AXA

XL Insurance Reinsurance

2023 Climate Report

August 2023

Contents

About AXA XL

AXA XL is the property & casualty and specialty risk division of AXA Group ("AXA Group" or "Group"), providing insurance and risk management products and services for mid-sized companies through to large multinationals, and (re)insurance solutions to insurance companies globally.

In this report, unless provided otherwise, (i) the "AXA Group" and the "Group" refer to AXA SA together with its direct and indirect consolidated subsidiaries; (ii) "AXA XL" or "we" refer to a division of AXA Group providing products and services through three business groups: AXA XL Insurance, AXA XL Reinsurance and AXA XL Risk Consulting.

1. Introduction

The climate is changing, with greenhouse gas ("GHG") emissions at the highest measured levels. These changes are affecting multiple areas of our climate system – sea levels, the atmosphere, the oceans, the cryosphere and carbon and other biogeochemical processes, along with the associated impact on local weather phenomena.

The impacts of climate change are of paramount importance to the (re) insurance industry.

Given their experience in predicting and preparing for damaging events, (re) insurers are well placed to help shape the conversations around the numerous risks arising from climate change.

The (re)insurance industry is exposed to complex climate-related risks through the risks (re)insurers underwrite, the investments that they make and the actions we take as a company. At the same time, there are also opportunities for the (re)insurance industry to support the transition to a low carbon economy. As the world manages its response to a warming climate, we strive to develop adapted insurance products and services.

In 2021, the Management Committee of AXA Group dedicated a pillar of its strategic cycle "Driving Progress 2023" to the Group's Environmental, Social and Governance ("ESG") ambition "Sustain our Climate leadership position". The AXA Group announced targets for the insurance pillar of the "AXA for Progress Index", which includes increasing premiums on green insurance products to €1.3 billion by 2023, and upskilling the Group's employees in climate issues by 2023. AXA XL, as part of its climate strategy, contributes to these objectives.

At AXA XL, we believe that we have a responsibility to help clients and communities manage the impacts of a changing climate, promote greener practices, support the protection of natural assets and biodiversity, as well as reduce our own carbon footprint.

2. Governance

2.1 Board oversight

AXA XL's boards oversee the activities of its key regulated entities in jurisdictions where it has a presence. Where relevant, AXA XL has defined the oversight of local boards on climate, in line with local legal and/or regulatory requirements. By way of example, AXA XL's key regulated entities in the UK have appointed the UK & Lloyd's CEO as the Senior Manager function within such entities, responsible for identifying and managing climate-related risks. AXA XL's key regulated entities in the USA have designated a Senior Manager as responsible for the management of climate-related risks in accordance with the New York State Department of Financial Services guidance.

The boards of AXA XL's key regulated entities evaluate and oversee climate-related issues and risks in connection with, among other things, approval of Own Risk and Solvency Assessments ("ORSA") (or equivalents) and business strategy and planning. Climate-related topics are also considered by the relevant board committee(s), depending on the subject matter in question, and escalated to the relevant board(s), as appropriate.

Climate and Environmental, Social and Governance ("ESG") training and regular updates are provided to boards of AXA XL's key regulated entities, covering the concepts associated with climate in the areas of physical risk, transition risk and liability risk, as well as other ESG dimensions. It also aims to provide information around regulations, the role of the board, reputation- related risks, and climate and ESG strategies.

2. Governance

2.2 Management oversight

AXA XL has established a Climate Steering Committee in order to provide 'tone from the top' leadership and direction on climate, ensuring alignment with AXA Group's climate strategy, and driving a single view from management regarding climate across AXA XL. The Climate Steering Committee oversees the definition, development and sponsorship of AXA XL's climate strategy, provides direction on priorities, and regularly assesses progress against the strategy. It provides climate guidance across all relevant functions and regional business units.

It is composed of the AXA XL Leadership Team, the AXA XL Head of Climate and the AXA XL Global Sustainability Director.

The AXA XL Head of Climate, appointed in 2021, acts as a central point of contact and leadership on climate risks and opportunities at AXA XL, and works proactively with the AXA XL Global Sustainability Director, who oversees all other ESG dimensions outside climate.

They both report to the AXA XL Head of Strategy and Corporate Development, who reports to the AXA XL CEO.

The AXA XL Head of Climate coordinates with AXA Group to implement the insurance-related climate initiatives and any new Group commitments on climate in underwriting.

The AXA XL Head of Climate is responsible for supporting the AXA XL Climate Steering Committee in setting goals and priorities, and works with the AXA XL respective corporate functions, reinsurance teams, and regional insurance business units (Americas, UK & Lloyd's, Europe and Asia Pacific).

The AXA XL Head of Climate is supported by the Climate Network, comprised of senior product leads and representatives from the regions and corporate functions. One key objective of the Climate Network is to facilitate information sharing, collaborate across areas of the business, seek opportunities to develop new initiatives, and share best practices.

The AXA XL implementation of AXA Group climate and sustainability-related sectoral guidelines and business restrictions (see section 3.2.2 of this report) is subject to a dedicated governance. The corresponding business referral process includes an escalation process to AXA Group Risk Management and to the AXA Group Underwriting Committee for sensitive and/or strategic climate-related business underwriting.

2.3 Remuneration

AXA Group's compensation policy, which also applies to AXA XL, is designed to align the interests of AXA employees with AXA's sustainability strategy. In this context, AXA Group has progressively integrated Environmental, Social and Governance (ESG) criteria in the compensation packages of its top executives on the short- and long- term components:

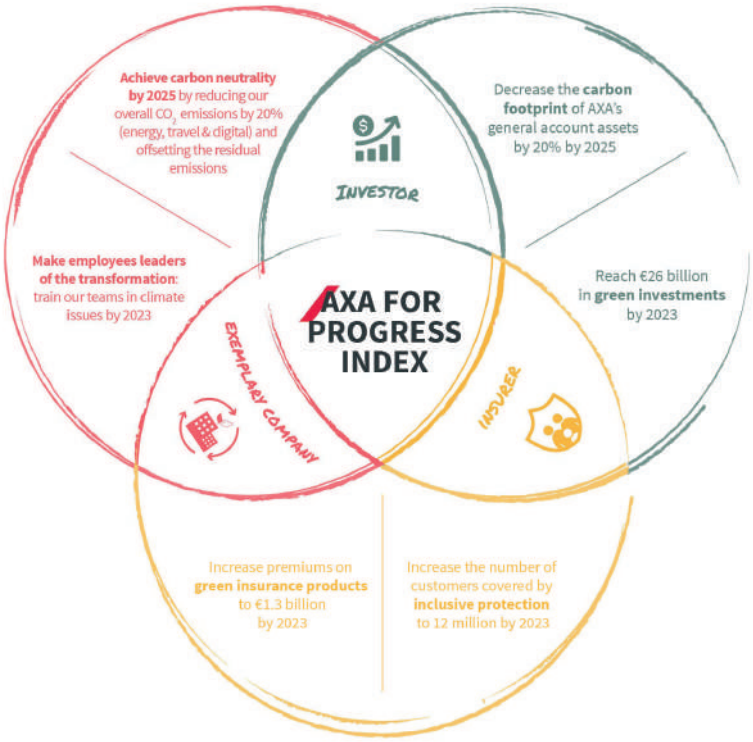
- the Global Leadership Network (GLN) are assessed on qualitative climate and diversity objectives, which are included in their annual target letters;
- a quantitative climate objective is included in the AXA Group performance grid, impacting around 2,000 employees' variable remuneration payout across AXA Group;
- long-term incentives include ESG criteria (climate and biodiversity objectives in performance shares plan, AXA ranking in the Dow Jones Sustainability Index in both performance shares and restricted shares plans), covering a population of around 6,000 employees every year across AXA Group

AXA's ambition is also to increase the weight of sustainability criteria in profit sharing agreements to 30% by 2023 (prevalent in certain European countries, impacting over 20,000 employees every year across AXA Group).

For more information, please refer to AXA 2022 Universal Registration Document (Annual Report).

3. Strategy

AXA Group launched its "AXA for Progress Index" in 2021. This is a set of climate and sustainability-related commitments translated into targets and shared across the Group to further embed sustainable development in our activities: as an investor, as an insurer and as an exemplary company. These AXA-wide commitments include AXA XL and are detailed throughout this report.



3.1 AXA XL climate strategy overview

At AXA XL, our climate strategy builds upon:

- **Education** – through the commitment from the AXA for Progress Index we are committed to ensuring our colleagues complete the AXA Climate Academy by 2023. This is being supplemented with additional training and development of our colleagues, further exploring what a changing climate might mean for the area of the global economy that they support.
- **Embedding Climate** – we are looking to embed climate into the main aspects of our business, from building our underwriting strategy through to our risk management, claims management and risk consulting services. Through education and internal initiatives we aim to position climate risks and opportunities as a core consideration in annual planning, whilst also working with our clients to support their net-zero aspirations.
- **Climate Metrics & Analytics** – in order to track our progress. AXA's Green Business strategy looks to provide insurance products and services supporting the activities of climate change mitigation, adaptation, transition to a circular economy, and limitation of biodiversity loss and protection[1]. In addition, our carbon reduction strategy for our company operations and travel focuses on an absolute reduction of 25% by 2025.
- **Culture & engagement** – underpinning much of the above is creating a culture of climate action as a strategic priority across AXA XL. Providing training and education, as well as broader opportunities for colleagues to engage – for example through our colleague-led "Green Committees" - supports our aspiration for climate leadership.

Teamwork and collaboration across AXA XL and the AXA Group is an imperative. We regularly work with our Underwriting, Science & Natural Perils, Sustainability, Risk Consulting and Risk Management teams to create multi-disciplinary working groups to respond to the challenges we face and the issues we are being asked to solve.

This work comes with the support of our senior leaders, which is critical in bringing a number of these initiatives to fruition.

[1] Green products are defined by AXA as P&C insurance coverage and services, which have a positive impact on the environment by contributing to at least one of the following four objectives: Climate Change Mitigation, Climate Change Adaptation, Transition to a circular economy and / or Limitation of biodiversity loss and pollution. For more information, please click here.

3.2 Underwriting

3.2.1. Underwriting restrictions[2]

Over time, the Group has developed specific "sector guidelines" to address certain activities in sectors that may pose certain risks to AXA Group as an investor and insurer. Among them, Coal, Oil and gas and Ecosystem conversion and deforestation policies, which apply to both investment and underwriting activities, aim to contribute to the transition toward a more sustainable and less carbon-intensive economy. These policies are published on AXA Group's website.

AXA Group Coal Policy

The underwriting restrictions ban Property and Construction covers for coal mines and coal plants. It also includes coal-related restrictions at client-level, mirroring, as appropriate, the criteria that apply to investments.

Full details of the current AXA Group Coal Policy is available at https://www.axa.com.

The AXA Group Coal Policy is currently under review and is expected to be updated in the course of 2023.

AXA Group Energy Policy

Since 2021, AXA Group no longer underwrites new upstream oil exploration projects (greenfield). Exemptions may be granted to companies with the most far-reaching and credible transition plans, based on a case-by-case review. Restrictions will take effect with a 12-month grace period ending on January 1st, 2024.

Full details of the current AXA Group Energy Policy is available at https://www.axa.com.

Furthermore, AXA Group reduces its insurance exposure to unconventional exploration and production in the following areas: Artic, oil sands and fracking / shale Oil & Gas.

The AXA Group Energy Policy is currently under review and is expected to be updated in the course of 2023.

AXA Group Ecosystem conversion and Deforestation policy

On insurance underwriting, AXA Group focuses on the activities at risk of causing deforestation. The Group restricts Commercial lines Property and Construction insurance underwriting in four cases:

- illegal logging;
- companies that are excluded by the investment policy screening are to be referred to the Group Risk Management and the critical activity will likely be banned from Construction and Property covers;
- businesses that operate in "high-risk countries"[3] and commodities (palm oil, beef, soy, timber) and facing high or severe deforestation controversies[4] are also to be referred to the Group Risk Management with a view to restrict the critical activity; or
- traders of soy, beef, palm oil and timber operating in "high-risk countries" and facing high or severe deforestation controversies are also to be referred to the Group Risk Management and the critical activity will likely be banned from marine cargo covers.

In line with the UNPSI-UNESCO classification, the Group also commits to protecting World Heritage Sites by ensuring it does not support, through Property and Construction insurance underwriting, businesses in sensitive sectors that are developing activities incompatible with ecosystem preservation in these vital sites.

Full details of the AXA Group Ecosystem conversion and Deforestation Policy details are available at https://www.axa.com.

[2] AXA XL adheres to legal requirements in the jurisdictions in which it operates

[3] Determined with support from the WWF experts. LATAM: Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname, French Guiana, Paraguay, Argentina. Congo Basin: Cameroon, Central African Republic, Democratic Republic of Congo, Republic of the Congo, Equatorial Guinea, Gabon. South-East Asia: Cambodia, China (Yunnan and Guangxi), Lao PDR, Myanmar, Thailand, Vietnam, Papua New Guinea, Indonesia, Malaysia, Brunei. Australia.

[4] According to Sustainalytics' controversies database.

3.2.2. Decarbonization targets

AXA Group is committed to transitioning its underwriting portfolios to net-zero greenhouse gas emissions by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial levels by 2100. In July 2023, the Group has established intermediate targets for the most material commercial and retail motor portfolios, which include:

- Increase its business in the field of renewable energies, and more broadly across sectors transitioning to low carbon business models,
- Reduce the absolute carbon emissions of the Group's largest commercial insurance clients by 30% and the carbon intensity of other corporate clients by 20% by 2030 compared with a 2021 baseline.
- Strengthen dialogue with its customers, particularly its corporate customers, but also with its external stakeholders and partners to better support them in the transition.

These targets are based on new calculation methodologies developed and promoted by the sector. We expect these methodologies to evolve as data availability improves, but they are a first step to better steer the carbon impact of our insurance portfolios.

Further information on these targets, the methodologies used to set and report on the targets, as well as the assumptions, risks and variables that may impact AXA's ability to meet the targets, is available at https://www.axa.com.

3.2.3. Green business and insurance product development

AXA Group seeks to develop products and services to support the transition to a more sustainable and less carbon-intensive economy. In 2021, AXA Group developed a Green Business Program[5] to deploy non-life/non-health products (insurance coverage or services) that contribute to:

- **climate change mitigation** – by encouraging the reduction of Greenhouse gas emissions (examples: low-emission energy infrastructure/vehicles);
- **climate change adaptation** – by supporting our clients being prepared to the consequences of climate change that is already happening (examples: resilient buildings, insurance on Nat Cat events);
- **transition to a circular economy** – by limiting the use of new raw material in our claims management (example: second-hand spare parts); or
- **limitation of biodiversity loss and pollution** – by protecting and restoring the natural site to its original state, prior to suffering the effects of a peril (example: Environmental Risk Insurance in case of an accidental pollution).

Mitigation	Adaptation	Circular economy	Biodiversity & pollution
GHG emissions reduction	**Climate change adaptation**	**Transition to circular economy**	**Limitation of biodiversity loss and pollution**
Examples: low-emission energy infrastructure/vehicles (…)	Examples: resilient buildings, some insurance on NatCat events (…)	Examples: second-hand spare parts (…)	Examples: pollution prevention, mangrove and coral reef conservation (…)

	Environmentally-sustainable behaviour	Green Claims Management	Green Assets	Green Clients / Activities
Mitigation	Transition towards less energy consumption to reduce GHG emissions	Damaged goods repair, or replacement with a low consumption equipment	Environmentally friendly assets	Environmentally friendly clients and /or activities
Adaptation	Preventive measures to limit vulnerability to climate change			
Circular economy		Replacement with 2nd hand goods		
Biodiversity and pollution prevention	Preventive measures to limit biodiversity loss			

Further information on AXA Group's approach is available in AXA Green Business Report 2022 | AXA.

[5] Derived from the 6 environmental objectives of the EU Taxonomy Regulation: 1/climate change mitigation, 2/climate change adaptation, 3/sustainable use and protection of water and marine resources, 4/transition to a circular economy, 5/pollution prevention and control, 6/protection and restoration of biodiversity and ecosystems. For more information, please click here.

At AXA XL, some of our green-focused products include the following:

- AXA XL offers Green Building Materials Expense supplemental coverage in our North America Environmental Pollution and Remediation Legal Liability ("PARLL") policy. This insurance coverage protects businesses against loss, remediation expense and legal defense expenses that may arise from sudden and gradual pollution conditions. Now businesses not only have the financial help to clean up a pollution incident, such as a fuel oil spill, they can take it a step further. With this added Green Building coverage, in the event of a pollution incident that causes property damage, clients can choose to use green, sustainable materials in the property's restoration.

- AXA XL's North America Construction business has developed tailored Builders Risk insurance programs to address clients' mass timber project risks. Mass timber, which includes cross-laminated timber ("CLT") is gaining popularity in North America. It is also considered a more sustainable building material; according to the Wood Council, replacing steel with mass timber would reduce carbon dioxide emissions by 15% to 20%. The process of manufacturing timber uses substantially less fossil fuel energy per unit volume than steel, concrete, or aluminum, meaning that timber has a lower carbon footprint.

- In addition, AXA XL's Structured Risk Solutions team continues to develop performance insurance solutions for the technical risks associated with breakthrough low-carbon technologies (e.g. fuel cells, energy storage, energy efficiency, waste to energy, and biofuels).

- Where permitted by law, AXA XL also offers Green Endorsements in our Property business, enabling clients to rebuild to more sustainable standards post-damage.

3.3 Client engagement and Risk Consulting services

The Risk Consulting segment of AXA XL works closely with corporate clients to help them translate climate hazards into a risk.

This means quantifying the physical and economic impacts of climate change on their assets and business operations and implementing appropriate risk metrics into the decision-making process. AXA XL Risk Consulting services model the unique vulnerability of assets to hazards, e.g. estimate the physical damage associated to a given flood water depth and quantify a wide range of direct and indirect economic consequences, such as the property damage associated with the said flood, the risk of disruption to the upstream supply chain or downstream disruption, and the risk of interruption of production. Some recent examples of analyses performed by Risk Consulting to support AXA XL clients are:

- Natural hazards prioritization analysis, aimed to identify regions and sites – among a client's portfolio, or supply chain – potentially more affected by natural hazards, as of today and due to climate change in the next 30 years.
- Water stress risk assessment, i.e. the assessment of potential water shortage and related impacts on business continuity and communities, as of today and in the next 30 years.

In addition to Risk Assessment, Risk Consulting is also able to support clients in tailoring the best risk mitigation strategy, and identify which countermeasures should be taken to control losses, or accelerate the pace and scale of adaptation, for instance reducing the physical vulnerability of assets by retrofitting, identifying alternate suppliers, creating backup stocks, or transfer risks, etc.

We have taken steps to encourage policyholders to reduce the losses caused by climate change-influenced events. Our Property Risk Consultants evaluate policyholders' property exposures and provide recommendations to reduce the potential for property losses from natural catastrophe events (including hurricane, storm surge, earthquake, and flood events).

We also help our customers manage fire perils. This includes advice to reduce carbon emissions from the fire's smoke plume, managing firefighting water runoff, the need to remanufacture damaged building materials, inventory, equipment, and the need to place damaged material that cannot be recycled in a landfill.

We have approximately 400 risk professionals across AXA XL. This includes Account Consultants that help clients to understand their portfolio, manage their risk and prioritize risk improvement activities as well as Property, Machinery Breakdown, Construction and Environmental Loss Prevention Consultants in the field globally, who visit our customers' key locations to help identify and mitigate risk. These risks include pre-emergency planning and preparation, as well as developing recommendations on how to further improve site protection.

Specific areas of focus in wind-prone areas include detailed wind inspections to help our customers ensure they have the necessary protection in place to withstand hurricane-force winds.

Another key activity our consultants focus on is categorizing the flood hazard for every location they visit. For those locations in flood-prone areas, they conduct detailed Flood Loss Estimates as well as survey current protection in place and recommend enhancements. AXA XL has invested in a state-of-the-art Global Risk Maps tool, which gives consultants access to multiple flood assessment sources of information. AXA XL Risk Consulting also has an active partnership with the University of Naples Federico II for flood and earthquake research.

We regularly advise our clients on how to ensure that well-meaning energy saving products do not adversely contribute to a fire or make the facility more vulnerable to natural catastrophe losses. We advise them on how to quickly recover from losses that do occur, which includes pre-planned and engineered environmental remediation strategies.

AXA XL has developed an "Environmental Sensitivity Tool" enabling clients to identify and mitigate pollution and environmental risks in Europe and in the UK. The tool uses comprehensive datasets and applies machine-learning algorithms to assess individual facilities' environmental liability risks. The outputs include environmental sensitivities scores and high-resolution maps for each location. When combined with customer-specific information like site location, industry type, and occupancy, companies can use this tool to assess their environmental liability exposures at individual facilities or across an entire portfolio of sites.

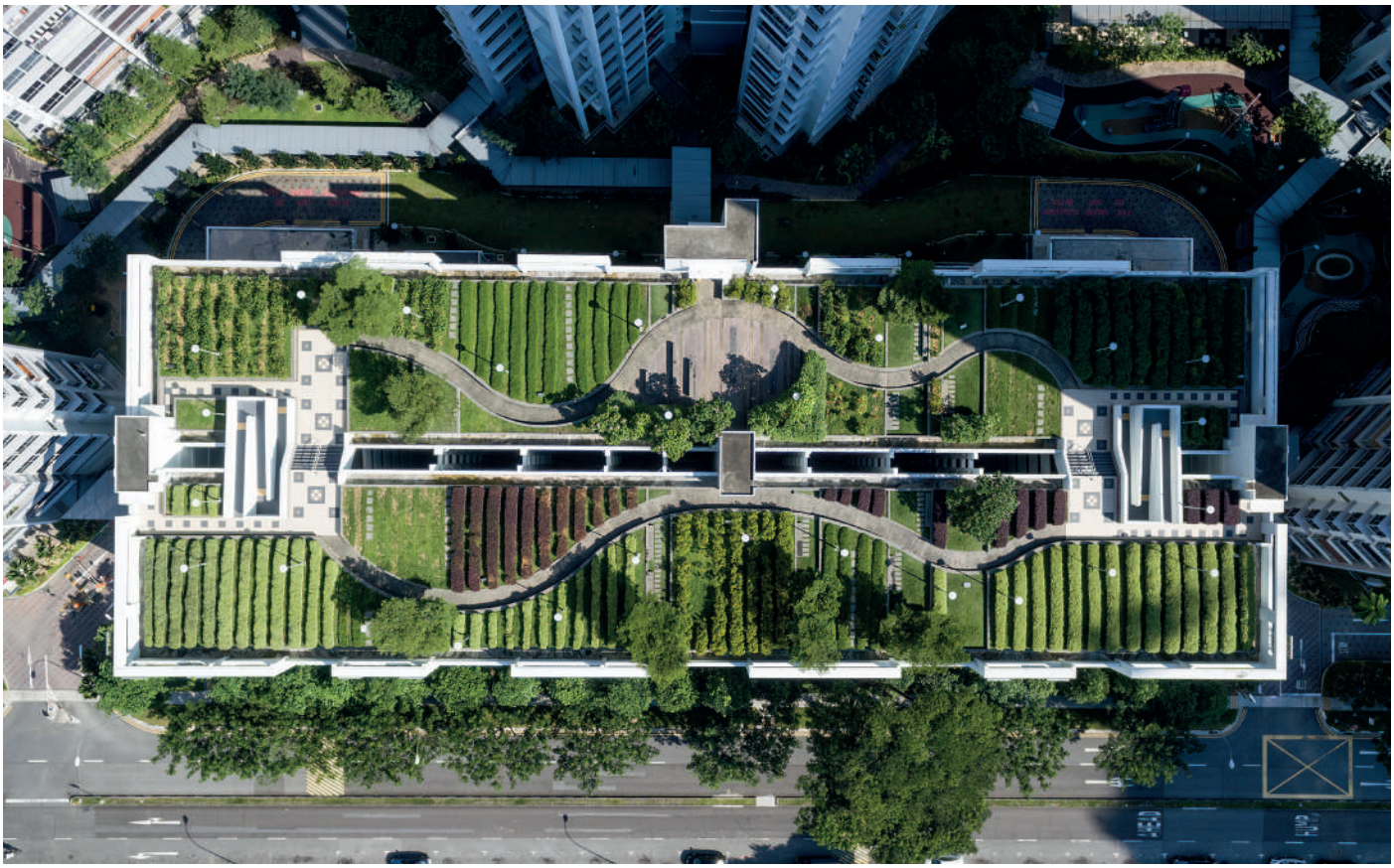
In 2021, AXA XL's teams in France began engaging with clients on their climate strategies and transition plans to achieve Net Zero. On a quarterly basis, a series of "Climate Catchup" interviews were held with multinationals across France. Those interviews enabled our teams to share our climate strategy with clients, and also to help determine how we can better support these clients with their low carbon transition.

3.4.Investment

3.4.1. Responsible Investment strategy

AXA Group's Responsible Investment strategy[6], which applies to all AXA entities - including AXA XL - is based on the following pillars:

- **ESG Integration:** Integrating ESG analysis into investment processes and decision-making, using KPIs and qualitative research across most of our assets. This includes the implementation of ESG "minimum standards" rules to review and potentially exclude underperforming issuers from AXA Group's portfolios.
- **Climate-related portfolio alignment:** Carbon metrics are integrated into investment decisions. AXA Group is also developing metrics for measuring the climate-related impact of its investments, in particular the contribution of its investments to the objective of the COP21 ("Paris Agreement") to limit global warming.
- **Exclusions and sensitive ESG investments:** Excluding sectors or companies that face acute social, human rights, ethical or environmental challenges. These sector restrictions (which apply both to investments and insurance) currently include controversial weapons, coal mining/coal- based power generation, oil sands and associated pipelines, palm oil, food commodity derivatives, and tobacco.
- A green investment target and transition financing to increase the allocation of green assets across various asset classes and to support companies shifting towards less carbon-intensive business models.
- Impact investments that create intentional, positive, measurable, and sustainable impacts on society while simultaneously delivering financial market returns.
- Active stewardship through voting and engagement on a range of ESG or sustainability issues.



[6] https://www-axa-com.cdn.axa-contento-118412.eu/www-axa-com%2Fdaadd8ce-58bf-4c1f-bd28-96890bdb51aa_axa_ri_+policy_march2020.pdf

3.4.2. Investment restrictions[7]

Over time, the Group has developed specific "sector guidelines" to address certain activities in sectors that may pose certain risks to AXA Group as an investor and insurer. Among them, Coal, Oil and gas and Ecosystem conversion and deforestation policies, which apply to both investment and underwriting activities, aim to contribute to the transition toward a more sustainable and less carbon-intensive economy. These policies are published on AXA Group's website.

AXA Group Coal Policy

Coal is by far the most carbon-intensive form of energy and as such coal-based power generation is seen as the industry the most at risk in terms of such "asset stranding".

AXA Group bans investments, for General Accounts and in UnitLinked assets in fully controlled mandates, in the following companies:

- power generation companies with coal share of power production (energy mix) over 30% and/or coal "expansion plans" producing more than 300 MW and/or over 10 GW of coal-based power installed capacity;
- mining companies with coal share of revenues over 30% and/ or with annual coal production over 20 million tons and/or developing new coal mines; and
- certain coal industry partners, defined as manufacturers (e.g., equipment suppliers) and infrastructure players (e.g., port terminals, dedicated railways) developing significant new coal assets

In addition, AXA Group is committed to a long-term "exit" strategy reducing exposure to the thermal coal industry to zero by 2030 in the European Union and OECD countries, and by 2040 in the rest of the world, as suggested by the main climate scenarios (such as the IEA "Beyond +2°C" scenario). This approach is applied both to its investments and underwriting activities

Full details of the AXA Group Coal Policy are available at https://www.axa.com. The AXA Group Coal Policy is currently under review and is expected to be updated in the course of 2023.

AXA Group Energy Policy

Since 2017, AXA Group has divested from oil sands-related businesses (defined as companies deriving more than 20% of their revenue from oil sands, including pipeline operators). As an asset owner, AXA Group has stopped investing in new upstream oil greenfield exploration projects unless they are carried out by companies with the most far-reaching and credible transition plans.

Furthermore, the Group reduces its investment exposure to unconventional exploration and production, as follows:

- Arctic: AXA Group extends the scope of its investment restrictions to the Arctic Region, in alignment with the Arctic Monitoring and Assessment Programme (AMAP). Only companies with Norwegian operations in the AMAP Region will be excluded from the scope of restrictions, given their high environmental standards and lower operational carbon footprint. AXA Group will exclude new direct investments in companies deriving more than 10% of their production from the AMAP Region or producing more than 5% of the worldwide volume of AMAP based Oil & Gas;
- oil sands: AXA Group has adopted a more stringent policy by ceasing direct investments in companies producing more than 5% of the worldwide volume of oil sands; and
- fracking/shale Oil and Gas : AXA Group will no longer directly invest in companies deriving more than 30% of their production from fracking/shale Oil and Gas.

The main database used is the Global Oil & Gas Exit List (GOGEL), released in 2022.

Full details of the AXA Group Energy Policy are available at https://www.axa.com. The AXA Group Energy Policy is under review and expected to be updated in 2023.

[7] AXA XL adheres to legal requirements in the jurisdictions in which it operates

AXA Group Ecosystem conversion and Deforestation Policy

The policy on the protection of ecosystems and deforestation seeks to address risks related to deforestation and protected areas of key biodiversity value. Curbing deforestation conserves water resources, prevents flooding, controls soil erosion, and preserves habitats and biodiversity, in addition to preserving key carbon sinks. This policy is implemented at Group level and is subject to the oversight of the Responsible Investment Committee and the Group Underwriting Committee. In the course of 2022, this policy has been implemented by all AXA entities. In the case of the asset management entities of the Group, the policy has been applied to the extent that they manage General Accounts assets.

The current AXA Group Ecosystem Conversion and Deforestation Policy details are available at https://www.axa.com. The AXA Group Ecosystem conversion and Deforestation Policy is currently under review and is expected to be updated in the course of 2023.

3.5 Our approach to our supply chain

AXA XL works with its supply chain to actively reduce their environmental impacts and improve the sustainable nature of their services. This engagement forms part of our overall strategy to manage our carbon emissions and environmental impacts. AXA XL conducts Corporate Responsibility scoring of its supply chain in partnership with EcoVadis, the business sustainability ratings platform. Based on leading standards such as the Global Reporting Initiative, the UN Global Compact, and ISO 26000, this assessment covers four themes: environment, labor & human rights, ethics, and sustainable procurement (assessing the vendor's own supply chain).

In 2022, AXA XL signed the Sustainable Markets Initiative Global Pledge for Sustainable Supply Chains, committing to measuring the carbon emissions associated with our supply chains, and engaging our suppliers on opportunities for reduction.

3.6. Employee training and capacity building: AXA Climate Academy

As part of the AXA for Progress Index, AXA committed to upskilling all its employees on climate by 2023. To achieve this, AXA has designed the AXA Climate Academy, a modular, bite-sized digital learning program that takes 2-3 hours to complete and helps employees think critically about climate and understand how they can act differently. It focuses on the fundamental scientific principles to understand climate change and gives an overview of the impact throughout the value chain for insurance and for investments, and the company's carbon footprint. The program is divided into four key components: Learn the science; Rethink the business perspective; Commit to change; and Transform.

3.7 Informing policy and external stakeholder engagement

AXA XL engages key constituencies on the topic of climate change through the following means:

- AXA XL is a member of **ClimateWise**, aiming to address how insurance can better respond to climate change. ClimateWise (UK) is a growing global network of leading insurers, reinsurers, brokers, and industry service providers, who share a commitment to reduce the impact of climate change on society and the insurance industry.

- AXA XL employees are members of the **Emerging Environmental Topics Advisory Committee of the Geneva Association**, which analyses the existing and potential role of insurance and risk management in tackling the challenges posed by climate risk and extreme events. AXA Group CEO, Thomas Buberl is a member of the Board of Directors for the Geneva Association.

- AXA XL is an active member of the **Insurance Development Forum** (IDF). The IDF is a public-private partnership that brings together insurers, reinsurers, and brokers, together with the World Bank and the United Nations Development Program ("UNDP"). By optimizing and extending the use of insurance and Risk Management capabilities to build greater resilience and protection for people. In 2019 the IDF signed a partnership with the UNDP and the German Federal Ministry for Economic Cooperation and Development to provide risk financing solutions in 20 emerging countries by 2025 to protect vulnerable populations against climate-related disasters and improve their climate resilience.

- In 2022, AXA XL joined the **Poseidon Principles for Marine Insurance**, a framework for measuring and reporting the alignment of insurers' shipping portfolios with climate goals, to promote responsible environmental stewardship throughout the maritime value chain, foster collaboration with clients, and gain insights to enhance strategic decision-making.

- AXA XL is also a member of the Geneva Association Climate Tech Advisory Committee focusing on how insurance can contribute to the understanding and scalability of new technology in the transition to a low carbon economy.

- AXA XL in partnership with the AXA Research Fund are founding members of the Cambridge Centre for Risk Studies Systemic Risk Hub, launched in May of 2023.

- In addition, AXA XL companies' membership in the American Property Casualty Insurance Association ("APCIA") provide regional support of US initiatives to promote disaster preparedness, sound building practices and highlight lessons learned post-catastrophic events. AXA XL companies are also members of the (re)insurance Association of America ("RAA") who have partnered with environmental, consumer and insurance groups to form SmarterSafer.org. It advocates for smarter, more effective policies to help people in need, promotes disaster safety and preparedness, and fosters sounder environmental stewardship of fragile coastal ecosystems. We continue to be members of the Insurance Institute for Business & Home Safety ("IBHS"), which identifies and promotes effective actions that strengthen homes, businesses, and communities against natural disasters and other causes of loss.

- AXA XL supports the work of the **United Nations Environment Programme Finance Initiative (UNEP FI) Principles for Sustainable Insurance**, including being a member of a consortium to develop tools and methodologies to assess climate risks in the underwriting portfolio, in line with the Taskforce for Climate- related Financial Disclosures ("TCFD") recommendations. (AXA Group were a founding company of the TCFD framework). In January 2021, AXA XL became a signatory of UNEP FI Physical Risk and Resilience Statement, committing to a public climate-related physical risk disclosure that responds to the recommendations of the TCFD by 2023 (see sections 4.2 to 4.5 of this report).

3.8 Sustainability and corporate responsibility

In February 2023, AXA XL launched its 2023-2026 Sustainability Strategy, 'Roots of Resilience', focusing on protecting natural ecosystems, addressing climate change, and embedding sustainable practices across its operations. The strategy consists of 23 goals, detailed in the axaxl.com website, which promote sustainability actions across our products and services, our operations, our people and our partnerships.

As part of our ongoing sustainability commitments, we recognize the importance of helping disaster-prone communities to develop preparedness strategies. We partner with RedR UK, an international humanitarian charity which provides training, skill-sharing and technical support to help equip aid workers, local and international humanitarian organizations better prepare for, and recover from, disasters. Our support enables RedR UK to deliver Climate Change Adaptation and Disaster Risk Reduction ("CCADRR") courses for humanitarian organizations working in vulnerable communities in the Philippines, East Africa, and Bangladesh.

We recognize that resilient ecosystems, are essential to our future. As part of Valuing Nature pillar of our strategy, we are committed to protecting and restoring nature by assessing our impacts, highlighting underappreciated nature risks, and quantifying the financial value of nature.

In partnership with The Nature Conservancy ("TNC"), we are assisting in the creation of a ground-breaking concept: Blue Carbon Resilience Credits. These would, for the first time, value the combined carbon sequestration and resilience benefits provided by coastal wetland ecosystems. The development of blue carbon credits will tap into the carbon credit marketplace that has traditionally focused on terrestrial credits and enable carbon finance to support these critical habitats over the long term. The resilience credit, purchased with the blue carbon credit or separately, will quantify and invest in the added risk reduction benefits of shielding coastal communities from more intense and frequent natural disasters in the future, conserving and restoring our natural ecosystems to their full potential. As a result of the work, TNC has generated the first seagrass offsets in the world.

We know that water is the primary medium through which we will see the impacts of climate change so at AXA XL we continue to work on ways we can make sure our clients and our communities recognize the social and economic value of water. We aim to be a resource for clients looking to understand what their future water- related risks will be in order to support them taking action to address their water risks, and plan for long term resilience. In 2023, we released the Water Risk Insights reports, which spotlights the different types of water-related risks, how they may impact key industries, and solutions to better manage these risks.

3.9. Thought leadership and academic research

3.9.1 The AXA Research Fund

AXA Group supports climate risk mitigation efforts by funding top-tier scientific research through the AXA Research Fund ("the Fund"). A scientific philanthropy initiative launched in 2008, the Fund supports academic research in health, climate and environment and socio-economic issues. The strategic focus is determined by an Advisory Board, and the selection of research projects is overseen by an independent Scientific Board.

With a global commitment of €250 million since its launch in 2008, the AXA Research Fund has funded around 689 research projects to-date that explore solutions to global societal challenges in the areas of climate and environment, health and socio-economic risk.

In 2022, in the field of environmental risks, the AXA Chair in Plastic waste upcycling by CO2 valorization at the University of Mons (Belgium) was selected to receive a fund of €1 million over five years.

To further support the climate priority of the Group's strategic plan "Driving Progress 2023", as part of the UNESCO Ocean Decade Joint Call for Fellows on Coastal Livelihood endowed with €1 million, the AXA Research Fund selected eight postdoctoral fellowship projects in May 2022, whose research will address flooding, tsunami risk, sustainable fisheries, and the involvement of local communities in the development of adaptation strategies.

In November 2022, following a call for projects on the health impacts of climate change, an additional €1 million was granted to eight post-doctoral fellowship projects, who will work on improving assessment and designing new climate adaptation approaches to those risks.

In the field of biodiversity, the AXA Research Fund launched a partnership with the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) to support climate and biodiversity science in the Global South by financing 12 young researchers on the IPBES "Nexus Assessment" studying the links between biodiversity, water, food, and health in the context of climate change & biodiversity loss with an endowment of €252,000.

3.9.2. AXA XL's climate-related research

AXA XL has played a leading role in pushing for greater understanding of the impacts of climate change and has engaged in research with academic institutions on further understanding the changing nature of risks and the impact it could have on our activity.

The Science and Natural Perils team at AXA XL also focuses on understanding the impacts of climate change by undertaking and supporting research on these risks. This research focuses on:

1 **Tropical cyclone induced precipitation ("TCIP"):** A new project was started in 2022 and is due to conclude in 2023, together with the National Center for Atmospheric Research ("NCAR"). The project looks at how to best assess and parametrise the TCIP peril in the US, how the risk varies along the US coast and with the intensity of a storm, and how climate change affects this peril.

2 **Predictive Exposure Modelling:** AXA XL has worked with the University of Colorado Boulder on a California focused pilot case study, aiming to model near-future (i.e. 3-10 years) urban development dynamics in the region. The goal has been to understand how risk might change due to factors influencing exposure (i.e. the assets that are at risk of being impacted from the hazard) rather than just the hazard (i.e. an extreme event that has the potential to cause destruction).

3 **Counterfactuals:** Working with academics at the University of Exeter and University of Reading, AXA XL embarked upon an exercise to explore the use of historical, dynamical, ensemble forecast data to create a suite of alternative histories. The assumption within the stochastic catastrophe modelling process is that the observed historical record accurately represents the mean of possible outcomes. We tested this assumption by comparing alternative, but realistic, histories to those which have been observed. What if the hurricanes we have observed had taken a different, but realistic course? Our objective was to explore where our observed history sits in a distribution of alternative histories, to assess potential deviations from the mean, but also look at both tails of the distribution. Parts of this work have been published, but the project is still ongoing.

4 **Global Inter-connections:** Over the past five years, and continuing in 2023, AXA XL has partnered with the University of Quebec at Montreal (UQAM) to support academic research. In its initial phase, the partnership has explored the global correlation and diversification of atmospheric perils, specifically floods and tropical cyclones. The research aimed to answer what is the spatial distribution of flood and tropical cyclone risks over the world? How does the El Nino – Southern Oscillation (ENSO) large-scale climate pattern impact the spatial distribution of these risks? Are floods and tropical cyclones easily diversifiable over a global portfolio?

5 **Drivers of change for Global Tropical Cyclones and Floods:** Following up on the UQAM work mentioned above (bullet point # 4), a new project was started in 2023, which took advantage of the tools and models already developed in the first phase of the project. These tools allow for a first-degree estimation of the impacts of climate change versus those of a changing exposure and compared to natural variability. Such comparisons are extremely valuable for the insurance industry at this stage of climate change assessment and quantification.

6 **Season Hurricane Forecasting and Trend Discussion:** The North Atlantic Hurricane activity is always of great interest to society, market and most certainly to AXA XL. In meeting this interest, AXA XL has been sponsoring the Barcelona Supercomputing Center to produce and maintain a website that collects and aggregates most seasonal forecasts provided by various research institutions or private entities across the globe. The website serves as a useful tool for gauging the current expectations for tropical cyclone activity in the basin, while also being able to check on the status of the season or to compare against historical seasons. In addition, the AXA XL community benefits from regular presentations and updates from top scientists on season status as well as latest trends in hurricane activity.

7 **Wildfire Risk:** Record industry losses in recent years prompted the question of whether we are entering a new phase of wildfire activity. While such questions remain difficult to answer, there is an urgent need to develop a new approach to the spatially detailed assessment of wildfire risk in the present and the near future. Such a wildfire model would take account of the non-stationary nature of climate, together with current understanding of meteorological, ecological, and human influences on fire. To this account, AXA XL has served as co-supervisor for PhD student starting from October 2021, together with scientists from the Leverhulme Centre for Wildfires, Environment and the Society and Reading University.

8 **Lambda Research on Climate Change Implementation:** At the start of 2023 AXA XL has started a new collaboration with 'Lambda', a small research body focused on intersecting climate change science with our (re)insurance industry. Through this partnership, AXA XL is working to improve and refine our existing climate change related adjustments now existing in our risk assessment tools (e.g., cat models). The work is mainly focused on tropical cyclone related adjustments, with emphasis on Atlantic Hurricanes, but the research would extend also to other parts of the world (e.g., Australia) and other perils (e.g. flood).

4. Risk Management

4.1. Risk management framework

AXA XL's Chief Risk Officer (CRO) is responsible for ensuring that the company has a risk framework across all major risks. He is the chairman of our AXA XL Audit, Risk and Compliance Committee, responsible for identifying, assessing, monitoring, and reporting key risks.

AXA XL has established policies and procedures to contain and monitor risks, and AXA XL's risk framework is designed to allow us to identify and understand material risk concentrations, including concentrations that have unattractive risk/reward dynamics, so corrective or mitigating actions can be taken. Our risk management committees serve as points of dialogue across our business, create risk aggregation methodologies, and develop specific risk appetites to coordinate the identification and discussion of risk topics/metrics. AXA XL applies stress tests, risk indicators and reporting processes that examine the consequences of low probability/high severity events (including those related to emerging risks) in order to take mitigating actions where required. For example, with our property catastrophe (re) insurance business, our underwriting guidelines generally limit the amount of exposure AXA XL will directly underwrite for any one reinsured and the modelled aggregate exposure to catastrophic losses in any one geographic zone. In addition, aggregation of investment portfolio risks is evaluated through scenario and other analyses and correlated exposures of investment and (re) insurance risks, such as within specific geographic zones, and are limited by our investment guidelines.

Our risk appetite framework guides our strategies relating to capital preservation, operational loss, and claims paying rating among others. This framework addresses our tolerance to risks from material individual events (e.g. natural catastrophes), our investment portfolio, and realistic disaster scenarios that cross multiple lines of business.

AXA XL's Emerging Risk Committee, which monitors issues where the extent and nature of any potential losses are particularly uncertain due to insufficiency of information or time to have fully analyzed the emerging situation, covers climate risks as part of its scope. It can provide "deep dive" assessments as appropriate on emerging risks and their impact on AXA XL's operations. The Emerging Risk Committee meets quarterly and provides quarterly emerging risk report summary updates as part of the AXA XL Risk and Compliance Committee.

Briefings on climate and sustainability risks are held as appropriate within AXA XL legal entities' boards (see section 1 on governance).

4.2. Identifying climate related risks

The climate-related risks insurers are exposed to are complex. The most significant climate change risks that have, and may in the future have, a material impact on our business are physical risks, transition risks, and liability risks.

Physical Risk

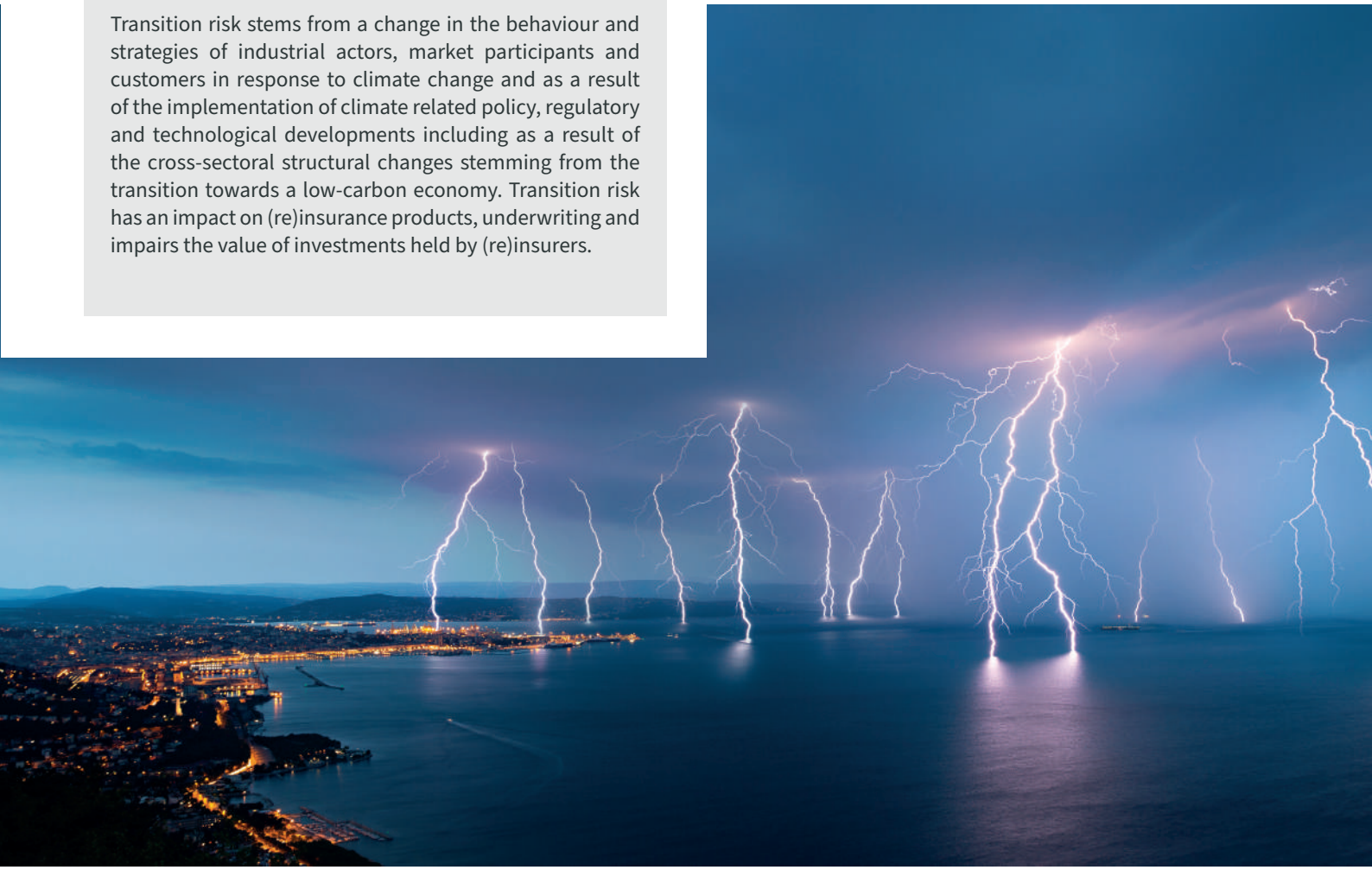
Physical risk refers to the direct impacts of climate change on persons and property, such as those arising from rising temperatures, the increase in the frequency and severity of extreme weather events, fires, rising sea levels and changes in exposure to vector-borne diseases. For (re)insurers, the physical risks may significantly impact business and the (re) insurance industry more broadly, including with respect to risk perception, pricing and modelling assumptions, the need for new insurance products, the amount, frequency, and quantum of claims. Physical risk has a direct impact on undertakings, both through the impairments in value associated with assets held by (re)insurers and through changes in the frequency and cost of these risks on the liability side of the balance sheet.

Transition Risk

Transition risk stems from a change in the behaviour and strategies of industrial actors, market participants and customers in response to climate change and as a result of the implementation of climate related policy, regulatory and technological developments including as a result of the cross-sectoral structural changes stemming from the transition towards a low-carbon economy. Transition risk has an impact on (re)insurance products, underwriting and impairs the value of investments held by (re)insurers.

Litigation Risk

Liability risk can result from both the physical and transition risks of climate change, including because of potential disputes, claims for compensation and legal proceedings brought against insured, companies (re) insurers are invested and potentially directly against insurers; seeking damages for contribution to climate change or for inaccurate or insufficient disclosure around material financial or operational risks. There is an increasing risk of other forms of climate-related litigation, in particular claims by shareholders and other stakeholders for so-called “greenwashing” actions, misrepresentation, misleading conduct, mis-selling, fraud, breaches of fundamental human rights, breaches of fiduciary duties and breaches of disclosure obligations in listing rules or other corporate regimes, or for having deficient controls or processes in place.



4.3. Climate stress tests, scenarios and ORSA

The development of climate scenario analysis and stress testing has accelerated in the past years under the impetus of the supervisory authorities. AXA XL sees the use of climate scenario analysis as an opportunity to further understand the implications of climate change on our investment portfolios and insurance business. Cooperation with supervisory authorities and industry peers makes it possible to improve the methodological framework and internal expertise to better assess climate change risks.

AXA XL is committed to developing capabilities on climate change risks and considering them as appropriate in our business planning and risk management.

AXA XL[8] actively participated in the Bank of England's "Climate Biennial Exploratory Scenario" ("CBES") exercise back in 2021. The goal was to test the resilience of current business models at leading UK banks and insurers to the physical and transition risks from different climate pathways.

The CBES exercise looked at the impact of these scenarios on both invested assets & insurance liabilities, and also included looking at the litigation risk associated with climate change. The exercise allowed for the development within the company of many climate change related tools and capabilities.

For the physical risk assessment, given the large study scope, both in terms of perils and geographically, the frequency / severity method was considered. Model inputs and outputs are available for current climate conditions and the adjustments implemented allowed us to estimate what the output might look like under future temperature scenarios.

Assessing the financial risks of climate change

As part of AXA XL's ORSA (Own Risk and Solvency Assessment) and in line with AXA Group's approach, learnings from supervisory stress tests exercises have been supplemented to better reflect AXA XL's own risk profile.

AXA XL assessed the potential impacts (i.e. evolution of Modelled Average Annual Losses and tail metrics) of physical risk on the underwriting portfolio. Three temperature scenarios have been considered, two of these temperature-scenarios are largely equivalent to: IPCC RCP 4.5 and RCP 8.5 at a 2050 time horizon. These temperature-scenarios were assessed for their implied change in hazard, and modelled for perils representative of AXA XL's exposure, including North Atlantic Hurricane, European Windstorm, and other relevant perils across its geographies. Complementing parameters on changes in hazards, the scenarios also considered in the evolution of exposure, as well as changes in vulnerability.

AXA XL also considered a disorderly transition scenario, whereby new climate policies are only introduced by 2030, and the abrupt implementation of policies affects the energy sector, as well as several areas of the real economy. It derived corresponding shocks applied to its investment portfolio (corporate bonds and listed equities).

[8] Through the Syndicate

4.4. Catastrophe modelling & future conditions driven by climate change: understanding hazard uncertainty

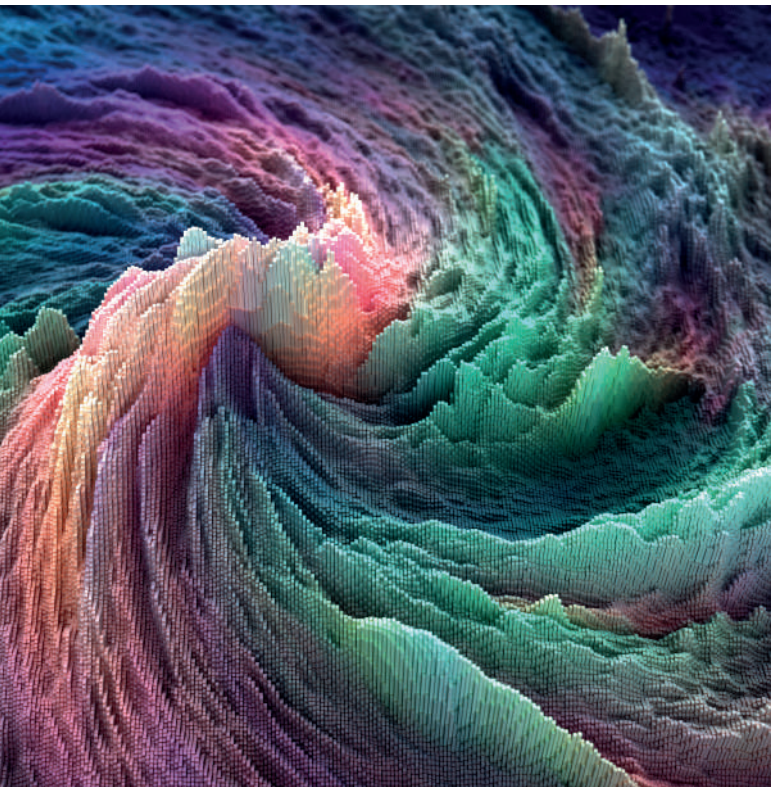
AXA XL is continuously working to develop a view of perils and areas that will most likely be impacted by climate change and refine its analysis. AXA XL works closely with catastrophe modelling firms and has in-house scientific expertise to integrate the latest understanding on climate risks. As the catastrophe modeling firms are closely tied to the climate science community, they work to integrate new views and tools into their products that allow insurers to adapt to changes in risk.

Model Evaluation

Our in-house science and model evaluation teams have a structured framework to perform model assessments, with the aim of determining whether models are fit-for-purpose and correctly represent the current climate.

There is scientific consensus that the hazard is changing for different climate-related perils due to anthropogenic climate change. However, scientific evidence suggests that over the long-term, the direction and order of magnitude of such change may be slow and, in many instances, highly uncertain.

When discussing the impact of climate change on (re)insurers portfolio, it is important to distinguish between weather and climate and the various time horizons and spatial scales: climate refers to average weather over longer time horizons (typically 30+ years) and low resolutions. Weather refers to short- term, relatively regional events. While climate change is global, its impact will manifest through extreme localized weather events. The significant uncertainty around how climate change will influence the frequency and severity of many of these atmospheric climate-linked hazards. Despite all the uncertainty, AXA XL continues to endeavor to understand the impact that a changing hazard will have on the risk the company faces (see section 4.3 of this report on climate stress tests, scenarios and ORSA).



Uncertainty

There is a great deal of inherent uncertainty in the risk assessment process. Uncertainty cannot be eliminated, and it is appropriate to acknowledge it and, where possible, assess it. To complicate matters further, uncertainty is greatly increased when introducing climate change into risk assessments. There are different types of hazard uncertainty to consider: uncertainty in system response (for example, future global temperature scenarios, time horizon of focus); uncertainty in assessment tools (for example, uncertainty in catastrophe models, uncertainty in the current view of risk); and uncertainty in the climate change attribution (natural variability versus climate change). The large uncertainties does not deter us from attempting to understand, implement, and model the impact of a changing hazard on the risk in question. This is an ongoing effort.

Unfortunately, there are not simultaneously accurate and simple narratives that describe climate change impacts. While anthropogenic climate change is indisputable, the climate change impact on various perils is incredibly complex, and often beyond the scope of reliable science. The impacts are likely to be highly non-linear and may act to increase the risk of certain aspects of the hazard, while decreasing other aspects of it.

For example, best estimates of North Atlantic hurricane activity show an increase in intensity as a result of climate change, while a decrease in overall frequency. How these aspects combine to change the risk on the ground is difficult to answer and requires very detailed and sophisticated hazard, exposure and vulnerability modelling to assess accurately. Further, risk occurs at very local (site-level) spatial scales, while contemporary numerical climate modelling of these perils operates at resolutions in the 10-100km range. The fact that the perils themselves are often sub-grid scale events (with respect to numerical/academic climate models) means that there is huge uncertainty in all projections. In the near term, at the timescales our business operates at, a large part of the signal in most perils is still well-represented by natural variability, and that is generally intrinsically captured by contemporary catastrophe models. In addition, catastrophe models are constantly being updated to make sure they are well calibrated to represent the current climate (therefore they are generally inclusive of whatever past climate change has already occurred).

4.5. Managing climate-related risks

4.5.1. Time horizons

Without coordinated and effective action, society will face extensive long-term challenges as a result of climate change. That being said, assessing climate change impacts at a shorter time horizon and at a local spatial scale is highly complex.

AXA XL has conducted several assessments looking at time horizons such as 2050 and 2100, informed by those set by regulators in climate stress tests, or developing and evolving regulatory guidance in this area.

These projections are certainly useful in understanding how the climate will change in the distant future at continental scale and above. However, from an annual underwriting, business and capital planning perspective, high-resolution climate and weather results are required, and at shorter time horizons.

Since first party property risks are most often priced and written on an annual basis, by subscribing to the most current modeling technology, we are reflecting and managing the risk of potential changes in frequency and severity of weather events in the present day.

4.5.2. Engaging with Underwriting and Claims

AXA XL engages with underwriters, actuaries and claims to understand how these changes may manifest in the lines of business they are responsible for, in order to react to the risks and opportunities that will emerge. AXA XL believes that this is very much a process of evolution as the risks and opportunities will evolve, so regular dialogue and interaction is necessary. AXA XL established this through its annual Business Unit Strategy work, starting the discussions around the level of understanding related to climate risk and opportunities and market preparedness per line of business. It established a Climate Network with representation from product lines, functions, and regions to facilitate information sharing, collaborate across areas of the business, seek opportunities to develop new initiatives, and share best practices.

AXA XL Property Risk Consultants also play an active role in the management of risks. They evaluate policyholders' property exposures and provide recommendations to reduce the potential for property losses from natural catastrophe events (including hurricane, storm surge and flood events).

Underwriting rules and guidelines assist in evaluation of exposure to certain classes of business. This is a vitally important process in our business model and part of our regular strategic and business cycle. Risks and opportunities arising from a changing climate are assessed by underwriters in much the same way. Additionally, if the threat of hurricanes increases, an underwriting team will assess the additional demand for coverage in conjunction with the increased risk and price changes on an annual basis.

4.4.3. Climate impacts on claims

The science around the exact impacts from changes in extreme weather phenomena is not clear in certain geographies and locations, but research has been done to try to estimate these changes whilst providing a view on the certainty of these changes. Some examples were referred to in AXA 2022 Climate & Biodiversity report (section 5.6), as shown in the table below, based on an internal analysis of the IPCC's Sixth Assessment Report, purely for the purposes of illustration (comments are general and generic): (i) increases in red; (ii) decreases in blue; and (iii) left in black conclusions without a clear or certain trend.

Hazard	Past Observed Change	In Cat-Models	Future Projected Change in Warmer Climate
Tropical Cyclones (TCs): Basin-wide Activity	*[Likely]* that the proportion of major TC intensities (CAT4&5) and the frequency of rapid intensification events have increased over past 40 years ***(Globally)***	Generally YES - Note that past changes refer to basin-wide, while no detectable trends at landfall	*[Likely]* that the global frequency of TCs over all categories will decrease or remain unchanged ***(Globally)***
			[Very Likely] that the average peak TC wind speeds and the proportion of Cat4-5 TCs will increase (Globally)
			[Very likely] that TC rain-rates will increase ***(Globally)***
Coastal Flood/ Sea Level Rise/ Storm Surge	*[High confidence]* Heating of the climate system has caused global mean sea level rise through ice loss on land and thermal expansion from ocean warming ***(Globally)***	Depending on model vintage as well as lags between model release and model use	*[Very likely to virtually certain]* that regional mean relative sea level rise will continue throughout the 21st century. Approximately two- thirds of global coastline has a projected regional relative SLR within ±20% of the global mean increase (medium confidence).
Extratropical Cyclones (ETCs)	***[Low confidence]*** in any recent changes in the total number of ETCs over both hemispheres ***(Globally)***	N/A(1)	***[Medium confidence]*** that future changes in the intensity of ETCs will be small, although changes in the location of storm tracks could lead to substantial changes in local extreme wind speeds ***(Globally)***
	[Medium confidence] in a poleward shift of the ETCs storm tracks over both hemisphere since the 1980s ***(Globally)***	YES – considering the historical data used to build the models	*[High confidence]* that average and max. ETCs precipitation-rates will increase ***(Globally)***
Severe Convective Storms (SCSs)	***[Medium confidence]*** that the mean annual number of tornadoes in the United States has remained relatively constant since 1970 ***(U.S.)***	N/A(1)	*[High confidence]* that average and max. SCSs rain rates in the U.S. will increase ***(U.S.)***
	[Low confidence] in changes in the number of SCSs due to insufficient data records and varying definitions between regions ***(Globally)***	N/A(1)	*[High confidence]* that environments will become more favourable for SCSs development in the Tropics and sub-tropics, potentially increasing SCS frequency ***(Globally)***
	[Medium confidence] in an increased number of detected tornadoes in Europe ***(Europe)***	N/A(1)	*[Medium confidence]* that the frequency of springtime SCSs in the USA will increase, lengthening the SCS season ***(U.S.)***
Heavy Precipitation Over Land	*[Medium confidence]* in an increase in globally average precipitation over land since 1950 ***(Globally)***	Generally YES - considering the historical data used to build the models	*[Virtually certain]* that heavy precipitation will become more frequent and more intense ***(Globally)***
Flood	***[Low confidence]*** in observed changes in the magnitude or frequency of floods globally (Globally)	N/A(1)	*[Medium confidence]* that flood frequency and magnitude in SE and N. Asia and India, E. and tropical Africa, and northern North America will increase ***(Regionally)***
	Some regions have experienced increases and some decreases in flood magnitude and frequency	Generally YES – considering the historical data used to build the models	*[High confidence]* that flood frequency and magnitude in central and E. Europe and the Mediterranean, parts of South America, S. and central North America, and SW Africa will decrease ***(Regionally)***
Wildfires	*[Medium confidence]* that weather conditions promoting wildfires have become more probable in southern Europe, northern Eurasia, the USA, and Australia over the last century ***(Globally)***	YES (U.S.) – we believe the influence of climate change on near-term wildfire activity exists within the natural variability of models.	*[Medium confidence]* in projected increases in the frequency and duration of fire weather (hot, dry, windy conditions), making extreme wildfires more likely for some regions, dependent on fuel availability and ignition sources ***(Globally)***

* By the end of the century.
(1) N/A = Not applicable due to no observable or a highly uncertain historical climate trend

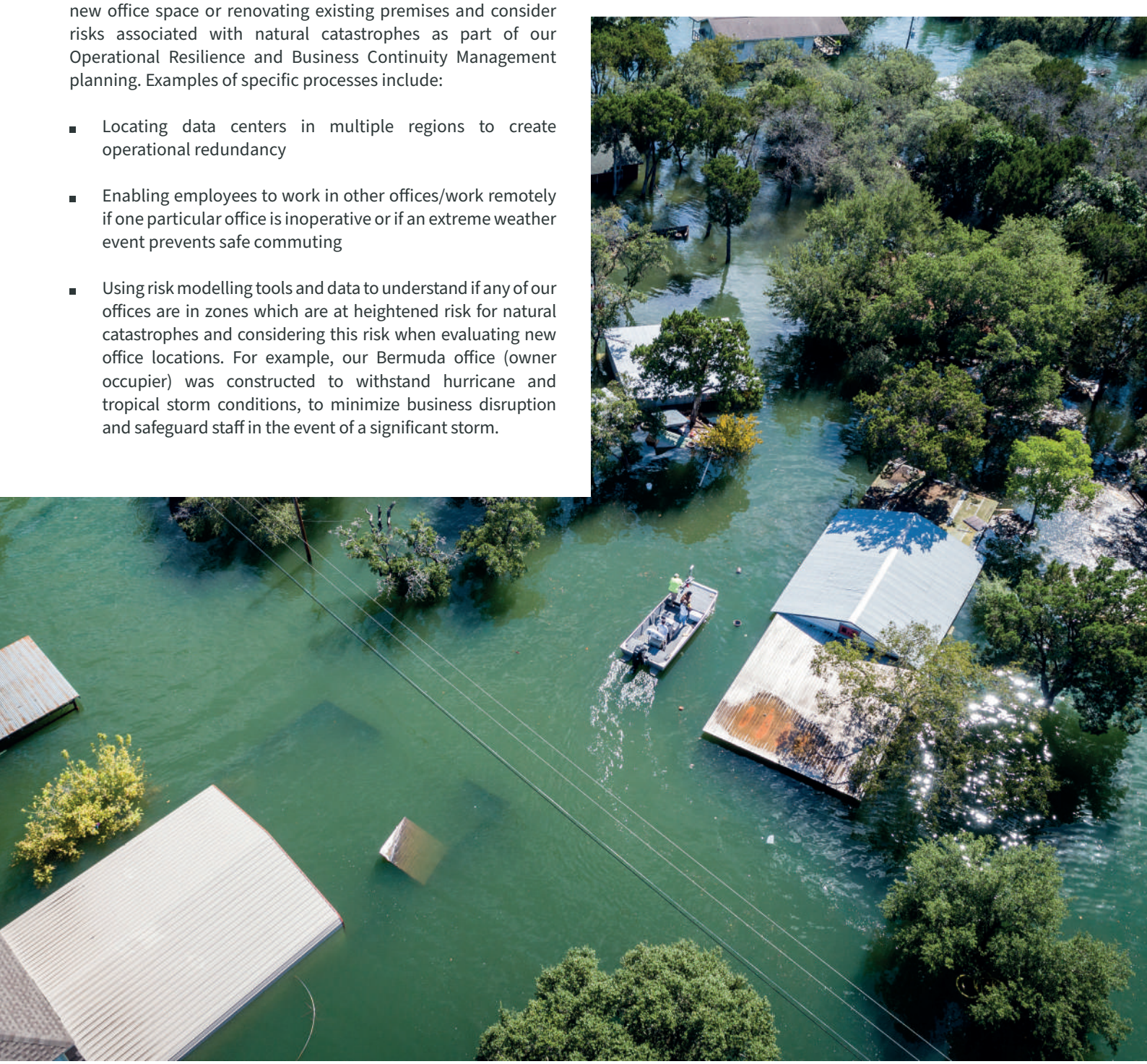
4.6 Climate risk and AXA XL operations

AXA XL has a mature Global Operational Resilience and Business Continuity Management Program, which is designed to ensure the continuation of critical operations in the event of a business disruption (or threat of one) due to natural, technological, man-made or public health emergency/pandemic events. Business continuity and disaster recovery plans are in place for all physical office locations and data centers and, in certain jurisdictions, these plans are shared with regulators of our legal entities. Natural hazard, terrorism and pandemic risks to physical office locations are assessed on an annual basis and communicated to management.

AXA XL conducts environmental due diligence when securing new office space or renovating existing premises and consider risks associated with natural catastrophes as part of our Operational Resilience and Business Continuity Management planning. Examples of specific processes include:

- Locating data centers in multiple regions to create operational redundancy
- Enabling employees to work in other offices/work remotely if one particular office is inoperative or if an extreme weather event prevents safe commuting
- Using risk modelling tools and data to understand if any of our offices are in zones which are at heightened risk for natural catastrophes and considering this risk when evaluating new office locations. For example, our Bermuda office (owner occupier) was constructed to withstand hurricane and tropical storm conditions, to minimize business disruption and safeguard staff in the event of a significant storm.

AXA XL has a Recovery Plan in place that identifies plausible actions that the company can take to restore its financial position and viability in the case of a severe stress event, including catastrophic events. This includes a full menu of potential recovery options that could be followed, such as de-risking measures and capital/liquidity management actions. Scenario analysis (including natural catastrophe stress events) is performed to assess the credibility and feasibility of the recovery options. AXA XL also regularly performs liquidity stress tests to ensure that obligations could be met even under a stressed environment with simultaneous insurance and capital market events. Investment portfolio leverage is controlled through limits imposed by Risk Management.



5. Metrics and Targets

5.1 Our operational carbon footprint

AXA XL is committed to reducing our operational carbon footprint. AXA XL proactively measures material carbon emissions generated through our business activities (primarily air travel and fuels to heat and cool office buildings). This allows us to monitor any footprint changes and target areas for future emissions reduction. AXA XL calculates its annual footprint using a full year of collected data (January – December) and reports on this the following year. This report displays detail related to AXA XL's 2022 operational carbon footprint as well as the data from the past four years:

tCO_2e	Scope 1	Scope 2 (location based)	Scope 2 (market based)	Scope 3 (location based)	Scope 3 (market based)
2018	2,970	6,829	7,559	44,769	44,936
2019	1,838	5,727	6,155	37,944	38,149
2020	1,639	4,345	4,784	12,138	12,436
2021	851	4,291	3,875	14,447	14,907
2022	1,100	4,119	4,557	20,238	20,993

AXA XL is responsible for the internal management controls governing the data collection process. Our independent environmental software providers, Ecometrica, manage the data aggregation, any estimates and extrapolations applied and GHG calculations performed.

Carbon Intelligence, part of Accenture, was commissioned to independently verify 100% of our greenhouse gas (GHG) emissions to a limited level of assurance, as defined by the standard ISO 14064 – part 3. An agreed materiality threshold of 5% at emissions source, and/or global emissions level, was applied.

For AXA XL's 2022 footprint, there was an increase of 30% in location-based emissions compared to 2021. The increase was expected due to rebounding business activity from the COVID-19 pandemic. Historically, the largest emissions source for AXA XL has been business travel, and in 2022 the primary drivers of AXA XL's emissions increases came from business travel.

AXA XL publishes its own operational carbon footprint in its annual Sustainability Report, which it shares on axaxl.com.

AXA XL continues to offset its Scope 3 emissions by working with its carbon offsetting partner, The Nature Conservancy.

5.2 Our carbon reduction strategy

AXA XL is committed to reducing its direct impact on the environment. Our 2021-2025 carbon reduction strategy aims to limit the contribution of our own operations to global warming to 1.5°C, aligning us with industry-practice decarbonisation.

Our overarching target is to reduce the total carbon footprint of our own operations by 25% by 2025 (compared to 2019). Our carbon emissions are, however, only one measure of our environmental impact. Resources such as paper, water, and waste have a low carbon intensity but are environmentally important. AXA XL has therefore included resource consumption targets for paper, water, and waste.

Sub-targets:

38%

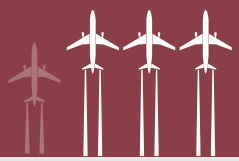
reduction in the emissions from how we light, heat and cool our buildings

40%

reduction in carbon emissions from the centers that store our data

25%

reduction in carbon emissions from our business air travel and hotel stays

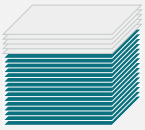


19%

reduction in carbon emissions from business car travel

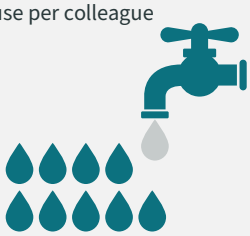
20%

reduction in paper use per colleague



11%

reduction in water use per colleague



10%

reduction in waste production per colleague

Air travel is consistently the biggest contributor to our carbon footprint, so since January 2020, a Green Contribution charge of USD $100 per ton of CO2 emissions has been applied to each AXA XL traveler's corporate budget for all business flights. This funds internal initiatives across the company to reduce our environmental footprint and purchase carbon credits to offset our travel emissions.

In 2022, the Green Contribution funded the installation of a bike repair station at our Paris office to encourage colleagues to cycle to work, a paper reduction campaign in our Dublin and India offices, and a vegetable garden initiative in our Bermuda office.

In 2023, the funds will finance the installation of energy metering in major offices, a single-use plastic reduction campaign across U.S. offices, as well as projects to support capturing additional Scope 3 emissions and promoting pollinators at our offices.

AXA XL 2022 Climate Report Disclaimer

Cautionary statement regarding forward looking statements and important legal information

This AXA XL 2023 Climate Report may include statements with respect to future events, trends, plans, expectations or objectives and other forward-looking statements relating to AXA XL's future business, financial condition, results of operations, performance and strategy as they relate to the climate objectives and other goals set forth herein. Forward-looking statements are not statements of historical fact and may contain the terms "may", "will", "should", "continue", "aims", "estimates", "projects", "believes", "intends", "expects", "plans", "seeks" or "anticipates" or words of similar meaning. Such statements are based on Management's current views and assumptions and, by nature, involve known and unknown risks and uncertainties; therefore, undue reliance should not be placed on them. In particular, the actual achievement of the climate-related and other goals set forth in the AXA XL 2023 Climate Report may differ materially from those expressed or implied in such forward-looking statements. Furthermore, many of the factors impacting the achievement of our climate goals may be more likely to occur, or more pronounced, as a result of catastrophic events, such as weather-related and other catastrophic events, including pandemic events. Actual results may differ from those set forth in the forward- looking statements due to a variety of factors, including those described in Part 5 – "Risk Factors and Risk Management" of the Universal Registration Document of AXA S.A., the ultimate parent of AXA XL, for the year ended December 31, 2022 (the "2022 Universal Registration Document"), available on AXA S.A.'s website (www.axa.com [axa.com]).

AXA XL assumes no obligation to update or revise any of these forward-looking statements, whether to reflect new information, future events or circumstances or otherwise, except as required by applicable laws and regulations. This AXA XL 2023 Climate Report and the information included herein were prepared on the basis of data made available to AXA XL as of the date of this Report. Unless stated otherwise in the AXA XL 2023 Climate Report, this Report and the information included herein are current only as of such date. The inclusion of information in this AXA XL 2023 Climate Report should not be construed as a characterization regarding the materiality or financial impact (or potential impact) of that information, or its significance for any other purpose, including for purposes of applicable securities law.

AXA XL adheres to legal requirements in the jurisdictions in which it operates.

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