

# Insights

## How climate change is driving geopolitical risk

With a civilisation stretching back thousands of years, the Mayan people of the 10th century could surely have never imagined the collapse of a society that, at its peak, dominated a region extending from modern-day Central America to northern Mexico.

Yet, for the Mayans, the next few hundred years were marked by a sustained period of drought that drove political unrest and migration, and led to abandoned cities.

Theirs is a story that's familiar in the history of human civilisation – climate change contributing to food and water shortages, upheaval and unrest, migration and warfare. And it's a story that's still with us today as pressures exerted by changing climate trends and extreme weather events are once again implicated in famine, migration, destruction, and conflict.

**As our world faces up to current climate change, it's clear that understanding and facing up to the geopolitically driven risks and opportunities they present will be key to local and global stability.**

### Climate change is really happening

There is now overwhelming scientific consensus on the presence of a warming climate trend that has been with us since the industrial revolution and that has accelerated in recent decades. During this period, planet Earth has experienced an increase in average temperatures of around 1° Celsius that has been accompanied by observable changes in weather patterns and related events, such as tropical cyclones, wildfires, heavy rainfall, and flooding.

It's useful to think about the influence of climate change on national security and geopolitics as a threat multiplier. From the reduction in sea-ice in the Arctic to the increased severity of droughts in Africa and the Middle East, climate change brings new national and global risks as well as amplifying some of those that already exist.



Icy seas



Stormy times



Food security and water scarcity



Efforts to tackle climate change

# Evidence of the growing risks.... and opportunities



## Icy seas

The global warming trend is greatest in the Arctic. Here, average temperatures have risen by up to 3° Celsius, melting and thinning the sea-ice that covers large areas of the Arctic Ocean. The ice melt has already begun to open up the possibility of new shipping routes<sup>1</sup> as well as previously inaccessible oil, gas and mineral reserves.

With these new opportunities, we can expect to see a shift in the appeal of the region and a subsequent realignment of its geopolitics. North American and Russian interests

increasingly compete for the opportunity to exploit newly accessible natural resources and China seeks to develop a 'polar silk road' to gain greater access to new trade routes. Organisations must understand where their supply chain may be affected by these changes.



## Stormy times

The increase in average global temperature of around 0.8° Celsius over the last century and a quarter has had an appreciable impact on the severity<sup>2</sup> and location<sup>3</sup> of tropical cyclones.

While the overall average number of hurricanes and typhoons in a season shows little change over the last few decades, their intensity and rainfall levels are becoming more severe. Climate conditions in a given season can lead to clustering – multiple storms affecting a particular region. And there is evidence that the location of maximum intensity of tropical cyclones is shifting northwards.

The net result is that some regions are finding themselves newly affected by storms, while others are finding themselves susceptible to more extreme and repeated

weather events. Every country and region affected will have to contend with the increased cost and regularity of recovery efforts, and the need for significant spend on infrastructure protection and adaptation – to protect both physical assets and people. In developing economies, this can have a drastic impact on the viability and resilience of businesses and communities.

As storminess increases, we're likely to see continued growth in the insurance market offering risk diversification and transfer as a means of financial protection for regions and businesses that are affected.

<sup>1</sup> Government Office for Science, Foresight, Future of the Sea: Implications from Opening Arctic Sea Routes, 2017

<sup>2</sup> Holland, G. & Bruyère, C.L. *Clim Dyn* (2014) 42: 617. <https://doi.org/10.1007/s00382-013-1713-0>

<sup>3</sup> Kossin, J. Emanuel, K.A. & Vecchi, G.A. (2014) <https://www.nature.com/articles/nature13278>



## Food security and water scarcity

There is growing evidence of the influence of climate change on political and social pressures, which can lead to civil unrest.

For example, one 2015 study<sup>4</sup> found that prolonged drought in the Fertile Crescent exacerbated issues of food security and water scarcity ahead of the Syrian uprising in 2011. The study showed that man-made climate change had increased the likelihood of drought in the region and concluded that “human influences on the climate system are implicated in the Syrian conflict.”

Climate change had intensified destabilising pressures in an already environmentally harsh and politically unstable region. Economic pressures on a small scale, subsistence agriculture led to rural-to-urban migration and the isolation of remote communities, increasing their susceptibility to radicalisation from terrorist groups and catalysing unrest.

As climate change continues, similar pressures in other regions are likely to see further geopolitical tensions elsewhere around the globe.



## Efforts to tackle climate change

Successfully tackling climate change will require global cooperation. However, agreeing what action is needed and who should take responsibility remain difficult questions for international negotiation.

Some progress has been made through accords such as the Paris Agreement of 2015. This Agreement established an international protocol for countries to agree to reduce their CO<sub>2</sub> emissions in order to work towards limiting global temperatures to 2° Celsius above pre-industrial levels, but are these targets strict enough?

Even if they are, an even greater risk might come from changes in national politics that see new administrations revoking or not meeting previously ratified agreements – for example, changes of position on the Paris Agreement. When such political swings take place in some of the world’s largest CO<sub>2</sub> emitters, global emissions targets suffer significant setbacks, limiting the impact of recent progress.

<sup>4</sup> Kelley, C.P. et al (2015) <https://www.pnas.org/content/early/2015/02/23/1421533112.short>

# Understand, prevent, protect and respond to climate related geopolitical risk

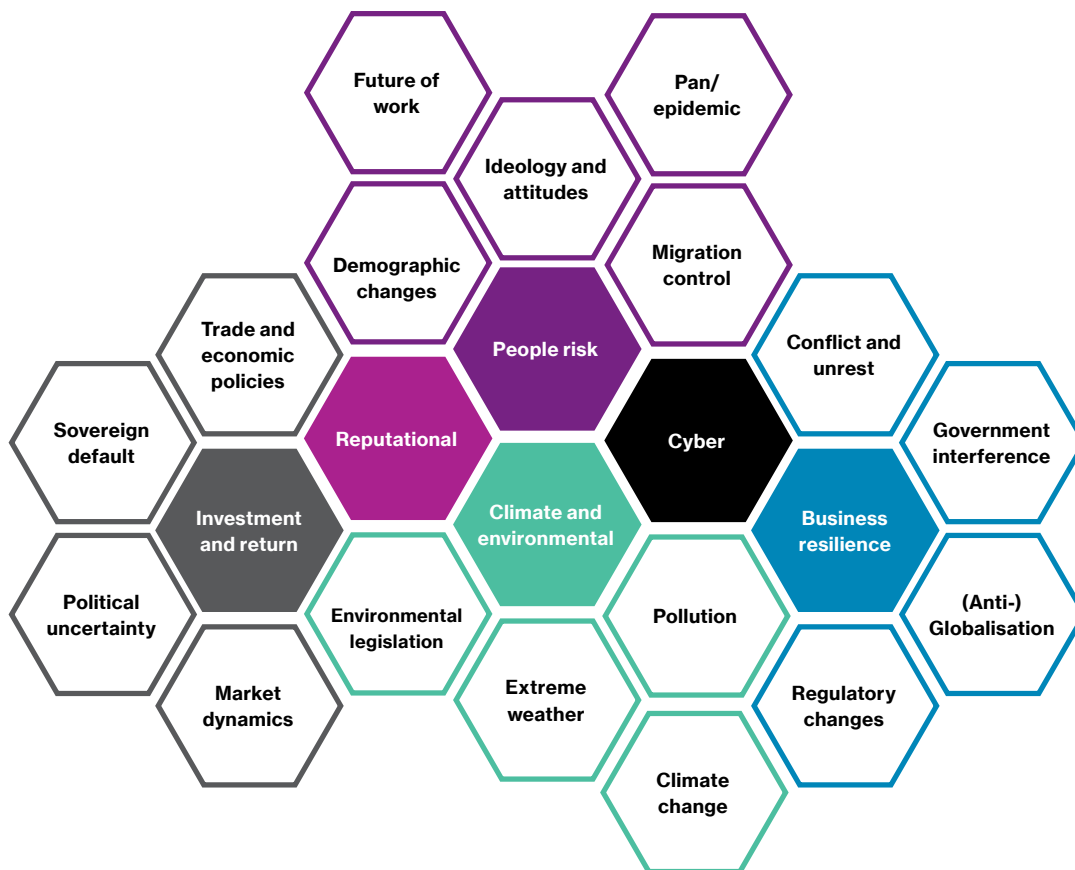
## Managing climate related geopolitical risk

Changing climate trends and extreme weather events can cause famine, migration, pandemic, destruction of assets and people, and conflict over scarce resources. Climate has a major impact on a business' decisions on where to invest and the profile of its available workforce. Political agendas will shape how climate change is managed and how committed global leaders are to acknowledge and address the issue within their country.

The drivers and their associated risks are interlinked – and play out differently depending on the sector, global footprint and size of an organisation.

Businesses will need to understand and mitigate these risks – looking through different 'geopolitical lenses' such as people, cyber, investment, reputation and business resilience to develop an integrated view of how these risks might collectively impact their business plans, across their organisation.

## Interconnected geopolitical drivers of risk



## Understanding climate as a driver of risk

A structured approach is key – assess the drivers and risks, mitigate and protect against the risks, and be able to recover from an event quickly if it happens. Consider the risk in two ways:

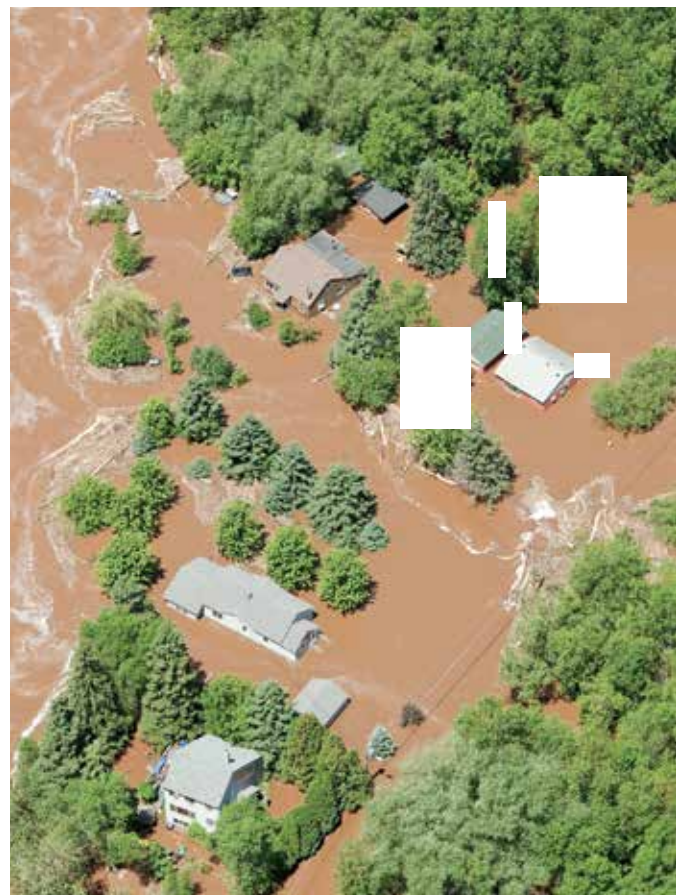
- How is the business reducing its own impact on climate change, e.g. its carbon footprint?
- How will the business be impacted by climate change?

To address the latter point and quantify the impact of climate-driven risks to the business, credible data is needed. Successful approaches will feature:

-  Quantification of the exposure and impact to their organisation
-  Consistent and credible information
-  Joined-up reputable package that reduces risk and drives insurance savings
-  Credible and tailored scenarios that are meaningful to the business

The development of a common geopolitical language that will enable insights to come to life for all stakeholders. Traditionally, to assess the viability of an investment overseas, natural catastrophe modelling would have been a key quantification tool. But this is no longer enough – businesses must look at all associated risks through the different geopolitical lenses to build the complete picture of risk (and opportunity) to their organisation.

Organisations should be alive to what their peer group and similar industries are doing to address climate risk to ensure they are not being left behind.



## Mitigating the risk

Investing in appropriate mitigation strategies for climate-related geopolitical risks will be essential to reducing their impact in fractious regions. Measures ranging from financial support during droughts to improved hurricane early warning and evacuation systems will all help to mitigate climate extremes and alleviate potential unrest.

Building financial strategies to deal with both the direct physical risks of climate extremes and the subsequent impact on geopolitical stability requires research and innovation. Similarly, improving international capability to make accurate seasonal and multi-year climate and weather predictions will help regions prepare for weather events.

Energy reform is also needed. For example, developing the solar and wind energy sectors in Africa would lead to the continent being less reliant on fossil fuels for a more sustainable future.

## Closing the protection gap

Insurance plays a vital role in mitigating risk in developed economies. However, for many of the regions most at risk of the geopolitical effects of climate change, there is a significant gap between the insurance cover needed and that available. The insurance industry has set out to address this protection gap through initiatives such as the Insurance Development Forum. Inevitably insurers will increase the call for a deeper understanding of the geopolitical drivers of risk, including climate change.

A recent report by the Intergovernmental Panel on Climate Change (IPCC) offers a vision of what the world will look like when global warming reaches 1.5° Celsius. Their projections help to build an understanding of the timescales for future climate scenarios based on expected levels of greenhouse gas emissions and CO2 reductions. However, for all the sophistication of climate models used, there remains a degree of uncertainty.

## Looking to the future

Navigating interconnected geopolitically driven risks and the opportunities related to climate change will be key to creating a stable financial platform for the success of businesses and communities – on both a local and global scale.

Climate Change is an important area of research and analysis for Willis Towers Watson, we are working to provide a range of climate advisory and consultancy services to help our clients navigate through the risks ahead, understand their impact across the business. The Willis Towers Watson Geopolitical Risk Team works with organisations to help understand, mitigate and prevent these interlinked risks across the business.

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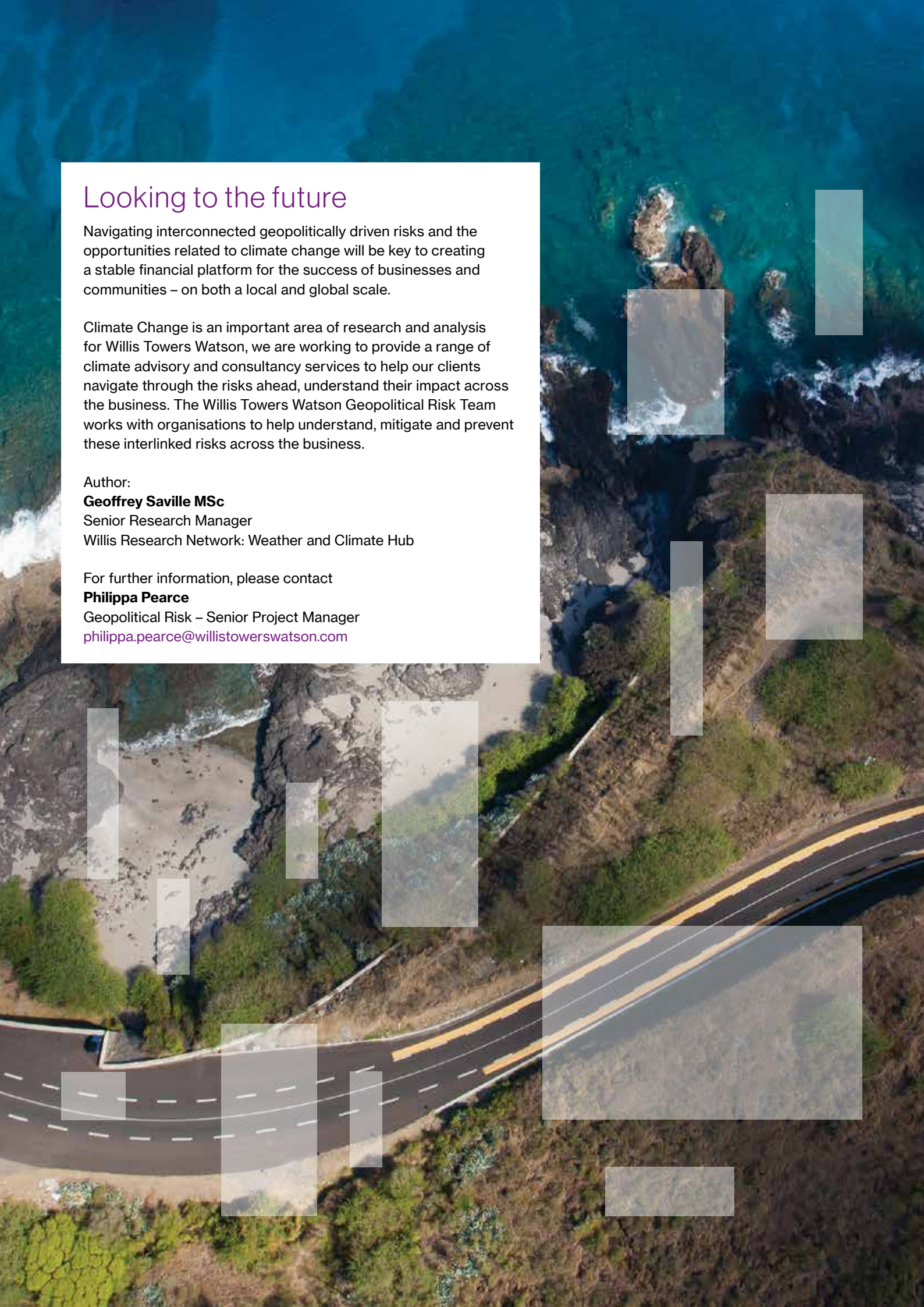
Willis Research Network: Weather and Climate Hub

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