

# **INFORMED INSURANCE:** CRITICAL UNCERTAINTIES 2020/21

**Climate Change:**  
**The rising tides of uncertainty**





# Climate Change: The rising tides of uncertainty

There can be few people left in the world who do not accept that human activity is changing our climate. Climate change deniers have become a ridiculed minority as the certainty of global warming impacts every continent. Scenario planning demands that we treat it as a certainty but such is the nature and potential impact of rising global temperatures that many of the consequences remain highly uncertain.

So uncertain is the impact of climate change that financial regulators, such as the Bank of England, have identified it as a systemic threat to the financial system and the firms that operate within it. Insurers are at the eye of this storm. They face potentially crippling underwriting losses as weather-related natural catastrophes grow in frequency and severity while investment portfolios are expected to come under pressure as fossil fuels decline, dragging down the value of the firms that exploit them.

“Regulators have a huge part to play. The Bank of England with its stress testing has been ahead of the game especially in highlighting the need to look at transition risks and be alive to the danger of stranded assets as insurers disengage from fossil fuels”, says Denise Eastlake, Head of DAC Beachcroft’s Climate Change Desk in London

## Rejecting fossil fuels

The debate about fossil fuels rages in every continent and the insurance industry faces huge pressure to take the lead in undermining the viability of businesses dependent on extracting fossil fuels or generating energy from them.

Leading the way in applying this pressure is Insure Our Future, recently rebranded from its previous incarnation as Unfriend Coal. This global network of some of the most effective corporate campaigning groups has the ear of policy makers in Europe and the United Nations. Peter Bosshard, Director of the Finance Program at one of those groups, California-based The Sunrise Project, says the campaign is having an impact.

“Our campaign started with coal in the spring of 2017 by asking insurers to withdraw from supporting the coal industry. You get the biggest bang for your buck with coal [responsible for 40% of global CO2 emissions] so it was the obvious place to start. We could tell that there was a need for action because there were gaps between what they were saying publicly and what they were actually doing. We have seen some success over the last three years with 19 major insurers ending or limiting underwriting of coal”.

European insurers have led the way in responding to this call but that is not just because of pressure from campaigners, says Christina Eckes, Partner at BLD Bach Langheid Dallmayr in Cologne.

“Some insurers have cancelled out of fossil energies, especially coal. I don’t see it as a pure political pressure point. It is also about the insurance industry wanting to promote changes in environmental policies. Sustainability is one of the key drivers for this. They are trying to change the way they operate to a more sustainable model”.

## INTERCONNECTIVITY OF RISKS

As insurers get to grips with the demands of regulators to face up to the systemic uncertainties, it will not be enough to place climate change risks into conventional silos as the connections between the different potential impacts are extensive and far-reaching.

The consequential impact of climate-related catastrophes is perfectly illustrated by the bush fires that swept Australia at the end of 2019, says Kristine Vale, Special Counsel at Wotton + Kearney in Sydney.

“The bushfires started in the hottest and driest year on record and by February 2020 had burned through between 20 and 40 million hectares. It was an extreme, catastrophic fire season. What really changed this year was the proximity to major urban areas. Three capital cities - Canberra, Sydney and Melbourne - were blanketed in smoke for almost the entire summer. In December, Sydney was almost encircled by fire”.

In Sydney alone there were 28 days where the smoke levels were declared toxic. Every one of those days cost the local economy around Aus\$20m in economic losses, a proportion of which hit insurers. The response has been to set up a Royal Commission to investigate bushfires and plan for a more hazardous future.

The insurance industry has been quick to argue the case for changes to building codes, infrastructure improvements and better land use planning, not just to create greater resilience against bushfires but extending the measures to protect against cyclones, flooding and other natural hazards growing in frequency and severity.

Wildfires are by no means just an Australian problem. California has experienced wildfires of escalating severity in recent years, displacing more people and costing insurers millions of dollars. We should not be surprised, says Paul S. White, Partner at Wilson Elser in Los Angeles.

“There have always been wildfires. The problem is not the wildfires themselves but that mankind has expanded its population centres into historically vulnerable areas”.

Elsewhere in the USA, this combination of rising temperatures and human activity could soon turn the rich agricultural pastures of the Midwest into the desolate dustbowls conjured up in John Steinbeck’s epic novel *The Grapes of Wrath*, says White.

“In Oklahoma, we are already seeing the combination of fracking and the excessive extraction of water for farming at a pace at which it cannot be replaced threatening a new era of dustbowls. The lack of water in those states will then hit the food supply chain”.

Along with his colleague and fellow Partner Carl Pernicone in New York, White also highlights the multiple threats facing China as a result of record rainfall and flooding threatening the integrity of the Three Gorges Dam, an example of infrastructure expansion struggling to maintain its integrity in the face of weather of unprecedented severity.

“Some of the flooding looks almost biblical. Downstream of the Yangtze River and the Three Gorges Dam is the heart of China’s manufacturing industry. 80% of the world’s pharmaceuticals and computer chips are produced downstream from the dam. If that goes down you are looking at a major catastrophe”, says Pernicone.

“This also highlights our vulnerability everywhere because we have such extended supply chains. The pandemic has already exposed these vulnerabilities as we have all off-shored so much”.



## EMBRACING DATA TO MODEL UNCERTAINTY

Searching for a better understanding of these connections and how to prepare for the enormous threats they will pose is a key focus around the world, says Eastlake.

“The challenge is to build in resilience for a broader range of unknowns. This means looking at how and where we build but insurers also need to take future predictions, even the extreme scenarios, into account. This is not easy because all the data they have is historic so many ‘one in one hundred years’ events have to be reassessed in terms of their likelihood and impact”.

Data and the tools needed to model these huge uncertainties are things the insurance industry understands but which it has to learn to deploy more effectively and, crucially, share with the people looking to it to help identify, mitigate and, ultimately, transfer the risks, says Nick Dunlop, Managing Director, Client Relationships at Willis Towers Watson.

“The insurance industry has at its disposal a truly unique set of capabilities, analytical tools and metrics to help us quantify and manage exposure to climate related risks. All financial services firms face the challenge of how to quantify and price climate risk and we are very experienced in this. Finding ways of sharing this expertise more widely will be key.

“We use these tools day-to-day in insurance and reinsurance to build resilient financial systems that can withstand major shocks. There is clearly an extreme overlap within the financial system as it faces pressure from regulators, stakeholders, investors and consumers to understand and mitigate its exposure to climate risk and minimise its contribution to climate change”.

As well as mitigation, insurers will come under pressure to find ways of covering potentially massive exposures. Among the potential solutions many are exploring, often in partnership with governments and supra-national bodies such as the World Bank, is parametric insurance.

### Parametric solutions grow

One solution that insurers are exploring when transferring trillions of dollars in climate risk is parametric insurance. The World Bank started trialling a parametric solution for 14 island countries in the Pacific Ocean in 2018 working with five major reinsurers – Swiss Re, Munich Re, Sompo, Mitsui and Tokio Marine – and backed by over US\$40 million from the United States, the United Kingdom, Japan and Germany to capitalise the scheme.

With a parametric solution, pre-agreed payment for a claim is guaranteed upon the occurrence of a triggering event, which needs to be a pre-defined parameter or metric related to the insured’s particular exposure, and its use is expanding.

In Brazil, where the huge agricultural sector is looking for cost effective cover against risks such as fire, rainfall, frost, hail and no germination, and part of the premium may be subsidised by the federal government, parametric policies are coming into play, says Marcia Cicarelli, Partner at Demarest Advogados, an Associate firm of DAC Beachcroft.

“Typically, they cover the loss of productivity based on climate indexes provided in the policy. Despite of the lack of specific rules regulating parametric insurance, an increase in demand is expected as the premium tends to be lower, the loss adjustment less complicated and payment of compensation more efficient and faster”.

## LITIGATION ADDS TO UNCERTAINTY

As the impacts and costs of climate change mount up, so it becomes inevitable that people start asking the question “who will pay?”.

This battle has already started in America with several municipalities pursuing petrochemical companies for the costs of mitigation, damage and clean-up they claim can be pinned on global warming and, specifically, carbon emissions.

The petrochemical firms’ hopes that these claims could be dismissed at a federal level have been dashed and the cases are now finding their way back to state courts where the complex business of trying to establish if, when and how the polluting activities began to constitute a demonstrable “nuisance” has started.

This will not be easy says Pernicone.

“Even climate change activists have to admit there was a time before which emissions did not cause a problem. The difficulty is establishing when that tipping point occurred and then looking at the policy wordings that were applicable at the time”. Many are alighting on the late 1960s as the most likely moment that will emerge as the tipping point. Others are arguing it could be even earlier, something that is unsustainable, says White.

“There is a developing trend of cities and states seeking to hold companies that emitted carbon responsible and as they go back into historical policies the potential damages, the potential exposures are alarming. You end up holding insurance companies responsible for cleaning up the earth which would be a staggering task”.

In Europe, anxious eyes are being cast towards the German Court of Appeal in the city of Hamm which has decided to take evidence in a controversial case in which a Peruvian farmer is pursuing a German energy company, alleging its emissions of global warming gases contributed to glaciers on the mountains above the farmland melting and flooding the land. The issues of causality were initially thought so tenuous that the case had little prospect of success but the court has decided to take evidence on this point.

“How are you going to prove German emissions have caused ice melting and flooding in Peru? It was initially thought the court would not seek to answer this question but in January it announced it was going to take evidence on causality. This is unusual in Germany unless the court sees the claim having some merit”, says Bastian Finkel, Partner at BLD Bach Langheid Dallmayr in Cologne.

This process has been put on hold by the coronavirus pandemic as it will require German experts to visit Peru but its ground-breaking potential ensures that it will be eagerly watched over the coming months.

## CO-OPERATION AND PARTNERSHIP

Insurers also need to keep a focus on the human cost of climate change as well as the financial implications, says Stewart Muglich, Partner at Alexander Holburn Beaudin & Lang in Vancouver.

“According to the International Association of Insurance Supervisors, since 2008 an average of 26.4 million people have been displaced from their homes by natural disasters”.

He says the challenge is so large that it requires unprecedented levels of co-operation.

“Everyone is going to have to pull together in the face of climate change. Private insurers cannot do it alone; governments cannot do it alone and businesses cannot do it alone”.

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