECE member establishments.

- SCF Spain and Global Nature Foundation cooperated with the first phase of LIFE Teixeres, an initiative to restore and conserve relic yew tree in forests near the region of Valencia.

- Grupo Santander placed 6,720 awareness raising leaflets with seeds on the 8 buses (all electric) that cover one of the public transport bus lines in the city of Madrid. This initiative seeks to support the bank’s commitment to public awareness of its carbon footprint.

- In May 2023 was held the “I Día del Hidrógeno Santander” conference, organized by SCIB in Spain. It gathered more than 300 participants and more than 150 companies from the Iberian Peninsula with low-carbon hydrogen activities.

### Santander Uruguay

- “SOY Santander”, the online store for Santander Uruguay clients: a new “I am sustainable” campaign was launched on June 5, 2021 as part of the World Environment Day celebrations, responding to the UN’s declaration of 2021-2030 being the Decade of Ecosystem Restoration. Santander Foundation to finance original, pro-environmental initiatives benefiting children and young people. Initiatives under the programme can be submitted by organisations through its website (link).

- Santander Uruguay is the main sponsor of BIOFERIA in Montevideo, an exhibition of sustainable products and environmental education.

### Santander Polska

- “Here I live. Here I make eco-changes” grant programme: programme organized by the Santander Foundation to finance original, pro-environmental initiatives benefiting children and young people. Initiatives under the programme can be submitted by organisations throughout Poland.

- Re:Generation programme: project implemented by UNEP/GRID-Warsaw, Poland. It was launched on June 5, 2021 as part of the World Environment Day celebrations, responding to the UN’s declaration of 2021-2030 being the Decade of Ecosystem Restoration. Santander Bank Polska has partnered this program since 2021 and in 2022 became an exclusive caretaker of a 400 m² flower meadow in the Lodz Heights Landscape Park. In 2022 and 2023, 8 ecological workshops for primary school pupils (over 200 participants) were organised there.
Annex 1

Bank of England’s Climate Biennial Exploratory Scenario

Santander UK participated in the BoE’s Biennial Exploratory Scenario for Climate Change (CBES). It reviews risks across three climate scenarios over a 30-year horizon. The exercise helps companies understand challenges to their business models. The CBES does not test capital adequacy or establish capital requirements.

Partnering with third-party climate modelling experts, we used internal and market datasets to feed into the CBES models used to complete this exercise. We also reached out to our largest corporate clients. The responses we received helped us model the impact of climate risks across each of the three scenarios (see details in the following summary table). This analysis covered most of our balance sheet assets across Retail Banking and CCB.

After analysing the results, Santander UK defined strategic management actions to mitigate the impact of climate change on our portfolios.

In 2022, the BoE requested participants to perform a qualitative follow-up exercise. The questions requested a qualitative, high-level sizing of potential loan book changes that might arise by 2050 from management actions and opportunities.

Climate Internal Scenario Analysis (CISA)

In Santander UK, we generated three qualitative scenarios (see chart below) for climate-related risks and also quantified potential losses. The CISA comprises three stages:

- Stage 1 defined climate change scenarios and explored their potential impact. At the end of phase 1, we selected the scenario to quantify in phase 2.
- Stage 2 assessed the chosen scenario for its economic impact on the balance sheet and modelled potential losses.
- Stage 3 reviewed the results, including applying expert judgement. It added a sensitivity analysis and extended the time frame from 5 to 30 years.

The impacts assessed through the CISA include:

- Impact on house prices from climate change and interest rates on mortgages.
- Possible consequences of policies that promote rapid transition and require retrofits and upgrades to improve energy efficiency.
- Impact on household finances from higher energy costs and taking account of customers whose homes have lower EPC scores.
- Sectoral analysis of the financial impact of transition risks. This includes EPC improvements, moving to renewable energy sources, reducing scope 1 to 3 emissions, and progressing sustainability plans.

<table>
<thead>
<tr>
<th>CISA scenario</th>
<th>Scenario characteristics</th>
</tr>
</thead>
</table>
| **Accelerated transition** | • Immediate and disorderly transition where geopolitical tension creates uncertainty over global energy market supply chains  
• This creates an emphasis on domestic energy security where the government funds an accelerated transition to renewable energy supplies. For example, grants to assist with a mass rollout of electric heat pumps, electric vehicles and renewable energy sources, such as offshore wind, which reduces the reliance on Russian energy. |
| **Cost-sensitive transition** | • A steady state scenario where real income growth continues its weak trend and energy transition continues in a cost sensitive way 
• Stable energy markets, and cheaper wholesale prices, keep gas in the energy mix 
• Private investment is expected to provide the bulk of the funding, with the government reluctant to directly pass-on infrastructure investment costs to the public. |
| **De-prioritised transition** | • Energy transition becomes more expensive due to geopolitical fragmentation and superpower competition 
• Climate action is de-prioritised until 2030, permanently slowing transition in Europe. |
## ENVIRONMENTAL FOOTPRINT 2020-2022

### Consumption

<table>
<thead>
<tr>
<th>Metric</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>Var. 2022-2021 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (m³)²</td>
<td>1,887,857</td>
<td>1,808,668</td>
<td>2,064,113</td>
<td>4.4%</td>
</tr>
<tr>
<td>Water (m³/employee)</td>
<td>9.75</td>
<td>9.76</td>
<td>11.07</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Normal electricity (millions of kwh)³</td>
<td>97.42</td>
<td>213.87</td>
<td>-14.4%</td>
<td>31.79</td>
</tr>
<tr>
<td>Green electricity (millions of kwh)</td>
<td>745.82</td>
<td>675.78</td>
<td>526.00</td>
<td>10.4%</td>
</tr>
<tr>
<td>Total electricity (millions of kwh)</td>
<td>843.24</td>
<td>889.66</td>
<td>920.00</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Total internal energy consumption (GJ)²</td>
<td>3,431,272</td>
<td>3,667,872</td>
<td>3,758,225</td>
<td>-6.5%</td>
</tr>
<tr>
<td>Total internal energy consumption (GJ/employee)²</td>
<td>17.73</td>
<td>18.95</td>
<td>20.16</td>
<td>-6.5%</td>
</tr>
<tr>
<td>Total paper (t)⁴</td>
<td>5,849</td>
<td>7,345</td>
<td>8,966</td>
<td>-20.4%</td>
</tr>
<tr>
<td>Recycled or certified paper (t)⁴</td>
<td>4,860</td>
<td>6,020</td>
<td>7,336</td>
<td>-19.3%</td>
</tr>
<tr>
<td>Total paper (t/employee)⁴</td>
<td>0.03</td>
<td>0.04</td>
<td>0.05</td>
<td>-23.7%</td>
</tr>
</tbody>
</table>

### Waste

<table>
<thead>
<tr>
<th>Metric</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>Var. 2022-2021 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper and cardboard waste (ton)⁴</td>
<td>4,124</td>
<td>6,324</td>
<td>5,926</td>
<td>-34.8%</td>
</tr>
<tr>
<td>Paper and cardboard waste (kg/employee)⁴</td>
<td>21.30</td>
<td>34.11</td>
<td>31.79</td>
<td>-37.6%</td>
</tr>
</tbody>
</table>

### Greenhouse gas emissions

<table>
<thead>
<tr>
<th>Metric</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>Var. 2022-2021 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct emissions (t CO₂-e)²</td>
<td>21,967</td>
<td>25,672</td>
<td>24,818</td>
<td>-14.4%</td>
</tr>
<tr>
<td>Indirect electricity emissions (t CO₂-e)-MARKET BASED²⁴</td>
<td>30,917</td>
<td>52,904</td>
<td>128,633</td>
<td>-41.6%</td>
</tr>
<tr>
<td>Indirect electricity emissions (t CO₂-e)-LOCATION BASED²⁴</td>
<td>217,906</td>
<td>265,095</td>
<td>282,216</td>
<td>-17.8%</td>
</tr>
<tr>
<td>Indirect emissions from business travel (t CO₂-e)²¹</td>
<td>49,410</td>
<td>19,692</td>
<td>21,785</td>
<td>150.9%</td>
</tr>
<tr>
<td>Indirect emissions from employee commuting (t CO₂-e)²³</td>
<td>32,125</td>
<td>15,728</td>
<td>18,923</td>
<td>104.3%</td>
</tr>
<tr>
<td>Total emissions (t CO₂-e)²</td>
<td>134,419</td>
<td>113,996</td>
<td>194,159</td>
<td>17.9%</td>
</tr>
<tr>
<td>Total emissions (t CO₂-e/employee)²</td>
<td>0.69</td>
<td>0.61</td>
<td>1.04</td>
<td>12.9%</td>
</tr>
<tr>
<td>Average number of employees</td>
<td>193,573</td>
<td>185,379</td>
<td>186,429</td>
<td>4.4%</td>
</tr>
<tr>
<td>TCFD Recommendations</td>
<td>Chapter Reference</td>
<td>Section Reference</td>
<td>Pages</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td><strong>Governance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Describe the board's oversight of climate-related risks and opportunities.</td>
<td>3. Governance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Describe management's role in assessing and managing climate-related risks and opportunities.</td>
<td>3. Governance</td>
<td>Action plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</td>
<td>2. Strategy</td>
<td>Climate risks and opportunities</td>
<td>10-14</td>
<td></td>
</tr>
<tr>
<td>b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.</td>
<td>4. Risk management</td>
<td>Scenario analysis</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</td>
<td>4. Risk management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Risk Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Describe the organization's processes for identifying and assessing climate-related risks.</td>
<td>4. Risk management</td>
<td>I. Identification</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>b. Describe the organization's processes for managing climate-related risks.</td>
<td>4. Risk management</td>
<td>II. Planning; III. Assessment; IV. Monitoring; V. Mitigation; VI. Reporting</td>
<td>20-29</td>
<td></td>
</tr>
<tr>
<td>c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Metrics and Targets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</td>
<td>5. Metrics and targets</td>
<td>Aligning our portfolio to the Paris agreement</td>
<td>35-40</td>
<td></td>
</tr>
<tr>
<td>b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</td>
<td>5. Metrics and targets</td>
<td>Decarbonization targets – Financed emissions</td>
<td>35-36</td>
<td></td>
</tr>
<tr>
<td>c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</td>
<td>5. Metrics and targets</td>
<td>Our environmental footprint</td>
<td>41-43</td>
<td></td>
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<td>Annex</td>
<td>Environmental footprint 2020-2022</td>
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<td></td>
<td></td>
<td>Decarbonization targets</td>
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### Annex 4

GFANZ Financial Institution Net-zero Transition Plans - Recommendation index

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<td>Objectives and priorities</td>
<td>2. Strategy</td>
<td>Our ambition</td>
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<td></td>
<td></td>
<td>Our strategy</td>
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<td>Our objectives and priorities</td>
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<td>Our approach</td>
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<td><strong>Implementation Strategy</strong></td>
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<tr>
<td>Products and services</td>
<td>6. Financing the green transition</td>
<td>Climate change and green transition oversight</td>
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<td>3. Governance</td>
<td>Policies and guidance</td>
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<td>4. Risk management</td>
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<tr>
<td>Engagement with clients and portfolio companies</td>
<td>4. Risk management</td>
<td>Santander and the Brazilian Amazon</td>
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<td></td>
<td>5. Metrics and targets</td>
<td>Action plan</td>
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<td>7. Partnerships</td>
<td>Sector working groups</td>
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<tr>
<td>Engagement with government and public sector</td>
<td>7. Partnerships</td>
<td>Engagement with regulators, industry bodies and other stakeholders</td>
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<td><strong>Metrics and Targets Governance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metrics and targets</td>
<td>5. Metrics and targets</td>
<td></td>
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</tr>
<tr>
<td>Roles, responsibilities, and remuneration</td>
<td>3. Governance</td>
<td>Climate change and green transition oversight</td>
<td>15</td>
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<tr>
<td>Skills and culture</td>
<td>6. Financing the green transition</td>
<td>ESG governance in Santander Asset Management</td>
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<td></td>
<td>3. Governance</td>
<td>ESG culture and skills development</td>
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</table>
Independent limited assurance report

To the management of Banco Santander, S.A.

We have carried out our work to provide limited assurance on the selected ESG indicators, for the specified reporting period for each indicator, contained in the “Annex II: Climate Finance Report 2022 - June 2023” included in the Climate Finance Report 2022 - June 2023 of Banco Santander, S.A. (Parent company) and its subsidiaries (hereinafter, “Grupo Santander”), prepared in accordance with the criteria of Grupo Santander set out in the “Annex II: Climate Finance Report 2022 - June 2023 Reporting Criteria”.

Responsibility of management

The management of Banco Santander, S.A., is responsible for the preparation, content and presentation of the Climate Finance Report 2022 - June 2023 in accordance with the internal procedure defined in the “Annex II: Climate Finance Report 2022 - June 2023 Reporting Criteria”.

Management’s responsibility includes establishing, implementing and maintaining the internal control required to ensure that the selected ESG indicators are free from any material misstatement due to fraud or error.

The management of Banco Santander, S.A., is also responsible for defining, implementing, adapting and maintaining the management systems from which the information required to prepare the selected ESG indicators, is obtained.

Our responsibility

Our responsibility is to issue a limited assurance report based on the procedures that we have carried out and the evidence obtained. Our limited assurance engagement was done in accordance with the International Standard on Assurance Engagements 3000 (Reviewed) “Assurance Engagements other than Audits or Reviews of Historical Financial Information”, issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC).

The scope of a limited assurance engagement is substantially less extensive than the scope of a reasonable assurance engagement and thus, less security is provided.

Our limited assurance conclusion

As a result of the procedures carried out and the evidence obtained, nothing has come to our attention that causes us to believe that Banco Santander, S.A. and its subsidiaries selected ESG indicators, for the specified reporting period for each indicator, contain significant errors or have not been prepared, in all of their significant matters, in accordance with the criteria of Grupo Santander set out in the “Annex II: Climate Finance Report 2022 - June 2023 Reporting Criteria”.

Use and distribution

Our report is only issued to the management of Banco Santander, S.A., in accordance with the terms and conditions of our engagement letter. We do not assume any liability to third parties other than Banco Santander, S.A. sources of information.

Our independence and quality management

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Management 1, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

To the management of Banco Santander, S.A.

Pablo Bascones Iñuldain

28 July 2023
### Annex I: Climate Finance Report 2022 – June 2023

Performance indicators included in the Climate Finance Report 2022 – June 2023 for Banco Santander S.A. and subsidiaries

#### Climate Finance Report

<table>
<thead>
<tr>
<th>Category</th>
<th>Report Value</th>
<th>Market-Based Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions from stationary fuel consumption</td>
<td>1,402 t CO₂</td>
<td>30,917 t CO₂</td>
</tr>
<tr>
<td>Emissions from electricity consumption</td>
<td>3.38 Mt CO₂</td>
<td>58.6 Mt CO₂</td>
</tr>
<tr>
<td>Emissions from other indirect sources</td>
<td>0.44 Mt CO₂</td>
<td>58.6 Mt CO₂</td>
</tr>
<tr>
<td>Total Greenhouse Gas (GHG) Emissions</td>
<td>134,419 t CO₂</td>
<td>31,965 t CO₂</td>
</tr>
</tbody>
</table>

**Notes:**
- Unless otherwise stated, the performance indicators included in the Climate Finance Report 2022 – June 2023 are reported for the year ending December 31, 2022.
- Financial emissions, as well as physical and financial emissions intensities, related to each sector are reported for the year ending December 31, 2022.
- **Total** financial and physical emissions are presented for the year ending December 31, 2022.

### Annex II: Climate Finance Report 2022 – June 2023

#### Reporting Criteria

The Climate Finance Report 2022 for Banco Santander S.A. and subsidiaries, hereafter referred to as Santander, Grupo Santander or the Company, has been prepared in accordance with internal procedures and policies. The present report includes information about Santander’s global operations, as well as specific information for the 10 main markets as reported in specific key performance indicators (KPIs). Considering that the procedures and policies on which the indicators are based may, or may not, be publicly available, the Reporting Criteria for the indicators subject to assurance are presented in the following table, as per the internal procedures defined by the Company.

**Reporting criteria:**

In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries include the financed emissions associated with the power generation, energy (oil & gas), aviation and steel GHG portfolios, for the year between January 1st and December 31st, 2020, in accordance with the methodology established by management, as presented below.

#### Reporting criteria

- **Power generation:**
  - Emissions associated with the financing of power generation activities are considered through Corporate and Project Finance mechanisms. In the case of Corporate Finance, emissions are calculated using the following equation:

  
  \[
  \text{Emissions} = \sum \text{Attribution Factor} \times \text{Emissions}
  \]

  Where attribution factor is calculated using the following formula:

  
  \[
  \text{Attribution Factor} = \frac{\text{Total Equity}}{\text{Total Enterprise Value}}
  \]

  **Reporting criteria:**

  In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries include the financed emissions associated with the power generation, energy (oil & gas), aviation and steel GHG portfolios, for the year between January 1st and December 31st, 2020, in accordance with the methodology established by management, as presented below.

  **Reporting criteria:**

  - Total amount of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated by the companies and/or projects financed by Banco Santander S.A and subsidiaries that are attributable to Santander following the attribution methodology defined below, based on the Partnership for Carbon Accounting Financials (PCAF) standard for financed emissions. To obtain the data on financed emissions, the following formulas are applied, depending on each portfolio:

  
  \[
  \text{Attribution Factor} = \frac{\text{Total Equity}}{\text{Total Enterprise Value}}
  \]

  Where Attribution Factor is calculated using the following formula:

  
  \[
  \text{Total Equity} = \text{Total Enterprise Value} - \text{Total Debt}
  \]

  **Reporting criteria:**

  In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries include the financed emissions associated with the power generation, energy (oil & gas), aviation and steel GHG portfolios, for the year between January 1st and December 31st, 2020, in accordance with the methodology established by management, as presented below.

  **Reporting criteria:**

  - Total amount of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated by the companies and/or projects financed by Banco Santander S.A and subsidiaries that are attributable to Santander following the attribution methodology defined below, based on the Partnership for Carbon Accounting Financials (PCAF) standard for financed emissions. To obtain the data on financed emissions, the following formulas are applied, depending on each portfolio:

  
  \[
  \text{Attribution Factor} = \frac{\text{Total Equity}}{\text{Total Enterprise Value}}
  \]

  Where Attribution Factor is calculated using the following formula:

  
  \[
  \text{Total Equity} = \text{Total Enterprise Value} - \text{Total Debt}
  \]

  **Reporting criteria:**

  In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries include the financed emissions associated with the power generation, energy (oil & gas), aviation and steel GHG portfolios, for the year between January 1st and December 31st, 2020, in accordance with the methodology established by management, as presented below.

  **Reporting criteria:**

  - Total amount of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated by the companies and/or projects financed by Banco Santander S.A and subsidiaries that are attributable to Santander following the attribution methodology defined below, based on the Partnership for Carbon Accounting Financials (PCAF) standard for financed emissions. To obtain the data on financed emissions, the following formulas are applied, depending on each portfolio:

  
  \[
  \text{Attribution Factor} = \frac{\text{Total Equity}}{\text{Total Enterprise Value}}
  \]

  Where Attribution Factor is calculated using the following formula:

  
  \[
  \text{Total Equity} = \text{Total Enterprise Value} - \text{Total Debt}
  \]

  **Reporting criteria:**

  In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries include the financed emissions associated with the power generation, energy (oil & gas), aviation and steel GHG portfolios, for the year between January 1st and December 31st, 2020, in accordance with the methodology established by management, as presented below.

  **Reporting criteria:**

  - Total amount of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated by the companies and/or projects financed by Banco Santander S.A and subsidiaries that are attributable to Santander following the attribution methodology defined below, based on the Partnership for Carbon Accounting Financials (PCAF) standard for financed emissions. To obtain the data on financed emissions, the following formulas are applied, depending on each portfolio:

  
  \[
  \text{Attribution Factor} = \frac{\text{Total Equity}}{\text{Total Enterprise Value}}
  \]

  Where Attribution Factor is calculated using the following formula:

  
  \[
  \text{Total Equity} = \text{Total Enterprise Value} - \text{Total Debt}
  \]
In the case of Project Finance, the financed emissions for Project $i$ are calculated using the following equation:

$$\text{Total Project Emissions }_i = \text{Attribution Factor}_i \times \sum \text{Production}_j \times \text{Emission Factor}_i$$

Where $\text{Production}_j$ represents Project $j$ production using technology $i$, expressed in MWh, $\text{Emission Factor}_i$ represents the emission factor associated to technology $i$.

To determine the attribution factor at the project level, the following equations are considered:

$$\text{Attribution Factor}_i = \frac{\text{Total Emissions}_i}{\text{Total Project Value}}$$

Data are obtained according to the information included in Table 1.

### Table 1: Data Sources

<table>
<thead>
<tr>
<th>Sector</th>
<th>Emissions</th>
<th>Production</th>
<th>Company Nature</th>
<th>Financial Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Total Project Emissions</td>
<td>Production</td>
<td>Asset Resolution</td>
<td>Capital IG Annual Reports</td>
</tr>
<tr>
<td>O&amp;G</td>
<td>Total Project Emissions</td>
<td>Production</td>
<td>Transition Pathway Initiative</td>
<td>Capital IG Annual Reports</td>
</tr>
<tr>
<td>Steel</td>
<td>Total Project Emissions</td>
<td>Production</td>
<td>Transition Pathway Initiative</td>
<td>Capital IG Annual Reports</td>
</tr>
<tr>
<td>Aviation</td>
<td>Total Project Emissions</td>
<td>Production</td>
<td>Calculated by the model</td>
<td>Capital IG Annual Reports</td>
</tr>
</tbody>
</table>

To determine the attribution factor at the company level, the following equations are considered:

$$\text{Attribution Factor}_i = \frac{\text{Total Emissions}_i}{\text{Total Project Value}}$$

### Energy - Oil & gas

The scope includes all assets of the project, which include upstream and integrated companies with material revenue from extraction and production activities, export credit agency (ECA) deals, as well as project finance activities in which the borrower is an upstream or integrated company. A second filter is applied to those project finance activities in which the relationship with respect to upstream is not so clear, being ownership/ownership as a criterion.

In the sector, Santander’s implementation is based on the methodology developed by the Transition Pathway Initiative (TPI, 2021). This methodology provides an emission intensity that includes scope 1, 2 and 3, using a homogenous approach to calculate the emissions from the use of fuel products. The emissions content of fossil fuels varies depending on the type of product. The Transition Pathway Initiative analysis uses product CO2 emissions and energy factors from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

### Transition Pathway Initiative

The emissions of a company can be approximated by means of its emission intensity and its production (expressed in TJ).

The total emissions for the portfolio are calculated by means of the following summation:

$$\text{Total Emissions} = \sum \text{Emissions}_i$$

For a specific client $i$, financed emissions can be computed as:

$$\text{Emissions}_i = \text{Production}_i \times \text{Emission Intensity}_i$$

To calculate production, the source for most of the companies is Trucost (displayed in m³). When Trucost does not provide that data, it must be searched manually in the companies’ Annual Reports. The emission intensity obtained from TPI is expressed in terajoules, which requires certain transformations:

$$\text{Production}_j(\text{TJ}) = \sum \text{Production}_j(\text{m²}) \times \text{Conversion Factor}_j$$

The conversion factors are applied to each fossil fuel type, as described by the Transition Pathway Initiative.

To determine the attribution factor at the company level, the following equations are considered, applying the same criteria as for Power generation:

$$\text{Attribution Factor}_i = \frac{\text{Total Emissions}_i}{\text{Total Project Value}}$$

### Aviation

The scope includes all assets of the project, which include passenger airlines, ECA (Export Credit Agency) deals for airlines and leased aircrafts (Project Finance in which the ultimate owner of the asset is an airline).

In the sector, Santander’s implementation is based on the methodology developed by the Transition Pathway Initiative (TPI, 2021), which involves scope 1 and scope 2. The data used comes from the companies’ Annual Reports.

The total emissions for the portfolio are calculated by means of the following summation:

$$\text{Total Emissions} = \sum \text{Emissions}_i$$

For a specific client $i$, financed emissions can be computed as:

$$\text{Emissions}_i = \text{Production}_i \times \text{Emission Intensity}_i$$

To calculate the activity data associated with production, the “revenue passenger kilometers” (or RPK) data is used, which is the total number of paying passengers multiplied by the distance flown. As well as for emissions intensity, the data comes from the Annual Reports of the companies, as shown in Table 1.

To determine the attribution factor at the company level, the following equations are considered, applying the same criteria as for the previous portfolios:

$$\text{Attribution Factor}_i = \frac{\text{Total Emissions}_i}{\text{Total Project Value}}$$
Independent verification report

<table>
<thead>
<tr>
<th>Santander</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attribution Factor</strong> = ( \frac{\text{Outstanding amount}}{\text{Total Enterprise Value}} )</td>
</tr>
<tr>
<td><strong>Total Enterprise Value</strong> = Total Debt + Total Equity</td>
</tr>
</tbody>
</table>

### Financial emissions intensity

#### Steel

For this portfolio, Corporates at Last Parent Level are included within scope.

**Total emissions for the portfolio are calculated by means of the following sum, for each company:***

\[ \text{Total Emissions} = \sum \text{Attribution Factor}_i \times \text{Emissions}_i \]

To determine the attribution factor at the company level, the following equations are considered, applying the same criteria as for the previous portfolios:

\[ \text{Attribution Factor} = \frac{\text{Outstanding amount}}{\text{Total Enterprise Value}} \]

### Physical emissions intensity

#### Energy – Oil & Gas

Considers total production on electrical energy, expressed in MWh, for the companies included in the portfolio. Typically, production data sourced from external vendors provides the breakdown of production for each type of technology. So, the total production for company “i” is obtained as the sum of the production of its different technologies:

\[ \text{Production}_i = \sum \text{Production technology}_i \]

#### Aviation

Considers total “revenue passenger kilometers” (RPK), which is the total number of paying passengers multiplied by the distance flown, for the companies included in the portfolio.

#### Steel

Considers total production of steel products, expressed in tons of steel, for the companies included in the portfolio. Considering that production in the sector is difficult to collect manually due to the different types of steel produced, a proxy for total production is used, derived from emission intensity and emissions for each company:

\[ \text{Production}_i = \frac{\text{Emissions}_i}{\text{Emission intensity}_i} \]

GHG emission scopes, calculation methodologies and data sources for each portfolio follow the criteria and methodology described for **Financial emissions intensity**.
## Contents


### Socially Responsible Investment Assets under Management

Socially Responsible Investment Assets under Management (hereinafter SRI AuM, or AuM), are presented below:

- Total amount of Socially Responsible Investment Assets under Management, expressed in EUR billion, obtained from the consolidated data of Santander Wealth Management. For the base reports sent by Santander Global Private Banking (PB) and Santander Asset Management (SAM), it represents the value corresponding to the Total Assets under Management classified as SRI in the SFDR Regulation (EU Reg. 2019/2088). Assets managed by Santander Asset Management (SAM) in the Europe and non-equivalent criteria in geographic hasers. SFOF does not apply (mainly Latin America) and Third Party Funds from the Private Banking segment.

### Thermal coal-fired power & mining phase out

In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries include the total amount of Socially Responsible Investment Assets under Management (hereinafter SRI AuM, or AuM), for the closing balances as of June 30th, 2023, in accordance with the methodology established by management, as presented below:

- Global Net REC of clients in sector of thermal coal mining or thermal coal-fired power generation. In this last case, if the activity represents more than 10% of gross consolidated revenues. Sum of the net REC of the customers under the perimeter of the watcher.

### Carbon neutrality in own operations

In the reporting scope of this indicator, Banco Santander S.A. and subsidiaries state the carbon neutrality of their own operations, for the year between January 1st and December 31st, 2022, in accordance with the methodology established by management, as presented below:

- Santander is committed to being carbon neutral in their own operations. The greenhouse gas (GHG) emissions subject to compensation will be estimated based on the operational emissions (see reporting criteria for Scope 1 and 2 below) associated with its ten main marktes (G10): Spain, Portugal, Germany, Poland, UK, USA, Mexico, Brazil, Argentina and Chile. Once GHG emissions have been calculated, Santander must carry out the compensation of the emissions that it has not been able to reduce, purchasing carbon credits from offset projects offered by providers of this service.

- The process of calculating the estimated emissions for each year will be carried out as close in time as possible to the bidding process, so that the amount of carbon credits purchased cover the actual emissions that occur in the exercise.

- In order to maintain the condition of being carbon neutral, Santander will carry out the compensation of emissions on a recurring basis every year, once it has been calculated how much these have amounted to and how many carbon credits must be acquired.

### Renewable energy

- Total installed capacity of renewable energy projects that were financed or advised on, for the year between January 1st and December 31st, 2022, in accordance with the methodology established by management, as presented below:

### Greenfield finance

- Total installed capacity of greenfield renewable energy projects that were financed or advised on in the reporting period, expressed in MW. Greenfield projects are defined as those new projects yet to be built as of the financing date.

### Brownfield finance

- Total installed capacity of brownfield renewable energy projects that we financed or advised on in the reporting period, expressed in MW. Brownfield projects are defined as those projects already existing and producing electricity at the financing date.

### Environmental footprint

- Total energy consumption in the company’s buildings and office networks, expressed in GJ. Total energy consumption is calculated based on the quantity data for natural gas, gasoil, electricity, diesel and all fuels consumed by the company. Conversion factors are obtained from the UK Government GHG Conversion Factors for Company Reporting published by OERI for 2022.

### Total internal energy consumption

- Total energy consumed in the company’s buildings and office networks, expressed in million kWh. Total energy consumption is calculated based on the corresponding data for electricity consumption.

### Total electricity consumption

- Total electricity consumed in the company’s buildings and office networks, expressed in million kWh. Total electricity consumption is calculated based on the base reports sent by SC/B for this information not to be available, since many of them pay for water consumption indirectly, an estimate can be made using the average daily consumption of 100 m³/day/employee, being calculated from a consumption sample of bank branches in Spain. The water consumption for said office can be obtained multiplying this rate by the number of employees in the office and by the number of working days in the year.

### Electricity consumption from renewable resources

- Total renewable electricity consumed in the company’s buildings and office networks expressed in million kWh. Total electricity consumption is calculated based on the corresponding data for electricity consumption certified as renewable energy.

### Water consumption

- Total consumption of public water supply of a certain building or of a network of offices, expressed in cubic meters (m³). The calculation of the total volume consumed in the reporting period is obtained from the corresponding data reported by each individual building or office, based on invoices or meters. Water consumption is calculated by the office, considering all the water consumption for this information not to be available, since many of them pay for water consumption indirectly, an estimate can be made using the average daily consumption of 100 m³/day/employee, being calculated from a consumption sample of bank branches in Spain. The water consumption for each office can be obtained multiplying this rate by the number of employees in the office and by the number of working days in the year.

### Total paper consumption

- Total paper consumption from all the different areas in the company, such as reprographics, printing, advertising, posters and postal mail, expressed in metric tons. The final value of total paper consumption is obtained from the corresponding data reported by each individual building or office, based on invoices or meters. Total paper consumption is calculated by the office, considering all the data on paper consumption is consolidated at the country level and there is no breakdown by building or network of offices. In this case, all consumption will be reported by a single site (preferably the country’s main office).

### The report of total paper consumption is reported separately following a classification based on the type of paper. The types of paper may be:

- Purchased Certified Paper Consumption. Paper that has been managed in a sustainable way, evidenced via certifications such as FSC and PEFC.
- Purchased Non-Certified Paper Consumption. Paper that does not have any certification related to sustainable sourcing/management.
- Purchased Recycled Paper Consumption. Paper that has been manufactured from previously used paper. The type of paper may, or may not, be certified.
Independent verification report

**Paper and cardboard waste**

Total paper and cardboard waste from all buildings and networks of offices, expressed in metric tons. The final value of total paper and cardboard waste is obtained from the quantity consumption data reported by each individual building or office based on reports of the waste management service provider. It may be the case in which the data on paper and cardboard waste is consolidated at the country level and there is no breakdown by building or network of offices. In this case, the consumption will be reported by a single site (generically the country’s main office).

**Scope 1 – Direct GHG emissions**

Total quantity of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated by combustion processes as a consequence of the consumption of natural gas, diesel and gasoline produced through conventional processes, air travel, railway operations, or any other direct GHG emissions.

Formula:

\[ \text{kg CO}_2\text{eq} = \text{Activity Data} \times \text{Emission Factor} \times \left( \frac{\text{kg CO}_2\text{eq/liter}}{\text{liter}} \right) \]

**Scope 2 – Indirect GHG emissions**

Total quantity of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated as a consequence of the consumption of electricity consumed in the Company’s buildings and office networks. Emissions are calculated following an operational control approach, based on the quarterly data for electricity consumption and the use of emission factors obtained from the CO₂ emissions from fuel combustion highlight report published by the International Energy Agency in 2021. To obtain the data for direct scope 1 emissions, the following equation is applied:

\[ \text{kg CO}_2\text{eq} = \text{Activity Data} \times \text{Emission Factor} \times \left( \frac{\text{kg CO}_2\text{eq/kWh}}{\text{kWh}} \right) \]

**Location-based emissions**

For this approach, the 2021 IEA emission factor for each country was applied to all consumed electricity. Emissions are calculated following an operational control approach based on the quarterly data for electricity consumption and the use of emission factors obtained from the UK Government GHG Conversion Factors for Company Reporting published by DEFRA for 2022. To obtain the data for direct scope 1 emissions, the following equation is applied:

\[ \text{kg CO}_2\text{eq} = \text{Activity Data} \times \text{Emission Factor} \times \left( \frac{\text{kg CO}_2\text{eq/MWh}}{\text{MWh}} \right) \]

**Market-based emissions**

For this approach, the 2021 IEA emission factor for each country was applied to the electricity not certified as being produced from renewable sources. For certified green energy electricity, no emissions are considered, i.e., emission factor equals zero.

**Total quantity of greenhouse gas (GHG) emissions, expressed in tons of CO₂ equivalent, generated as a consequence of the consumption of electricity consumed in the Company’s buildings and office networks.**

Activity Data:

- Number of available parking spaces at central service buildings
- Number of working days in the quarter

\[ \text{Total quantity of greenhouse gas (GHG) emissions} = P \times (\text{Number of available parking spaces at central service buildings} \times \text{Number of working days in the quarter}) \]

Where:

- \( P \) = Number of available parking spaces at central service buildings
- Note: The use of a personal car by employees in Argentina, Poland or the UK is not reported due to the unavailability of the information.

Notes:

1. Activity data is understood to be the parameter that defines the degree or level of the activity that generates GHG emissions. For example, the gasoline consumption (liters) of a vehicle, or the amount of electricity (kWh) used in a building. The emission factor, in turn, describes the amount of GHG emitted for each unit of the “activity data” parameter.

Source: Guía para el cálculo de la huella de carbono y para la elaboración de un plan de mejora de una organización. MITECO (June, 2003).
Non-IFRS and alternative performance measures

This document contains financial information prepared according to International Financial Reporting Standards (IFRS) and taken from our consolidated financial statements, as well as alternative performance measures (APMs) as defined in the Guidelines on Alternative Performance Measures issued by the European Securities and Markets Authority (ESMA) on 5 October 2015, and other non-IFRS measures. The APMs and non-IFRS measures were calculated with information from Grupo Santander; however, they are neither defined or detailed in the applicable financial reporting framework nor audited or reviewed by our auditors. We use these APMs and non-IFRS measures when planning, monitoring, and evaluating our performance. We consider them to be useful metrics for our management and investors to compare operating performance between periods. Nonetheless, the APMs and non-IFRS measures are supplemental information; their purpose is not to substitute IFRS measures. Furthermore, companies in our industry and others may calculate or use APMs and non-IFRS measures differently, thus making them less useful for comparison purposes. APMs using ESG labels have not been calculated in accordance with the Taxonomy Regulation or with the indicators for principal adverse impacts in SFDR. For further details on APMs and Non-IFRS Measures, including their definition or a reconciliation please see “Alternative performance measures” section of Banco Santander, S.A. (Santander) Q2 2023 Financial Report, published on 26 July 2023. This document is available on Santander’s website (https://www.santander.com/en/shareholders-and-investors/financial-and-economic-information#quarterly-results).

Non-financial information

This document contains, non-financial information (NFI), including environmental, social and governance-related metrics, statements, goals, commitments and opinions. NFI is not audited nor reviewed by an external auditor (with the exception of Greenhouse Gas Statement of Santander and subsidiaries for the financial year ended December 31, 2022, which has been third party verified to a limited assurance by “PricewaterhouseCoopers Auditores, S.L.” in accordance with the International Standard on Assurance Engagements 3410 (ISAE 3410), “Assurance Engagements on Greenhouse Gas Statements” issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC)). NFI is prepared following various external and internal frameworks, reporting guidelines and measurement, collection and verification methods and practices, which are materially different from those applicable to financial information and are in many cases emerging and evolving. NFI is based on various materiality thresholds, estimates, assumptions, judgments and underlying data derived internally and from third parties. NFI is thus subject to significant measurement uncertainties, may not be comparable to NFI of other companies or over time or across periods and its inclusion is not meant to imply that the information is fit for any particular purpose or that it is material to us under mandatory reporting standards. NFI is for informational purposes only and without any liability being accepted in connection with it except where such liability cannot be limited under overriding provisions of applicable law.

Forward-looking statements

Santander hereby warns that this document contains “forward-looking statements” as per the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Such statements can be understood through words and expressions like “expect”, “project”, “anticipate”, “should”, “intend”, “probability”, “risk”, “VaR”, “RoRAC”, “RoRWA”, “TNAV”, “target”, “goal”, “objective”, “estimate”, “future”, “commitment”, “commit”, “focus”, “pledge” and similar expressions. They include (but are not limited to) statements on future business development, shareholder remuneration policy and NFI. However, risks, uncertainties and other important factors may lead to developments and results to differ materially from those anticipated, expected, projected or assumed in forward-looking statements. The following important factors (and others described elsewhere in this document and other risk factors, uncertainties or contingencies detailed in our most recent Form 20-F and subsequent 6-Ks filed with, or furnished to, the SEC), as well as other unknown or unpredictable factors, could affect our future development and results and could lead to outcomes materially different from what our forward-looking statements anticipate, expect, project or assume: (1) general economic or industry conditions (e.g., an economic downturn; higher volatility in the capital markets; inflation; deflation; changes in demographics, consumer spending, investment or saving habits; and the effects of the war in Ukraine or the COVID-19 pandemic in the global economy) in areas where we have significant operations or investments; (2) climate-related conditions, regulations, policies, targets and weather events; (3) exposure to various market risks (e.g., risks from interest rates, foreign exchange rates, equity prices and new benchmark indices); (4) potential losses from early loan repayment, collateral depreciation or counterparty risk; (5) political instability in Spain, the UK, other European countries, Latin America and the US; (6) legislative, regulatory or tax changes (including regulatory capital and liquidity requirements), especially in view of the UK’s exit from the European Union and increased regulation prompted by financial crises; (7) acquisition integration challenges arising from deviating management’s resources and attention from other strategic opportunities and operational matters; (8) our own decisions and actions including those affecting or changing our practices, operations, priorities, strategies, policies or procedures; (9) uncertainty over the scope of actions that may be required by us, governments and others to achieve goals relating to climate, environmental and social matters, as well as the evolving nature of underlying science and industry and governmental standards and regulations; and (10) changes affecting our access to liquidity and funding on acceptable terms, especially due to credit spread shifts or credit rating downgrades for the entire group or core subsidiaries.
DISCLAIMER

Forward looking statements are based on current expectations and future estimates about Santander’s and third-parties’ operations and businesses and address matters that are uncertain to varying degrees, including, but not limited to developing standards that may change in the future; plans, projections, expectations, targets, objectives, strategies and goals relating to environmental, social, safety and governance performance, including expectations regarding future execution of Santander’s and third-parties’ energy and climate strategies, and the underlying assumptions and estimated impacts on Santander’s and third-parties’ businesses related thereto; Santander’s and third-parties’ approach, plans and expectations in relation to carbon use and targeted reductions of emissions; changes in operations or investments under existing or future environmental laws and regulations; and changes in government regulations, regulatory requirements and internal policies, including those related to climate-related initiatives.

Forward-looking statements are aspirational, should be regarded as indicative, preliminary and for illustrative purposes only, speak only as of the date of this report, are informed by the knowledge, information and views available on such date and are subject to change without notice. Santander is not required to update or revise any forward-looking statements, regardless of new information, future events or otherwise, except as required by applicable law.

Past performance does not indicate future outcomes

Statements about historical performance or growth rates must not be construed as suggesting that future performance, share price or results (including earnings per share) will necessarily be the same or higher than in a previous period. Nothing in this document should be taken as a profit and loss forecast.

Third Party Information

In this document, Santander relies on and refers to certain information and statistics obtained from publicly-available information and third-party sources, which it believes to be reliable. Neither Santander nor its directors, officers and employees have independently verified the accuracy or completeness of any such publicly-available and third-party information, make any representation or warranty as to the quality, fitness for a particular purpose, non-infringement, accuracy or completeness of such information or undertake any obligation to update such information after the date of this document. In no event shall Santander be liable for any use by any party of, for any decision made or action taken by any party in reliance upon, or for inaccuracies or errors in, or omission from, such publicly-available and third-party information contained herein. Any sources of publicly-available information and third-party information referred or contained herein retain all rights with respect to such information and use of such information herein shall not be deemed to grant a license to any third party.

External verification

PricewaterhouseCoopers Auditores, S.L., an independent firm charged with auditing the financial statements of Banco Santander S.A., issued a verification report, with limited assurance, on the selected indicators mentioned in PwC verification report (Annex “Independent verification report”), according to the International Standard on Assurance Engagements (ISAE) 3000 (Revised). The report’s conclusion can be found in the Annex “Independent verification report” at the end of this Climate Finance Report.

Not a securities offer

This document and the information it contains does not constitute an offer to sell nor the solicitation of an offer to buy any securities.
Glossary

ACT  Assessing Low Carbon Transition
AGM  Annual General Meeting
APMs Alternative Performance Measures
AuM  Assets Under Management
BEI  Banking Environment Initiative
BRC  Board Risk Committee
BMS  Building Management Systems
CAF  Development Bank of Latin America
CBES Climate Biennial Explanatory Scenario
CCB  Configuration Control Board
CCUS Carbon Capture, Utilisation and Storage
CEB Council of Europe development Bank
CEO  Chief Executive Officer
CESGA EFFAS Certified ESG Analyst
CFA  Chartered Financial Analyst
CFE  Comisión Federal de Electricidad
CISA  Climate Internal Scenario Analysis
CISL Cambridge Institute for Sustainability Leadership
CRA  Agribusiness Receivables Certificate
CRO  Chief Revenue Officer
DCM  Debt Capital Markets
E&CC Environmental and Climate Change
EAD Exposure at default
EBA  European Banking Authority
EBRD European Bank for Reconstruction and Development
ECB  European Central Bank
EDF Environmental Defense Fund
EFPA European Financial Planning Association
EFRAG European Financial Reporting Advisory Group
EIB  European Investment Bank
EMDEs Emerging market and developing economies
ENCORE Exploring Natural Capital Opportunities, Risks and Exposure
EPCs  Energy Performance Certificate
ESCC  Environmental, Social and Climate Change
ESG  Environmental, Social and Governance
ESMA European Securities and Markets Authority
ETFs  Exchange Traded Funds
EV  Electric Vehicles
EWRM Enterprise Wide Risk Management
FATF Financial Action Task Force
FECE Federation of Domestic Appliance Merchants
FSC  Forest Stewardship Council
GARP Global Association of Risk Professionals
GBF  Global Biodiversity Framework
GFANZ Glasgow Financial Alliance for Net Zero
GHG  Greenhouse Gas
GVA  Gross Value Added
GSID  Global Investors for Sustainable Development
GTB  Global Transactional Banking
GTPS  Brazilian Roundtable on Sustainable Livestock
HPI  House Price Index
IASE International Association for Sustainable Economy
ICMA International Capital Market Association
IEA  International Energy Agency
IFAC  Innovative Finance for the Amazon, Cerrado and Chaco
IFC  International Finance Corporation
IFRS  International Financial Reporting Standards
IIGCC International Investors Group on Climate Change
ILAAP Internal Liquidity Adequacy Assesment Process
IMF  International Monetary Fund
IPBES Intergovernmental Policy Platform on Biodiversity and Ecosystem Services
IPCC  International Panel on Climate Change
ISSB  International Sustainability Standards Board
IUCN International Union for Conservation of Nature
KPIs  Key Performance indicators
LEAP Listening and Engagement Active Partnerships
LGD  Loss Given Default
LMA  Loan Market Association
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<th>Acronym</th>
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<tr>
<td>M&amp;A</td>
<td>Mergers and Acquisitions</td>
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<tr>
<td>MIGA</td>
<td>Multilateral Investment Guarantee Agency</td>
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<td>MITECO</td>
<td>Ministry for the Ecological Transition and the Demographic Challenge</td>
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<td>MREL</td>
<td>Minimum Requirement for own funds and Eligible Liabilities</td>
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<td>Statistical Classification of Economic Activities</td>
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<td>NFi</td>
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<td>NGFS</td>
<td>Network for Greening the Financial System</td>
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<td>NUTS</td>
<td>Nomenclature of Territorial Units for Statistics</td>
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<td>NZBA</td>
<td>Net Zero Banking Alliance</td>
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<td>NZE</td>
<td>Net Zero Emissions</td>
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<td>OECC</td>
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<td>PCAF</td>
<td>Partnership for Carbon Accounting Financials</td>
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