

Responding to climate change –

THE INSURANCE INDUSTRY PERSPECTIVE



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With core competencies in risk management and finance, the insurance industry is uniquely positioned to further society's understanding of climate change and advance creative solutions to minimise its impacts. Insurers have now begun to embrace this huge opportunity, which will enable them to prosper while reducing the claims from climate change.

INTRODUCTION

There is growing acknowledgement among insurers that the impact of climate change on future insured losses is likely to be profound. The chairman of Lloyd's of London has said that climate change is the number-one issue for that massive insurance group. And Europe's largest insurer, Allianz, stated that climate change stands to increase insured losses from extreme events in an average year by 37 per cent within just a decade. Losses in a bad year could top US\$1 trillion. Insurers increasingly recognise that it is the lack of action to combat climate change that is the true threat to their industry and the broader economy; engaging with the problem and mounting solutions represents not only a duty to shareholders but also a boon for economic growth.

The insurance sector thus finds itself on the front lines of climate change. The response of many, particularly in the United States, has been to focus on financial means for limiting their exposure to high-risk areas along the coastlines and areas prone to wildfires. Allstate, for instance, has said that climate change has prompted it to cancel or not renew policies in many Gulf Coast states, with recent hurricanes wiping out all of the profits it had garnered in 75 years of selling homeowners insurance. The company has cut the number of homeowners' policies in Florida from 1.2 million to 400,000 with an ultimate target of no more than 100,000. The company has curtailed activity in nearly a dozen other states.

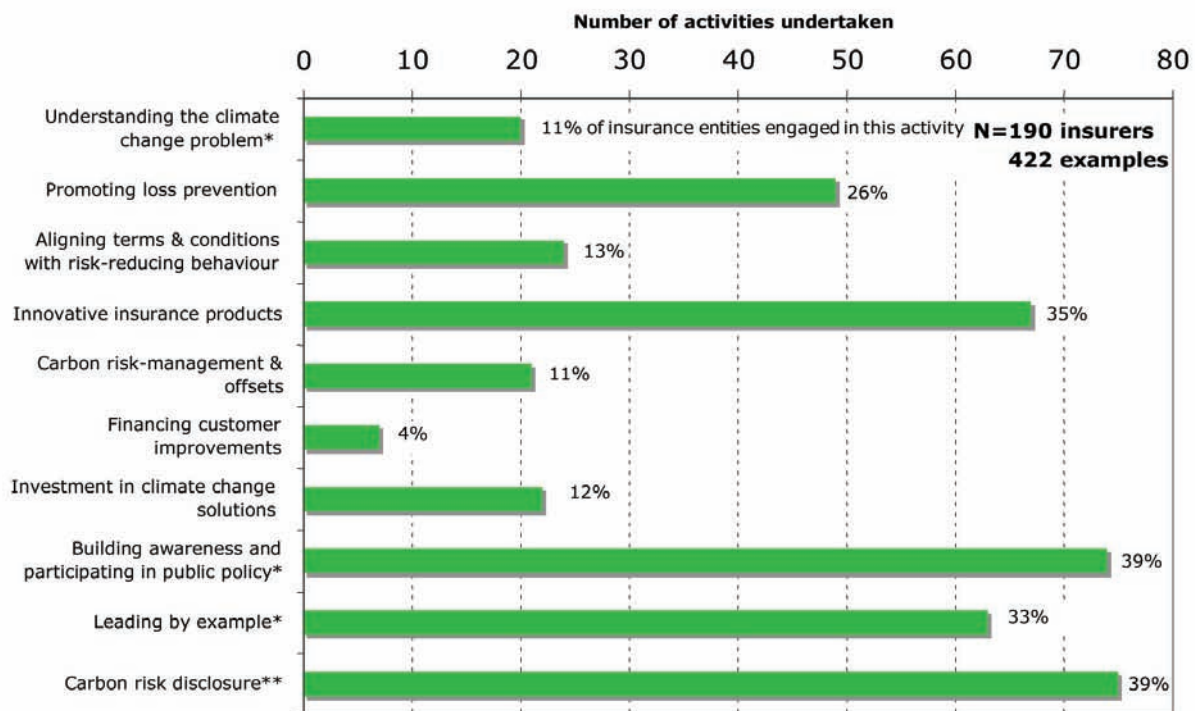


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Figure 1: Range of insurer activities documented in this article.

* For these three categories, a maximum of one is tallied, as there is too much subjectivity in assigning weights to each individual activity.

** Multiple-year responses to a given disclosure initiative (eg Carbon Disclosure Project) are counted once.



More difficult to detect than formal withdrawals or price spikes is the 'hollowing out' of coverage through increased deductibles, reduced limits, and new exclusions. A similar crisis in availability is occurring in many commercial insurance markets such as hotels and the energy sector, despite the absence of price regulation for non-household insurance.

A PROACTIVE APPROACH TO CLIMATE CHANGE

While many insurers continue to focus chiefly on financial risk management in response to climate change, others are realising that a more proactive, holistic approach to the issue presents significant opportunities to grow revenues, reduce risk and improve brand value. The Association of British Insurers and the European Insurance and Reinsurance Federation have recently called on insurers to actively pursue climate change solutions to ensure the preservation of private insurance markets.

Regarding the business opportunities presented by climate change, hundreds of billions of dollars will be spent on clean energy technologies and other responses, which represents an enormous new capital base with associated business operations requiring insurance. Several large insurers have already established special practices dedicated to the diversity of customers participating in this new market. Examples include AIG's Global Alternative Energy Practice, Allianz's Climate Solutions, Aon's Agri-Fuels Group and Chubb's Green Energy Team.

ADVANCING SOLUTIONS

Just as the insurance industry has historically asserted its leadership to minimise risks from building fires and earthquakes, insurers have a huge opportunity today to develop creative loss prevention solutions and products



Tokio Marine Nichido home page illustrates its mangrove restoration project designed to offset the company's carbon footprint and improve protection of insured infrastructure to storm surge.

that will reduce climate change related losses for consumers, government and insurers.

Figure 1 identifies a wide spectrum of insurance opportunities, with 422 real world examples from 190 insurers, reinsurers, brokers and insurance organisations from 26 countries. These are grouped into 10 broad categories described below. An additional 23 non-insurance organisations, ranging from energy utilities to foundations to governmental agencies, have collaborated with insurers or otherwise supported their initiatives. These embody a wide range of activities that help improve disaster resilience and adaptation to climate change, while reducing climate-related risks through strategies, such as energy efficiency programmes, green building design, sustainable driving practices, and carbon emissions trading.

VISIT: WWW.CLIMATEACTIONPROGRAMME.ORG

1. Understanding the climate change problem

Insurers, including AIG, Allianz, Lloyds of London, Marsh, Munich Re and Swiss Re, are beginning to apply their expertise in data collection, catastrophe modeling, and risk analysis to track trends and define problems posed by climate change, pointing towards solutions for both the industry and society. Insurers are also looking to the scientific community to help it build forward-looking risk models that take climate change into account, with profound results.

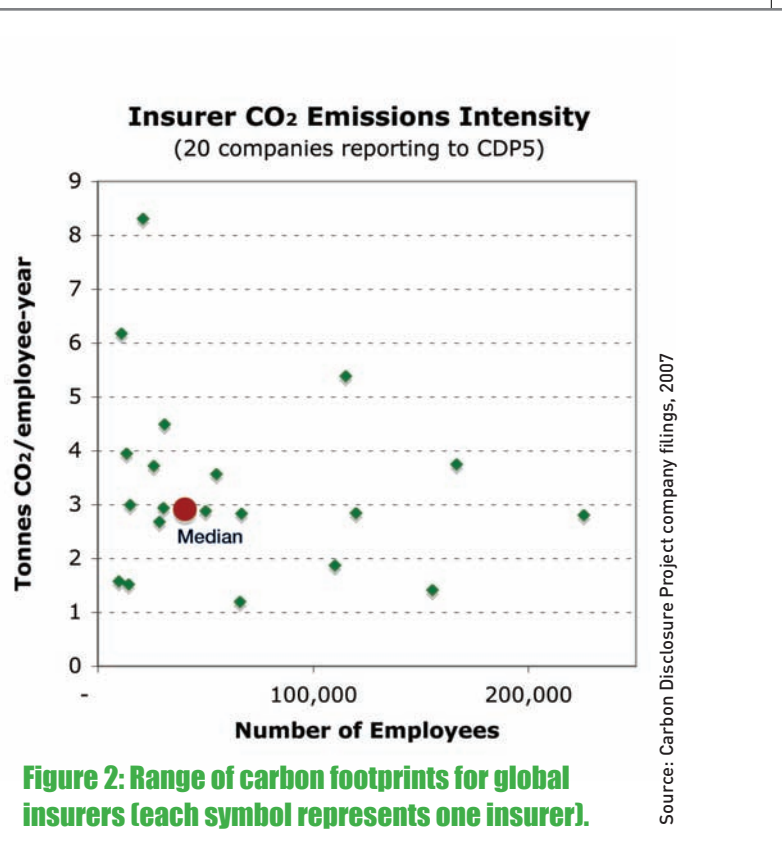
2. Promoting loss prevention

Managing risks and controlling losses is central to the insurance business, and is evident in the industry's history as founders of fire departments and advocates for building codes. While the primary focus in recent years has been on financially managing risks, physical risk management is receiving renewed attention and could play a large role in helping to preserve the insurability of coastal and other high risk areas. Improved building codes and land use management are important starting points. Beyond that, innovations include a whole genre of energy efficient and renewable energy technologies that also make infrastructure less vulnerable to insured losses. Improved management of forests, agriculture and wetlands also offers dual benefits: withdrawal of carbon from the atmosphere and storage in biomass and soils coupled with increased resilience to drought, coastal erosion and other products of weather extremes. Tokio Marine Nichido is a leader in this area.

“ Insurers have an enormous opportunity to develop new profit centres by providing innovative insurance products for energy users or providers of clean energy services. ”

3. Aligning terms and conditions with risk reducing behaviour

New kinds of insurance terms and policy exclusions designed to instill behaviours that reduce greenhouse gas (GHG) emissions, as well as appropriate efforts to prepare for the impacts are beginning to emerge. Pay-as-you-drive insurance products have now been offered by 19 insurers, recognising the link between accident risk and distance driven and co-benefits for the environment. Among the most discussed possibilities is the liability of corporate directors and officers for their actions regarding climate change risks. Conversely, customers with a tendency to reduce climate vulnerabilities, eg drivers of hybrid cars, are being seen by companies like Farmers, Sampo Japan and Travelers as 'good risks', and rewarded accordingly through premium discounts.



4. Crafting innovative insurance products

Insurers have an enormous opportunity to develop new profit centres by providing innovative insurance products for energy users or providers of clean energy services. Examples include 'Green buildings' insurance and products from AIG, Fireman's Fund and Sampo Japan that cover risks associated with energy efficiency or renewable energy projects. London based Willis Holdings has launched a new product to cover potential underproduction of power from wind farms.

Insurers can also tap their core competencies to offer new services to assess and mitigate climate risks. Such activities would naturally develop into new business lines in energy auditing, retrofit evaluation, installation and management, as well as a host of quality assurance services that manage the performance risks of energy saving and carbon offset projects. New products such as micro-insurance are being introduced by companies such as Munich Re for small farmers and others in the developing world currently lacking access to traditional insurance.

5. Offering carbon risk management and carbon reduction services

Combined expertise in risk analysis and finance makes insurers natural participants in emerging markets for carbon offsets and trading. Some companies, eg Allianz and Insurance Australia Group, are also bundling carbon offsets with their products, particularly automobile and travel insurance. Insurers are also involved in providing property and liability insurance for carbon reduction capital projects, as well as consultative services in designing and managing such projects so as to maximise their technical and financial upside.

6. Financing climate protection improvements

Insurers, especially those associated with banking operations, are in a position to engage in financing customer-side projects that either improve resilience to the impacts of climate change or contribute to reducing emissions. One example is Fortis's preferential mortgage

rate for energy efficient appliance and home upgrades. The company also offers Clean Car Credit, ie financing for low-emission vehicles. ING car leasing, which operates 300,000 cars across Europe, offers its customers in the Netherlands fuel efficient options, selected by 70 per cent of customers.

7. Investment in climate change solutions

Insurers are among the most significant players in financial markets, with US\$16.6 trillion in financial assets as of 2005. There has been at least US\$6 billion in green investment from 10 of the leading companies (total investment is not known), as well as significant examples of 'green' real estate asset management.

8. Public policy

It is in the business interest of insurers to support public policies that reduce and make risks more predictable. Insurers are now beginning to add their voices to the national and international discussion regarding climate change. Thirty eight insurers and insurance organisations from around the world have joined in the ClimateWise programme to promote a policy and market agenda for proactive responses to climate change risks. AIG and Marsh joined companies like ConocoPhillips and Duke Energy in the US Climate Action Partnership, which calls on the US to establish mandatory targets to reduce GHG emissions 60 to 80 per cent over several decades.

9. Leading by example

While insurers are not major emitters of GHGs, the energy used by their vast real estate holdings and employee travel is significant. Some insurers have pledged to become carbon neutral through various combinations of reducing energy intensity and the purchase of carbon offsets. Others prepare annual sustainability progress reports. It is notable that the median emissions by insurers, about three tonnes of CO₂ per employee per year, see Figure 2, is equivalent to the global average emissions per capita for transportation energy, and greater than that for housing.

10. Carbon risk disclosure

The process of assessing and disclosing climate risks contributes to insurers' ability to evaluate the impacts of climate change on their business. Disclosure also enables consumers and investors to gauge whether to purchase a policy from, or invest in, a particular insurance company, and it helps regulators to monitor the financial condition of insurance companies and the progress they are making towards addressing climate change risks. Such disclosures have been made in documents submitted to federal regulatory agencies or in response to formal requests from institutional investor groups, the largest of which is the annual call by the Carbon Disclosure Project (CDP), representing global investors with US\$41 trillion in assets.

TOWARDS BEST PRACTICES

The concrete opportunities described here have in common the potential for improving the business position of insurers while addressing the risks posed by climate change. To be successful, insurers will need to partner with other actors, such as energy providers and governments.

However, most insurers remain behind the curve in developing forward-looking products and services in response to climate change. As shown in Figure 1, only about one in 10 of the insurers in this compilation are working and contributing to understanding the mechanics and implications of climate change, with a similarly small proportion incorporating these considerations into asset management. About a third are offering innovative products and services, and only four in 10 have disclosed climate risks to shareholders. Insurers engaging in the policy discussion of climate change, or leading by example through energy and carbon management in their own operations, remain in the minority. One challenge will be to ensure that responses are brought to scale in time to have a material impact on what is likely to be the biggest challenge facing the industry in its history.

It is also important to anticipate and avoid inadvertent adverse side effects of carbon-reduction strategies. For example, questions have arisen about unquantified liabilities associated with the rising popularity of carbon capture and storage. The insurance sector may also be unwilling to insure a rebirth of nuclear power, argued by some to be an important climate mitigation strategy. The prospect for insurers' involvement in the development and promotion of climate change mitigation and adaptation strategies stands as an immense but as yet largely untapped opportunity.

Author

Dr Evan Mills is scientist at the US Department of Energy's Lawrence Berkeley National Laboratory. Dr Mills works in the areas of energy management and the impacts of climate change on economic systems, particularly with respect to the insurance sector. He has published over 200 technical articles and reports and has contributed to nine books. He contributed to the Intergovernmental Panel on Climate Change (IPCC) assessments in 2001 and 2007. IPCC scientists shared the 2007 Nobel Peace Prize with former US Vice President Al Gore.

Organisation

Founded more than 70 years ago, the Lawrence Berkeley National Laboratory is the oldest of the US Department of Energy's National Laboratories. The Lab is managed by the University of California, with an annual budget of more than US\$500 million and a staff of about 3,800 employees, including more than 500 students. Today there are 11 Nobel Laureates associated with Berkeley Lab. The Lab conducts unclassified research across a wide range of scientific disciplines with key efforts in fundamental studies of the universe, quantitative biology, nanoscience, new energy systems and environmental solutions, and the use of integrated computing as a tool for discovery.

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