



# Climate change – our approach to risks and opportunities

In fulfilling our role to financially protect people and assets, we recognise the material risk climate change poses to our business and are committed to embedding climate-related risks and opportunities in our decision making.

We continue to support the objectives of the Paris Agreement and the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. This report details our approach to managing climate-related risks and opportunities, including our progress and performance against our Climate Change Action Plan. We will continue to enhance our disclosures in line with the TCFD recommendations over time.

Throughout 2020, we have expanded our analysis across physical, transition and liability risks and opportunities to understand where we could have material exposure and have started to develop appropriate responses. We have also used the analysis to highlight the drivers of the key risks we face.

## Governance

Our climate governance framework clearly defines the roles and responsibilities for effective oversight and management of climate-related risks and opportunities at the Board and senior management levels.

The Board Risk & Capital Committee and the Executive Non-Financial Risk Committee received quarterly reports on environment, social and governance (ESG) issues, including climate change. We have three working groups under the Climate Change Steering Committee to focus our work in the key areas of physical, transition and liability risk. These cross functional groups comprise representatives from our underwriting, finance, investment, risk, sustainability, strategy, reinsurance and product development teams.

## Climate change and remuneration

A component of our Group Executive Committee's incentive outcome is determined with reference to the achievement against QBE's strategic priorities. Priorities are set each year and, in 2020, 35% of the incentive outcome for all members of the Group Executive Committee is determined with reference to performance against these.

Delivery of key sustainability and climate commitments forms part of QBE's strategic priorities and directly impacts remuneration outcomes.

QBE's Head of ESG Risk is responsible for identifying and integrating climate-related risks into our risk framework, while QBE's Head of Environment is responsible for developing and implementing the strategy to address the environmental impacts of our operations. Incentives for both of these roles are significantly impacted by the achievement of relevant performance objectives.

# Climate governance framework



## Strategy

Climate change is a material financial risk in and of itself, and it can also act as a risk multiplier. For example, prolonged droughts combined with stronger winds are making bushfires in Australia and wildfires in California, and elsewhere, more intense. Coastal windstorms, together with increasing sea levels, may multiply the scale and intensity of damage within a coastal region. Equally, the past may no longer be a good guide to the future; risk models based on historic experience need to be adjusted to allow for the impact of climate change over time.

This represents a challenge where we provide cover for physical loss or damage to assets. It also increases the potential for third party injury and/or damage. Given this, we have spent considerable time over the past two years analysing what the potential impacts of climate change may be from a physical, liability and transition risk perspective and using this analysis to assess the resilience of our strategic responses, improve our underwriting, pricing and business planning, and to set our risk appetite.

Going forward, we will focus our climate-related activities in the following areas:

- building resilience for our customers and communities;
- investing towards a net-zero economy;
- strategically integrating climate change risks and opportunities;
- aligning our business operations and people to reduce our footprint and support climate action; and
- being transparent about our governance and performance.

## Physical analysis

QBE helps customers protect insured assets against threats caused by extreme weather. Consequently, QBE is exposed to risks associated with extreme weather events including the risk of increasing frequency and severity of weather events as the climate continues to change.

The physical impact of climate change is a material risk for QBE. Over the long term, we anticipate that the increased frequency and/or severity of extreme weather events, even under scenarios consistent with the achievement of the Paris Agreement, has the potential to result in increased damage to our customers' assets and increased claims costs. If these scenarios do eventuate and cause an increase in claims cost, it is likely that insurance premiums may also increase, especially for customers in higher risk areas.

Extreme weather risk has a quantifiable impact on QBE's financial performance each year. QBE's incurred net claims for all catastrophe events, including weather-related events, were \$688 million, \$426 million and \$523 million in 2020, 2019 and 2018 respectively.

QBE management devotes significant resources to assessing and managing the extreme weather risk we assume while protecting customers' assets. We use sophisticated computer simulations to quantify potential natural catastrophe claims, factoring in the current climate and weather (inclusive of the change in climate we have experienced since the start of the industrial revolution).

Claims experience and catastrophe modelling allow us to better understand the risks we are facing and to accurately price each property we insure. A significant portion of our extreme weather risk stems

from perils including cyclones, convective storms, hail, windstorm and floods.

While our customers have assets spread across the world, Australia, the United States and Western Europe account for the majority of our weather risk.

To better understand how our extreme weather risk may evolve as the climate continues to change over the next 30+ years, we have partnered with catastrophe modelling vendors Risk Management Solutions, Inc. and AIR Worldwide, and with Aon to enhance our catastrophe models.

### Our methodology

With the help of our partners, we analysed the scientific literature related to the potential impact of climate change on specific perils and regions.

For Australia, we have used scenarios developed by Australia's leading climate scientists at CSIRO and the Bureau of Meteorology through the Climate Measurement Standard Initiative (CMSI).

**i Further information on CMSI can be found in Partnerships and Initiatives on page 35.**

We have concentrated our analysis on the perils and regions representing over 80% of QBE's extreme weather exposure as measured by annual average losses.

The perils and regions we have analysed are:

- cyclone – Australia, North America
- convective storm/hail – Australia, North America
- windstorm – Europe
- flood – Australia, Europe.

Our analysis has considered risks at 2030, 2050 and 2090.

Our analysis considered two potential scenarios of a temperature increase by 2100 relative to pre-industrial times of:

- less than 2°C, low emissions consistent with Representative Concentration Pathway (RCP) 2.6
- greater than 2°C (3.2°C to 5.4°C), high emissions consistent with RCP 8.5

QBE is committed to supporting the objectives of the Paris Agreement; however, we recognise that the greater risk for our business is under a high emissions scenario and we want to understand the potential impacts of this pathway.

We recalibrated our catastrophe models to reflect the potential change indicated by scientific literature in order to estimate annual average losses under each scenario. These scenarios do not represent forecasts of the impact of climate change, and instead are indicative of the potential outcomes assuming the scenario occurs. Our analysis assumes no changes to our portfolio of risks over time, no change in vulnerability of assets through improvements in resilience and no changes in cover provided.

### What did we find?

#### The impact of climate change will differ across specific perils/regions

Our analysis showed that the impact of climate change will differ significantly across the catastrophe perils and the regions we studied. From the perils/regions studied so far, flood claims in Europe potentially could be the most impacted, while cyclones and convective storms may take a little longer (mid-century) before the impact of climate change becomes more significant.





## ► Helping American farmers

In 2020, working with the Federal Crop Insurance Corporation, we launched the first ever Enhanced Coverage Option (ECO) for crop insurance, to help American farmers with crop damage or poor farming conditions as a result of extreme weather conditions. The ECO is an area-based coverage which can reduce a farmer's loss retention from 15% to 5% or 10% of expected crop value. The ECO is expected to be available on over 30 crops beginning in 2021, with more to follow in 2022 and beyond.

### **There is a significant level of uncertainty regarding the localised impact of climate change**

We found during our review of scientific literature that most of the climate change research and modelling are of a global nature and subject to significant uncertainty associated with: whether or not concerted global efforts are taken to achieve the scenario; the range of possible temperature outcomes under each scenario; the behaviour of perils in each region under each scenario; the year-on-year natural variability of each peril; and the estimation of claims costs under each scenario given the inherent approximation of each model. Further, there is additional uncertainty in resolving the impact of perils at a local address level for underwriting and pricing risks. To understand the impact on our claims cost, we need to understand the local impact of climate change on specific perils. Given those limitations, predictions of the local impact of climate change is subject to much more uncertainty than predictions of the global impact.

### **The greenhouse gas concentration pathway will impact future catastrophe claims**

Higher greenhouse gas emissions will result in significant increases in annual average losses expected in 2050 and 2090, with less impact on costs in 2030.

### **In the short term, the overall impact of climate change may be difficult to discern from the normal volatility of catastrophe events**

Our analysis generally indicates that changes in claims related to climate change over the next 10 years will be less than the expected annual variability in natural catastrophe losses. There are minimal impacts to most of the perils and

regions we studied, through to 2030, with the exception of flood in Europe and Australia which could potentially see up to a 25% increase in annual average losses under a high emissions scenario.

Factors such as distance between our accumulations of insured properties and the locations of severe weather events, and the wide variation of intensity and footprints of such events, result in a large range of potential catastrophe claims even under stable climate assumptions. This will make assessing the impact of climate from observing claims information more difficult. It is likely to take 10 to 30 years before our actual claims experience confirms our climate change analysis. This lag gives us time to adapt our products and services, but also makes it very important to continue to refine our analysis to better anticipate future fluctuations of claims.

### **In the medium term, greater divergence starts to show between the high and low emissions scenarios across all perils and regions**

By 2050, the impact of climate change under a high emissions scenario starts to rise more noticeably across all perils/regions. Flood continues to be the biggest driver of claims, followed by cyclone in North America.

### **In the long term, there is potential for climate change to impact certain perils/regions very significantly**

Due to climate change, some of our product offerings may have to be adjusted to continue to be commercially viable while still meeting the evolving needs of our customers. Our analysis illustrated the potential for large increases in claims in specific perils and

regions by 2090. The impact under a low emissions scenario is not much greater in 2090 than in 2030. However, under a high emissions scenario the impact is considerable with the most affected perils/regions being flood in Europe and Australia, and cyclone in North America.

Importantly, we will continue to monitor the evolving scientific literature to maintain the best possible understanding of the potential impact of climate change on our products and our customers and to use this information to evolve our product offerings to better serve our customers, our shareholders, and the communities in which we operate.

### **How are we responding?**

Following the conclusion of the analysis, we integrated the results into our catastrophe accumulation management process to enable us to consider the impact of climate change on other areas related to catastrophe risk.

In the short term, QBE will manage natural catastrophe claim volatility by considering a wide range of event frequency and severity scenarios in our capital planning, and by purchasing a comprehensive Group catastrophe reinsurance program.

Over the longer term, we will continue to engage with external stakeholders, including governments, to encourage adaptation including the adoption of resilience measures against weather-related events.

In 2021, we intend exploring bushfire scenario analysis, particularly for Australia and the United States. We will further utilise the scenario analysis results in our strategic business planning and portfolio monitoring.

## Supporting the transition to a low carbon economy

### Renewable energy underwriting

QBE has a longstanding role in the energy business, insuring customers that support global energy markets from a diverse number of sources. In 2020, we are proud to have supported the insurance of the Dogger Bank Project, a joint-venture project by two of our customers, Equinor and SSE. Dogger Bank wind farm is an offshore wind farm being developed in three phases and is located off the north east coast of England. Collectively, it will become the world's largest offshore wind farm and will have an installed capacity of up to 3.6GW and will be capable of powering up to 4.5 million homes. Overall, in 2020, we have increased gross written premium from renewable energy by around 50% to \$33 million.

### Investing in Australia's first climate, equity-linked green bond

QBE collaborated with BNP Paribas, the Clean Energy Finance Corporation and Aware Super to invest in Australia's first climate equity-linked bond. The eight-year BNP Equity-Linked Green Bond has a fixed coupon component and a variable component to the return. The variable portion is linked to a forward-looking climate index called the Australian Climate Transition Index, meaning that QBE is aligning capital and returns towards companies expected to perform better in the transition to a low carbon economy.

### Premiums4Good

In 2020, QBE extended the ambition to grow impact investments to \$2 billion by 2025. Premiums4Good has grown to 68 securities and \$1.1 billion in portfolio value as at 31 December 2020. Consistent with our commitment to positive opportunities in relation to climate risk, more than \$641 million is invested in environmental impact areas.

## Transition analysis

### Scenario analysis

During 2020, we have undertaken scenario analysis to understand the impact of the transition to a low carbon economy on our business. We worked with Planetrics, a Vivid Economics company, to understand sectoral trends to 2030 and 2050, which we can use to inform our strategic positioning over the coming years. The analysis is based on the Network for Greening the Financial System Orderly and Disorderly scenarios (REMIND model) and the Inevitable Policy Response Forecast Policy Scenario. All three scenarios are consistent with keeping the increase in global temperatures to below 2°C. The scenarios are expressed relative to a baseline of current policies (3-4°C).

The sectors most impacted by 2030 and 2050 by the transition to a low carbon economy include fossil fuel production and transport. As the economy decarbonises, demand for oil and gas, and internal combustion engine vehicles declines, and transport service providers face rising carbon costs on their emissions. The utilities sector experiences a high variation in impact, with low carbon utilities benefiting from rising demand for low carbon electricity and high carbon utilities facing rising carbon costs. Within the transport sector, air transportation is most affected, with passenger road and rail transportation least affected due to the relative availability of low cost electric alternatives.

Significant growth is expected in demand for green products and inputs such as electric vehicles, copper, battery materials and renewable energy equipment.

For each scenario, we have focused on the impact (by profit) on the most material sectors for our underwriting and investment portfolios. The results show that transition risk is low for the majority of our business. Our exposure to high transition risk sectors is low. For some of the more affected sectors, we have started to respond through progressing our policy positions, engaging with our customers and undertaking due diligence.

### Underwriting

The top three sectors that our underwriting business is exposed to (by gross written premium) are construction, real estate and professional services. Across all three scenarios, by 2030, the impact of the climate transition to these sectors is expected to be modest (up to -1%), although individual corporates in these sectors could be more materially affected on both the upside and downside.

### Investment

The top three sectors we are exposed to (by investment value) through our corporate credit portfolio are financial services, health and pharmaceuticals, and communications. Across all three scenarios, by 2030, the impact of the climate transition to these sectors is expected to be modest.

### Paris Agreement Capital Transition Assessment

In 2020, we again completed transition analysis for our corporate credit portfolio at both the divisional and Group level using the Paris Agreement Capital Transition Assessment (PACTA) tool.

We used the Sustainable Development Scenario, which is an economic transition scenario consistent with limiting global warming to 2°C above pre-industrial levels. The PACTA tool analysis focuses on the fossil fuel, power and automotive sectors. Currently, less than 3% of the Group's corporate credit portfolio is exposed to activities across these three sectors and this includes exposure to both high carbon (e.g. fossil fuels) and low carbon (e.g. renewables, electric vehicles) activities. We currently have no exposure to fossil fuel production.

### Transition stress test

In 2020, as part of an independent review of the strategic asset allocation of our investment portfolio, we undertook a climate transition stress test. Two scenarios were considered – one consistent with a 2°C pathway and one consistent with a 4°C pathway. The results found that the investment portfolio, over a five year timeframe, is likely to perform slightly better (less than 1%) under a 2°C pathway, and likely to experience minor negative returns (less than 1%) under a 4°C pathway, relative to the baseline. Overall, the portfolio is well positioned for climate transition.

## Investment management

QBE manages a multi-asset, multi-currency investment portfolio. Our fixed income portfolio, of which the majority is corporate credit, represents 93% of our total investment assets at 31 December 2020 and is mostly managed directly using in-house portfolio managers and analysts. Growth assets comprise the remaining 7% of our investment assets, and we mostly use external investment managers and passive index vehicles to access a variety of asset classes.

### Carbon footprint of corporate credit portfolio

Carbon footprinting reflects our exposure to carbon intensive issuers. As at 31 December 2020, the weighted average carbon intensity of the corporate credit portfolio was 18 tCO<sub>2</sub>-e/\$M sales. This is considered to be in MSCI's low carbon risk category and our intent is to maintain a low level. The MSCI World Index is shown below as a relative comparison to the QBE corporate credit portfolio.

**18** tCO<sub>2</sub>-e/\$M  
sales

**QBE corporate  
credit portfolio**  
as at 31 December 2020

**162** tCO<sub>2</sub>-e/\$M  
sales

**MSCI World Index**  
as at 30 April 2020

### Unlisted property funds - physical risk exposure

Over the past year, we leveraged our catastrophe models to analyse the exposure of our investments in unlisted property funds to physical climate risks. Our initial analysis considered our top 157 properties across the funds (by property value) located in the United States, Europe and Australia, as these are the regions for which we have future climate scenario analysis embedded in our models. The findings showed that there are no significant aggregations of properties in the portfolio, which reduces the likelihood of large catastrophe claims. Over the next 10 years, climate change is not expected to meaningfully influence the value of the properties assessed. By 2050, exposure to windstorm, severe convective storm and flood perils is expected to increase more noticeably (for all RCP scenarios).

## Liability analysis

In 2020, we undertook a detailed analysis of climate change litigation including considering climate liability risk from two different perspectives: we analysed US-based climate-related litigation cases to better understand our potential exposure, and we commenced analysis of specific liability scenarios in relation to our liabilities.

We completed a detailed analysis of all climate-related litigation cases in the United States (from 1986 to 2020), with a particular focus on industry, defendant, jurisdiction and damages sought. Based on these criteria, the analysis helped to identify our potential exposure, how our policies may respond and how we might mitigate this exposure to prospective future litigation. In 2021, we plan to complete analysis for non-US litigation and we will continue to monitor new cases and types of coverage we offer.

The litigation landscape continues to evolve as plaintiffs find new and innovative ways to bring climate-related litigation cases to the courts. This analysis will therefore be an ongoing consideration, with interpretation varying by policy wordings in place.

During 2020, we also engaged an external modelling consultant, Arium, which has developed a casualty analytics platform. This platform contains a large database of casualty scenarios which is being used to specify scenarios to quantify our exposures to remote yet plausible climate scenarios. To support this analysis, QBE has grouped liability exposures, for example by industry sector and by product, and a working group has been formed to identify and develop these scenarios for testing to increase our understanding of liability-related climate risks.



### QBE investment portfolio commits to net zero emissions by 2050

In 2020, we committed to achieving net zero emissions by 2050 in our investment portfolio and became the first Australian-headquartered insurance business to join the UN-convened Net-Zero Asset Owner Alliance. Joining the Alliance means QBE will take into account the best available scientific knowledge and collaborate with other global institutional investors on developing standard industry frameworks.

Over the coming years, we will explore strategies and approaches to align our investment portfolio with the objective of the Paris Agreement to be net zero emissions by 2050, including setting and communicating our interim targets.





## Risk management

Climate-related risk is a type of strategic risk which we identify, assess and manage using our enterprise risk management framework and ESG business practices. Climate-related risk is also implicitly considered within the insurance, credit, market, liquidity and operational risk classes.

**i** For further detail on how sustainability, including climate change, is integrated into risk management, refer to the Sustainable Insurance section of QBE's 2020 Sustainability Report at [www.qbe.com/sustainability](http://www.qbe.com/sustainability).

### Environmental and social risk framework

In 2020, we developed an environmental and social (E&S) risk framework to help us identify and mitigate risks to our underwriting and investment portfolios. The following issues and sectors are included in the E&S risk framework:

- biodiversity and protected areas
- forestry
- fishing
- defence
  - controversial weapons
  - firearms
- energy
  - coal
  - oil sands and Arctic drilling
  - oil and gas
- mining; and
- large-scale hydropower dams.

The E&S risk framework, which will be fully implemented by 1 January 2022, was developed to promote informed decision making that is consistent with our commitment to sustainable insurance and investment. In line with our United Nations Environment Programme Finance Initiative (UNEP FI) Principles for Sustainable Insurance (PSI) and Principles for Responsible Investment (PRI) commitments, the E&S risk framework further supports the integration of ESG considerations into our underwriting and investment and increases transparency with customers.

**i** The E&S risk framework is available here: [www.qbe.com/investor-relations/corporate-governance/global-policies](http://www.qbe.com/investor-relations/corporate-governance/global-policies).

### Regulatory oversight of climate change risk

Following the release of the United Kingdom's Prudential Regulation Authority (PRA) Supervisory Statement SS3/19 in 2019, QBE developed a roadmap for meeting its requirements which has been approved by the board of our European operations and submitted to the PRA. In QBE's European operations, the Chief Risk Officer is approved by the PRA as the accountable senior executive under the Senior Managers Regime. A European climate risk working group has also been established to support the Chief Risk Officer with meeting our roadmap commitments. Reporting on roadmap implementation progress to the European Risk and Capital Committee takes place on a quarterly basis.

To raise awareness and support delivery of the roadmap, a townhall meeting was held in 2020 attended by over 100 underwriting staff in Europe. The session provided appropriate context regarding the UK PRA SS3/19 requirements and QBE's roadmap, and guidance on how to identify potential exposures and develop underwriting strategies in response.

QBE remains on track to fulfil all of its regulatory climate risk obligations. We anticipate that over time these requirements will become increasingly prevalent in a growing number of jurisdictions.

## Metrics and targets

We continue to evolve our climate-related metrics and targets. Our aim is to establish metrics and targets that are relevant and reliable, and that will drive performance and transparency against our climate-related goals. During 2020, we have maintained our carbon neutrality and achieved our energy use, air travel and science-based emission reduction targets ahead of time. While COVID-19 had a substantial impact on our business operations and target performance, we expect to achieve our 2021 targets when we return to a more normal operating environment in 2021.

In 2020 we committed to achieving net zero emissions by 2050 in our investment portfolio. Over the coming years we will set interim targets and progress against these targets will be included as part of our annual reporting.

Our climate-related metrics and targets are presented below:

MEASURE	TARGET	2019	2020	STATUS
Energy use (GJ)	15% reduction by 2021 (from 2018 levels)	153,296 (-14%)	122,115 (-32%)	Achieved
Scope 1 & 2 emissions (1.5C trajectory aligned science-based target) (tCO <sub>2</sub> -e)	30% reduction by 2025 (from 2018 levels)	12,772 (-57%)	5,881 (-80%)	Achieved
Renewable electricity use (MWh)	100% by 2025	18,876 (63%)	22,529 (97%)	On track
Air travel (tCO <sub>2</sub> -e)	20% reduction by 2021 (from 2017 levels)	12,160 (-31%)	2,717 (-85%)	Achieved
Impact investing ambition	\$2 billion by 2025	\$663 million	\$1.1 billion	On track
Investment portfolio emissions	Net zero emissions in investment portfolio by 2050	N/A	N/A	Ongoing

# Partnerships and initiatives

We are actively involved in a range of initiatives including:

- Actuaries Institute Climate Change Working Group
- Australian Sustainable Finance Initiative
- CDP
- ClimateWise
- Investor Group on Climate Change
- RE100
- UN-convened Net-Zero Asset Owners Alliance
- UNEP FI PRI
- UNEP FI PSI

**i** For further detail on our collaboration on climate change, sustainable finance and resilience, refer to QBE's 2020 Sustainability Report at [www.qbe.com/sustainability](http://www.qbe.com/sustainability).



## UNEP FI insurance pilot

QBE, along with 22 other global reinsurers and insurers, has been part of the UNEP FI's PSI Initiative to pilot the TCFD recommendations for insurance portfolios. The aim of the initiative is to contribute to the development of consistent and transparent analytical approaches that can be used to identify, assess and disclose climate change-related risks and opportunities. The initiative has covered physical, transition and liability risks and opportunities. QBE has been a member of the working group looking at transition risk in the property sector in Australia, which developed a model to assess the risk which we aim to pilot in 2021. We have also been a member of the litigation working group, which complemented our internal analysis on climate-related liability risk.

**i** The report is available here: [www.unepfi.org/psi/wp-content/uploads/2021/01/PSI-TCFD-final-report.pdf](http://www.unepfi.org/psi/wp-content/uploads/2021/01/PSI-TCFD-final-report.pdf).



## CDP

Our climate-related progress has been externally recognised, with our CDP score moving from a 'B' to 'A-' in 2020, putting us in the Leadership band. Areas of highest performance include governance, business strategy and planning, risk management processes, scope 1 and 2 emissions, and value chain engagement. CDP runs a global disclosure system accessed by 515 investors with \$106 trillion in assets under management that assesses our awareness of climate change issues, management methods and progress towards action taken on climate change.



## Climate Measurement Standards Initiative

QBE, in collaboration with banks, insurers and asset owners, has been actively involved in the CMSI, which has developed standards for assessing climate physical risk projections of damage to property in Australia. The CMSI has delivered two reports with recommendations on:

- disclosure – guidance to the financial services industry on disclosing scenario analyses under the recommendations of the TCFD; and
- science – scenario specifications for physical risk for Australia. These specifications are based on the latest scientific research on the impact of climate change on tropical cyclones, floods, storms, bushfires and other extreme events.

**i** The reports are available here: [www.cmsi.org.au/reports](http://www.cmsi.org.au/reports).



## Insurance Council of Australia - Climate Change Action Committee

QBE is a member of the Insurance Council of Australia's Climate Change Action Committee (CCAC). In 2020, the CCAC initiated a number of projects to address the challenges of climate change in Australia, including:

- partnering with the Green Building Council of Australia on their Future Homes project to develop standards for healthy, resilient and energy efficient homes in Australia;
- providing our data to assist in the assessment of the vulnerability of residential buildings to floods and cyclones in Australia, that can be used to improve building standards; and
- understanding the impact of climate change on sea levels and actions of the sea and developing future options to improve the resilience of communities exposed to ongoing sea level rise.

**i** Further information is available here: [www.climate risk.insure](http://www.climate risk.insure).