CII thinkpiece

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How Can the Insurance Industry Promote Climate Change Adaptation? A Case Study from the UK

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Summary

- Climate change is a not a distant threat but a real challenge, affecting policy making and business decisions today.
- While there is a clear scientific consensus about the causes of global warming, some uncertainty remains about the severity and locality of future consequences. This is a challenge for policy makers when faced with the need to develop adaptation strategies, but it also presents a threat to insurers.
- The insurance industry has the tools and expertise to assess current and future climate risks – but more needs to be done to close the gaps between insurer's information needs and scientific data provided. Insurers are already engaging in a range of activities to further the understanding of climate risks.
- The financial services industry has started to promote adaptation through its own products, by encouraging its customers to become 'climate aware'.
- Adaptation is a challenge, but it brings with it opportunities for insurers. Ultimately the industry wants to continue to provide affordable cover to its customers – but it will only be able to do this if today's and tomorrow's climate risks are appropriately managed.

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CII Introduction: back in the eighteenth century, the insurance industry in London incentivised widespread behaviour to mitigate fire risk by introducing the world's first building fire codes in the form of fire marks, and then creating the world's first organised fire services. Now 350 years later, the industry has the potential of doing much the same for climate change. In this third instalment of the CII's special series of thinkpieces on climate change, Swenja Surminski of the Association of British Insurers provides an overview of the insurance industry's recent work promoting adaptation in the face of a new range of climate-related risks.

There is now widespread scientific consensus that climate change is a reality.[1] It is happening now and we need to tackle it – by taking steps to reduce emissions and adapting to what is already built into our world, such as the legacy of greenhouse emissions. Inaction would simply defer and increase the cost to the next generation, and lead to unnecessary economic and social cost for those affected by climate change in the interim.

The overall climate change objectives should focus on reductions in emissions as well as on the reduction in climate impacts through adaptation. The two strands need to go hand in hand.

The adaptation measures that should be adopted now and over the medium term include:

- **Risk avoidance:** moving people and assets out of areas likely to suffer heavy climate impacts through strategic, risk-based land use policies including those on housing, regeneration and critical infrastructure;
- **Risk reduction:** addressing vulnerabilities to weather damage and heat effects by strengthening building codes, flood and coastal defences, infrastructure performance, technological resilience and healthcare regimes;
- **Risk management:** taking pro-active measures to ensure the most vulnerable people and social and economic functions are given additional protection, and providing more assured responses to events by improving contingency planning by government, business and communities.

[1] Not a single national or international scientific body has formally refuted that anthropogenic climate change is occurring, and several studies show that the vast majority of individual scientists agree with this as well. See for example, http://www.ipcc.ch

Climate change impacts will be tempered, exacerbated or disguised by socio-economic changes. This is of great importance to the insurance industry. Socio-economic changes could combine with climate effects so that actual claims rise even more sharply. For example, the significant rise in financial and insured damages globally arising from weather events since the 1950s is driven in large part by increasing numbers and values of assets in flood-prone areas as well as the increased penetration of insurance in certain markets.[2] More studies are needed to separate socio-economic and climate effects in modelling future flood risks.

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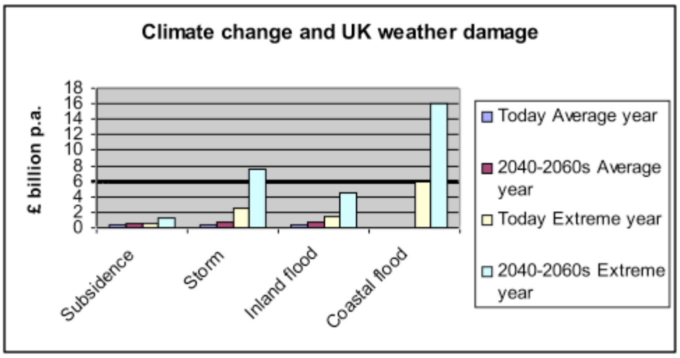
The insurance industry, through its expertise in risk management and analysis of the financial costs of more extreme weather, have a key role to play in the climate change debate, as indicated by for example the CII's recent study on the implications of climate change on insurance and ABI's publications on this subject.[3] In the UK, the insurance industry has been promoting adaptation for several years. The work has been focused on better understanding of climate risks, driving policy change and incorporating climate issues into business model to work with customers.

Adaptation in the UK

The UK enjoys a relatively benign climate, where major weather events such as hurricanes or severe snowstorms are extremely rare. Nevertheless, London has been identified a 'megacity at risk' in view of the high asset accumulation and level of economic activity



Source: *Adapting to our Changing Climate*, ABI 2007.

[2] See Munich Re Topics publications and Swiss Re Sigma Reports for latest analyses.

[3] See for example http://www.abi.org.uk/climatechange; and Andrew Dlugolecki, ed.*Coping with Climate Change: Risks and Opportunities for Insurers*, London: Chartered Insurance Institute, Feb 2009. http://www.cii.co.uk/pages/research/climatechangereport.aspx

combined with low-medium level natural hazards.

British insurers are most concerned about the predicted increase of coastal and fluvial flooding and storm risks. Surface water flooding, arising from heavy rainstorms, is also likely to become more frequent and severe as a result of climate change.[4] In addition, prolonged drought periods and heat waves could lead to an increase of the subsidence risk, especially in areas with clay soil, such as London. As outlined by the graph below especially the extreme weather events will be even more severe, with climate change acting as an amplifier.

Recognising the challenges that climate change brings the insurance sector is actively engaged in the policy debate, contributing through publications, participation in advisory groups and campaigning to the formation of policy responses to climate change. In the UK, the insurance sector has formed a unique partnership with Government on flood insurance. This collaboration helps the country to protect itself from flood both through risk management and insurance cover.

Promoting Adaptation

Demanding government action is one thing – but insurers also need to recognize that this must be a two-way relationship and that the industry must do all it can to help tackle climate change. The launch of the ClimateWise initiative in 2007 illustrates this, as well as insurer's work to drive behaviour change and to incentivise better risk management.[5] Below is an outline of past and current activities of the industry in the three areas most relevant for promoting adaptation:

1. improving the understanding of current and future risks;

2. protecting homes, businesses and communities by securing government policy reforms; and

3. developing risk management solutions for climate risks and making the market work for adaptation.

Task 1: Improving the understanding of current and future risks.

Assessing risk is at the core of insurer's business. The industry needs more and better data, but can also contribute to a wider understanding of climate change through its own data. Understanding climate risks will enable policy makers, business and individuals to take informed decisions about investments - but to achieve this, climate data needs to be freely available and easily accessible.

In the UK, the ABI has developed a close relationship with the Environment Agency and corresponding bodies in Scotland and Northern Ireland, who are in charge of flood risk mapping. The main aim of the relationship is the improvement of the data available to insurers and the general public. Following the flood events in 2007, the industry has now agreed to explore the options for data sharing, especially with regards to surface water flooding – an area characterized by lack of data and information.

While several insurers have started to employ skilled modellers and natural hazards experts, the industry is also proactively fostering a closer relationship with scientists. Research networks such as the Willis Research Network[6] or the Lighthill Risk Network[7] are identifying the areas of research that would be most beneficial to insurers and are then providing a platform for discussion and exchange between insurers and academia.

Understanding climate risks will enable policy makers, business and individuals to take informed decision about investments - but to achieve this, climate data needs to be freely available and easily accessible.

But there is still a large gap between the data available and insurer's modelling requirements. More work is needed to translate latest scientific findings into useful information for insurers – misconceptions about probabilities and uncertainties, time lines and data format are still widely spread.

The UK Government is expected to publish new climate scenarios for the UK in 2009. The insurance industry has agreed to lead the debate about new climate data by hosting discussion amongst insurers, scientists and others on the scientific evidence and the conclusions for business practices. In this context the ABI is planning a seminar for Summer 2009 to focus on the gap between climate data and insurer's modelling requirements.

[4] See for example David Crichton et al, "Personal lines: flood and storms," in *Coping with Climate Change* op.cit.

[5] For more information on ClimateWise, see for example Andrew Voysey, "ClimateWise: The Insurance Industry Challenging Itself to do More," *CII Thinkpiece* 17 (April 2009) http://www.cii.co.uk/downloaddata/TP17_Voysey_ClimateWise_15Apr2009.pdf

[6] For more information please see www.willisresearchnetwork.com/

[7] For more information please see http://www.lighthillrisknetwork.org/

Understanding climate risks is important for the industry, but it is also the key to greater public awareness.

Insurer research in the UK shows that 85% of small businesses are aware that climate change poses a serious problem.[8] At the same time, research compiled by the British Insurance Brokers Association (BIBA) shows that nearly half of businesses have no plans to deal with the impact of flooding and a third of businesses have no plans to deal with the impact of a storm, while nearly a third only have "rough plans". But half of those businesses questioned by BIBA believed it would take less than a day for a serious disruption or disaster to have a significant impact on their business.[9]

Risk awareness and detailed risk knowledge is also important for policy makers. Informed decision making requires input from scientists and experts. Based on research conducted in 2005 on Financial Risks of Climate Change[10] the UK insurance industry is now re-assessing the risks, incorporating the latest scientific data. This project, lead by the ABI, will result in the launch of a new report on the regional financial costs of climate change, which can then be used to inform policy makers and those requiring quantitative information on climate risks.

Insurers are uniquely placed to support and encourage people in their efforts to take action. Insurance can help frame solutions by responding to customers' desires by providing information to help people understand the risks they face. One example of individual adaptive action is the retrofitting of homes to achieve higher flood resilience. The key to encouraging people to protect their homes themselves is having much better and clearer publicly available information about flood risk and better information about what can be done to protect their own home. The UK insurance industry is supporting a Government initiative to provide free flood risk assessment reports to property owners in areas identified as higher risk. Such reports would provide insurers with the information they need to advise on the terms they can offer, with and without the risk improvements suggested, and ensure that premiums closely reflect the risk and therefore recognise and reward homeowner initiatives to reduce the risk.

But there are many psychological and sociological barriers to individuals adopting climate-resilience measures. Future probabilities and consequences are often not understood or heavily discounted, so messages on future risk need to be crafted taking account of these factors.

Task 2: Protecting homes, businesses and communities by securing Government policy reforms.

There is a real danger that policy makers consider insurance for climate risks as an alternative to adaptation. This is a misconception. The challenges of climate change are so big that adaptation becomes the key to maintaining insurance products affordable and available. Similarly, in emerging markets adaptation becomes one of the conditions for establishing insurance products for climate risks. Insurance cover will only be available if risks are managed.

Insurance acts as a useful messenger of the financial costs of climate change, both today and in the future. But insurance cannot reduce the overall level of risk from climate change. This is where government has a key role.

In the UK, the insurance industry works with policy makers to secure Government policy reforms in a range of areas:

- ensuring flood and coastal defence investment keeps pace with development and climate change
- avoiding unnecessary damage by having a risk-based planning system and rigorous building codes
- evaluating the health and social costs of failing to provide decent homes
- requiring economic regulators to take account of climate risks in reviewing utility investment plans and pricing policy
- setting climate resilient standards for the public estate and new property developments
- investing in science and technological innovation

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Successful adaptation to climate change, leading to reduced damage or claims costs, will be dependent on clear signals provided through regulation.

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[8] Climate Change and its Effects of Small Businesses in the UK, August 2006, AXA

[9] British Insurance Brokers Association/ Populus: Business Resilience Survey 2006, http://www.populus.co.uk/biba-business-resilience-survey-071106.html

[10] ABI: Financial Risks of Climate Change, 2005

For example we need to build houses now, and protect them with flood defences in ways that meet the likely severe weather conditions of 2050 and beyond. In addition to building houses now with flood defences it is essential that building codes are extended to include resilience measures in new homes to take account of long term climate predictions given that the lifespan of homes should as a minimum be in excess of 50 years. A clear policy and regulatory framework within which investors can plan is needed.

The land use planning system can capture intergenerational benefits and costs in a way that markets (including insurance) cannot. Consequently the insurance industry has been working very closely with the UK Government to strengthen the planning system to deliver sustainable development through a risk-based assessment, balancing current and future benefits and costs to all of the affected parties.

The current economic climate and the constraints on public funding may put some of the adaptation policies at risk. This would send the wrong signal. The insurance industry should engage with policy makers to call for an economic stimulus that also recognizes the importance of climate resilience. ABI's research shows that investment in climate resilience is very cost effective. For example, flood defence expenditure in the UK has a cost-benefit ratio of 7:1. This is much higher than for other public sector capital investments.

Task 3: Developing risk management solutions for climate risks and making the market work for adaptation.

The industry is increasingly looking at its own products to see how these could be used to bring about behaviour change amongst insurance customers. Insurers are well equipped to promote and encourage adaptation through risk management, but some barriers exist.

The aim is to reduce the key risks affecting customers and therefore contribute to reducing claim frequency and cost over time. In this context adaptation is not very different from the 'loss prevention' efforts of the industry in other risk areas, such as fire and theft. This also applies to the problem of moral hazard: Without the right signals insurance could lead to 'mal-adaptation'[11] - policy holders may become 'careless' and unprepared to participate in loss prevention and risk reduction measures.

[11] See IIASA: SUMMARY Expert Workshop on Insurance instruments for Adaptation to Climate Risks, Sept. 24-25, 2007, http://www.iiasa.ac.at/Research/RAV/conf/ICR-07/Summary.pdf

Insurance has a long history of driving risk management through providing pricing incentives and imposing terms and conditions requiring action. It can be an effective market mechanism for signalling risk and changes in risk or understanding of risk but has most impact when coupled with other signals, such as fiscal incentives. Research published by the ABI in 2007 shows that the market for climate-friendly and climate-proof insurance products and services could be significant.[12] Certain products and services could create new insurance market opportunities for business clients and domestic customers. An example is the provision of flood resilient repair to those properties at high risk of repeated flooding.

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With an insurance product being held by almost everyone in the developed world, the insurance industry's links to its customer base are very important. Customers vary from individuals to households, small businesses to multi-national companies and governments. Understanding the needs of each customer is complex but important if insurers are going to be able to use this reach across the economy to share its understanding of climate change.

Currently there are three significant barriers that prevent take up of climate resilience measures by insurance customers:

- homeowners and businesses do not understand the level of risk or believe that their property is at high risk of further flooding. For example customers often commented that, if their home is at a 1% risk of flooding, the fact that their home has just been flooded makes it unlikely that it will be flooded again within 100 years;
- homeowners and businesses are expecting Government to protect them from extreme weather events. Feedback from customers affected by the 2007 Summer Floods in the UK shows that most homeowners expect that, once they have been flooded, the Government will step in and ensure that it does not happen again.
- homeowners and businesses do not know what can be done to protect their property and operations, nor who can help advise them on this. There is a need for clear kitemark and

[12] ABI: Insuring our future climate, 2007

approval schemes to ensure greater transparency for consumers.

If we are to overcome these barriers, everyone involved in risk management will need to play their part: providing information and impartial advice will be essential to trigger risk management at individual level. The ABI recommends that:

- everyone interacting with people at risk of flooding needs to explain the risk better and the options for tackling it at the property level;
- the Government should to set out its vision about areas that can expect to be defended and, more importantly in this regard, those areas that are unlikely to ever benefit from large-scale community defences.

The ABI has agreed to work with the National Flood Forum to produce a clear factsheet that insurers and loss adjustors can use when talking to customers who have been flooded, so that they can make an informed choice about whether to build in flood resilience as their home is repaired.

If customers want to insure their home so that they are provided with resilient repairs in the event of a flood, insurers would start to offer these policies. As yet, though, there is no consumer demand for such policies.

Conclusion

Adaptation is a challenge, but it also brings with it opportunities, especially for the insurance industry. The companies that prosper will be those which hone the industry's traditional skills in understanding and managing risk so that they meet customers' changing needs most effectively. But the industry cannot solve all the issues alone. Insurers need help from government in setting the regulatory environment, providing incentives and managing risks; from scientists and technologists genuinely in understanding new risks and solutions; and from suppliers in delivering a complete service that addresses the climate challenge. We need new and strengthened partnerships delivering real action on risk management.

This Climate Change series of Thinkpieces is linked to the latest comprehensive report by the Chartered Insurance Institute on climate change entitled Coping with Climate Change: Risks and Opportunities for Insurers. The report (18 chapters) can be downloaded in full from the CII website: http://www.cii.co.uk/pages/research/climatechangereport.aspx

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