



CLIMATE DISCLOSURE

**Societe Generale's climate report
aligned with the TCFD recommendations**

Third Edition - December 2021

**THE FUTURE
IS YOU**  **SOCIETE
GENERALE**

FOREWORD BY FRÉDÉRIC OUDÉA



FRÉDÉRIC OUDÉA
CHIEF EXECUTIVE OFFICER

In 2021, more than 450 companies representing 40% of the world's financial assets came together in the Glasgow Financial Alliance for Net Zero (GFANZ). These institutions have collectively committed to align with net zero carbon emissions trajectories using science-based guidelines. This is a pivotal decision for the transition of the financial system to supporting a more responsible future.

For Societe Generale, pioneering science-based approaches and alliances to achieve the objectives of the Paris Agreement is part of our convictions. Hence, it felt natural to contribute to join as a founding member the Net Zero Banking Alliance (NZBA) and as a member the Net Zero Asset Owner Alliance (NZAOA), both belonging to the GFANZ.

Our world calls for change, for evolution, by placing the challenges of sustainable development as drivers of the transformations of our economies and societies. The Covid-19 pandemic has further accelerated the necessary reinvention of our business models, with rising expectations by stakeholders notably on climate commitments.

As one of the leading European financial services groups, based on a diversified and integrated banking model, the Group combines financial strength and proven expertise in innovation with a strategy of sustainable growth. The restatement of our purpose was an opportunity to allow us to put our responsibility, including our climate and environmental considerations, at the heart of our long-term vision. Committed to the positive transformations of the world's societies and economies, Societe Generale and its teams seek to build, day after day, together with its clients, a better and sustainable future through responsible and innovative financial solutions.

As a reference bank in the energy sector, Societe Generale will be a natural leader of the energy transition. We have committed to align our credit and investment portfolios with trajectories aiming for carbon neutrality by 2050, starting with highly carbon emissive sectors, as we did for the coal sector, and will support our clients in their transition. We will keep on working on defining alignment trajectories in industries such as real estate, automotive, steel and aviation. In all our activities – retail banking, corporate & investment banking, insurance or car leasing and fleet management – we are developing positive impact solutions in advisory, financing or investing services.

2021 was a time for action. We have strengthened our policies to no longer finance activities involving the exploration and production of unconventional hydrocarbons. And we are now engaged to halving our own operations carbon emissions between 2019 and 2030.

The group has decided in 2021 to further intensify its efforts to embed ESG objectives throughout the organisation and to become ESG by design.

The collective challenge of the energy transition is finding the appropriate rhythm according to the reality of the different geographies and sectors, taking social impact into account. As an institution involved in economies and societies, Societe Generale has a responsibility to support their transformation. Our 2021 Climate Disclosure report is illustrating our commitment to building a better and sustainable future.

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INTRODUCTION

Climate change is accelerating, and urgent and unprecedented changes are needed more than ever. The summer of 2021 saw extreme heat events in north-western US and Canada, rainfall and flooding in Germany, wildfires in Russian Siberia and other extreme events across the world. As illustrated by the 6th assessment report of the Intergovernmental Panel on Climate Change (IPCC), the world needs urgent, global and coordinated action to contain the now inevitable global warming.

Societe Generale has been engaged in the fight against climate change for many years now. And the Bank remains committed to support an extensive shift towards a decarbonised and more resilient economy.

In this third edition of Societe Generale's Climate Disclosure report, the Group highlights efforts made not only to manage the financial impact of climate change on its activities, but also the impact of its activities on climate change. The Group's governance, strategy, risk management framework and key performance indicators have been complemented and improved up until the publication of this report.

The Climate Disclosure report is an ongoing document. That means that qualitative information is up to date as of the publication date of this report. But quantitative indicators are calculated for the period running from 1 January 2020 to 31 December 2020, with data taken on 31 December 2020, unless otherwise specified.

Societe Generale's Climate Disclosure report is based on the Task Force for Climate-related Disclosure (TCFD)¹ recommendations and its four pillars (governance, strategy, risk management, metrics and targets).

1. CLIMATE STRATEGY

Societe Generale defined its corporate purpose in 2020 as “building together, with our clients, a better and sustainable future through responsible and innovative financial solutions”. This purpose, which was validated by the General Management and approved by the Board, came out of an extensive work and co-construction with 85,000 contributions from a variety of stakeholders and steers the Group's strategic reflection. Sustainability is at the core of the Group's strategy and fighting against climate change is one of its key elements. The climate strategy is articulated around three axes:

- Managing climate-related risks (transition and physical);
- Managing the Group's impact on climate (via its own operations and the offer of financial products and services to customers);
- Supporting the transformation of its customers with its financing as well as investment products and services.

In this third edition, the Group's climate strategy and its commitments are presented against a granular mapping of its activities. This mapping illustrates how Societe Generale's financing activities and investment activities represent the bulk of the Group's climate materiality. This edition also offers disclosure on the Group's public commitments.



“Societe Generale has been committed to limiting global warming since the Paris Agreement and joined in April 2021 the Net Zero Banking Alliance as a founding member. In 2021, as a demonstration of the central role of CSR in the Group's strategy, Societe Generale has decided to appoint Hacina Py as Group Chief Sustainability Officer, reporting directly to General Management. Becoming ESG by design means ESG is embedded in all our business activities and processes, in particular in managing social and environmental risks. As a responsible bank we will continue playing our part in accompanying our clients and societies in the transition towards a sustainable and fair economy”

DIONY LEBOT
DEPUTY CEO

¹ <https://www.fsb-tcdf.org/>

Figure 1: Overview of Societe Generale's climate strategy



1.1. Societe Generale's climate materiality at a glance

Societe Generale is one of the leading European financial services groups. Active in the real economy since 1864 with a solid position in Europe and connected to the rest of the world, Societe Generale employs over 133,000 employees in 61 countries and supports daily 30 million customers, businesses, and institutional investors around the world as of December 2020.

Figure 2 maps out the impacts of Societe Generale's own operations and business activities (via the offer of financial products and services to customers). It illustrates that the Group has a good degree of influence in reducing the impact on its own operations, but that influence diminishes depending on the type of business activities involved (e.g., the Group has more influence on its credit products than on market activities).

Figure 2: Overview of Societe Generale's main activities in relation to climate materiality (URD 2021)

IMPACT OF THE GROUP'S OWN OPERATIONS	IMPACT OF THE GROUP'S BUSINESS ACTIVITIES VIA THE OFFER OF PRODUCTS AND SERVICES TO CUSTOMERS			
Group real estate portfolio (3.2 million m ²) IT Infrastructure Employee mobility (272 million km travelled) Energy (590 GWh) Waste (11,633 tonnes) Water (1,29 million m ³) Paper (6,061 tonnes) Group purchasing (EUR 5.5 billion)	Real estate development 2,099 dwellings and 4,315 m ² of tertiary real estate delivered [Sogeprom]	Financing activities (EUR 1,004 billion of Exposure at Default) Corporates (30%) Sovereigns (29%) Retail customers (20%) Financial institutions (11%) Other (10%)	Investment activities (EUR 241 billion of Assets Under Management) Insurance [Sogécap] (52%) Private Banking (48%)	Market and investor services Fixed income and currencies, advisory services, payments, equity & security services have indirect materiality through the activities of clients
+ - Degree of influence/impact				

1.2. Societe Generale's climate strategy

Increasing awareness and understanding about climate-related risks and opportunities has influenced Societe Generale's strategic decisions across most of the activities highlighted in Figure 2. In 2017, Societe Generale presented its strategic plan for 2020, Transform to Grow, which set out a Corporate Social Responsibility (CSR) ambition for all the Group's activities. To define it, a Materiality Matrix was established to rank Environmental, Social and Governance issues after extensive consultation with 1,500 of the Group's stakeholders, both internal and external. The survey showed that climate change was ranked second among fourteen issues. Climate change became one of the 6 strategic pillars of the Group's CSR ambition (see Figure 2). It resulted in a climate strategy for 2017-2020, which was validated by the General Management and approved by the Board of directors. This strategy was structured around three core themes: 1) managing climate risks, 2) managing climate impacts, 3) financing the transition towards a low-carbon economy.

1.2.1 Managing climate-related risks on the Group

The Group does not view climate change risks as a new risk category but rather as an aggravating factor for the categories already covered by the Bank's risk management system (credit risk, operational risk, market risk, etc.). Accordingly, the existing risk management governance and processes have been updated to include climate risk factors, ensuring that the increasing relevance of such factors is properly considered.

- For credit risk, Societe Generale has made progress integrating into its standard credit risk assessment framework the evaluation and control of transition risks (on large corporates of sensitive sectors) and is working on deepening its understanding of physical risks.
- For compliance and reputation risks, Societe Generale has developed and maintained an E&S risk management framework with E&S general guidelines, cross-sectoral and sector-specific E&S policies (with dedicated E&S tools: identification lists, exclusion lists, evaluation procedures for clients, issuers and transactions).

The two processes are complementary: one assesses the long-term impact of transition risk on corporate client credit risk using scenario analysis, while the other looks at the short-term impact of transition risk on reputation risks using the Group's normative standards set out in its E&S policies. To ensure a better integration of climate risks into the Group's financial risk management framework, internal processes such as risk identification, stress testing, risk appetite setting, reporting and external disclosures continue to evolve to explicitly take these risks into account.

- ➔ See Section 3 for a complete overview of the climate-related risk assessment framework
- ➔ See Section 6.1 for metrics on climate-related risk and the implementation of E&S policies

1.2.2 Managing the Group's impact on climate

Managing impacts of the Group's own operations

Societe Generale manages the climate impact of its own operations (electricity consumption, employee transport, IT infrastructure, etc.) via an internal carbon tax and a set of environmental policies. As part of its 2014-2020 carbon reduction programme, Societe Generale undertook to cut its greenhouse gas emissions per occupant by 25% and to improve the energy performance of the Group's buildings by 20%. The Group met its ambition by 2019: GHG emissions per occupant were down 25% and energy performance per occupant had improved by 25%.

In July 2021, Societe Generale set a new climate-related target for the Group to reduce the greenhouse gas emissions generated by its own operations (energy consumption, employee mobility, IT infrastructure, etc.). This new target accelerates the pace of efforts made to reduce carbon emissions and aligns this reduction with net-zero 2050 macro-economic scenario.

- On its own operations, the Group pledges to reduce its Scope 1, 2 & 3 GHG emissions by at least 50% by 2030 relative to 2019 levels.²
 - In addition to climate-related targets, Societe Generale is also banning single-use plastics in the workplace by 2025 across the world.
- ➔ See Section 4.1 for details on the Group's own operations approach
 - ➔ See Section 6.2.1 for metrics on own operations

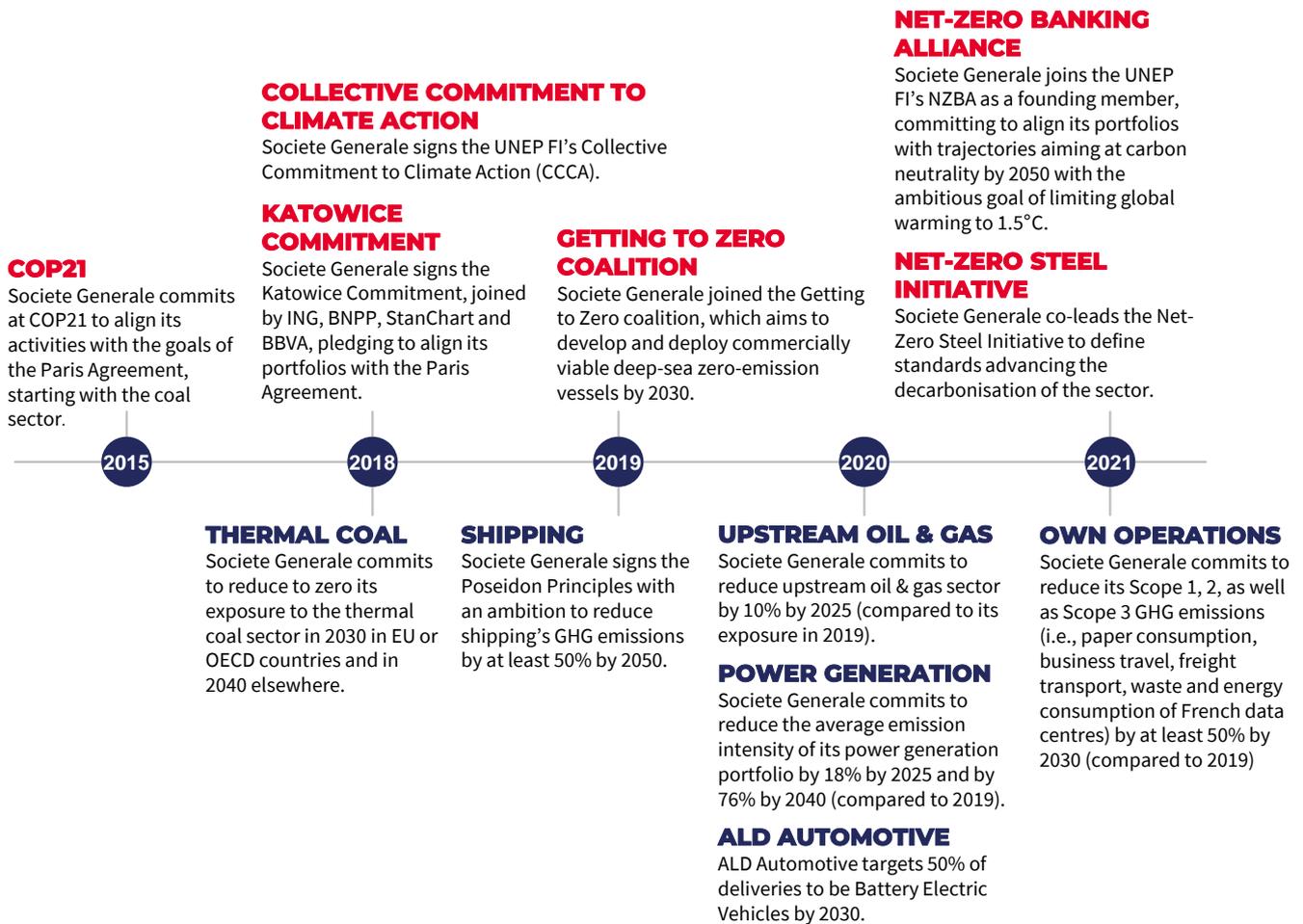
² Scope 1 covers direct emissions related to energy consumptions and fugitive emissions of fluorinated gases. Scope 2 covers indirect emissions related to energy consumption (external electricity, steam and chilled water). Scope 3 covers GHG emissions from all office paper consumption, business travel, freight transport, waste, and energy consumption of French data centres since 2017.

Managing impacts of the Group's business activities

The Group also manages the impact associated with its business activities by aligning its credit portfolios with the goals of the Paris Agreement. Over time several commitments and actions have been set in place and Societe Generale is one of the leaders in major industry initiatives to drive sustainable change (see Figure 3).

- See Section 4.2 for details on the portfolio alignment approach
- See Section 6.2.2 for metrics on portfolio alignment

Figure 3: Timeline of Societe Generale's commitments and actions



1.2.3 Supporting the sustainable and positive impact of our clients

As a committed and responsible partner in tackling today's climate challenges, Societe Generale offers a comprehensive range of finance and advisory services for clients active in the energy sector around the world. The Group has been investing in renewable energies for nearly two decades, taking a pioneering role in the funding of renewables, supporting innovative start-ups as well as financing large-scale projects. Today, as one of the world's top supporters of renewable energies, the Group remains more committed than ever to accompanying the development of its clients. The Group is also pivotal in financing the transition of heavy industries and new business models such as in the battery and hydrogen sectors.

In December 2017, Societe Generale committed to raise EUR 100 billion in financing earmarked for energy transition projects between 2016 and 2020. Having met this target a year early, the Group renewed its commitment, raising the bar to EUR 120 billion between 2019 and 2023, based on a range of sustainable financing solutions (loans, bonds, advisory).

- See Section 5 for details on the Group's financing offering
- See Section 6.3 for metrics on the Group's financing

1.2.4 Connecting with our stakeholders

Organisations and peers

Climate change is a shared global challenge. The Group has taken a wide range of collaborative actions with peer banks, international organisations, and regulators to manage financial and E&S risks.

→ See Appendix 1 to view all the public or private initiatives to which the Group is committed or engaged in.

Regulators

Societe Generale has been participating in consultation processes and working groups with regulators to promote regulations on sustainable finance.

This includes the provision of extensive feedback to the Technical Expert Group of the European Commission on the elaboration of the EU taxonomy, gathering expertise from across the Group on the technical screening indicators. The Group is now part of a working group organised by the United Nations Environment Programme Finance Initiative (UNEP FI) and the European Banking Federation (EBF) to provide high-level recommendations on the application of the EU taxonomy on a selection of banking products.

The Group also contributed to several consultations launched in the sustainable finance domain, such as the Renewed sustainable finance strategy of the European commission³, and the consultation on the Draft ECB Guide on climate-related and environmental risks⁴.

In addition, Societe Generale participated in a consultation by the European Commission and EFRAG (European Financial Reporting Advisory Group) on the standardisation of corporate information on sustainability in the context of the Revision of the Non-Financial Reporting Directive⁵ (NFRD).

Civil society

Societe Generale has been participating in various working groups and discussion meetings with some 10 NGOs (including Friends of the Earth, BankTrack, Oxfam, ShareAction, Urgewald, WWF, etc.), either in the form of bilateral meetings or broader consultation meetings organised by the associations themselves or, among others, by the OECD, the Equator Principles Association, and *Entreprises pour les Droits de l'Homme* (Companies for Human Rights).

Societe Generale was asked by the Student Manifesto for an Environmental Awakening to answer a questionnaire on how the Company is taking the climate emergency into account. This response has been posted online.⁶ The Group has a Dialogue and Transparency section on its website⁷.

1.2.5 Climate-related disclosure

As a founding signatory of the Principles for Responsible Banking (PRB), Societe Generale committed itself to transparency and accountability through public reporting. It is all the more important given that quality data and comparable frameworks of disclosure are crucial for addressing climate-related financial risks and mobilising sustainable finance.

Societe Generale was an early adopter of the TCFD recommendations beginning with its 2019 report and attaches great importance to the disclosure of climate-related information that is consistent, reliable, and clear. This third edition of our Climate Disclosure report is an illustration of this commitment.

In addition to this report, the Group implements the EU regulation on non-financial reporting requirements through the publication of Societe Generale's Declaration of Non-Financial Performance (DNFP), which is the national transposition of the NFRD. For this reason, part of the information can also be found in the DNFP.

While the TCFD recommendations took largely a financial materiality perspective, the NFRD brings a double materiality perspective, covering both financial materiality (how climate change affects the bank's activities) and environmental and social materiality (how the bank's activities affect climate change) (see Figure 4). Henceforth, reference to risks should be understood to refer both to risks of negative impacts on the company (transition and physical risks) and risks of negative impacts on the climate.

³ https://ec.europa.eu/info/consultations/finance-2020-sustainable-finance-strategy_en

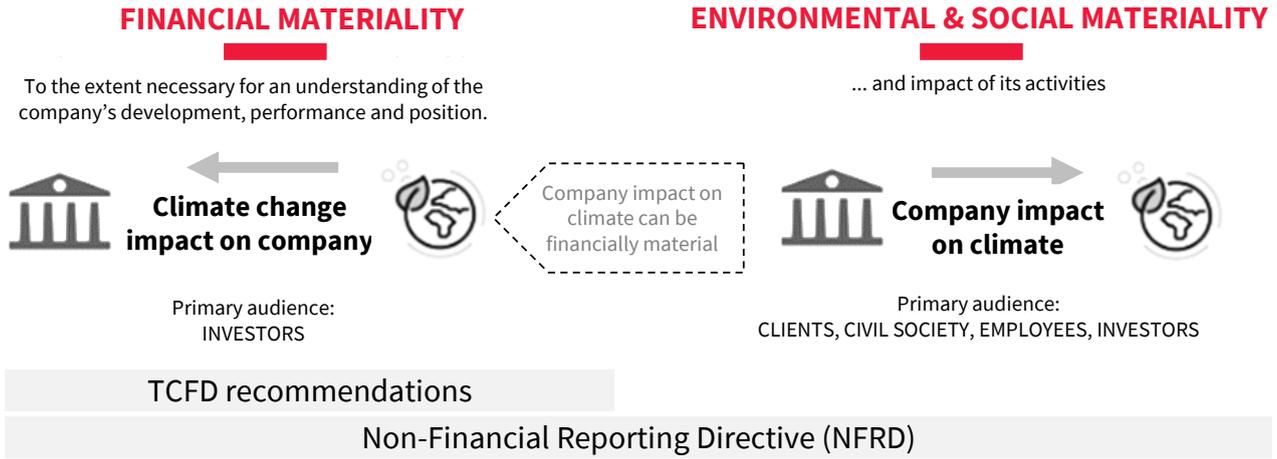
⁴ https://www.bankingsupervision.europa.eu/legalframework/publiccons/html/climate-related_risks.en.html

⁵ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12129-Revision-of-Non-Financial-Reporting-Directive/public-consultation>

⁶ <https://pour-un-reveil-ecologique.org/en/les-entreprises-nous-r%C3%A9pondent/#-reponses>

⁷ <https://www.societegenerale.com/en/news-and-media/dialogue-and-transparency>

Figure 4: The double materiality perspective in the context of climate-related reporting



In 2020, Societe Generale’s progress in environmental, social and governance was recognised externally with the highest rating (A1+) from extra-financial rating agency Vigeo Eiris and placed in the first decile by ISS ESG (C + Prime). In 2021 the Group has continued to receive best in-class ratings, with an upgrade to AAA by MSCI, placing the Group in the top 3% of banks worldwide and in the top 7% by the annual S&P Global Corporate Sustainability Assessment.

1.2.6 ‘ESG by Design’ and ‘ESG Analytics’ programmes

Two new structuring programmes were launched in 2021, ‘ESG by Design’ and ‘ESG Analytics’, with a view to accelerate the operational implementation of the Group ESG transformation roadmap and develop ESG reporting production facilities.

ESG by Design is placed under the direct supervision of the Deputy CEO in charge of sustainability and is co-sponsored by the Risk department and the CSR Department. The programme will ensure compliance with supervisory expectation by delivering the predefined roadmaps for Climate and Environmental risk integration into the Group’s risk management framework. The programme will further develop the processes and tools allowing the strategic steering of the Group’s CSR engagements. This operationalisation will pay attention to the roles and responsibilities to tinge existing production processes with ESG features where necessary, for example in KYC, credit granting, new product design/structuring, IT architecture.

The ESG Analytics programme aims to develop reporting production capacities for internal steering and mandatory regulatory reporting. Key features will involve ESG data industrialisation and data quality qualification.

1.3. Assessing the resilience of the Bank's strategy with scenario analysis



“Climate scenarios are key, not just for risk management and strategic planning, but also to build a common understanding with our clients, paving the way for innovative solutions to help support investments for a sustainable future.

The Covid-19 crisis has had an accelerating impact on several dimensions of the climate transition and is visible in the fiscal policies of many governments. The climate transition is also clearly seen as an opportunity for securing the near-term economic recovery.”

MICHALA MARCUSSEN
GROUP CHIEF ECONOMIST AND HEAD OF ECONOMIC AND SECTOR STUDIES

1.3.1 Why Societe Generale uses scenarios

Strategic planning requires the use of forward-looking scenarios. The materiality and timing of climate-related risks are uncertain across geographies, subject to potentially different policy and societal choices and may also depend on still unknown technological developments. It is therefore necessary to consider how risks and opportunities can evolve under different conditions.

Scenario analysis is a means to explore a series of plausible future states relating to climate change and provides a coherent framework for formalising the reasoning on possible futures. The approach helps to minimise the biases that expert judgement may introduce and allows a bridge to existing frameworks as these are built out.

1.3.2 How scenarios are used to inform the bank's strategy

Societe Generale has used scenarios to stress the resilience of the Bank's strategy for several years, reflected in its portfolio allocation, through two types of exercise:

- **Assessing climate-related risks:** Since 2018, the Bank assesses the impact of transition risks using the Sustainable Development Scenario (SDS) of the International Energy Agency (IEA) on the most sensitive sectors of its corporate portfolio. A similar exercise was carried out for physical risks but unlike for transition risks, the methodology is not sufficiently developed to allow an adequate financial assessment.
- **Strategic portfolio reallocation decisions:** Societe Generale has reduced its coal financing in line with the IEA's 2°C Scenario (2DS) since 2016. The Group has also been active in the development of an open-source methodology (the PACTA methodology), in conjunction with the think tank 2°C Investing Initiative (2DII) and partnering banks known as the Katowice Banks (ING, BNPP, Standard Chartered and BBVA), to assess the alignment of its activities with the goals of the Paris Agreement. The PACTA methodology relies on climate scenarios used and developed by organisations such as the IEA. The results are presented in Section 6.2.2.

Table 1 summarises the use of scenarios over previous years.

Table 1: Complementary information on the climate scenarios used

Strategic exercise	Year used	Scenario used	Horizon (max)
Coal reduction target	2016	IEA 2DS and IEA 450 scenarios	Up to 2020
Physical risks (operations)	2017	Seine River Flooding (in-house)	NA
Transition risks (credit)	2018	REMIND SSP2 (2°C) and IEA SDS scenarios	
	2019 - Present	IEA SDS scenario	
Portfolio alignment (multiple sectors including coal)	2019 - Present	IEA SDS scenario	Up to 2040/2050
Shipping alignment	2019 - Present	IMO 2050 ambition	

1.3.3 Governance and rationale for selection

The reference scenarios are reviewed annually by the Group Chief Economist and the selection is validated by the Risk Committee 'CORISQ', chaired by General Management, in a dedicated session for climate-related risks. The choice of a reference scenario applies both to transition risk assessment and portfolio alignment exercises. If the selected scenario does not cover a given activity, other ad-hoc scenarios may be used.

The selection process considers several criteria including the institutional set up of the scenario provider, transparency of the scenario assumptions and modelling, frequency of updates, coverage in terms of both sectors and geographies and efficiency of use.

In 2019, in accordance with the selection process described above, the CORISQ validated the Sustainable Development Scenario (SDS) of the International Energy Agency (IEA) as the Group reference scenario to be used for transition risk assessment and portfolio alignment exercises.

1.3.4 Future developments

In April 2021, Societe Generale strengthened its climate ambition by joining the Net Zero Banking Alliance (NZBA) as a founding member. In joining the NZBA, the Group undertakes to align its portfolios and own operations with a trajectory compatible to reach net-zero emissions by 2050 which is equivalent to reaching 1.5°C by the end of the century.

The guidelines of the NZBA require banks to use widely accepted science-based decarbonisation scenarios from credible and well recognised sources. The scenarios are required to have no or low overshoot, rely conservatively on negative emissions technologies and have reasonable assumptions on carbon sequestration achieved through nature-based solutions and land-use change. The IEA SDS and NZE2050 scenarios are both referenced as suitable scenarios by the NZBA.

Presently, Societe Generale uses the SDS as its main reference scenario. In the NZBA transition period to April 2024, when the full application of the NZBA guidelines comes into force, Societe Generale will progressively adopt a net-zero emissions by 2050 scenario for all its alignment targets.

Of note, this transition from the SDS to a net-zero scenario is a process that is already well underway as the Group works to review and set new sector targets. For example, the Group's upstream oil and gas reduction target of 10% by 2025 is more than twice as ambitious as of the IEA's SDS scenario in 2025 (of -4%). Moreover, in 2020, the Group updated its coal policy to be consistent with a 1.5°C scenario. Indeed, Societe Generale's coal, oil & gas and power targets are all more ambitious than the IEA SDS and respect the approach of emissions reduction, with minimal reliance on Negative Emission Technologies.



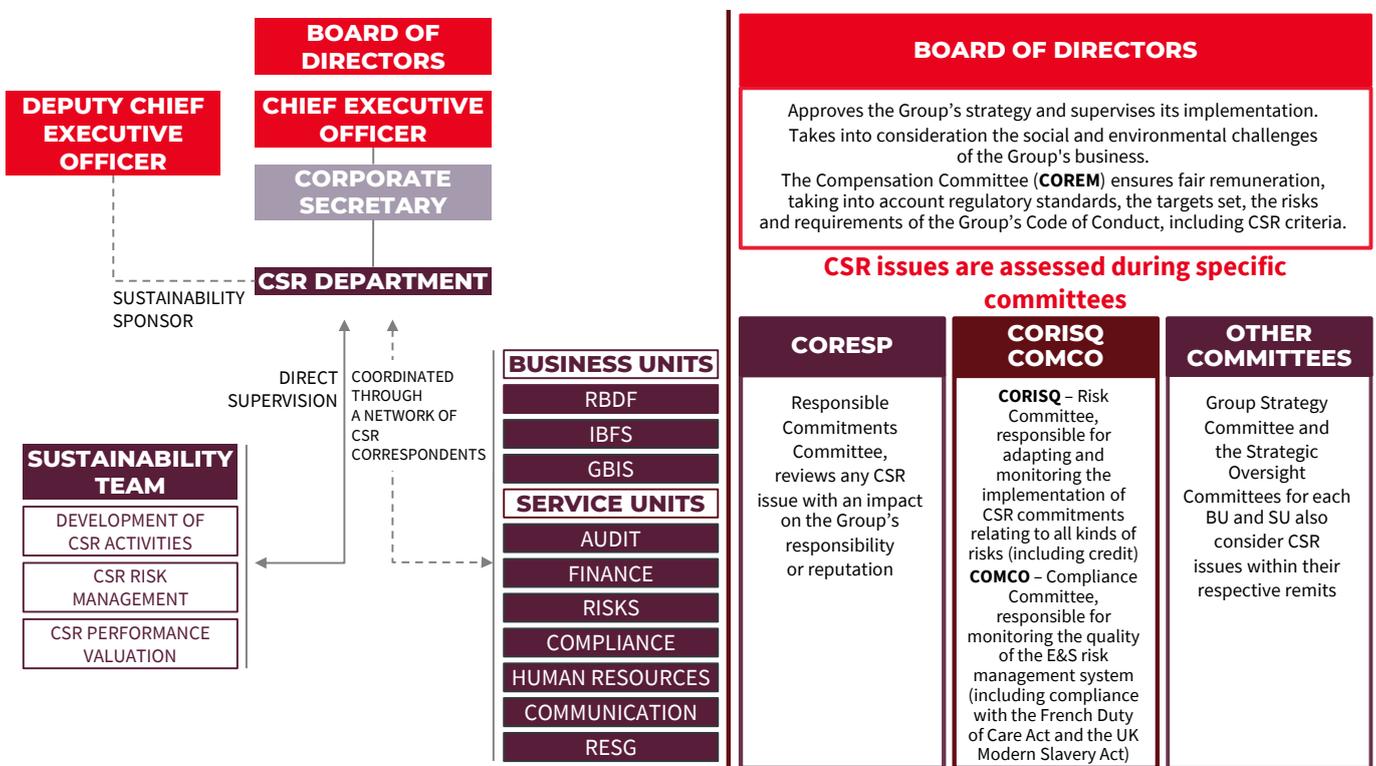
2. GOVERNANCE

Societe Generale is fully committed to act as a responsible bank: a tone which is set from the Board of Directors and embedded throughout the organisation. The Board of Directors approves the Group’s strategic CSR policy, oversees its implementation, and reviews it at least once a year. Climate change is included in the roadmaps for each Business and Service Unit and integrated in the performance criteria for the remuneration of General Management and in the employee remuneration policy.

Since 2019, a Responsible Commitments Committee ‘CORESP’, chaired by the General Management, has been set up to reinforce the governance and take strategic CSR decisions, including climate-related ones. 2019 was also marked by the update and integration of the Environmental and Social risk management principles into the Group’s new normative documentation, where the concepts of E&S risks and their governance have been more formally defined.

In May 2021, the Board of Directors appointed Mr Jean-Bernard Lévy as a Non-Voting Director (“censeur”) for a two-year period in accordance with article 7 of Societe Generale’s By-laws. One of his mission is to assist the Board of Directors in its mission regarding the energy transition.

Figure 5: CSR in the Group’s governance structure



2.1. Role of governance bodies

2.1.1 Board of Directors

The Board of Directors approves the orientation of the Group’s strategy, oversees its implementation, and reviews it at least once a year. As regards to climate-related risks and opportunities, in 2017, the Corporate Social Responsibility (CSR) policy, including Societe Generale’s climate strategy, underwent a strategic overhaul by the General Management and was presented to the Board of Directors. The CSR policy is supervised by the Board on an annual basis.

The Board also approves the global strategy, the risk appetite and verifies their implementations. As regards to climate-related risks, the Board Risk Committee has been informed of the analysis and orientations taken by the CORISQ (Risk Committee) of January 2017, October 2018, July 2019 and January 2021.

Following the adoption of the *Loi Pacte* which encourages companies to assert their purpose (*raison d'être*), the Board of Directors approved the Group's corporate purpose in 2020: following 85,000 contributions across the Group it was defined as "Building together, with our clients, a better and sustainable future through responsible and innovative financial solutions". The Board decided not to include the corporate purpose in the By-laws. However, at its Extraordinary General Meeting of 2020, Societe Generale modified its By-laws to specify that the Board sets the approach of the Company's activity and ensures it is implemented according to its corporate interests, by considering responsible environmental and social considerations.

Since May 2021, Jean-Bernard Lévy is appointed as Non-Voting Director for 2 years: in particular, the Board has asked M. Lévy to monitor how the Group defines and implements its energy transition strategy.

2.1.2 General Management

Since December 2021, the duties of General Management are performed by the Chief Executive Officer, Frédéric Oudéa, assisted by two Deputy Chief Executive Officers, Diony Lebot and Philippe Aymerich, and Deputy General Managers Slawomir Krupa, Gaëlle Olivier and Sébastien Proto.

Two general management-led committees are specifically concerned by the Group's climate strategy:

The **Responsible Commitments Committee (CORESP)**, created in 2019, deals with topics related to the Group's commitments and normative framework in CSR (including CSR sector policies), culture and conduct, or other topics that have an impact on the Group's responsibility or reputation: it reviews issues with an impact on the Group's responsibility or reputation; approves the Group's new commitments; defines the normative framework, and examines culture and conduct topics.

This committee is chaired by the CEO or, in his absence, by the Deputy CEO sponsoring CSR, and, depending on the agenda, is composed of the relevant Business and Service Units. The CORESP met 12 times in 2021, to address for instance: the update of sector policies, such as the oil & gas policy; the alignment of Societe Generale's own operations (setting new targets for its own operations); and a biodiversity roadmap was discussed.

The **Risk Committee (CORISQ)** meets about once a month and defines the Group's key priorities in terms of risks (credit, counterparty, market, operational and model risks), within the framework of the risk appetite, and monitors compliance in such respect. Subject to the powers attributed by the Board of Directors, the CORISQ, based on proposals from the Risk Department, takes the main decisions relating to the management of various risks (credit risks, counterparty risks, market and operational risks). The CORISQ responsibilities include the review of the main portfolios and those which present concentration risk and determines the risk framework in compliance with the Risk Appetite Statement (RAS) validated by the Board of Directors.

Since 2017, the CORISQ reviews climate-related risks annually, and especially the "reference climate scenario" of the Group and the portion of the credit portfolio exposed to climate-related risks (including alignment indicators). This annual analysis also reviews the continuous improvement of methodologies and a follow-up of the regulatory banking environment. The Risk Department in its secretary role for the CORISQ, may require the opinion of the CSR Department on environmental or CSR-related reputation issues when the credit portfolio is concerned (over the last 4 years the CSR Department has expressed its opinion on metals & mining, automotive, oil & gas, renewable energy, real estate, airlines and shipping sectors). In addition, the Board-level Risk Committee discusses climate risks several times a year. A certain number of subjects have been addressed in 2021, such as the ECB's review of the Group's self-assessment of environmental risks and of proposed action plans.

Considerations concerning the climate and climate-related risks are not under the sole responsibility of these two committees. More broadly, CSR questions are also considered in other General Management Committees including the Group Strategic Committee and the Strategic Oversight Committee of the Business and Service Units.

2.1.3 Group Management Committee

In addition to these committees, Societe Generale has a consultative committee for communicating and debating strategy and issues of general interest to the Group: the **Group Management Committee**. Comprising 61 executives appointed by the Chief Executive Officer, the Group Management Committee meets at least once every quarter. It communicates and debates strategy and issues of general interest to the Group.

Several individuals in the Group Management Committee have dedicated responsibilities as regards to climate-related affairs:

- **Diony Lebot**, Deputy Chief Executive Officer, is responsible for overseeing all ESG policies and their effective incorporation into the strategic trajectories adopted by the Group's business units and functions. She also has supervision of the specialised financial services and insurance activities, and particularly the strategic development of ALD Automotive, for which she chairs the Board of Directors.⁸
- **Hacina Py** is Chief Sustainability Officer and co-sponsor of the 'ESG by Design' programme. With sustainability increasingly core to the Group strategy, the Chief Sustainability Officer will report directly to General Management as of 1 January 2022.
- **Gilles Briatta** is Group General Secretary who manages the development and oversight of public affairs, institutional relations and advocacy initiatives, as well as CSR until the end of 2021.
- **Jean-François Despoux** is Deputy Chief Risk Officer of RISQ, co-sponsor of the 'ESG by Design' programme and oversees particularly climate-related risk integration into the Group risk management framework.
- **Patrick Folléa** is Head of Societe Generale Private Banking, supervises the development of climate-related affairs for the investment arm of Societe Generale.
- **Michala Marcussen** is Group Chief Economist and Head of Economic and Sector Studies, whose responsibilities include the Group climate scenario selection and the Group sovereign and sector-related risks assessments (including climate-related aspects).
- **Pierre Palmieri** is Head of Global Banking & Advisory and lead sponsor of the Sustainable and Positive Impact Finance (SPIF) offering for SG's wholesale businesses.

2.2. Key policies and due diligence processes related to climate mitigation

All Societe Generale Group activities are governed by rules and procedures contained in a set of documents referred to collectively as the "Standard Guidelines", compiled in the Societe Generale Code.

The Societe Generale Code groups together the standard guidelines which, in particular: define the governance of the Societe Generale Group, the structures and duties of its BU/SUs; and set out the operating framework of an activity and the management principles and rules applicable to products and services rendered and defines internal procedures. The Societe Generale Code has force of law within the Group and falls under the responsibility of the Group Corporate Secretary.

The update and integration of the E&S risk management framework into the Societe Generale Code in 2019 allows for the integration of E&S risk management into existing management processes, such as transactional processes, on-boarding processes and periodic customer review processes. Aspects relating to E&S risks are thus gradually being integrated into the credit and reputational risk management policies and processes of all BUs.

In addition, the Societe Generale Code includes since 2018 a risk taxonomy, in which risks associated with climate change are identified as factors that could aggravate the Group's existing risks (credit risks, operational risks, reputational risks, insurance risks, etc.).

2.3. Business Units and Service Units' roles

CSR objectives and processes (including climate ones) are rolled out in the roadmaps of all **Business Units (BU)** and **Service Units (SU)**, which are responsible for the implementation of the Group's CSR policy and the corresponding alignment of their actions.

The **CSR Department** is in charge of defining and proposing regular updates of the framework and of promoting CSR within the Group. Societe Generale has a **dedicated wholesale sustainable finance offering**, together with a **sustainable investment and retail offering**.

Since 2019, resources have increased with the recruitment or appointment of E&S experts in all BUs, including the strengthening of local teams in Africa, Eastern Europe and Russia, as well as in other BUs, such as Equipment Finance, Trade Finance, Global Transaction & Payment Services, and Global Markets. Other regions where the Group operated are also concerned.

⁸ This new role will take effect on the 17th January 2023. Gaëlle Olivier is appointed Deputy General Manager of the Group and Chief Operating Officer. In this role, she will supervise the Group's resources and be responsible for coordinating the IT, digital transformation and innovation function.

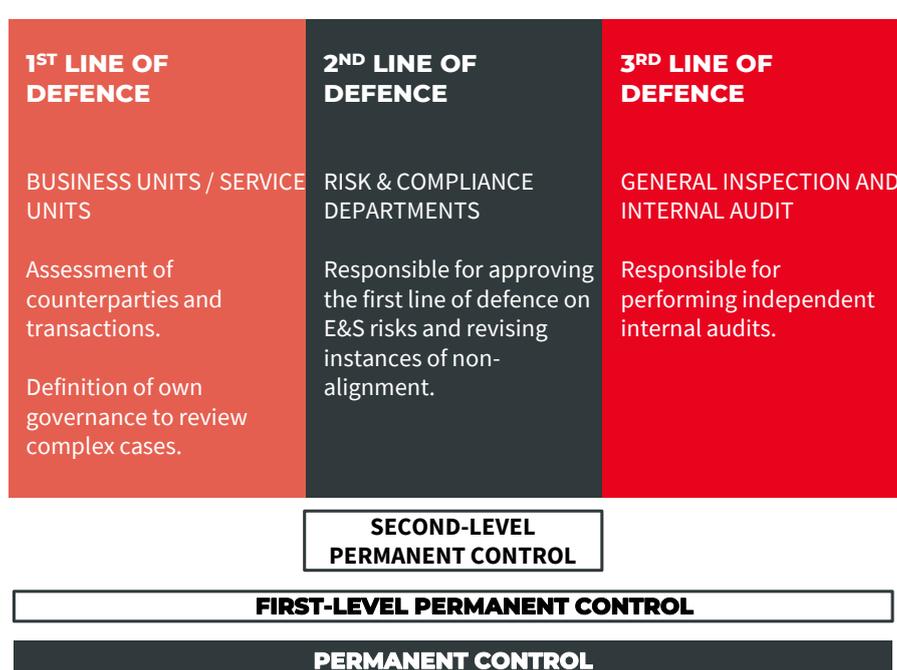
As regards to risks, as the first line of defence (LOD1), the BU/SUs (for their own activities) bear primary responsibility for assessing, managing and monitoring their risk levels in all risk categories, including climate-related risks. A second line of defence (LOD2) is composed of the Risk, Compliance and Finance departments and is entirely separate from the operational activities (in accordance with the French Order of 3rd November 2014).

The main role of the **Risk Department** is to support the development of the Group's activities and profitability by defining the Group's risk appetite (allocated between the Group's different business lines) in collaboration with the Finance Department and the BUs/SUs and in establishing a risk management and monitoring system as a second line of defence.

The Group **Compliance Department** is responsible for the definition and consistency of the non-compliance risk prevention and control framework, and for coordinating the framework aimed at preventing, identifying, assessing and controlling reputational risk across the entire Group (for which Compliance plays the LOD2 role). The Compliance Service Unit assists and monitors the implementation of the CSR policy.

Moreover, the Service Unit responsible for **General Inspection and Internal Audit** serves as an independent 3rd line of defence (LOD3). In 2019-2020, this department conducted a review of CSR risks and opportunities within the Group, demonstrating the rising importance of the subject for Societe Generale.

Figure 6: E&S Risk Management



2.4. Training and access to expertise on climate-related issues

Societe Generale continues to roll out training programmes on E&S and climate-related risks and opportunities to help embed climate across the Group. Key trainings include:

- Workshops organised to raise awareness of global warming and the energy transition: *La Fresque du Climat*, which started in 2020 and continues in 2021 across several Group entities in Investment Banking, Retail Banking and certain Service Units.
- A training course with customised modules focusing on the challenges of the energy transition was developed and distributed in 2020 and 2021 for client-facing staff: more than 10,000 employees have been trained by the end of 2021.
- Societe Generale engaged into the INVEEST program⁹ to further enhance skills in Energy Transition financing, especially for SMEs in industry.
- An e-learning course was originated to raise awareness on environmental- and social-related risks to train target audiences to factor environmental and social (E&S) risks into the Group's activities. It combines theoretical content with practical examples. 40,000 people have been trained to date.

⁹ https://inveest.org/?gclid=EA1aIQobChMx4HfnoT46glVV7LVCh3sKQSAEAAAYASAAEgLFvwD_BwE

- In French Retail Banking, a training course was organised at the end of 2020 focusing on the new E&S processes.
- Crédit du Nord trained close to 450 employees to engage with their client on E&S issues. In 2021, 716 clients or prospects had this exchange with the business advisors. These exchanges are formalised by a questionnaire, from which business advisors can learn about clients' compliance with Societe Generale's sectoral policies, their level of E&S commitment and their company's sensitivity to global warming.

Moreover, the deployment of the dedicated internal CSR portal launched in November 2020 is continuing to share with all staff the E&S principles and tools, align the practices among the Group, value the ESG performance of the businesses, and educate the employees in the whole Group on sustainable issues.

2.5. Remuneration linked to the Group's climate-related performance

2.5.1 Remuneration of Chief Executive Officers

The Compensation Committee (COREM) ensures fair remuneration, considering regulatory standards, the targets set, the risks and requirements of the Group's Code of Conduct, including CSR criteria (of which climate related topics).

The remuneration of Chief Executive Officers is broken down into three components: a fixed remuneration (FR), an annual variable remuneration (AVR) and long-term incentives (LTI).

The achievement of targets in relation to the Group's CSR policy is part of the evaluation criteria for the CEOs' annual variable remuneration. This annual variable remuneration is 60% based on quantitative criteria and 40% on qualitative criteria. The qualitative criteria include achieving the Group's CSR goals and its positioning in extra-financial ratings.

In the LTI, 20% of the award is based on CSR performance conditions:

- Half (10%) is conditional on the Group's positioning within three extra-financial rating agencies: S&P Global Corporate Sustainability Assessment (positioning in the first quartile), Sustainalytics (positioning in the first quartile) and MSCI (rating \geq BBB), which include an analysis of the Group's climate strategy and its impact;
- The other half (10%) is conditional on the Group's compliance with its energy transition financing commitments (100% vesting if the target is achieved in 2023 and 0% if the target is not met).

2.5.2 Remuneration of the other Management Committee members

In addition to the CEOs, the annual variable remuneration of the Group Management Committee, comprising 59 managers as of January 2021, complies with the CRD5 Directive and is subject to meeting predefined collective and individual targets.

Since 2018, the members of the Group Management Committee have been pursuing shared collective targets, including: financial performance; customer satisfaction and experience according to the Net Promoter Score; the employee commitment rate, measured by the Group's Employer Satisfaction Survey; Corporate Social Responsibility, through the Group's extra-financial ratings by S&P Global CSA (formerly RobecoSAM), Sustainalytics and MSCI. These targets dictate part of their variable compensation.

2.5.3 Remuneration of employees

Employee remuneration is composed of a fixed remuneration and an annual variable remuneration, though these are not tied to climate objectives.

However, in France, employees are involved in Societe Generale's long-term development through profit-sharing and/or incentive schemes. They are linked to the Group's overall performance (financial and non-financial) and regulated by Societe Generale agreements signed with the trade unions every three years. For Societe Generale SA in France, out of the total amount of profit-sharing and incentives paid in 2020 for the financial year 2019, 8% was related to CSR objectives. For more detail, see Societe Generale's [2020 Compensation Policies and Practices Report](#) and [2020 Performance and Compensation Report](#).

3. MANAGING CLIMATE RISKS

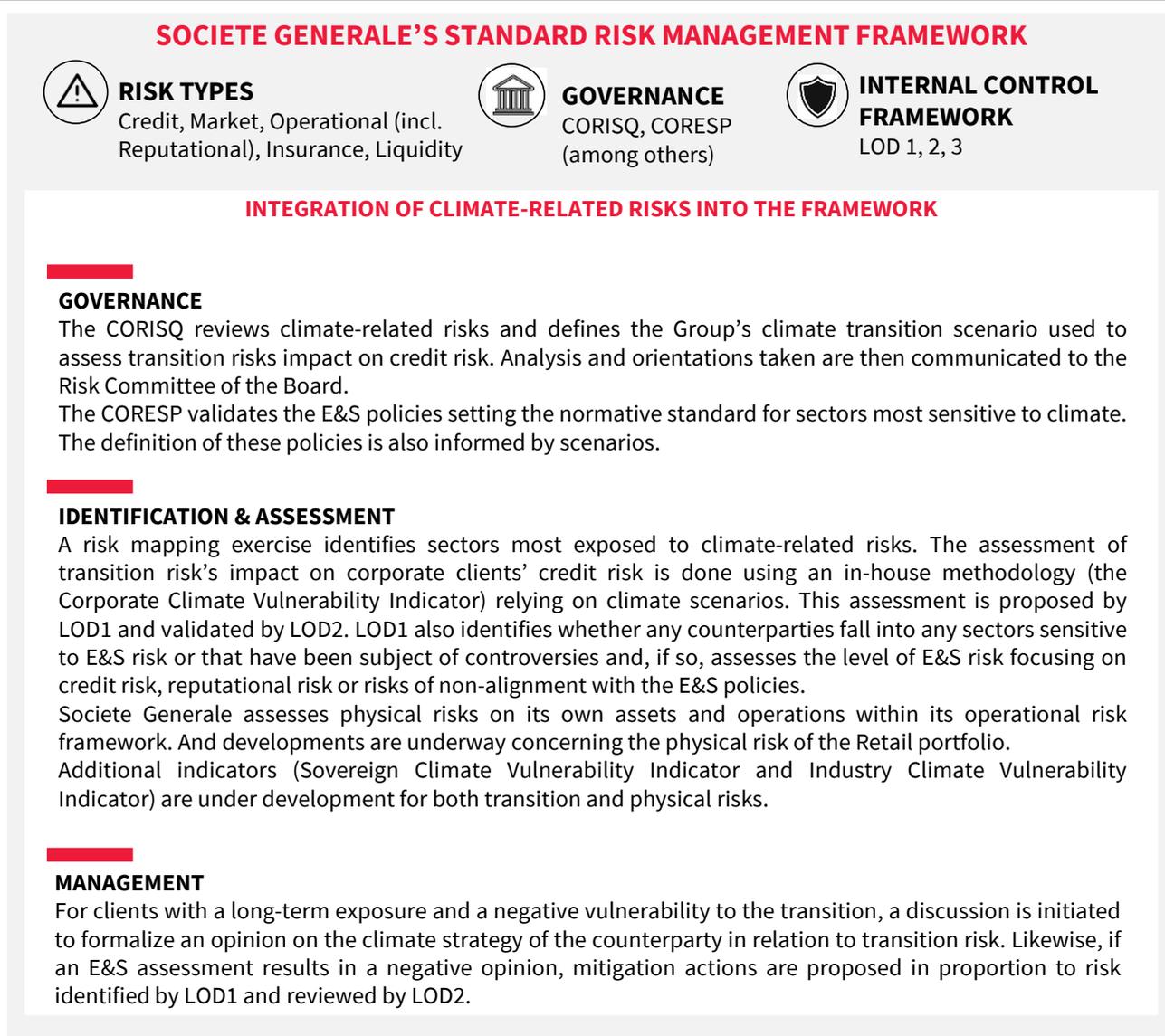
Societe Generale considers that risks associated with climate change (transition and physical risks) do not represent a new risk category, but rather an aggravating factor for the types of risks already managed through the risk management framework of the Group. As a result, the integration of climate-related risks relies on existing governance and processes and follows a classical approach (Identification, Quantification, Risk appetite setting, Control and Mitigation).



“An efficient risk management framework depends on the ability to develop the correct tools and competences at both LOD1 and LOD2 levels. It also requires having the necessary data (both internal and external), in particular through the rapid development of enriched databases adapted to evolving needs in terms of ESG risk monitoring.”

JEAN-FRANÇOIS DESPOUX
GROUP DEPUTY CHIEF RISK OFFICER

Figure 7: Integration of climate-related risks into the standard risk assessment framework



3.1. Climate-related risk terminology

Climate change is having an ever-increasing impact on our world's physical, social and economic systems, both directly, through the physical channels, and indirectly, through the actions taken to limit emissions with the transition and to minimise damages through adaptation.

The Group has adopted the risk terminology proposed by the TCFD for qualifying climate-related risks, i.e., physical and transition risks.

3.1.1 Transition risks – definition and main categories

Transition risk refers to an institution's financial loss that can result, directly or indirectly, from the process of adjustment towards a lower-carbon and more environmentally sustainable economy.

Transitioning to a low-carbon economy may entail extensive legal, regulatory, technological and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations.¹⁰ Even if not expressed as such in the TCFD recommendations, the Group has also considered liability risks, arising if parties who have suffered losses from physical and transition risk factors seek to recover these losses from those they view as responsible¹¹, in this category.

Table 2 shows the main categories of transition risks identified and their potential financial impact for Societe Generale and its customers (mainly in carbon-intensive sectors). In comparison with last year's report, the Group expects legal, regulatory and market impacts to become material on a short-term horizon.

Table 2: Transition risks (short-term (ST): <1 year, medium-term (MT): 1-5 years, long-term (LT): >5 years)

Risk driver	Impact description	Time horizon
Legal and regulatory	Higher operating costs for most carbon intensive customers (especially in Europe with the gradual implementation of the Green Deal and the "Fit for 55" package), as the price of carbon is expected to rise in the coming years	ST-MT
	Higher reporting obligations and related costs (data collection): <ul style="list-style-type: none"> Enhanced emissions-reporting obligations (e.g., scope 3) Green Taxonomy-related reporting expected (incl. for banks) New Non-Financial Reporting Directive at EU level 	
Technological	Additional potential capital requirements for banks for high carbonised exposures (concept of <i>brown penalising factor</i>) could increase the costs of customers' access to financing	MT-LT
	Costs to transition to lower emissions products and services (e.g., power generators customers with a high share of fossil fuel generation are expected to experience high capital expenditure requirements to decarbonise their mixes) Write-offs and early retirement of existing assets due to technology changes: decommissioning costs and stranded assets are foreseen in the power sector and oil & gas sector	
Market	Reduced demand for goods and/or services due to shift in consumer preferences (e.g., increasing demand for green financial services from customers)	ST-MT
	Change in revenue mix and sources resulting in decreased revenues: (e.g., shift in revenue from oil supply to gas supply for customers in the Oil & Gas sector)	

¹⁰ TCFD (2017) Recommendations of the Task Force on Climate-related Financial Disclosure <https://www.fsb-tcf.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf>

¹¹ Bank of England (2018) Transition in thinking: The impact of climate change on the UK banking sector <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf>

	Abrupt and unexpected shifts in energy costs: decrease in electricity wholesale prices resulting from large deployment of intermittent power generation technologies	
	Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations) may lead to increased liquidity risks for coal power assets	
Reputational	Reduced revenue from decreased demand for goods/services of stigmatised sectors and counterparties	ST

3.1.2 Physical risks – definition and main categories

Physical risk refers to the financial impact of a changing climate, including more frequent extreme weather events and gradual changes in climate. Physical risk is therefore categorised as ‘acute’ when it arises from extreme events, such as droughts, floods and storms, and ‘chronic’ when it arises from progressive shifts, such as increasing temperatures, sea-level rises and water stress.

Physical risks may have financial implications for organisations, such as direct damage, supply shocks (to own assets or indirect impacts on supply chain) or demand shocks (impacting downstream destination markets). Organisations’ financial performance may also be affected by changes in water availability, sourcing and quality, food security, and extreme temperature changes affecting organisations’ premises, operations, supply chain, transport needs and employee safety.

Table 3 shows the main categories of physical risks identified and their potential impact for the Group and its customers.

Table 3: Physical risks (short-term (ST): <1 year, medium-term (MT): 1-5 years, long-term (LT): >5 years)

Risk driver	Impact description	Time horizon
Acute risks	<p>Increased severity and multiplication of extreme weather events could lead to:</p> <ul style="list-style-type: none"> Lower revenues because of value chain impacts (impact on own assets as production centres, supply chain, commercial routes...) or end markets Increased capital costs (e.g., to repair damage to facilities) and insurance costs to cover potential future damages 	MT-LT
Chronic risks	<p>Changes in weather patterns (e.g., risings temperature, sea level...) could cause:</p> <ul style="list-style-type: none"> Lower revenues in areas where business models and operation facilities would be negatively impacted (e.g., temperature rise impact on agricultural yields or on number of working hours in the construction domain) Decrease of asset values in affected areas (e.g., real estate value in coastal flooding areas such as Florida) 	MT-LT

3.2. Integration of climate-related risks into the standard risk assessment framework

3.2.1 Identification and consideration of climate-related risks in relation to existing risk factors

Climate-related risk identification is part of the overall Group risk identification process. This Group-wide process is continuously performed to identify all risks that are or might be material. It is comprehensive and holistic (it covers all risk types and all Group exposures) and relies on two pillars:

- 1) The risk-management governance, including through key committees such as Risk Committees ‘CORISQs’ at Group level or business unit level, or New Product Committees, that monitor the risk profile per risk type (credit, market, operational...). In addition to the monitoring of identified risks, this governance allows for debate between risk experts and senior management on emerging risks and opportunities. This debate is fuelled by recent market news, warning signals, etc...

- 2) A series of exercises aiming to identify additional risks, e.g., arising from evolutions such as macro-economic or sector conditions; financial markets; regulatory constraints; competitors/market pressure; business model (concentration effects) and bank organisation. These additional identification exercises are organised by risk type and include some identification of cross-risk effects (e.g., market X credit, or credit X operational). For a given risk type, these exercises analyse and segment the Group exposure along several axes (Business Unit / activity / client / product / region...). For the perimeters where this risk is assessed as material, the underlying risk factors are identified.

For Societe Generale, climate-related risks do not form a new category of risks but constitute an aggravating factor of existing categories such as credit, market, operational, insurance risks and liquidity risks. This is in line with the best practices published in 2020 by the French banking regulator (*Autorité de contrôle prudentiel – ACPR*)¹² and the European Central Bank's *Guide on climate-related and environmental risks*¹³.

These risk categories are defined here below¹⁴:

- **Credit risk:** risk of losses arising from the inability of the Group's customers, issuers or other counterparties to meet their financial commitments. This risk includes the risk linked to market transactions and securitisation activities and may be further amplified by individual, country and sector concentration risk.
- **Counterparty credit risk:** credit risk of a counterparty on a market transaction, combined with the risk of changes in exposure.
- **Market risk:** risk of a loss of value on financial instruments arising from changes in market parameters, the volatility of these parameters and correlations between them. These parameters include but are not limited to exchange rates, interest rates, the price of securities (equity, bonds), commodities, derivatives and other assets.
- **Operational risk:** risk of losses resulting from operational failures, inadequacies or failures in processes, personnel or information systems, or from external events. It includes:
 - **non-compliance risk (including legal and tax risks):** risk of court-ordered, administrative or disciplinary sanctions, or of material financial loss, due to failure to comply with the provisions governing the Group's activities,
 - **reputation risk:** risk arising from a negative perception on the part of customers, counterparties, shareholders, investors or regulators that could negatively impact the Group's ability to maintain or engage in business relationships and to sustain access to sources of financing,
 - **misconduct risk:** risk resulting from actions (or inactions) or behaviour of the Group or its employees inconsistent with the Group's Code of Conduct, which may lead to adverse consequences for our stakeholders, or place the Group's sustainability or reputation at risk,
 - **IT and Information Systems Security risk (cybercrime, IT systems failures, etc.);**
- **Risk related to insurance activities:** through its insurance subsidiaries, the Group is also exposed to a variety of risks linked to this business. In addition to balance sheet management risks (interest rate, valuation, counterparty and exchange rate risk), these risks include premium pricing risk, mortality risk and the risk of an increase in claims.
- **Liquidity and funding risks:** liquidity risk is defined as the inability of the Group to meet its financial obligations: debt repayments, collateral supply, etc. Funding risk is defined as the risk that the Group will not be able to finance its business growth on a scale consistent with its commercial objectives and at a cost that is competitive compared to its competitors.

The Economic and Sector Studies Department, under the independent supervision of the Group Chief Economist, sets the methodology to identify the transition and physical risks. In the setting of the methodology, inputs are received from the Business lines and the Risk department. Vulnerability indicators, resulting from the methodology, are set up at corporate, sector and country level. The methodology is reviewed on regular basis, taking into account regulation evolution, new data availability and the learning curve on climate change. Given the lack of significant historical data set of climate related - events, room from back testing is limited.

¹² Gouvernance et gestion des risques climatiques par les établissements bancaires : quelques bonnes pratiques https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525_synthese_gouvernance.pdf (p.6)

¹³ <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks-58213f6564.en.pdf>

¹⁴ https://www.societegenerale.com/sites/default/files/documents/Document-d-enregistrement-universel/2020/sg_urd_eng_2020.pdf chapter 4

Table 4 shows how these typologies of risk could be impacted by climate-related physical and transition risks (without reference to the materiality of those impacts for Societe Generale activities).

Table 4: Impact of identified climate-related risks on existing categories of risk

Risk	Physical	Transition
Credit risk and counterparty credit risk	<p>Physical risk could increase customers' probability of default by directly damaging their assets in affected areas (as physical events could hit production facilities, warehouses, services and decisions centres) and indirectly impacting their business model by disturbing their supply chain, commercial routes or markets.</p> <p>In case of the customer default, physical risks could also make the Group ability to recover part of their commitment more difficult, for example through lower collateral valuations in real estate portfolios because of increased flood risk.</p>	<p>Transition risks, for sectors affected by low-carbon transition policies (higher price of carbon for example), could also impact customers' ability to generate revenues and meet their financial commitments if they do not take measures to adapt their business models or if they cannot finance the needed adaptations measures (such as research and developments to develop low-carbon alternatives to products and services). Transition risks could also indirectly impact customers' asset valuation, for example by impacting the valuation of fossil fuel reserves such as coal or oil, whose value is expected to fall in a low-carbon economy (stranded assets phenomenon). This could particularly impact collateral valuation.</p>
Market	<p>Severe physical events may lead to shifts in market expectations and could result in sudden repricing. For example, hurricanes impacting companies' premises in certain areas may impact market expectations on their ability to generate revenues, and so their share value.</p>	<p>Transition risks may generate an abrupt repricing of securities and derivatives, for example for products associated with industries affected by asset stranding.</p>
Operational	<p>Physical events could impact Societe Generale's own sites and the Group ability to continue providing services to its customers.</p>	<p>Non-compliance with transition-related disclosure obligations could lead to legal proceedings or fines. Non-compliance with public commitments towards low-carbon economy transition could generate a reputation risk which might stigmatise banks and generate a loss of revenues caused by customer shift. An additional reputational risk could also exist if a commitment is perceived as inappropriate or insufficient by external stakeholders.</p>
Insurance	<p>Multiplication of physical events and higher severity could impact IARD activity (<i>Incendies, Accidents et Risques Divers</i>).</p>	
Liquidity	<p>Multiplication of physical events causing physical damages to clients' properties could impact liquidity risk by pushing clients to withdraw money from their accounts to finance damage repairs. A major weather event disrupting a major financial centre or data centre could lead to an operational event preventing SG from operating in one major funding market.</p>	<p>The non-alignment of an institution's activities with the goals of the Paris Agreement could result in the deterioration of its extra-financial rating. Such degradation could lead to the exclusion of its securities from the investment universe of asset managers. A change in the regulation from one major central bank, imposing stricter and ESG related criteria for eligible collateral (or introducing a "green factor" in its monetary policy), reducing the Group's ability to pledge some assets to that central banks monetary operations.</p>

Sudden repricing of securities due to extreme weather events or abrupt implementation of carbon-restrictive policies may reduce the value of banks' high-quality liquid assets, thereby affecting liquidity buffers.

3.2.2 Consideration of climate-related risks in the normative framework (E&S general guidelines and policies)

As part of its risk management framework, the Group has adopted procedures to implement its Environmental & Social 'E&S' commitments (E&S General Guidelines, E&S policies and the Equator Principles). These procedures aim at managing the E&S issues associated with business transactions and clients' business activities to which the Group provides banking and financial services. Initially only applicable to the activities of Corporate and Investment Banking, they are now being developed and gradually rolled out to cover all the Group's financing and investment activities. In addition to facilitating the identification, assessment and appropriate management of potentially negative E&S impacts, these procedures also enable the identification of transactions and clients having a positive impact in relation to sustainable development.

Developed by cross-business line working groups under the supervision of the CSR Department, the E&S policies are approved by the Responsible Commitments Committee 'CORESP'. They detail the main E&S challenges and risks of the sectors covered, identify international standards for such sectors, and provide an analytical framework for client evaluations and dedicated transactions. As part of the Group's commitment to ongoing improvement, a sector watch assesses the need to update existing policies.

Energy and mining are covered by a number of sector-specific policies due to their importance for the economy and for the Group, their potentially significant impact in terms of atmospheric emissions, and their impact on the natural environment and local communities (dams and hydroelectric energy, thermal power plants, coal-fired power plants, mines, civil nuclear power and oil and gas).

To support its commitment to exit from the thermal coal sector, Societe Generale has reviewed its portfolio and is engaging in dialogue with client companies with mining or power production thermal coal assets: the Group's objective is to stop providing new financial products and services to any company with mining or power thermal coal assets which is a thermal coal developing company or which has not communicated a transition plan aligned with the 2030/2040 thermal coal phase out objectives of Societe Generale, by the end of 2021 at the latest.

In 2021, the Oil and Gas policy was updated. The Group strengthened its commitments by extending its efforts to reduce exposure to all shale oil and gas, oil sands, Arctic oil, Ecuadorian Amazon oil, and heavy crude oil, through the exclusion of:

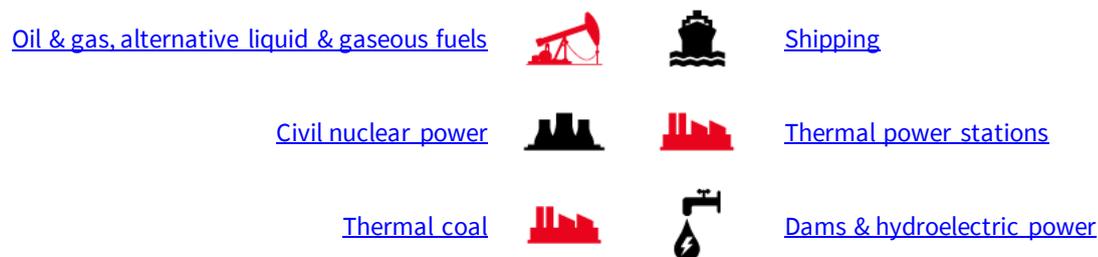
- New dedicated transactions for the exploration and production of these categories of hydrocarbons;
- Any production company for which the above resources represent more than 30% of its production;
- Any diversified company for which exploration and production of the above resources represent more than 30% of its revenues.

Furthermore, the Group is extending its efforts down the value chain by prohibiting any new mandates related to new LNG (liquefied natural gas) production projects in North America.

In 2021, the Group also developed a new Industrial Agriculture, food and forestry sector policy with a specific emphasis on the agriculture-related risks of deforestation. The latter are at the crossroads between climate and biodiversity issues and the Group is committed to accelerate the decoupling of soft commodities production from deforestation. As such, by the end of 2022, Societe Generale will engage discussions with all clients involved in Palm oil and South American soy and beef sectors to assess their strategies to tackle deforestation. After this date, the Group will only provide financial products and services to clients:

- Committed to deforestation- and conversion-free activities (own operations and supply chain).
- Committed to establish a systematic traceability in their value chain and able to report on progress in terms of the scope of implementation and/or percentage of achievement on an annual basis.

Figure 8: Selection of Societe Generale’s sector-wide E&S policies



3.3. Processes and tools for identifying and managing climate-related risks

The following processes and tools examine a range of transition and physical risk impacts on a variety of risk factors and portfolios. They are at various stage of maturity.

3.3.1 Corporate Climate Vulnerability Indicator

The impact of transition risk on the credit risk of Societe Generale’s corporate clients has been identified as the main climate-related risk for the Group. As a result, this was Societe Generale’s first area of focus for implementing a climate-related risk framework. To measure this impact, a Corporate Climate Vulnerability Indicator (CCVI) that aims at reinforcing the credit analysis on the most exposed counterparties within the sectors identified as particularly vulnerable is being gradually deployed.

Table 5: Priority sectors identified as particularly vulnerable in terms of transition risk

Sector	Vulnerability assessment to transition risk – Main challenges
Oil & Gas	The sector is under strong pressure from activist funds and NGOs to reduce its greenhouse gas emissions. It is furthermore affected by the strengthening of regulation on other sectors, including in the transport sector (for example, local regulations prohibiting or limiting the use of vehicles with internal combustion engines). The development and deployment of low-carbon (renewable) and mobility (hybrid and electric) energy solutions will lower demand for fossil fuels. The sector is also subject to lawsuits for anticipated damages related to climate change (US) and strategies that do not comply with the Paris Climate Agreement (EU).
Power Utilities	The price of carbon impacts the cost of coal-fired and gas-fired electricity and incentivises the acceleration of the production of renewable energy. The need to ensure the security of electricity supply to end customers will require an evolution of the utility business model with the development of capacity remuneration. The arrival of new entrants (e.g., “big oil companies”) to the market with a focus on renewable energy will create a more competitive environment.
Metals & Mining	Steelmaking will bear heavy carbon taxes because it currently requires coal or gas in the chemistry of the process. The sector still has to mature low carbon technologies, that presently come at a heavy cost to decarbonise. The sector will need governments to provide supportive policies and infrastructure (green hydrogen and electricity). Recent EU directives for construction materials are pushing towards the use of lower carbon footprint solutions: for instance, less concrete and oil-based insulating materials and more bio-sourced material.
Automotive	The implementation of CO2 emission regulations, such as an increase in the carbon tax, or a local ban on the use of cars with certain engines in cities or city centres, are putting significant pressure on the sector. As an example, the proposed EU regulation with the “Fit for 55” package foresees a 55% reduction in average emissions from new cars by 2030, followed by an elimination of internal combustion engines by 2035.
Shipping	Implementation of marine fuel taxes, new IMO regulations, the use of low-carbon fuels, inclusion in the EU Emissions Trading Scheme (ETS), increasing competition from other means of transport (rail, air) and accelerating R&D for carbon-free technologies are all challenges facing the sector.

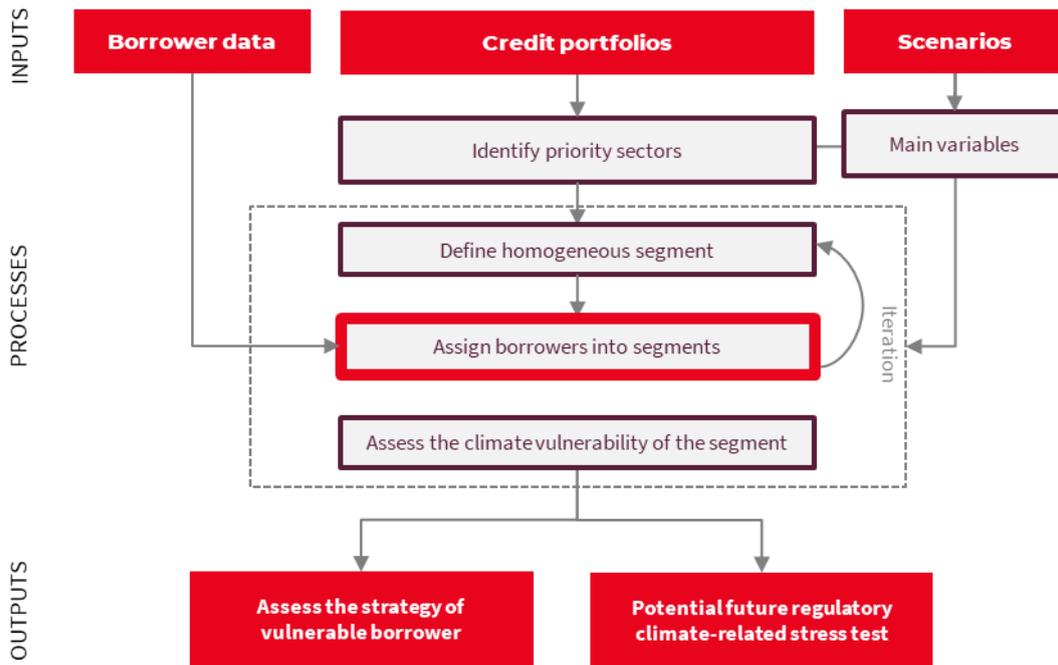
Aviation	The sector is subject to increasingly restrictive regulations: increasing the severity of the ETS conditions (reduction of deductibles), the implementation of taxes on jet fuel, the push for using sustainable aviation fuels, the risk of a ban on short-haul flights (in France for example), implementation of emission standards for new designed aircraft (EU taxonomy).
Commercial Real Estate	The general tightening of European and national regulations will impact both new constructions and existing assets (Fit for 55 proposal, RE2020, tertiary decree, reduction of land artificialisation) and will at least temporarily increase costs and investments. Smaller and less diverse players will be more sensitive to these regulations.

The approach adopted by Societe Generale for measuring transition risks is inspired by the United Nations Environment Programme Finance Initiative (UNEP FI), to which Societe Generale has contributed along with 15 international banks in 2018. In a nutshell, this approach aims to assess transition risks by quantifying the marginal impact of the climate scenario on the credit rating of borrowers for a set of priority sectors, under the assumption that the borrower does not adapt to this scenario. This climate scenario is validated every year by the Risk Committee 'CORISQ' following the proposal of the Economics and Sector Research department.

The evaluation of transition risk is conducted as per the 5 steps below and summarised in Figure 9.

1. **Identify priority sectors:** considering the materiality of Societe Generale's exposure, the sectors identified as priorities for transition risk include (as of mid-2021): Oil & Gas, Power Utilities, Metals & Mining, Transportation (including Automotive, Shipping, Aircraft) and Commercial Real Estate. This first set of sectors has been validated by the CORISQ, with the opportunity to be extended in the future (with CORISQ validation);
2. **Choice of a single climate scenario:** the SDS reference scenario integrates the effects of policy measures to limit global warming below the Paris Agreement threshold. The scenario defines the evolution of key variables (e.g., carbon tax, investments in new technologies, changes in energy prices) which are detailed at the level of each activity sector in an associated geographical area (details on the chosen scenario provided in Section 1.3).
3. **Define homogeneous segments:** The selected sectors are then sub-divided into segments, which consist in groups of borrowers with a homogenous sensitivity to the transition scenario in terms of credit risk. This homogeneity is defined by experts in relation to the main transition risk factors given by the scenario. The assignment to one segment relies on an expert decision tree and based on objective sectoral and regional criteria (e.g., energy mix for electricity producers, US, and EU utility regulatory differences);
4. **Assign borrowers into segments:** Depending on the sector and on a threshold of exposure, borrowers are assigned into a segment, thanks to the borrowers' data (publicly available or specifically asked to the client when missing);
5. **Assess the "climate vulnerability" of the segment:** The borrowers automatically inherit the level of sensitivity of the segment to which they belong, materialised by a **Corporate Climate Vulnerability Indicator (CCVI)**. The CCVI is represented by a 7-level scale as shown on Figure 10 and corresponds to the marginal impact on the counterparty current internal rating over a 20-year time horizon of the selected transition scenario. It is evaluated in parallel to the internal rating (which is based on a 1-year probability of default), and under the assumption that the counterparty does not take any adaptation measures.

Figure 9: Corporate Climate Vulnerability Indicator methodology for assessing transition risks on the credit portfolio

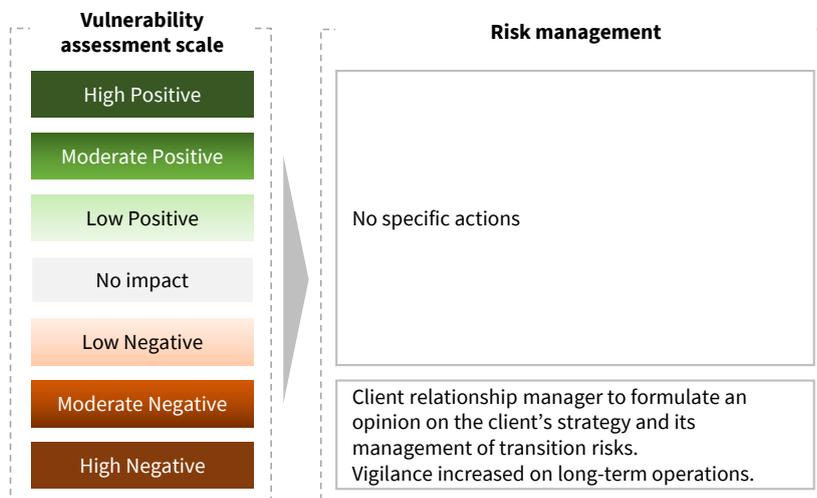


This evaluation is reviewed by the appropriate governance: the CCVI calculated according to this methodology is proposed by the first line of defence (LOD1), which can adapt the evaluation (and then modify the CCVI) according to the borrower’s specifics. It is then validated by the Risk Department as second line of defence (LOD2). The CCVI is reviewed once a year along with the internal rating review. Moreover, the CORISQ annually assesses the deployment of the CCVI tool and analyses the results in the eligible areas.

The CCVI identifies clients vulnerable to transition risks and for whom the transition strategy will be examined. For borrowers that are identified as vulnerable or highly vulnerable, the client relationship manager formalises an opinion on the client’s strategy as regards to transition risk following a discussion with the client. For long-term exposure, attention is paid on the financing risk at maturity. Vigilance is also paid to the timeliness of the client’s strategic shift compared to that of the scenario. Indeed, in the case of a slow adaptation, the borrower could find itself in difficulty to raise the liquidity needed to finance its transformation plans.

In addition, the internal deployment of the CCVI can facilitate participation to future regulatory climate related stress tests, as the examination of vulnerable sectors to climate risks remains a constant factor in external exercises.

Figure 10 : Vulnerability Assessment Scale



A tool (“Greenlight”) has been developed internally to assess the CCVI. This tool has been designed to be user-friendly and has two types of access: one to compute a CCVI for LOD1 and one to validate a CCVI for LOD2. It also provides a monitoring of the CCVIs globally and by sector.

This internal tool was launched in January 2020, and has seen continual improvements, including both methodological and regarding the scope of the counterparties.

The Group's ambition is to gradually extend the scope covered by CCVI in 2022, both in terms of counterparties covered within priority sectors (via the lowering of the materiality thresholds) and in terms of the number of sectors included in CCVI.

3.3.2 Industry Climate Vulnerability Indicator

In deepening the Group's toolkit for the assessment of the climate vulnerability of borrowers, a new Industry Climate Vulnerability Index (ICVI) has been developed in-house.

The ICVI scores the capacity of the industry sectors covered to adapt to moderate potential damage or cope with the consequences of climate-related risks (physical and transition). This first assessment helps formalise the industry sectors' vulnerability to climate change (physical and transition risks) and to identify both these sectors most at risk and those that may benefit. A score is provided for physical and transition risks, allowing the sector analysis produced elsewhere to be refined.

Physical and transition risks affect multiple aspects of the business ecosystem for a counterparty: including macro-environment and governing agencies, supply chains, operations, assets and the market. When assessing the vulnerability of an industry sector's physical and transition risks, the Group considers an extensive list of elements, including those illustrated below.

Our final assessment is based notionally on the 25% of companies most at risk in each industry sector. This approach has been selected to ensure that risks are well captured.

Panels and financial quantifications of risks are used where possible, but corporates are only starting to report climate-related financial data and risk assessments. As climate-related reporting standards improve over time, we expect to increasingly use quantitative analysis in our future assessment updates. At this stage, the assessment remains primarily based on expert knowledge of each individual sector.

The ICVI scale consists of seven scores, ranging from high positive to high negative to identify the impact of climate-related risks (physical and transition) to a counterparty. This scale is deliberately aligned with the one used for the CCVI, to maintain alignment between tools.

Table 6: Elements considered in the Industry Climate Vulnerability analysis

	Sensitivity	Adaptative capacity
Macro-environment	<ul style="list-style-type: none"> Economic dependence on climate exposed sectors Economic dependence on emission intensive sectors Dependence on subsidies Regulated market 	<ul style="list-style-type: none"> Flexibility for fiscal and monetary support policies Development level
Supply chain	<ul style="list-style-type: none"> Supplier natural resource intensity Supplier emission intensity Supplier ability to pass through costs 	<ul style="list-style-type: none"> Producer ability to shift supply chains Producer ability to shift to low-carbon suppliers or inputs
Operations & assets	<ul style="list-style-type: none"> Impact of weather conditions and natural resources availability & price on production (productivity, yields, costs) Adequacy of engineering & design to adverse weather conditions 	<ul style="list-style-type: none"> Producer capacity (technical and financial) to modify facilities to operate in adverse weather conditions Producer emission abatement potential and affordability

	<ul style="list-style-type: none"> • Producer emission intensity • Asset's capital intensity • Availability and coverage of insurances 	<ul style="list-style-type: none"> • Producer capacity (technical and financial) to develop new products/technologies
Market	<ul style="list-style-type: none"> • Consumption dependent on weather conditions • Availability of alternative lower carbon products or services • Market elasticity to price • Sales diversification • Consumption emission intensity 	<ul style="list-style-type: none"> • Producer capacity to shift customer base • Producer capacity (technical and financial) to develop low carbon products/technologies • Producer capacity to pass through costs

3.3.3 Sovereign Climate Vulnerability Indicator

The Sovereign Climate Vulnerability Indicator (SCVI) is constructed as an indicator of the relative vulnerability of countries to climate risks to gauge the direct effect on country risk, i.e., the ability and willingness of a country to honour its external debt commitments.

The SCVI, built in-house, evaluates the vulnerability to physical and transition risks, and was constructed to be relevant to different climate change scenarios. The SCVI is constructed using publicly available and well recognised data sources (World Bank, Food and Agriculture Organisation, etc.). For each variable, the countries are ranked from least vulnerable (0) to most vulnerable (1) and the indices are constructed as an average of the ranks. Data availability and frequency of data updates remains a challenge, and as more data become available the SCVI will be extended to reflect this. Presently, the index covers 114 countries representing 96% of the global economy measured by GDP and 88% of the global population. Countries not covered reflect lack of data availability.

- The physical risk score ranks the countries according to their vulnerability to both extreme weather events and physical changes from the increase of global temperatures as these climate-related hazards will likely lead to a deterioration of a sovereign's public and external finances. This score includes for instance data such as shared water resources or the share of population living below 5 meters of elevation.
- The transition risk score ranks countries according to their vulnerability to those risks that could result from the process of adjustment towards a lower-carbon economy that can have a negative effect on public and external solvency via two channels: i) the cost associated with adaptation to a lower-carbon economy; ii) the opportunity cost of stranded assets, which may translate into lower foreign exchange revenues for instance, deteriorating the external metric of a country. This score includes data on energy imports dependency or CO₂ intensity of the economy.

The ongoing work to deepen these indices will be an opportunity to check if the physical risk index remains highly correlated with traditional sovereign ratings in contrast to the transition risk index. Our findings show that, so far, countries that have a high vulnerability to physical risks tend to be countries that have weak governance and fragile public finances, elements that are all part of standard country risk analysis. By contrast, the transition risk index sheds new light on the vulnerability of sovereigns. The correlation between the transition risk score and sovereign risk rating is less clear cut, which means that several clusters can be considered. Indeed, countries with the higher transition risk score generally have good sovereign ratings. Looking ahead, however, we expect the time factor and increased demand to address the climate transition to challenge this picture.

3.3.4 Identification of physical risk impact on credit risk using scenario analysis

The Group has chosen to prioritise the development of internal tools to identify physical climate risks. R&D work on physical risk-related impacts on its portfolios started with the French retail home loan portfolio, for which the exact location of financed assets is known. Conversely it is more complex to locate all assets, installations and premises for our corporate borrowers as explained in the next section.

The analysis performed on the French retail home loan portfolio was conducted as follows:

- Assessment of the proportion of residential loans exposed to acute physical events (but not the expected financial loss) i.e., the portfolio was mapped against the physical risk map of the most impacted areas.

- Monitoring of the risks associated with drought, flooding and coastal flooding. Coastal flooding occurs when normally dry, low-lying land is flooded by seawater. Note that it is a different risk to sea level rise. The former is an acute risk (increased severity of extreme weather events) while the latter is a chronic risk (changes in extreme variability in weather patterns). However, sea rising is an aggravating factor of coastal flooding.
- Monitoring of the risks associated with wildfires. Wildfire is a large, destructive fire that spreads quickly over woodland or bush.

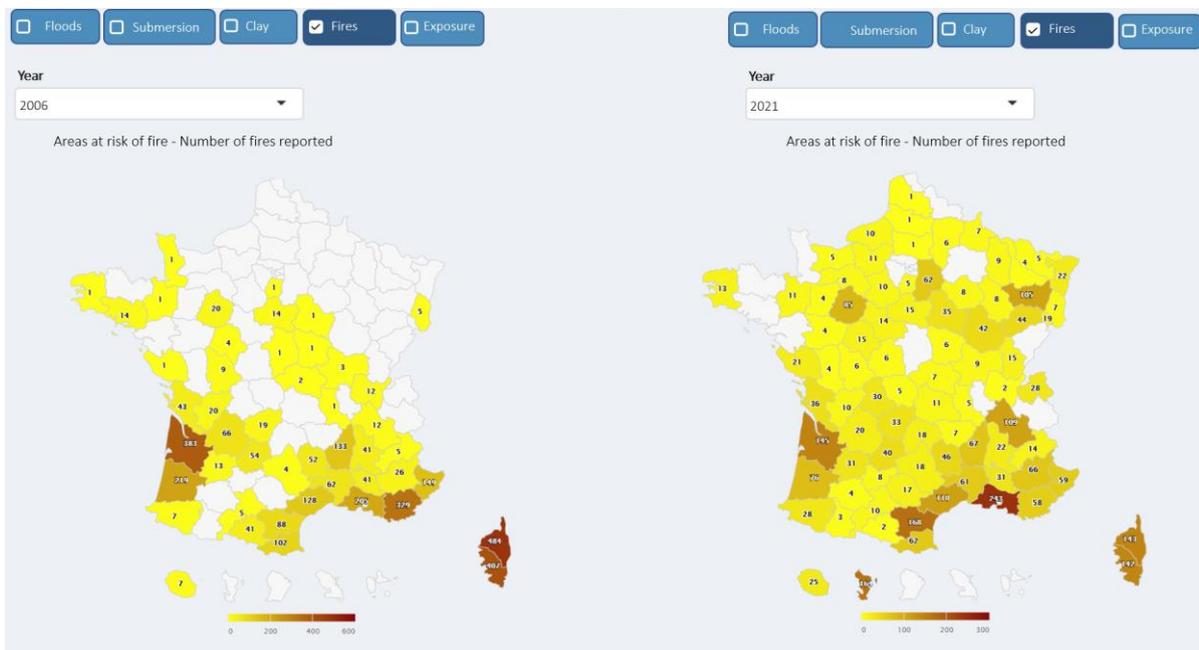
It was noted that the consequences of extreme weather events for borrowers would first be covered by the state-guaranteed natural disaster regime as long as borrowers have insurance cover. If this cover is no longer maintained and default arises, the bank would be partially covered by the guarantee from *Crédit Logement*¹⁵. In this study, no climate physical risk scenario has been used to map the identified vulnerable areas to weather projections.

A web application has also been developed internally to identify the drought, flooding and coastal flooding risks at municipality level, and the wildfire risk at department level. The application computes Societe Generale’s exposure in any particular area and enables a visual of the different types of risk at selected levels of granularity. The application also provides aggregated data at department level.

For now, the visual tool is based on data on flood, marine flooding, and withdrawal-swelling of clay soils risks provided by the ONRN¹⁶ and data on wildfires extracted from the BDIFF (*Base de Données sur les Incendies de Forêts en France*). Regarding projections on floods and drought, we are using historical and RCP-scenarios-based-simulated rainfall data provided by DRIAS *les futurs du climat*¹⁷ – a project co-financed by the program GICC¹⁸ of Ministry of Ecology, Sustainable Development and Energy. The tool allows to cross-analyse the climate-related data with the outstanding amount on home loans located in France. All these data are combined with INSEE¹⁹ data on population census and GEOFLA® data, provided by the French government, on national administrative breakdown of Metropolitan France and French Overseas Departments. The visual is presented on p.32 of the second edition of Societe Generale’s Climate Disclosure report, October 2021.

A new feature developed in 2021 concerns the wildfire mapping in France at a department level and over time. This visual shows the evolution of this risk (Figure 11).

Figure 11: Illustration of wildfires mapping in 2006 and 2020 in the Societe Generale’s internal web application



¹⁵ *Crédit Logement* is a financing company specialising in the guarantee (surety) of real estate loans to individuals distributed by banks.

¹⁶ *Observatoire National des Risques Naturels*

¹⁷ <http://www.drias-climat.fr/>

¹⁸ *Gestion et Impact du Changement Climatique*

¹⁹ *Institut National de la Statistique et des Etudes Economiques*

3.3.5 Physical risk in Societe Generale operational risk

Societe Generale defines operational risk as the potential for loss resulting from inadequate or failed internal processes and systems, human error, or from impact of external events. Societe Generale assesses physical risks on its assets and operations within its operational risk framework. The approach is implemented by region aiming to contribute to business continuity plans (BCP) related to local risks. A climate event could impact all together or part of the resources (human, technical or facility) and consequences are covered by classical BCP. For instance, in France the scenario « Flood of the River Seine » which used to be associated to a 100-year frequency is now associated to a 20-year frequency. This scenario is considered in internal models for capital requirement calculations. In Asia, studies and business resumption documents have been formalised for Hong Kong and Taiwan for typhoon or heavy rains. In US, studies are based on known scenarios such as hurricanes, floods or snowfall in conjunction with the data known to the authorities. In India, a flood scenario has been studied.

3.3.6 E&S policies monitoring transition risk impact on reputational risks

For several years, the Group has had procedures in place to implement its commitments. The year 2019 was marked by the update and integration of Environmental & Social 'E&S' risk management principles into the Group's new normative documentation (Societe Generale Code). The development of the Group's normative documentation aims to integrate E&S risk management into existing management processes, such as transactional processes, on-boarding processes, and periodic customer review processes.

The Group published in March 2021 an updated version of its Environmental and Social General Guidelines. The concepts of the E&S risk management system have been more formally and precisely defined.

The scope of the E&S risk management system has been conducted at different levels: corporate clients, dedicated transactions, products and services, issuers of securities. Moreover, the Group has made long term commitments regarding its overall involvement in some sectors, for example reducing the share of coal in the financed energy mix. These commitments are managed at financing and/or investment portfolios' level.

Aspects relating to E&S risks are thus gradually being integrated into the credit and reputational risk management policies and processes of all Business Units. E&S risk management is based on three main steps:

- **1) E&S risk identification:** This step consists in identifying whether the counterparty's activities or the transaction association with such activities present a potential E&S risk. In particular, it is based on an analysis aimed at verifying whether the counterparties or underlying activities are on the E&S exclusion list or the E&S identification list, whether they are subject to a sector policy or whether they are the subject of E&S controversies. This process makes it possible to review compliance with the exclusion criteria of the various sector policies.
- **2) E&S assessment (of counterparties or transactions identified as presenting an E&S risk):** when an E&S risk has been identified, the business line assesses compliance with the criteria of the applicable E&S policy(ies) and the severity of any E&S controversies. This assessment may contain a prospective analysis of these criteria. The E&S assessment can result in a positive, conditional (contractual conditions, action plans, restrictions) or negative opinion;
- **3) E&S actions:** mitigation actions may be recommended to mitigate the risks identified.

E&S assessments and actions are reviewed by the second line of defence (depending on the process, the Risk or Compliance Departments) and may be mediated by the heads of the business lines if necessary, or by General Management within the context of CORESP. Monitoring and controls are also gradually being implemented in E&S risk management processes within the business lines.

In addition to identifying, assessing and defining actions to mitigate potential negative impacts, these procedures enable the identification of counterparties and transactions for positive impact financing. Sustainable finance with a positive impact is underpinned by this dual approach.

3.4. Participation to stress testing exercises

The use of dedicated climate stress tests is a useful tool to assess the resilience of institutions to various market developments, considering different scenarios of future developments.

In 2020, the Group volunteered to participate in two pilot stress testing exercises organised by the ACPR (French Prudential Supervisory and Resolution Authority) and the European Banking Authority (EBA). They involved respectively 8 and 29 banks and focused on the impact of climate transition risks on credit risk (ACPR and EBA) and market risk (ACPR only) metrics.

Additionally, the Group is currently preparing its participation to a regulatory climate stress test organised by the European Central Bank (ECB) in the first half of 2022.

Focus on the ACPR stress test

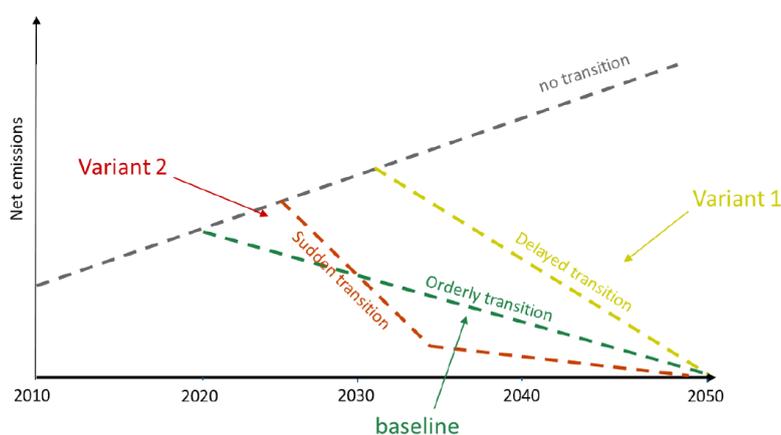
The ACPR exercise gathered 8 French financial institutions and focused on climate transition risk impact on both credit risk and market risk. For this exercise, financial institutions had to provide stress calculation impact on risk metrics according to guidance and scenarios provided by the ACPR.

Financial institutions had to perform stress calculations on credit and market risks parameters on 4 times horizons up to 2050 and 4 geographical zones.

Three scenarios in line with the Network for Greening the Financial System (NGFS) transition scenarios were used: a reference orderly transition scenario and two adverse versions (sudden transition and delayed transition).

Results were published by ACPR in May 2021²⁰.

Figure 12: Schematic representation of the transition scenarios included in the ACPR pilot exercise



The exercise was performed under a dynamic balance sheet hypothesis. It implies that institutions' exposures evolve over time in line with economic growth and sectoral evolution while adjusting to institutions' individual commitments in favour of the transition: the Group integrated its climate strategy in its balance sheet evolution. For example, portfolio alignment commitments including the gradual exit from thermal coal and exposure reduction to upstream oil and gas sectors.

The Group's participation to this exercise (whose scope was wider than internal scenario analysis exercises undertaken internally so far) was very enriching. First, it fostered the development of new approaches to overcome challenges of climate-related risks (long-term horizons and sector approach) and was an opportunity to test the adaptation of stress testing infrastructures to those characteristics, even if for example the analysis of impacts over long time horizons (until 2050) remains challenging. It was a good opportunity to continue raising awareness in the Risk department and other support functions and business lines with regards to climate-related risks. Finally, it was an interesting intermediate step to prepare future regulatory climate stress test exercises and the use of those exercise to highlight business strategy orientations (in line with supervisory expectations as expressed in *ECB guide on environmental risks*).



4. MANAGING CLIMATE IMPACT

Societe Generale has been committed to align its portfolios since the Paris Agreement in 2015. In 2021, the Group reinforced its commitment by joining the Net Zero Banking Alliance (NZBA) as a founding member, undertaking to align its own operations and portfolios with trajectories aiming to achieve carbon neutrality in 2050 with the ambitious goal of limiting global warming to 1.5°C. To achieve this goal, Societe Generale manages its impact on climate from its own operations thanks to an internal carbon tax and a set of environmental policies (real estate, IT, etc.). It manages the impact of its business activities by aligning financing and investment portfolios with the goals of the Paris Agreement. The Group is also an active contributor to a number of international coalitions on topics ranging across the sustainable finance spectrum.



“At Societe Generale, we have placed climate change issues at the heart of our business development and are constantly working to reinforce our positive impact on the world we live in. Accompanying our clients on their transition paths resonates with our group’s purpose. This conviction must be supported by solid actions – whether it be on our own operations or the financial solutions we design for our customers. As such, we have taken ambitious commitments since the Paris Agreement in 2015, and the Group will set another series of targets in the coming years as part of its commitment to the Net Zero Banking Alliance. Because now, more than ever, we know that our actions will reduce exposure to climate-related risks and determine the Group’s future performances.”

HACINA PY
CHIEF SUSTAINABILITY OFFICER

4.1. Own operations

On its own operations, the Group has pledged to reduce its Scope 1, 2 & 3 GHG emissions by at least 50% by 2030 relative to 2019 levels. Societe Generale took several actions to reduce direct emissions and indirect emissions related to energy purchases (Scope 1 & 2), as well as other indirect emissions (Scope 3) associated with business travel, freight transport and energy consumption of data centres hosted in France since 2017. In addition to climate-related actions, Societe Generale’s actions pertaining to paper consumption and waste management also help reduce our environmental impacts on natural resources.

Renewable Energy

Since 2015, 100% of the electricity consumed by the Group’s Corporate Centre buildings in France is of renewable origin, notably through guarantees of origin and power purchase agreements (PPA). Societe Generale signed a long-term power purchase agreement (PPA) with EDF in 2019, which came into effect on 1 January 2021. Under this PPA, 27 GWh/year will be purchased over three years from the Eurowatt wind farm in France. The Group decided to power all 3,050 branches and offices in its French Retail Banking network using solely French-sourced wind power and is negotiating a new PPA for that purpose. We are also exploring the possibility of switching to French-sourced green gas produced by methanation.

Real estate

Whilst electricity is a significant source of emissions for Societe Generale’s operations. The Group focuses on reducing its electricity use and improving energy efficiency through a range of actions such as:

- 21 corporate centre buildings (out of 38) are certified under ISO 50001. In addition, 7 Group entities in Lyon now occupy approx. 5,000m² of office space in the same property complex, chosen in part for its environmental certifications (BREEAM NC 2016: Very Good; HQE Bâtiment Durable: Excellent).
- The Group has carried out initiatives to eliminate older and less energy-efficient technologies. For example, oil-fired boilers were replaced with gas boilers or high-performance reversible air conditioners that emit less CO₂, and low-energy lighting is systematically installed.
- Smart meters were installed at the 192 most energy intensive sites to monitor electricity, gas and water consumption, providing continuous monitoring and detecting any unusually high consumption, which automatically triggers an on-site investigation.

- In 2018, the Group invested in a software programme that analyses the monthly consumption of all the network's branches, enabling them to identify where remedial action is needed.

Employee mobility

The Group has deployed targeted measures to promote alternatives to individual vehicle use for commuting. The Head Office at La Défense, near Paris, has set up a carpooling platform and a car-sharing service for the Group's employees. Some entities have also made bicycles and ebikes available to staff, such as Boursorama, which offers all employees at its Boulogne-Billancourt headquarters the option of commuting in an environmentally friendly manner, using the free ebikes provided.

IT infrastructure

The 'CSR by IT' policy has been rolled out, with 9 ambitions to determine the Group's sustainable IT strategy. These ambitions encompass and define the commitments that the Group agreed to by signing the Sustainable IT Charter in November 2019. Its goals cover every aspect of the IT system and data life cycle, from design to end-use services. This entails actions such as reducing electricity consumption, developing green online applications and reducing waste from digital services. It also entails responsible use of data and new technologies such as artificial intelligence. In 2019, the French IT Departments partnered with a provider from the supported/sheltered employment sector to give a second life to IT equipment that are no longer required. Any items that cannot be reconditioned are sent to Recyclea for recycling in France. Societe Generale also partnered in 2019 with a French SME allowing it to offer its employees telephones reconditioned in France.

Paper

The progress achieved with respect to paper consumption – the main consumable used in service activities – is the result of various measures introduced throughout the Group such as good printing practices, moves towards digital rather than paper resources, and the use of recycled paper. Additionally, a Societe Generale representative sits on the Board of Directors of CITEO, a not-for-profit company born out of the merger between *Eco-emballages* and *Ecofolio* that promotes the circular economy.

Waste management

Societe Generale has pledged to ban single-use plastics in its offices by 2025 across the world. Through recycling, the Group strives to minimise the direct impact of its waste on the environment. Five types of waste are sorted for recycling in all Societe Generale branches as well as the corporate centre buildings in the Paris region: paper and cardboard, metal, plastic, glass and wood. To encourage employees to sort their waste, in the new flexible workspaces at the Corporate Centre buildings there are no longer individual bins by each desk. On top of this, waste is sorted before disposal where possible, resulting in an additional 20% improvement in sorting of ordinary industrial waste (OIW). The Group is also working to raise awareness among its employees about using recycled materials and avoiding plastics, especially for bottled water provided at meetings and events.

Food waste

In 2019, Societe Generale signed the Charter against Food Waste proposed by the NPO *La Défense des Aliments* to reduce all forms of food waste. The Group also entered a partnership with *Le Chaînon manquant* for the collection of leftover food from its cafeterias at La Défense. In most cafeterias, the remaining waste is then sorted and methanised. The Group also works with *Phenix* to reduce food waste and raise awareness about more responsible practices. *Phenix* collects food left over from the Group's big corporate events, which it then gives to local charities. Lastly, one of Societe Generale's cafeterias at La Défense signed up to the *Too Good To Go* app in 2020. The app allows individuals to make their own contribution towards reducing food waste by buying salads and sandwiches left over after the lunch rush at reduced prices. Since September 2020, all leftovers from the Group's cafeterias at La Défense have been composted by *Les Alchimistes* (a specialist in the collection and composting of organic waste) under a three-year contract.

Internal carbon tax

To manage its own carbon footprint, the Group has set up an internal carbon taxation scheme. Each year, a carbon tax is levied on each of the Group's entities, based on their greenhouse gas emissions (EUR 10/tonne CO₂ equivalent, and increasing to EUR 25/ton CO₂ equivalent from end-2021). The sums collected are then used to reward the best initiatives within the Group to limit its direct environmental impact, through the Environmental Efficiency Awards. The Environmental Efficiency Awards could not take place in 2020 due to the Covid-19 pandemic. The Group nonetheless still levied its carbon tax, setting the sum aside for the 2021 awards, which will reward the best initiatives from both 2020 and 2021. The Group's carbon tax raised EUR 2.2 million in 2020 (EUR 3.2 million at end-2019).

- See Section 1.2.2 for details on Societe Generale's commitments
- See Section 6.2.1 for details on our progress

4.2. Business activities (via the products and services offered to customers)

4.2.1 NZBA commitment

As a member of the Net Zero Banking Alliance (NZBA), Societe Generale commits to align its lending and investment portfolios with the pathways required to achieve net-zero by 2050. Societe Generale will have to adopt a first set of intermediate targets, no later than 2030, by September 2022 and a second round by April 2024 on priority sectors. The Group's first 2030 targets will focus on priority macro-sectors where the Group can have the most significant impact, i.e., the most carbon-intensive sectors within our portfolios, with further sector targets to be set within 36 months of Societe Generale's accession to the NZBA.

The NZBA identifies some priority macro-sectors, and segments: coal, oil & gas, power generation, transport, iron & steel, aluminium, cement, commercial and residential real estate as well as agriculture. While Societe Generale has already set targets on a portion of its credit activities that meet the requirements of our partnership with the NZBA, the Group plans to further develop our alignment project.

To complement the alignment of our activities with the Paris Agreement goals, work is currently ongoing to produce a first estimate of the absolute amount of GHG emissions (carbon footprint) associated with our corporate credit activities. Going forward, we will report on the volume of absolute emissions associated with our portfolios: this figure will be provided on top of the portfolio alignment indicators, which will remain the main approach for steering our portfolios. This metric intends to enhance the Group's climate disclosures of current absolute financed emissions. It will also comply with our commitments with the NZBA and align with the expectations of stakeholders such as the ECB, extra-financial rating agencies and international standard setters.

4.2.2 NZBA implementation: The Alignment Project

Societe Generale's portfolio alignment project was initiated following a Responsible Commitments Committee 'CORESP's decision in August 2019. This project aims to define indicators and identify scenarios to pilot the Group's activities in line with Paris aligned trajectories. The project is supervised by two steering committees chaired by the Chief Sustainability Officer. The role of these steering committees is to foster an environment of co-construction on the targets and ambition taken:

- A Credit steering committee involves the Head of Global Banking & Advisory, the Head of International Retail Banking for Africa, the Head of International Retail Banking for Europe and Russia, the Head of Societe Generale Retail Banking in France, and representatives from the Risk Service Unit.
- An Asset Owner, Asset Management and Market Activities steering committee with the Head of Societe Generale Private Banking, the Head of Group WAAM and the Head of the Insurance businesses. The Co-Heads of Global Market activities have since been added to the steering committee.

4.2.3 Approach and methodologies used to quantify impacts

Societe Generale uses both alignment and carbon footprint measurements to pilot and report its climate impacts. These two approaches are complementary. Measuring the carbon footprint is useful for identifying priority portfolios to target and to examining whether overall absolute emissions reduce year-on-year. But carbon footprint measures are not suitable for piloting portfolios. Indeed, in our view, carbon footprint measures suffer from several limitations:

- **Data availability and quality:** Flexible reporting standards limit the comparability of data across companies and make aggregation at the portfolio level difficult. The lack of data quality assurance exacerbates the problem. Compared to financial data, for which this is mandatory, only 40% of companies' ESG/CSR reports currently have some level of assurance. When emissions data is audited, Scopes 1 & 2 GHG emissions are almost always included. The creation of more standardised and consistent reporting systems will almost certainly lead to adequate assurance of Scope 3 data. The voluntary nature of Scope 3 reporting, combined with the lack of assurance, raises reliability and quality issues until sufficient assurance methods are developed. Moreover, Scope 3 emissions provides only a static assessment of a portfolio's emissions based on historical data. Instead, the use of production or capacity indicators provides a forward-looking view of a portfolio's trajectory.
- **Double counting:** As a direct consequence of the fact that Scope 3 represents GHG emissions across the value chain, it includes emissions already reported by stakeholders up and down the value chain. For example, the Scope 3 GHG emissions of an oil company will include the Scope 1 GHG emissions of a taxi company. If both companies are in the same portfolio, these emissions will be counted twice, unless these duplicate emissions within the portfolio are removed. Societe Generale has not found any convincing methods to adjust for double counting at this stage.
- **Volatility,** which makes it unsuitable for steering. To understand why, consider that to know what share of a company's absolute emissions can be attributed to a financial instrument, carbon footprint approaches define an allocation rule. This allocation rule generally assumes that the share of a company's absolute emissions attributable to a financial instrument is equal to the ratio of the value of the financial instrument to the total debt or assets of the company (the enterprise value). But total debt or asset value of a company are financial indicators that fluctuate over time. Therefore, the level of emissions allocated to the portfolio may vary according to the financials of a company, and independently of any changes in emissions in the real economy or any changes in financing. This type of allocation rule is used by the Partnership for Carbon Accounting Financials (PCAF) methodology and is also used by the Science-Based Target Initiative (SBTI) which recognises the PCAF methodology as one of its underlying methodologies.
- **Poor decision-making incentives:** The use of absolute emissions at the portfolio level tends to favour simplistic (but not necessarily effective) decarbonisation strategies. Banks can reduce their total carbon footprint simply by lending more to certain sectors with lower sectoral intensity or to companies with higher 'enterprise value', thus artificially reducing the carbon footprint. For example, a carbon footprint approach may identify that the steel industry has higher emissions than the pharmaceutical sector. As a result, the incentive may be to divest from the former in favour of the latter. The associated marketing suggests an emissions reduction that can be achieved without any significant climate action by the bank. For these reasons, the Group has not considered using these approaches to decarbonise its portfolios, but simply to disclose overall emissions.

Instead, alignment approaches offer more relevant, granular, forward-looking, and stable indicators for steering portfolios. The Group uses several methodologies listed in Figure 13. Aligning portfolios with the Paris Agreement is a concept that implies that companies in all sectors reduce or stop activities that are detrimental to the goals of the Paris Agreement and are support activities that contribute to them. For Societe Generale, alignment means encouraging clients to reorient their investment plans to ensure consistency with the Paris Agreement and redirect financial flows away from inconsistent activities and/or scale-up consistent activities.

Figure 13: Overview of approaches and methodologies used for decarbonising Societe Generale's credit portfolios

Objectives	ALIGNMENT Used to set targets to decarbonise portfolios					CARBON FOOTPRINTING Used for identifying high-emitting sectors, but not used for target setting and piloting
Methodologies	PACTA/Katowice	Poseidon Principles	NZ Steel Initiative	FBF approach	In development	PCAF
Portfolios	Coal, Oil&gas, power, cement, automotive	Shipping	Steel	Residential real estate	Other sectors	All sectors in the corporate credit portfolio

All the alignment methodologies listed in Figure 13 have common characteristics:

- **Sector specific:** The alignment methodologies focus on sectors that hold the bulk of the impact on the climate system, and on those segments where the decision-making power or capacity to reduce carbon emissions directly or indirectly resides. This includes ‘carbon-intensive sectors’, such as the fossil fuel sector, and ‘green’ sectors such as renewable energy production. It considers the fact that there is no single transition, but several transitions that vary by sector, geography and timeframe. For some sectors the indicator is expressed in physical units (e.g., fossil fuel production volume, total power capacity in each technology, emissions intensity of each technology/sector) or in financial units (e.g., capex investment in each power technology).
- **Targets informed by scenarios:** The goals of the Paris Agreement can be translated into usable data and indicators using a climate scenario. These scenarios show the potential pathways needed to reach the goals of the Paris Agreement. They translate the Paris Agreement into carbon budgets and sector-specific transition pathways, or ‘technology roadmaps’, using the evolution of physical asset types (e.g., from brown to green power plants) over time and financial metrics to show a potential pathway to meet the global warming target. These pathways represent a benchmark to measure the level of alignment of a portfolio.
- **A stable allocation rule:** To allocate the climate indicators of multiple counterparties at the portfolio level, the alignment methodologies used applies a portfolio weight approach, which is simply an average of the counterparties’ indicators weighted by the size of their loans. This simple allocation rule has the advantage of offering stability over time, i.e., an approach that is not volatile or dependent on changes other than the company’s decarbonisation efforts or the bank’s portfolio decisions. The limitation of this approach is that it cannot be used to allocate absolute volumes to a portfolio (see the Katowice Methodology for more details on this limitation).

The remaining of this section gives information on the methodologies used.

Katowice Banks application of the Paris Agreement Capital Transition Assessment (PACTA)

PACTA is a methodology developed by the 2° Investing Initiative (2DII) to help investors analyse the extent to which corporate capital expenditures and industrial assets behind financial instruments and portfolios in emissions-intensive industries are aligned with various climate scenarios.

Since 2018, Societe Generale has contributed to the development of the PACTA methodology and collaborated with BBVA, BNP Paribas, ING and Standard Chartered (also known as the Katowice Banks) and 2DII to make the PACTA methodology applicable to banking portfolios, providing recommendations for improving the methodology. In September 2018, 2DII published its PACTA methodology. Shortly after, the Katowice Banks jointly published a report on the application of PACTA on their credit portfolios. This document is referred to as the Katowice Methodology, which is now used by the Group.

→ For more detail on the methodology, see [PACTA for Banks Methodology Document](#) and the [Katowice Banks’ application of the PACTA methodology](#).

2DII published a methodology document detailing the basic principles of PACTA, along with an online tool.



PACTA for Banks Methodology Document

Climate scenario analysis for corporate lending portfolios
Date: 18 September 2020
Version: 1.1.0*



The Katowice Banks published an application document of the PACTA methodology.

Credit Portfolio Alignment



An application of the PACTA methodology by Katowice Banks in partnership with the 2 Degrees Investing Initiative
September 2020



Poseidon Principles

The Poseidon Principles, which follow the fundamental principles of PACTA, establish a framework for assessing and disclosing the climate alignment of ship finance portfolios to promote the decarbonisation of international shipping. The Poseidon Principles are consistent with the goal of the International Maritime Organisation (IMO) to reduce GHG emissions from the shipping sector by at least 50% by 2050 (compared to 2008).

In 2019, Societe Generale contributed to the development and signed the Poseidon Principles. Signatories must, on an annual basis, measure the carbon intensity of their shipping portfolios and compare those against annual emissions targets tied to the IMO's 2050 GHG emissions reduction goals. Signatories must also report the overall climate alignment of their shipping portfolio with that year's target on an annual basis.

→ For more detail on the methodology, see the Poseidon Principles' [Technical guidance](#)

Steel Climate-Aligned Finance Working Group

In 2021, Societe Generale joined the Steel Climate-Aligned Finance Working Group as co-leader, joining five other leading lenders of the steel industry who will work to define standards advancing the decarbonisation of the sector. The objective of the working group is to establish a joint climate-aligned finance agreement, modelled on the Poseidon Principles. It will define a framework for assessing and disclosing the degree to which greenhouse gas emissions associated with each financial institution's portfolio are in line with UN's 1.5°C climate targets. The Working Group will propose the methodology, scope and governance of the climate-aligned agreement. It will work together with existing decarbonisation initiatives and the industry, under guidance from RMI's Centre for Climate-Aligned Finance – a non-profit organisation from which this initiative originates. This Working Group will also aim to enrol multiple lending banks to the initiative, to make it an industry-wide success.

Partnership for Carbon Accounting Financials (PCAF)

PCAF is an industry-led initiative, created in 2015 by Dutch financial institutions, extended to North America in 2018, and scaled up globally in 2019, working to develop a standard for how financial institutions assess and disclose the GHG emissions from their loans and investments (financed emissions). Until now, there has not been a globally accepted standard for the measurement and disclosure of financed emissions. The absence of harmonised methodologies and reporting rules has led to the poor uptake of the accounting of financed emissions and inconsistent disclosures across financial institutions.

PCAF's standard provides methodological guidance for different asset classes. For example, for business loans, emissions are allocated to a financial institution based on the outstanding loans it provides to a company as a percentage of the company's enterprise value including cash. A company's emissions can be derived from public reporting or estimated based on physical or economic activity data, in line with the principles of the GHG Protocol.

→ For more detail on the methodology, see PCAF's [Standard](#)

Other work related to quantifying impact

In addition to the aforementioned approaches, the Group has undertaken work to develop an approach to assess the alignment of its sovereign credit portfolio. It aims to determine whether a country's emission reduction ambition is in line with various climate scenarios.

The Group is also interested in other marketplace methodologies to measure the carbon footprint of financial institutions, such as the P9XCA methodology.

Lastly, Societe Generale has conducted a number of studies on its residential real estate portfolio. The Group notably used the ADEME database to identify Energy Performance Certificates (EPC) on this portfolio, and further collaborated with the French Banking Federation (FBF) to share the result of this work. A note, co-written with BNP Paribas, offers a first attempt to define the KPIs and a methodology to measure the alignment of French retail real estate mortgages as well as methodological guidance to measure the retail real estate portfolio's alignment and the difficulties encountered, especially in the handling of the ADEME's EPC database.

→ For more detail, see the [Methodology](#) written jointly by Societe Generale and BNP Paribas as part of a FBF working Group

4.2.4 Monitoring impacts

In July 2021, the Responsible Commitments Committee 'CORESP' validated the inclusion of alignment indicators in the Risk Appetite Framework (RAF), as requested by the European Central Bank (ECB) guidelines. The RAF defines the governance and implementation of the Group's risk appetite. The Group is engaged on reaching alignment targets at a future point in time, and the objective of integration into the RAF is to operationalise an annual monitoring of progress against these targets.

To monitor alignment, thresholds on each portfolio are used to pilot our portfolios and follow their trajectories to make sure we will be compliant with the targets corresponding to the Group's voluntary commitments. The thresholds represent the maximum deviation that can be allowed in a given year. They are used to alert when the level of misalignment becomes too serious relative to targets set at a future point in time.

If the thresholds are exceeded, an action plan may be required from the business lines from 2023 onwards. The action plan aims at correcting the misalignment or requesting a specific approval by justifying the new threshold level (e.g., based on the climate strategy of the lagging customers) and estimating the consequences from a climate standpoint.

Thresholds are checked:

- **In hindsight:** Hindsight control process is yet sufficient to control medium-term targets and will be completed operationally by a pre-deal checking process based on the availability of data produced by ESG Analytics programme.
- **Reviewed annually by the Risk Committee 'CORISQ':** the climate alignment of portfolios will now be addressed in each sectoral CORISQ to regularly assess the evolution of the sector and the level of transition of clients. The CORESP remains responsible for defining alignment indicators and setting targets.
- **At Group level:** As all targets are currently defined at this level of granularity.



5. SUPPORTING THE SUSTAINABLE DEVELOPMENT OF OUR CLIENTS

Societe Generale is highly supportive of transitioning to a more sustainable economy and stands by its clients to support the sustainable and positive impact of their business. The Group began its Positive Impact journey as one of the founding members of the Positive Impact initiative within the UNEP-FI. From now on, Societe Generale aims to be ESG by Design, meaning that all its businesses will integrate ESG matters by design in the solutions they develop. Societe Generale helps its clients generate positive impact by:

- Contributing to new standards: Societe Generale drives sustainable change through industry initiatives;
- Leading the energy transition: Societe Generale supports its clients in their energy transition with its global presence and extensive experience in the energy sector;
- Acting for communities across geographies: Societe Generale is a catalyst for positive societal and economic impact in emerging and developed economies;
- Delivering innovation in ESG markets: Societe Generale is at the forefront of innovation, as it expands sustainable solutions across products and asset classes, with one of the broadest offerings in the market.



“Sustainability related business is now becoming mainstream for Societe Generale. We are accelerating our transformation, embedding ESG within all our offering. Our businesses are redefining their mandates to put ESG at the heart of their activity, developing innovative solutions that help our clients to address the complex challenges of climate change and successfully achieve their transition.”

PIERRE PALMIERI
HEAD OF GLOBAL BANKING & ADVISORY

Figure 14: Societe Generale Sustainable & Positive Impact Finance Solutions

SUSTAINABLE & POSITIVE IMPACT FINANCING

Green, social & sustainability-linked products

Bonds, Loans, Guarantees & Letters of Credit, Securitisation, Hedging solutions

Sustainable project & asset finance

Infrastructure, Energy transition

Leasing & financial services

SGEF, ALD, SGF

SUSTAINABLE & POSITIVE INVESTING

Sustainable & Positive investment solutions

ESG Research, ESG indices, Custom investment

Securities services – ESG offer

STRATEGIC ADVISORY & BUSINESS DEVELOPMENT

Strategic advisory – Industry groups

ESG advisory & market access

New businesses & markets

Impact-based finance, Social impact solutions, Sustainable cities

5.1. Climate-related opportunities identified

Some years ago, the identification of climate-related business opportunities was the domain of sector experts and CSR officers (using scenario and taxonomies). It has now become mainstream for Societe Generale, and all Business Units have made climate change a pillar of their workplan. Societe Generale sees a wide range of opportunities arising from the energy transition across all sectors in the economy.

Product-wise, Sustainable and Responsible Investment (SRI) issues, as well as Environmental, Social & Governance (ESG) factors, have become important performance drivers. Societe Generale's dedicated ESG research team has helped investors and asset managers to integrate these criteria into investment decisions.

Geographically, Societe Generale has also placed the sustainable development of the African continent at the heart of its strategic priorities. In November 2018, Societe Generale confirmed that it would continue to expand its business on the African continent, in line with its strategic plan, and launched its new *Grow With Africa* initiative.

5.2. Sustainable and positive impact financing

5.2.1 Green, social & sustainability-linked products

Green, social and sustainable **bonds**' proceeds aim at financing clearly earmarked projects generating environmental and/or social benefits. Pioneering this expertise, Societe Generale is a major actor in the development of the sustainable bond market: the Group leads the flagship positive impact bond framework, sets standards as an issuer and assists clients in structuring and issuing their own sustainable bonds. Since 2013, the Group has executed more than 180 green, social and sustainable bond mandates globally, for more than EUR 170 billion. In a drive to support the further development of the sustainable bond market globally, Societe Generale is taking an active part in several initiatives, such as being a member of the ICMA Green and Social Bond Principles and was the first French bank in 2018 to join the Climate Bond Initiative's Partnership Programme.

As an innovative way to value its client's sustainability performance, Societe Generale has developed a broad green & impact offering – **green loans and sustainability-linked loans**, linking the financing structure to the client's CSR achievements. Aligned with the Green Loan Principles, green loans' proceeds are dedicated to the financing of green projects, selected and evaluated through predefined eligibility criteria. Sustainability-linked loans refer to a loan where the proceeds can be used for General Corporate Purpose: the client commits to ESG objectives (KPIs) reflecting its CSR strategy and monitors its performance through these KPIs throughout the maturity of the loan. Defined on a case-by-case basis, the objectives are discussed with clients and supported by an incentivised mechanism. With this tailor-made structured offer, Societe Generale joins forces with its clients to help them achieve their sustainability ambition and reach their CSR goals. In 2020, EUR 4.2 billion sustainability-linked loans with positive impact features were granted by Societe Generale to its clients. Societe Generale is a member of the Sustainable Finance Working Group established by the Loan Syndications and Trading Association (LSTA), Loan Market Association (LMA) and Asia Pacific Loan Market Association (APLMA) tasked with the establishment and maintenance of the *Green Loan Principles*.

Societe Generale is a global advisor and arranger of tailor-made solutions in green & sustainability-linked trade **guarantees and letters of credit** insurance programmes. Green guarantees and letters of credit are Trade Finance instruments for which the underlying project or product covered has a clear positive contribution to the environment and supports the transition to a low carbon future. The eligible Green Trade Finance instruments pertain to four categories: renewable energy, clean transportation, waste management, and sustainable water and wastewater management.

Societe Generale's integrated **securitisation** and collateralised financing chain combines top-tier capabilities in advisory, structuring, financing, placement and trading across Europe, the US and APAC. Relying on this expertise and on its leading role in ESG advisory and structuring, Societe Generale supports issuers and investors through the securitisation of green assets and sustainability-linked collateralised financings.

The Group also offers sustainable and positive solutions within its **hedging activities and financing products** to support its client's (private or institutional investors and corporate clients) sustainability objectives:

- Sustainability-Linked Derivatives: With derivatives whose features are contingent to the achievement of specified sustainability targets, Societe Generale strengthens its commitment to the sustainable transformation of its corporate clients. Sustainability-linked swaps can notably hedge sustainability-linked loans and bonds.
- Sustainability-Screened and Sustainability-Linked Financing: With financing transactions in public markets whose features are contingent to the achievement of specified sustainability targets, Societe Generale strengthens its

commitment to the sustainable transformation of its Financial Institutions clients. Societe Generale can also apply bespoke ESG screen to the collateral of financing transactions.

5.2.2 Sustainable project and asset finance

Societe Generale has a longstanding and well-established track record in providing financial advisory services and arranging capabilities in relation to project financing, in multiple sectors across the world, from energy to infrastructure, to foster energy transition.

- **Growth of renewable energy:** Societe Generale advises and finances developers of renewable energy projects. Leveraging its expertise, the Group helps clients address the complex challenges of climate change and accelerate their transition. The Group continued to deploy over the year its expertise on new technologies: floating offshore wind, bi-facial solar panels, CCS, etc.
- **Increasing demand for minerals and metals enabling the transition to low carbon technologies and green mobility:** Societe Generale provides advisory, structuring and financing solutions to miners, metals producers and players in downstream industries including recycling, batteries for Electric Vehicles and hydrogen solutions for industrial assets. With its wide range of sustainable finance solutions, the Group enables clients to integrate their transition toward a low-carbon and resources efficient economy and ESG commitments into their financial strategy.
- **Decarbonising the shipping industry:** Societe Generale supports leading ship owners around the world in meeting their emissions reduction targets by providing bank and capital market financing as well as advisory services for project and corporate financing for the decarbonisation of shipping vessels.
- Societe Generale provides advising and financing solutions dedicated to essential infrastructure for sustainable development in the sectors of transportation, regulated assets, telecom and broadband, water and environment as well as social infrastructure and Public-Private Partnerships (PPP).

5.2.3 French retail bank

In October 2021 Societe Generale presented its new **French retail bank** model, merging the Societe Generale and Credit du Nord retail banks. This merger will take place on 1 January 2023 and is being used as an opportunity to speed up the implementation of the Group's sustainability commitments: for example, dedicated teams will be set up to assist our clients with the energy transition and ensure that SMEs benefit from the experience of Societe Generale as the world's leading advisor of large groups in the financing of renewable energies.

In July 2021 the retail division launched a new Environmental and Social financing offer to accompany its corporate clients in the financing of the E&S projects (including energy efficiency, renewable energy, low carbon transport, recycling, education and training, social housing). This offer follows a pipeline of green financing offers through sustainable development loans and consumer loans, including energy efficient renovation projects and electric or hybrid vehicles.

5.2.4 Leasing and financial services

Societe Generale Equipment Finance (SGEF), a subsidiary of Societe Generale, specialises in financing sales of professional capital goods. At the beginning of 2021, SGEF has integrated its CSR ambition at the heart of its strategic roadmap for the next five years by defining as its first strategic objective "to be a market leader in CSR equipment financing". To achieve this strategic objective, SGEF has launched a CSR ambition called "Care & Dare about the Future" for the next five years, which is being implemented both in terms of business and internally. In cooperation with manufacturers, energy service providers and specialised financial intermediaries, SGEF is committed to widening the range of sustainable finance solutions. Based on four sectors business expertise – Technology, Industrial Equipment, Healthcare & Green and Transportation – SGEF defines with its partners the implementation of sustainable concepts with embedded finance solutions for end-customers. Equally, SGEF embeds circular economy principles in financing solutions, by supporting the behavioural shift from asset ownership to usage-based models using an asset life-cycle approach. Together with its partners it focuses on the sustainable use of products and resources. For example, it cooperates with partners to offer finance solutions for EV charging stations including hardware and services to support the shift towards electrification.

ALD Automotive supports its corporate clients by providing mobility solutions that are more and more eco-friendly with the deployment of electric cars, improve safety on the road or promote innovative & sustainable mobility solutions. ALD is also contributing to the shift from car ownership to usage. The Move 2025 strategic plan places CSR at the heart of ALD Automotive's strategy. For a complete overview of ALD's CSR strategy, refer to ALD Automotive's 2020 annual report:

- ALD Automotive provides advisory services to help clients reduce the environmental impact of their fleet by conducting needs analysis, measuring a fleet's carbon footprint and improving client awareness on the benefits of alternative powertrains (battery electric vehicles, full hybrids, plug-in hybrids in particular).
- ALD Automotive provides solutions such as corporate car sharing and car swapping services which provide alternatives in response to the gradual shift away from the “one user = one car” traditional model to more collaborative solutions and on-demand solutions.
- ALD Automotive has signed partnerships to collectively launch new electrified mobility solutions that combine driving electric vehicles and charging facilities to provide a seamless and consistent customer experience.

The platform **Lumo**,²¹ pioneering renewable energy crowdfunding platform in France, offers local communities, individuals and businesses the possibility to participate in financing a selection of local projects supporting renewable energies in France. With this acquisition, the Group aims to strengthen its capacity to serve its major energy customers by offering them a solution of recourse to crowdfunding for the development of their projects.

5.3. Sustainable & responsible investing

5.3.1 Sustainable and positive investment solutions

Environmental, Social and Governance (ESG) factors, as well as Sustainable and Responsible Investment (SRI) issues, have become important performance drivers. Sitting alongside financial and macroeconomic considerations, ESG factors have become easier to quantify and are now considered when assessing any company. Since 2006, Societe Generale's dedicated **ESG research** team has helped investors & asset managers integrate financially material ESG criteria into investment decisions. In 2020, Societe Generale became one of the first banks to integrate the ESG dimensions into all its equity research, in addition to the fundamental financial analysis.

Societe Generale also offers investors a leading **ESG index** range designed in partnership with our ESG research team, or its comprehensive network of ESG partners, to align their portfolio's performance with their ESG priorities. A wide array of formats is available to deliver the ESG indices: ETFs, funds, bank certificates, structured products, etc. Whether designed from a flagship index or created at the client's request, these are developed to precisely match an investor's objectives.

5.3.2 Asset management - Sustainable & Positive investments

The Group's **Private Banking** arm has offered sustainable and responsible investment opportunities in all Private Banking entities in France, Europe and the UK since 2017. The offer is structured around three main pillars:

- Portfolio management: two dedicated Management companies (SG29H for French customers) and SGPWM in Luxembourg for European customers offer several open-ended funds that have been awarded well-known certifications: the French government's SRI label and the Luxembourg's Luxflag label. Customers who opt for an SRI strategy benefit from the same management process as SRI-labelled funds based on a combination of exclusion and ESG multi-sector best in class selection. At end-2020, the Group's Private Banking management companies achieved a rate of 30% of assets managed according to responsible principles compared to total AUMs held by asset management companies.
- The structured product range differentiates between products indexed against indices that incorporate ESG criteria and those indexed on stocks chosen for their ESG performance. Some structured products echo with the Group's CSR initiatives: the Positive Impact Finance programme, the Charity programme and the “Let's Plant Trees” programme. For example, Societe Generale Private Banking donates to a partner association recognised as operating in the public good for each subscription to Charity structured products. Our “Let's Plant Trees” programme plants a tree for every EUR 10,000 invested, financed by Private Banking;
- The advisory management offering, which will gradually incorporate advice on high non-financial performance funds or stocks. Since 2020, Private Banking has applied two exclusion lists to the suite of stocks on which it directly advises: the exclusion list taken from the E&S General Principles defined in the Group's risk management policy (stocks linked to thermal coal or controversial weapons) and the exclusion list of issuers with the most serious ESG controversies. Finally, one of the pillars of the SRI offer is our ability to select external funds in accordance with customers' objectives

²¹ <https://www.lumo-france.com/>

and investor profiles. The range of sustainable, ESG or responsible external funds was recently expanded to encompass a universe of 19 funds (+50% vs. 2019), or 10% of the total investment universe.²²

Societe Generale Insurance offers a full range of products and services to meet the needs of individual, professional and corporate clients in Life Insurance Savings, Retirement Savings and Personal Protection. As such it has significant leverage when it comes to benefiting the environment and civil society. Its investment policy has long included environmental, social and governance (ESG) factors, alongside financial and credit ratings. Every year, asset portfolios are formally scrutinised according to these three criteria and their carbon footprint measured. Our insurance branch made ambitious commitments to responsible finance over the past three years:

- Alignment its investments with the objectives of the Paris Agreement;
- Signature of the United Nations Principles of Responsible Investment (UN PRI)²³ and the Montreal Carbon Pledge²⁴;
- Establishing three climate-themed market investment funds (*Fonds Objectif Climat*) with three other French institutional investors as part of the action against climate change;
- Further exclusion of the carbon coal industry and commitment to fully disengage from the sector within the time frame set in the Paris Agreement;
- Adopting a tobacco-free investment policy (and signature of the Tobacco-Free Finance Pledge²⁵), resulting in the sale of all securities of companies in this industry;
- Increasing the share of green investments²⁶ in general assets. These amounted to EUR 2.5 billion on 31 December 2020, a nearly 3.5-fold increase since 2018;
- Membership to the Net-Zero Asset Owner Alliance (NZAOA)²⁷.

5.3.3 Securities services – ESG offer

Societe Generale Securities Services (SGSS) helps clients (issuers or institutional investors) integrate ESG criteria into their investment strategies by offering comprehensive solutions covering the ESG and carbon criteria:

- Portfolio analysis: SGSS provides clients with a clear and synthetic vision of the positioning of their investments in terms of carbon footprint, quality and management of environmental and social aspects and governance;
- Pre-trade compliance: SGSS offers a pre-trade control solution to monitor the effectiveness of their investments decisions and ensure their compliance with their ESG strategy;
- Integration of ESG criteria in fund depository controls;
- A shareholder general meeting organisation service, already selected by 150 listed companies, proposing electronic vote capabilities.

5.4. Strategic advisory & business development

5.4.1 Strategic advisory – industry groups

Societe Generale provides tailored advice and solutions to help its clients transform by adjusting their portfolio of activities, redeploying their capital in new business models while continuing to deliver long term shareholder value.

- Advising clients on strategy evolution and implementation through first class Mergers & Acquisition expertise and track record;

²² Investment policy of Societe Generale Private Banking:

https://www.privatebanking.societegenerale.com/fileadmin/user_upload/SGPB/PDF/SGPB_Investment_Policy-Sustainability_risk_and_adverse_impacts.pdf

²³ The United Nations Principles of Responsible Investment (UN PRI) are a blueprint for the international financial industry to work together to provide a framework for the incorporation of environmental, social and governance (ESG) considerations in investment decisions.

²⁴ By signing up the Montreal Carbon Pledge, investors commit to measure and publicly disclose the carbon footprint of their investment portfolios on an annual basis.

²⁵ The Tobacco-Free Finance Pledge is an initiative of the non-profit organisation, Tobacco Free Portfolios, to encourage non-tobacco investment policies.

²⁶ Green bonds, climate and energy transition funds and projects, direct investments.

²⁷ By joining the Net-Zero Asset Owner Alliance, investors commit to ensure the transition of the carbon emissions of their investment portfolio to net-zero by 2050. The NZAOA bases its action on the will to implement the Paris Agreement on Climate Change, which aims to limit the increase of global warming to 1.5°C.

- Offering unique combination of senior banker implication, in-depth industrial sector expertise and geographic proximity;
- Engaging Equity Capital Markets investors, understanding their concerns regarding the company and its sector.

Societe Generale's expertise allows the Bank to advise and accompany clients across sectors both in Financial Advisor and global coordination roles. In 2020, the Group joined the Hydrogen Council committing to leveraging its expertise in innovative financing and energy advisory to help create tomorrow's low carbon-hydrogen solutions.

5.4.2 ESG advisory & market access

As part of their investing policy, investors consider now that ESG performance is a key indicator of a company's long-term risk profile which may significantly impact its liquidity/attractivity in the market. Societe Generale's experts support and advise corporate clients in their ESG disclosure and rating process to gain the best market access, thanks to the Group's extensive knowledge of ESG concerns by investors and stakeholders (including clients, contractors, regulators and ESG rating agencies).

- Diagnosis: review of ESG risks, opportunities and trends; ESG impacts associated with company's positioning; benchmark of ESG disclosures and commitments;
- ESG ratings advisory: review of ESG rating by rating agencies; identification of applicable methodologies; assistance in selecting the most suitable agency and in the optimisation of ESG rating;
- Assistance in upgrading strategy: identifying the main strengths and weaknesses in the company's disclosures; selecting the best communication strategy to improve the perception of ESG performance; integration of ESG factors into business strategy and the equity story;
- Roadshow and marketing: based on our extensive knowledge of investors and financial intermediaries and vast market access network; organisation of roadshows and proposition of marketing material in relation to clients' projects and operations; leverage the ESG roadmap to envisage sustainable finance solutions.

5.4.3 New businesses & markets

The **Impact-Based Finance** team works diligently on a number of international initiatives, such as the UNEP FI's Positive Impact Finance, the CFO Task Force for the SDGs convened by the UN Global Compact, the Energy Efficiency Financial Institutions Group (EEFIG) in Europe, EnergieSprong in France and the Africa Infrastructure Fellowship Programme.

In 2019, Societe Generale created a new **Social Impact Solutions** team whose remit is to focus on funding needs of its customer's social projects. The Social Impact Solutions offer engineers solutions to unlock public and private funding for social projects developed by our customers as they make the transition towards sustainability and work towards the SDGs. In this type of project, where social impacts and business interest mingle, corporates typically join forces with non-governmental organisations, but also with public-sector institutions. The dedicated Social Impact Solutions team assists and advises customers on the design of social projects that align private-, public and social-sector interests and offers tailor-made, innovative financing mechanisms driven by results-based principles. The financial instruments employed typically use blended finance, social impact bonds and other hybrid tools to arrange financing that involves development finance institutions, impact investors and foundations motivated by the strong and demonstrated social impact of the project.

Societe Generale and its start-ups innovate to finance the cities of tomorrow, thus spurring the development of **sustainable cities**, alongside like-minded actors from the private and public sector. The start-up LaVille E+, a subsidiary of the Group, is an urban planning advisory firm supporting future city projects with the goal of co-building sensitive, inclusive, sustainable, positive-impact urban environments. La Ville E+ notably worked for Ivry-sur-Seine in a public consultation for a sustainable real estate development in the Gagarine-Truillot district. Societe Generale was a founding partner of the Netexplo Smart Cities Accelerator international training and certification programme, which provides insights to inform the development of inclusive, connected cities that are mindful of their environmental footprint. In addition, Societe Generale has committed up to finance the future metropole of Paris project "Grand Paris", a laboratory for intelligent, sustainable and agile cities of tomorrow. Societe Generale acts as a partner to local authorities through its real estate development branch Sogeprom.

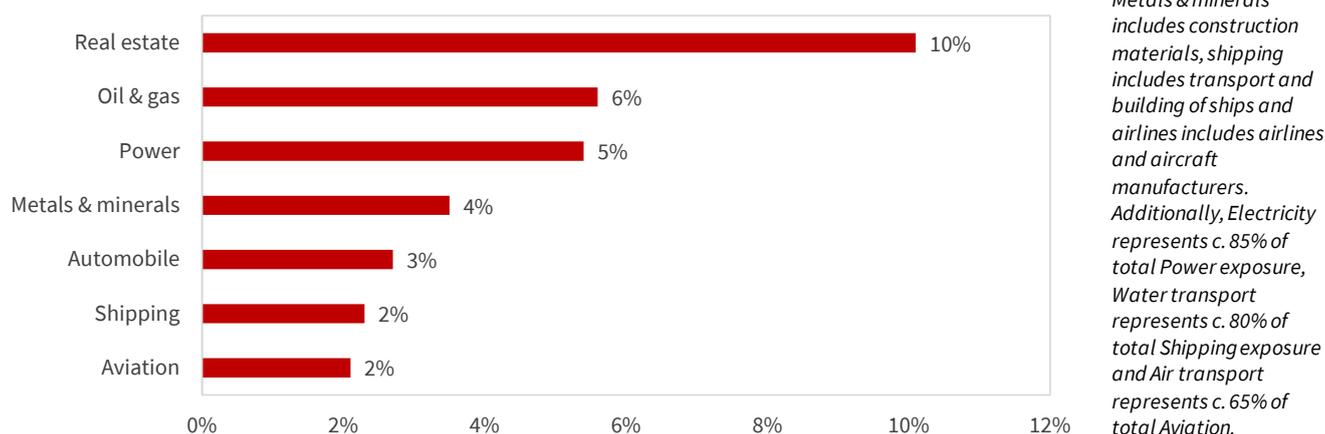
6. METRICS AND TARGETS

6.1. Managing climate-related risks

6.1.1 Distribution of portfolios by climate-related sectors

Climate risk impacts business sectors differently depending on their characteristics. In particular, the Group has identified 7 sectors that are particularly sensitive to transition risk. The Group's exposure to its 7 most sensitive sectors to transition risk accounts for 31.7% of the Group's corporate credit portfolio. On 31 December 2020, the corporate portfolio amounted to EUR 339 billion (on- and off-balance sheet exposure measurement in EAD).

Figure 15: Sector breakdown of the Group's Corporate portfolio (EAD) – focus on sectors sensitive to transition risk



6.1.2 Coverage of the E&S risk management system (E&S policies)

The following indicator is linked to the application of the Group's E&S policies. The E&S risk management system provides for an E&S review of customers and transactions at Group level and in each of Societe Generale's business units, as well as the training of a number of people in E&S risk management (+40,000 by the end of November 2021). The associated indicators are presented in Table 6.

Table 6: Key indicators related to the E&S risk assessment process within the business units

	2018	2019	2020
Group			
Total number of customers (groups or units) who underwent a thorough E&S review	659	686	1,015
Total number of transactions analysed that underwent an E&S review	N/A	N/A	1,239
o/w total number of transactions analysed that underwent a review falling within the scope of the Equator Principles	56	48	90
Number of people training in E&S risk management	N/A	N/A	3,280
Corporate and Investment Banking			
Number of transactions signed that underwent an E&S review	113	112	118
Amount of new financing for dedicated transactions that underwent an E&S review in the scope of the Equator Principles (EP) (in EUR bn)	3.4	3.6	4.7
Amount of new financing for dedicated transactions that underwent an E&S review of the Equator Principles in the voluntary scope of Societe Generale (in EUR bn)	3.7	4.2	3.2
Number of customers (groups of units) who underwent an E&S review	143	134	153
French Retail Banking			
Number of customers (groups or units analysed)	416	389	456
International Retail Banking			
Number of customers (groups or units analysed)	N/A	167	406

6.2. Managing impacts

6.2.1 Societe Generale's own operations

This section presents metrics for Societe Generale's own operations. Figure 16 shows that the Group's total GHG emissions (Scope 1, 2 & 3) have decreased by 34% between 2015 and 2020.²⁸ While Figure 17 shows the distribution of this carbon footprint across its main sources, with electricity being the main one.

Figure 16: GHG emissions (S1-3) related to Societe Generale's own operations, by scope

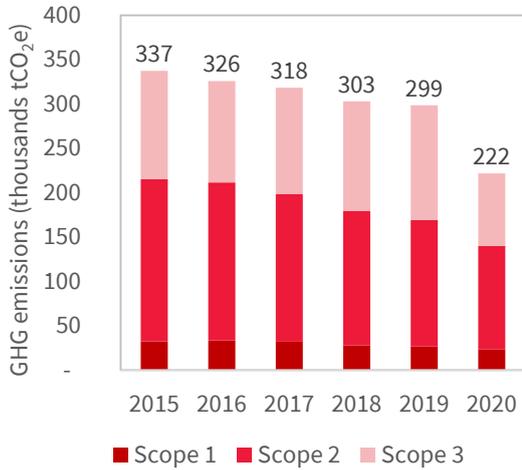
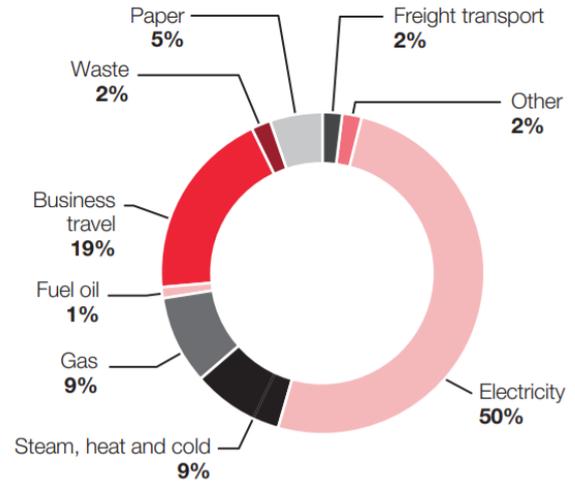


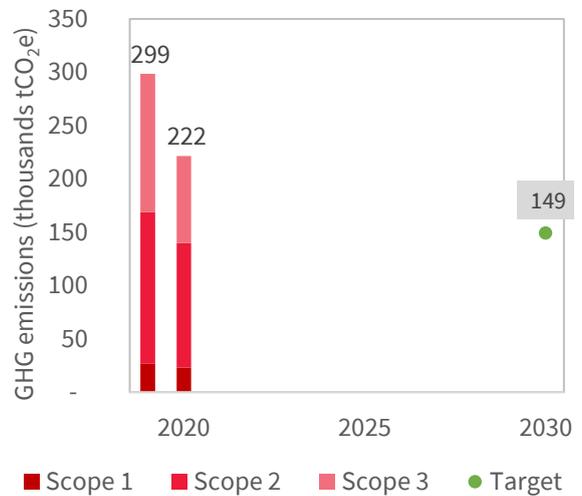
Figure 17: Breakdown of Societe Generale's GHG emissions (S1-3) related to its own operations in 2020



In 2021, Societe Generale committed to reduce Scope 1 & 2 GHG emissions, as well as Scope 3 emissions by at least 50% by 2030 relative to 2019. By end-2020, the GHG emissions have reduced by 26% compared to 2019.

This reduction can be attributed to Covid-19 crisis, as business travel was significantly reduced. Also, the energy impacts of teleworking are not considered in the calculation of the carbon footprint and could offset part of the reduction if they were included.

Figure 18: Own operations GHG emissions (2019-2030)



²⁸ CO₂ emissions are calculated according to the GHG Protocol method and are broken down into three categories: Scope 1 covers direct emissions related to energy consumption and fugitive emissions of fluorinated gases; Scope 2 covers indirect emissions related to energy consumption (external electricity, steam and chilled water); Scope 3 covers GHG emissions from all office paper consumption, business travel, freight transport, waste and energy consumption of data centres hosted in France since 2017.

6.2.2 Credit portfolio alignment

Societe Generale has set a target to reduce its exposure to **thermal coal power & mining** to zero by 2030 in the EU and OECD countries, and by 2040 in the rest of the world. The indicator selected is the financing of thermal coal extraction and power (EUR gross commitment – index base 100) in line with the Katowice application of the PACTA methodology.²⁹

As a scenario benchmark, the Group uses the thermal coal extraction and power demand trend (% change EJ) from the IEA’s SDS 2020 edition.³⁰ Societe Generale’s target is more ambitious than the SDS scenario.

Between 2019 and 2020, the total exposure to thermal coal power & mining decreased by 19%.³¹

Societe Generale has set a target to reduce its exposure to **upstream oil & gas** by at least 10% by 2025 relative to 2019. The indicator selected is the financing of the oil & gas extraction (USD gross commitment – index base 100), in line with the Katowice application of the PACTA methodology.³²

As a scenario benchmark, the Group uses the oil & gas production trend (% change EJ) from the IEA’s SDS 2020 edition.³³ Societe Generale’s target is more ambitious than the SDS scenario.

Between 2019 and 2020, the total exposure to upstream oil & gas decreased by 8%.³⁴ A significant portion of the decrease observed in 2020 can be attributed to the decision to stop financing onshore oil and gas extraction in the United States.

Figure 19: Gross commitments to coal power & mining

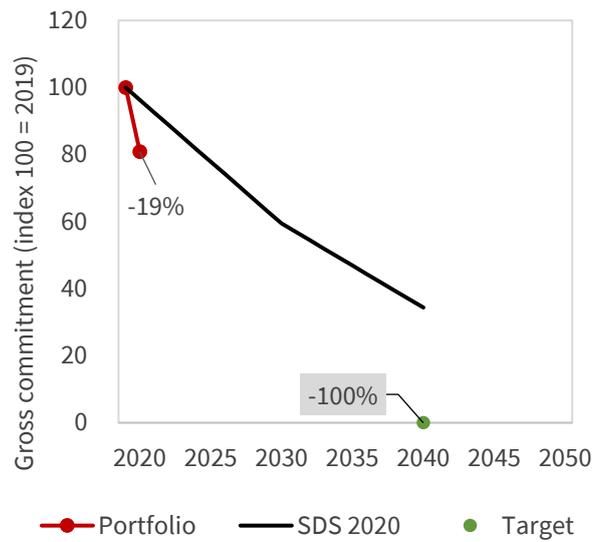
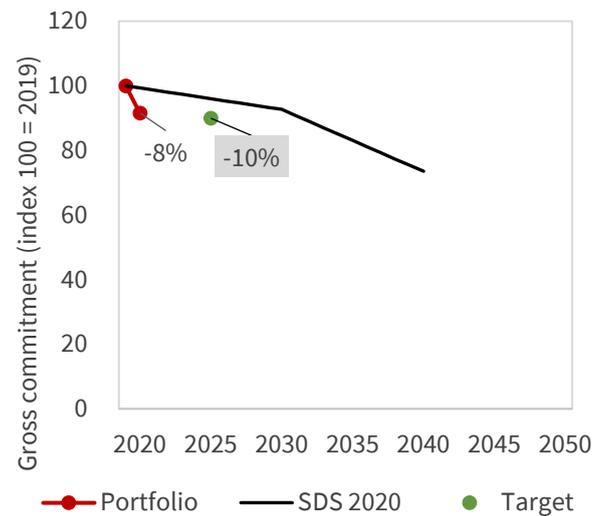


Figure 20: Gross commitments to oil & gas extraction



²⁹ <https://2degrees-investing.org/resource/credit-portfolio-alignment-katowice-report/>

³⁰ The SDS scenario has been derived from the IEA’s coal mining production pathway (Mtoe), as set out in the 2020 World Energy Outlook. Physical production is used as a proxy because the SDS does not provide a scenario for coal expressed in a monetary unit.

³¹ The calculation of thermal coal power & mining (EUR gross commitment) is based on counterparty-specific information such as the revenue share from coal power & mining to calculate the precise amount granted to counterparties for coal power & mining. The product between the gross commitment and the revenue share gives the output indicator. This is subsequently summed to arrive at a total exposure to coal power & mining for Societe Generale’s portfolio.

³² <https://2degrees-investing.org/resource/credit-portfolio-alignment-katowice-report/>

³³ The SDS scenario has been derived from the IEA’s oil & gas production pathway (Mtoe), as set out in the 2020 World Energy Outlook. Physical production is used as a proxy because the SDS does not provide a scenario for oil & gas expressed in a monetary unit.

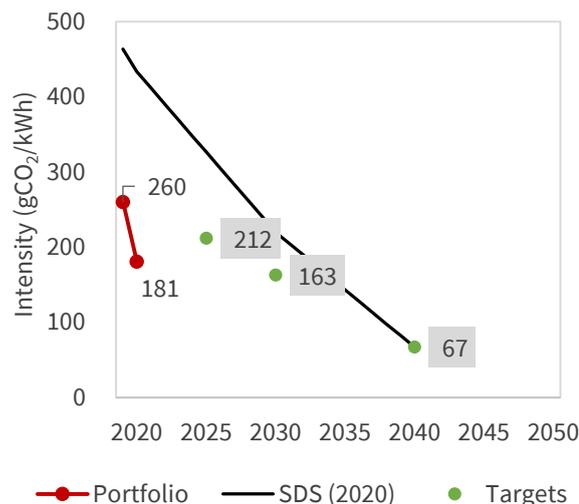
³⁴ The calculation of upstream oil & gas exposure (USD gross commitment) is based on counterparty-specific information such as the revenue share from upstream oil & gas to calculate the precise amount granted to counterparties for upstream oil & gas. The product between the gross commitment and the revenue share gives the output indicator. This is subsequently summed to arrive at a total exposure to upstream oil & gas for Societe Generale’s portfolio.

Societe Generale has set a target to reduce the average emission intensity of its **power generation portfolio** to 67 gCO₂/kWh by 2040 (with interim targets at 212 and 163 gCO₂/kWh in 2025 and 2030 respectively). The indicator is measured as per the Katowice application of the PACTA methodology.³⁵

As a scenario benchmark, the Group uses the CO₂ intensity pathway for the power sector (gCO₂/kWh) from the IEA's SDS 2020 edition.³⁶ Societe Generale's target is more ambitious than the SDS scenario. Societe Generale's power generation portfolio is far less carbon intensive than the world scenario from the IEA's SDS 2020 edition and the interim targets are set at more ambitious levels than the SDS scenario.

In 2020, average emissions intensity decreased by 30% at 181 gCO₂/kWh compared to 260 gCO₂/kWh in 2019.³⁷

Figure 21: Power generation emission intensity

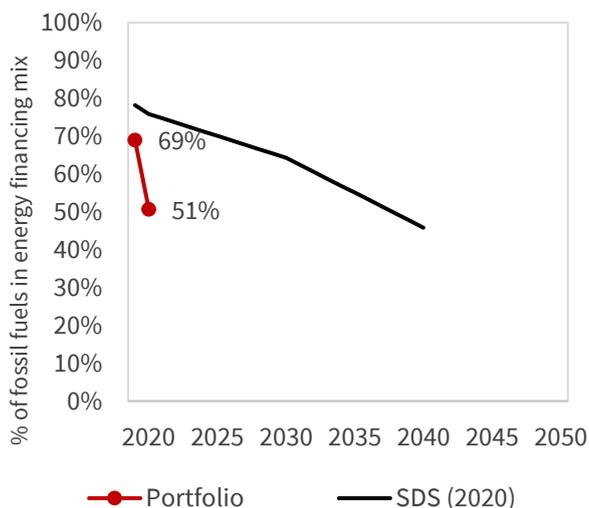


To ensure that the power generation and fossil fuels portfolios as a whole are also aligned, Societe Generale monitors its **primary and secondary energy financing mix**.³⁸ This is only used as a complementary indicator and targets are not set specifically. The indicator selected is the share of fossil fuel energy sources (% gross commitment) in the energy portfolio, in line with the Katowice application of the PACTA methodology.³⁹

As a scenario benchmark, the Group uses the energy demand mix (% change EJ) from the IEA's SDS 2020 edition, which includes thermal coal, upstream oil & gas and power generation.⁴⁰

In 2020, the share of fossil fuel in Societe Generale's primary and secondary energy financing mix decreased by 18 percentage points at 51%. This is far below the IEA's SDS energy financing mix (78%) thanks to efforts in recent years to reduce coal and increase renewable energy financing.

Figure 22: Proportion of fossil fuels in the overall primary & secondary energy financing mix



³⁵ <https://2degrees-investing.org/resource/credit-portfolio-alignment-katowice-report/>

³⁶ The SDS scenario has been derived from the IEA's global CO₂ intensity pathways for the power sector (gCO₂/kWh), as set out in the 2020 World Energy Outlook.

³⁷ The calculation of emission intensities (gCO₂/kWh) is based on counterparty-specific information such as the revenue share from power generation to calculate the precise amount granted to counterparties for power generation, which is supplemented with the counterparty's installed capacity by technology. The product between the installed capacity and average technology capacity factors gives the power generation mix. The product between the power generation and the emission intensity factors by technologies gives the output indicator. This is subsequently weighted by the counterparty's precise amount granted for power generation to arrive at an average CO₂ intensity for Societe Generale's portfolio.

³⁸ Primary energy is extracted or captured directly from natural resources, such as oil, gas or coal. Secondary energy products, such as electricity, are produced as a result of a transformation process, either from a primary or from different secondary energy product.

³⁹ <https://2degrees-investing.org/resource/credit-portfolio-alignment-katowice-report/>

⁴⁰ The SDS scenario has been derived from the IEA's world primary and secondary (power sector) energy demand mix (Mtoe), as set out in the 2020 World Energy Outlook. Coal, oil and natural gas are considered fossil fuels, while nuclear, hydro, bioenergy and other renewables are considered non-fossil fuels.

In 2019, Societe Generale signed the Poseidon Principles and reported its first results in 2020, aiming to provide transparency on how its shipping finance portfolio aligns with the International Maritime Organisation's (IMO) strategy to reduce absolute GHG emission by 50% by 2050.

In 2020, Societe Generale's alignment delta increased to +23.6%, compare to +2.05% in 2019. A positive alignment score implies misalignment with the trajectory. This misalignment is largely caused by **methodological changes whose effects were compounded by the consequences of the Covid-19 pandemic**. These methodological changes had a strong negative impact on passenger vessels (see Figure 23). Indeed, Societe Generale's misalignment score would be reduced to +3% if passenger vessels were excluded.

Regarding passenger vessels, we can notice that: First, the IMO has introduced methodological changes in its 4th GHG study in 2021. The baseline emission intensity of passenger vessels, which was overestimated in the 3rd GHG study, has been lowered, making the targets more difficult to achieve for these types of vessels.

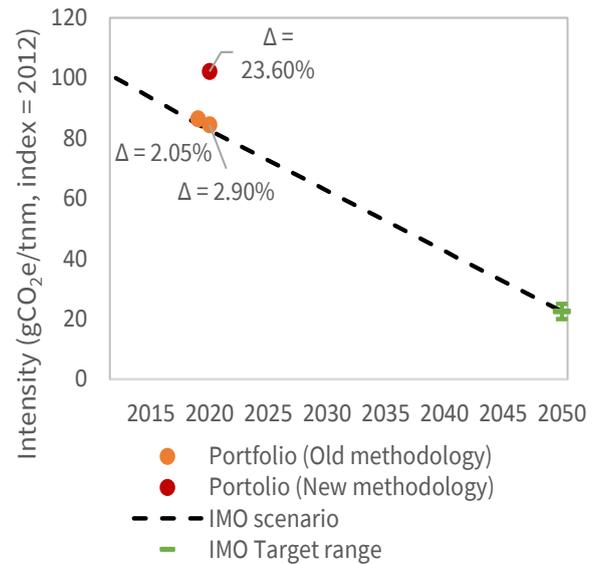
Second, the emission intensity metric used for passenger vessels was changed to include distance travelled. This change was intended to harmonise the measure of emission intensity for all types of vessels. However, it has an impact on some passenger vessels that travel relatively short distances and spend a lot of time idle in ports while serving passengers.

Third, the inclusion of the distance travelled was more detrimental in 2020 as the passenger vessels market was severely affected by the Covid-19 pandemic. Due to idling vessels, the distance travelled was limited while the engines were running, thus resulting in higher emission intensities. It should be noted that the new energy efficiency metric chosen is still under discussion at the IMO, as it does consider the habits of some passenger vessels travelling short distances.

To illustrate the impact of these effects, if the same IMO methodology had been used as last year, Societe Generale's misalignment score for 2020 would have remained roughly stable at +2.9% compared to +2.05% in 2019. This increase (apart from the methodology and Covid-19 effect) is due, on the one hand, to the reduction of the targets along the former decarbonisation trajectory between 2019 and 2020 and, on the other hand, to the improved emission intensity of Societe Generale's portfolio.

Going forward, Societe Generale is committed to supporting its clients in their decarbonization efforts. The Group will strive to achieve the IMO's decarbonisation efforts by financing new and existing vessels aligned with the IMO's targets and shipowners committed to the energy transition by integrating these elements into all its credit decisions. Also, since signing the Poseidon Principles initiative, Societe Generale has been structuring loans to incentivise our clients to operate their vessels in the most efficient and environmentally responsible manner.

Figure 23: Shipping emission intensity



As part of its 2025 strategic plan⁴¹, **ALD Automotive** has set itself the target of reducing the average tailpipe carbon emission of its new passenger vehicles delivered in Europe (European Economic Area, UK and Switzerland) by 40% by 2025 compared to 2019 (gCO₂/vkm in NEDC Correlated terms). The resulting target is more ambitious than the emission intensity threshold set by the EU regulation 2019/631.

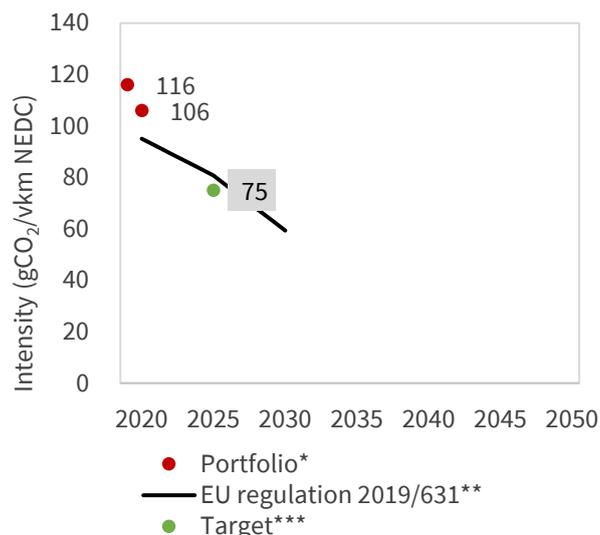
In 2020, average emissions fell to 106 gCO₂/vkm, down by 10 gCO₂/vkm compared to 2019. The significant decline of emissions in 2020 is due to the ramping up of “green” vehicle deliveries, under the combined effect of coming into force of EU targets applying to carmakers, tax incentives and the internal policy implemented by ALD. ALD expects the share of electric vehicles⁴² in its new car deliveries to reach around 30% by 2025 and around 50% of battery electric vehicle deliveries by 2030.

*New passenger car deliveries for EU, Norway, UK and Switzerland

**ALD Automotive’s emission intensity is not directly comparable to the EU regulation (2019/631) because it mixes data expressed according to the WLTP standard and others in the NEDC Correlated standard. The EU regulation target is expressed in terms of NEDC gCO₂/vkm.

***The target set for 2025 is expressed in the NEDC Correlated standard and therefore will be reviewed when the new emission protocol (WLTP) takes place.

Figure 24: ALD Automotive’s emission intensity



6.3. Managing climate-related opportunities

6.3.1 Financing the energy transition

In December 2017, Societe Generale committed to raise EUR 100 billion in financing earmarked for energy transition projects between 2016 and 2020. Having met this target a year early, the Group renewed its commitment, raising the bar to EUR 120 billion between 2019 and 2023, based on a range of sustainable financing solutions (loans, bonds, advisory).

This total sum breaks down as follows:

- EUR 100 billion in sustainable bond issues led or co-led by Societe Generale. Sustainable bonds include both green bonds and sustainability bonds (as defined by the ICMA guidelines and the EU’s Green Bond Standard), as well as all bonds indexed to climate targets.
- EUR 20 billion for renewable energies, in the form of advisory and financing.

By end-2020, the Group was already 67% of the way towards meeting this renewed target. The proportion of renewables in the electricity mix financed by the Group surpassed the 50% mark by mid-2020.

The Group is monitoring its Sustainable and Positive Impact Finance (SPIF)⁴³ to extend credit, leasing and customer support in the growth of sustainable activities. The figure 27 and 28 shows the evolution and distribution of climate-related financing over time. Green financing refers to climate-related activities, from renewable energy production, sustainable buildings, public transportation and other environmental projects.

⁴¹ <https://www.aldautomotive.fr/decouvrez-ald-automotive/nos-engagements/move-2025>

⁴² Battery electric vehicles + plug-in hybrid electric vehicles + hydrogen vehicles. Targets set on new passenger vehicle deliveries for EU, Norway, UK and Switzerland

⁴³ For SPIF methodology, refer to Societe Generale’s UDR 2020: <https://www.societegenerale.com/sites/default/files/documents/2021-03/2021%20Universal%20Registration%20Document.pdf>

Figure 25: Green financing production (corporate)

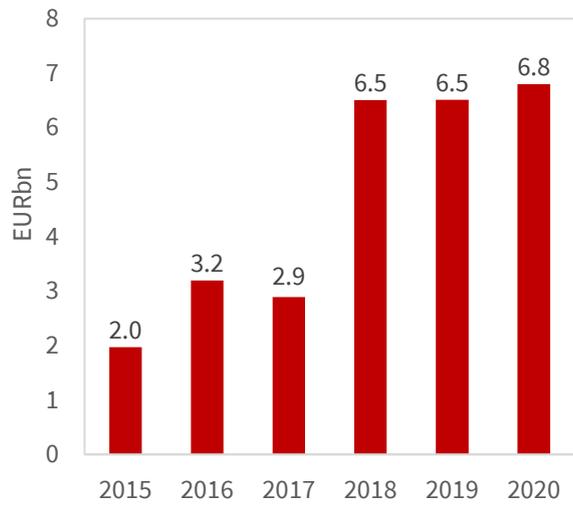


Figure 26: Split of green financing production 2020

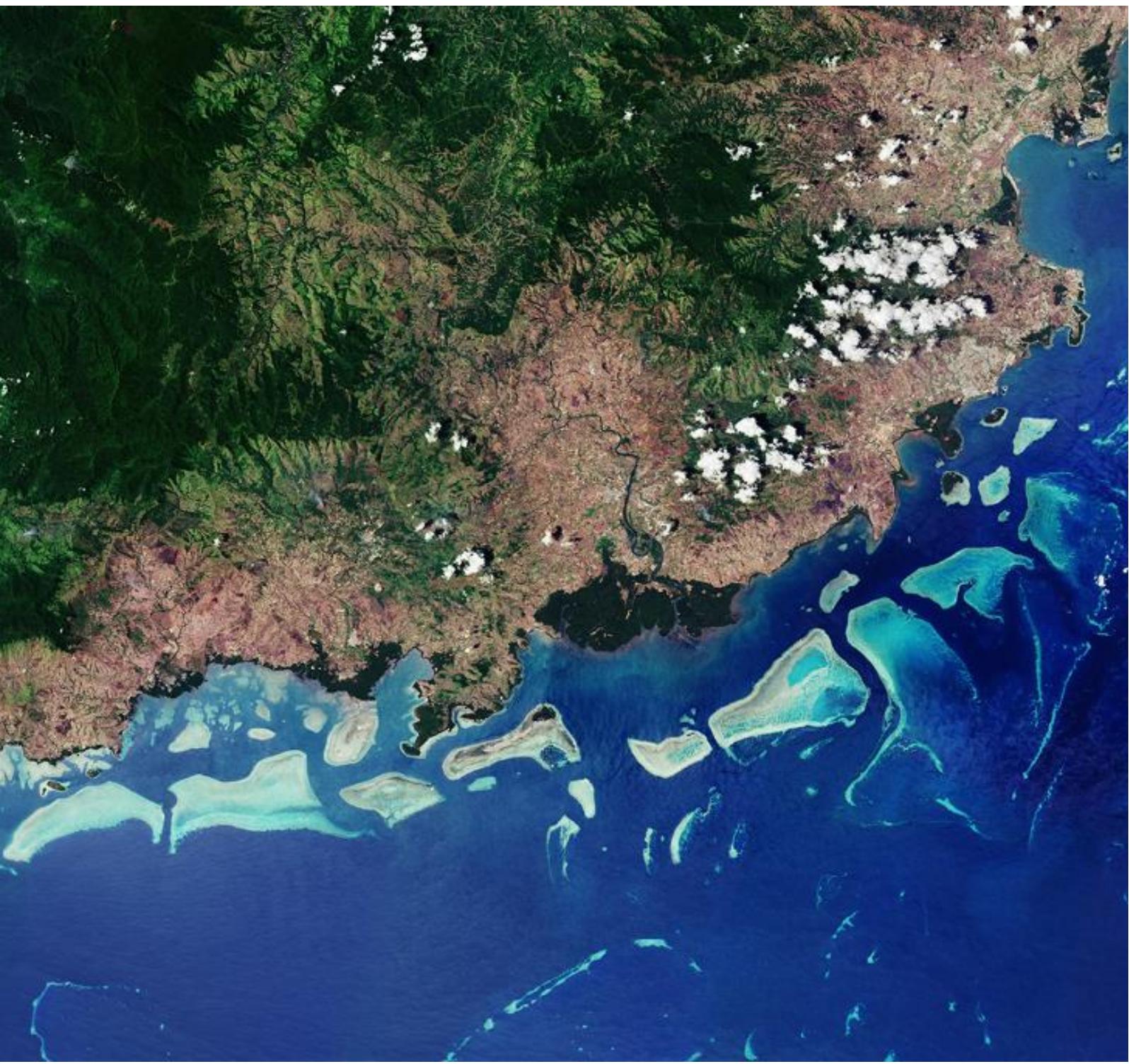
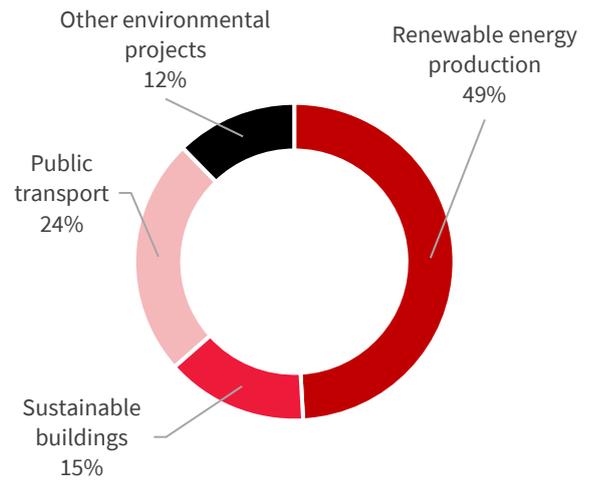


Table 9: Summary of climate-related indicators and targets

Indicator	Scenario	Baseline	Target	Realisation	Alignment delta in 2020 ⁴⁴
Commitments to promoting energy transition (2019-2023)					
Renewable energy financing and consulting (EUR bn)	-	5.2 (2019)	20 (2023)	9.2 (Q4 2020)	n/a On track
Sustainable bond issues (led or co-led) (EUR bn)	-	36.1 (2019)	100 (2023)	71.6 (Q4 2020)	n/a On track
Commitment to reducing impact from Societe Generale's own operations (2019-2030)					
Absolute emissions (thousand tCO ₂ e)	IEA Net Zero 2050 absolute emission trend	299 (2019)	149 (2030)	222 (2020)	n/a On track
Commitments to reducing impact from Societe Generale's business activities					
Gross commitments to coal power & mining (EUR bn, index 100)	IEA SDS 2020 Coal power & mining production trend (%Δ EJ)	100 (2019)	0 (2030/40 OECD/RoW)	81 (Q4 2020)	-16% Aligned
Gross commitments to oil & gas extraction (USD bn, index 100)	IEA SDS 2020 Oil & gas production trend (%Δ EJ)	100 (2019)	90 (2025)	92 (Q4 2020)	-7% Aligned
Power generation emission intensity (gCO ₂ e/kWh)	IEA SDS 2020 Emission intensity (gCO ₂ e/kWh)	260 (2019)	212/67 (2025/40)	181 (Q4 2020)	-28% Aligned
Proportion of fossil fuels in the overall primary & secondary energy financing mix (% EUR)	IEA SDS 2020 Primary and secondary demand mix (% EJ)	69 (2019)	Not set	51 (Q4 2020)	n/a n/a
ALD automotive deliveries fleet emission intensity passenger cars NEDC (gCO ₂ /vkm)	EU regulation 2019/631 Emission intensity (gCO ₂ /vkm)	116 (2019)	70 (2025)	106 (2020)	-2% Aligned
Shipping emission intensity (gCO ₂ e/tnm, index 100)	IMO Objective 3 Emission intensity (gCO ₂ e/tnm)	100 (2012)	20-25 (2050)	102 (Q4 2020)	+24% Misaligned

⁴⁴ The alignment delta is defined as the percentage difference between the portfolio climate indicator and the scenario benchmark at a given point in time. The benchmark is defined as the linear between the indicator at reference year and the target – as per the Katowice methodology. A positive alignment delta signifies a misalignment, while a negative figure means that the portfolio is aligned. Alignment deltas are not provided when there is scenario benchmark at baseline.

APPENDIX 1

This lists all public or private initiatives to which the Group is committed or engaged in:

Net Zero Banking Alliance (NZBA) (2021)

Societe Generale is a founding member of the Net Zero Banking Alliance, bringing together 53 banks worldwide to align their lending and investment portfolios with net-zero emissions by 2050. <https://www.unepfi.org/net-zero-banking/>

Net-Zero Asset Owner Alliance (NZAOA) (2021)

Societe Generale Assurances reinforces its commitments on climate by joining the Net-Zero Asset Owner Alliance (NZAOA). Launched in September 2019 at the United Nations Climate Action Summit, the NZAOA gathers institutional investors who have committed to ensure the transition of the carbon emissions of their investment's portfolio to net-zero by 2050. <https://www.unepfi.org/net-zero-alliance/>

Principles for Responsible Banking (PRB) (2019)

Societe Generale is a founding signatory of the Principles for Responsible Banking (PRB), signed by 130 banks worldwide. Officially presented at the UN General Assembly in September 2019, these principles aim to define the role of the banking sector in building a sustainable future, in line with the United Nations Sustainable Development Goals. <https://www.unepfi.org/banking/bankingprinciples/>

Collective Commitment to Climate Action (2019)

We have also joined in 2019 the Collective Commitment to Climate Action, signed by 34 banks to align their lending with the objectives of the Paris Agreement on Climate. <https://www.unepfi.org/banking/bankingprinciples/collective-commitment/>

Positive Impact Finance (2016)

Societe Generale has pioneered the creation of the UN's Positive Impact initiative which seeks to provide a common language and developing new solutions to finance the Sustainable Development Goals along with its clients.

UNEPFI: TCFD pilot (2017-18)

We participated in the Phase 1 of the TCFD pilot during 2017 and 2018 and contributed to the summary report reports produced on transition and physical risks. <https://www.unepfi.org/banking/tcfd/>

Voluntary application of the EU Taxonomy (2019)

Societe Generale joined this working group aiming to provide high-level recommendations on the voluntary application of the EU taxonomy to core banking products. <https://www.ebf.eu/sustainable-finance/high-level-recommendations-on-the-voluntary-application-of-the-eu-taxonomy-to-core-banking-products/>

Paris Agreement Capital Transition Assessment (PACTA) pilot (2019)

Societe Generale participated in 2018 in the pilot test of the PACTA tool, developed by 2DII that provides a forward-looking analysis of the transition in key sensitive sectors. <https://2degrees-investing.org/resource/pacta/>

Katowice Commitment (2018)

Societe Generale, with BBVA, BNP Paribas, ING, and Standard Chartered committed to align our lending portfolios with the goals of the Paris Agreement. We have collaborated with the think tank 'The 2° Investing Initiative ». <https://2degrees-investing.org/the-katowice-commitment-one-year-on/>

Poseidon Principles (2019)

One of the founding signatories to the Poseidon Principles in 2019, with Global Maritime Forum, promoting shipping industry decarbonisation. <https://www.poseidonprinciples.org/>

Getting to Zero coalition (2019)



Societe Generale also announced that it had joined the Getting to Zero coalition, which aims to develop and deploy commercially viable deep-sea zero-emission vessels by 2030.

<https://www.globalmaritimeforum.org/getting-to-zero-coalition/>



Hydrogen Council (2019)

Societe Generale joined the Hydrogen Council in 2019 (more specifically joined the Investor Group), a global CEO-led initiative launched during the 2017 World Economic Forum in Davos, which will be responsible for creating new economic models for low-carbon hydrogen solutions to aid their future large-scale commercialisation. <https://hydrogencouncil.com/en/>



Carbon Pricing Leadership Coalition (2018)

Commit in principle to the transition towards a low carbon business model in Singapore (and the region); and commit in principle to the implementation of some internal carbon pricing model in at least one department in your organisation, within the next two years.

<https://www.carbonpricingleadership.org/>



Green Investment Principles (2020)

Signature of the Green Investment Principles, which aims to incorporate low-carbon and sustainable development into projects in Belt and Road Initiative countries.

<http://www.gfip.org.cn/public/ueditor/php/upload/file/20181201/1543598660333978.pdf>



NetExplo Smart Cities Accelerator Program (2018)

Societe Generale joined the “Smart Cities Accelerator Program” launched by NetExplo since the beginning in 2018, in the frame of the Group’s Sustainable Cities Initiative, which aims to develop solutions for smart & sustainable cities. <https://www.netexplo.com/corporate/smart-cities/>



Sustainable IT Charter (2019)

On its #TechWeekSG event, Societe Generale announces the signature of the Sustainable IT Charter, under which the Group is reasserting its commitment to contribute to the positive transformation of societies and economies. <https://www.societegenerale.com/en/NEWSROOM-Sustainable-IT-Charter>



LaREF - French Business Climate Pledge (2019)

In the framework of the Rencontre des Entrepreneurs de France (LaREF), 99 French companies, accounting for 1.650 billion euro turnover and 6 million jobs worldwide, reaffirm the need to collectively change course by accelerating innovation and R&D through their investments in low-carbon solutions, in order to engage in a drastic reduction of global greenhouse gas (GHG) emissions.

https://www.societegenerale.com/sites/default/files/documents/Document%20RSE/french_business_climate_pledge_2019_eng.pdf



Act4Nature (2018)

Act4nature international is the continuation of act4nature 2018 for companies with international activities. It is also led by EpE under a multi-stakeholder steering committee and, though aimed at global actors, is a French collective initiative run by French partners. Companies committed to act4nature in 2018 and willing to pursue their action under act4nature international are invited to send updated commitments (SMART) by 19 June 2020, thus generating strong momentum for progress beyond 2020. <http://www.act4nature.com/en/>



UN Global Compact Network (2003)

The United Nations Global Compact is a non-binding United Nations pact to encourage businesses worldwide to adopt sustainable and socially responsible policies, and to report on their implementation. Societe Generale is also a member of the GCN at the regional level; e.g., Singapore. <https://www.unglobalcompact.org/what-is-gc/participants/8628#cop>



Carbon Disclosure Project (2020)

Besides the use of the data that is proposed (data on climate change, deforestation and water security to inform decision making, engage with companies, reduce risks and identify opportunities).

Photos Credits

In the context of lockdown imposed by the Covid-19 pandemic, the Sustainability team organised a contest to encourage creativity among young people, children or grandchildren in the care of active employees. Below is a sample of their creations and, as can be seen, children have focused on environmental themes.



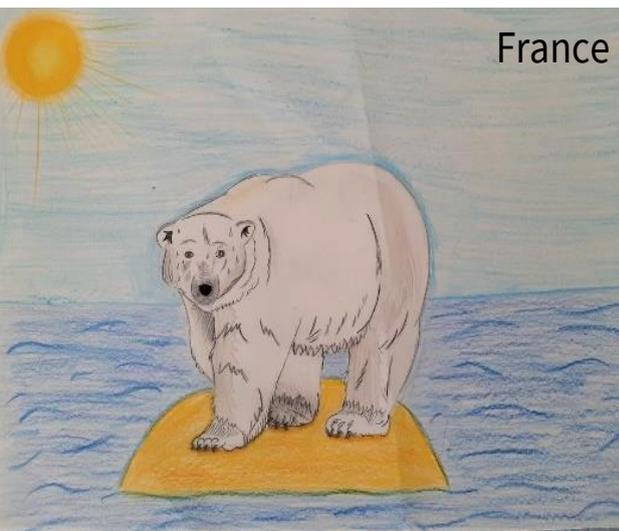
Romania



Romania



Romania



France



Romania



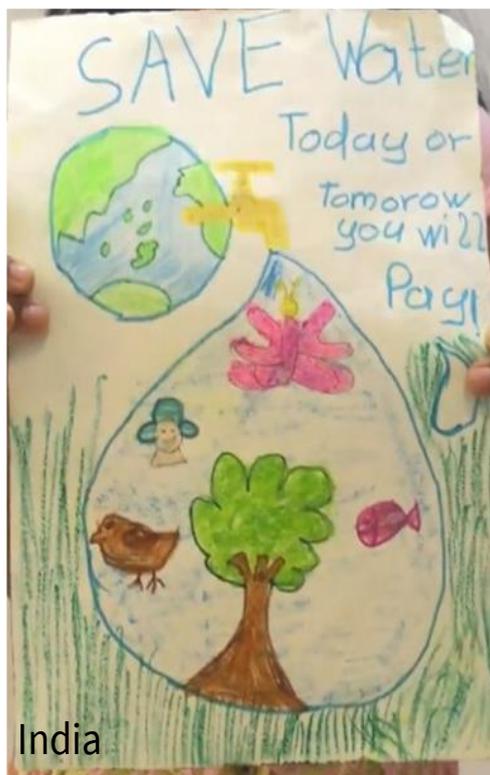
France



France



France



India



India