

# Fiona Shaw

## Willis Group

Technology Strategy Board

Driving Innovation

Knowledge Transfer Network “Building a Resilient Future”

# **INSURANCE AS A DRIVER OF CHANGE**

Fiona Shaw, Managing Director, Willis - Global Analytics

26<sup>th</sup> February 2014

The Willis logo is displayed in white serif font on a dark blue rectangular background. The logo is positioned in the bottom right corner of the slide, which features a light grey horizontal bar at the bottom.

# **Can an insurance contract be a driver of change?**

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**How is the insurance industry responding to climate change impacts?**

**What convinces clients to build climate change resilience into their strategies, processes and activities? Are there any clear drivers i.e. legal, financial, reputational, first-hand / near miss experiences?**

**How does the insurance industry utilise the available data to analyse, interpret and apply to built environment projects and real world decision-making situations?**

**What tools are used by the insurance industry to support clients' understanding of the impacts and risks of extreme weather events and climate change?**

# Response to climate change impacts

## Industry recognition

Global Insurance Industry Statement 6th September 2010

## Increasingly analytical approach

Risk analysis a bigger part of the underwriting process

Analytical approach to the assessment and evaluation of risk

## Growing status of modelling

Catastrophe loss models play an increasingly important role

Closer integration between climate models and catastrophe loss models

## Improvements in risk management (identification, quantification & mitigation)

Risk control is recognised as being a more effective long term strategy than simply transferring the risk to an insurance company



### Global insurance industry statement

**Building climate and disaster-resilient communities and economies:**

**How the insurance industry<sup>1</sup> and governments can work together more effectively**

**We have come together as leaders in global risk management to issue a collective call to action to proactively address climate threats and build societal resilience.**

The IPCC has identified that climate change, to which human activity contributes, is accelerating, and most aspects of climate change will persist for many centuries even if emissions of CO<sub>2</sub> are stopped<sup>2</sup>. This already manifesting itself through the increasing frequency and severity of extreme weather events such as heat waves, intense precipitation events and wildfires. In turn, these changes are increasing the frequency and severity of phenomena such as droughts, wildfires and floods. Climate change also causes long-term changes such as desertification and rising sea levels.<sup>3</sup>

Without rapid and ambitious action to reduce global greenhouse gas emissions, the capacity to keep global temperature rises within limits considered manageable or 'safe' will narrow significantly, leading to major shifts in risk landscapes worldwide and threatening human and economic well-being. In this context, and with diminishing public resources to manage associated losses, it is prudent and timely to revisit the social role and value of insurance. Given the IPCC's recommendations<sup>4</sup> to include risk transfer and insurance-related approaches for climate-resilient development, both public and private actors need to engage in a broader societal discussion about the use of insurance and the role of the global insurance industry in partnership with governments, in forging climate and disaster-resilient development pathways.

#### **We agree to actions in the following key areas:**

- Demonstrating leadership to decarbonise economic activity at the scale and pace demanded by scientific consensus and supporting corresponding public sector decision-making.
- Identifying and developing incentives to reduce climate risk by promoting risk awareness, risk prevention and risk reduction solutions that contribute to building adaptation to the effects of climate change including disaster resilience.
- Where risks cannot be effectively reduced or retained, supporting the transfer and sharing of such risks through insurance mechanisms including risk pooling mechanisms.
- Considering how insurance industry responses to climate-related events can shape the behaviour and decisions of government, communities and businesses in managing climate risks.

The insurance initiatives represented in this statement have a combined membership that includes more than 100 of the world's leading insurers across Africa, Asia, Europe, North and South America, and Oceania.

ClimateWise [www.climatewise.org.uk](http://www.climatewise.org.uk)  
The Munich Climate Insurance Initiative (MCII) [www.climate-insurance.org](http://www.climate-insurance.org)  
The United Nations Environment Programme Finance Initiative (UNEP FI) [www.unepfi.org](http://www.unepfi.org)

<sup>1</sup> The insurance industry refers to both insurers and reinsurers.

# Building climate change resilience into strategy, process & activity

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## **Annual renewal process**

A regular opportunity to reassess risk

## **Regulatory influence**

Insurance companies are required to carry adequate capital to cover losses arising from catastrophes.

Catastrophe models & risk indices are part of the risk assessment process

Influence on pricing

## **Reputation**

Corporate Social Responsibility

## **First hand experience**

Thailand floods

Supply chain

## **Public-private collaboration.**

Very much supported by the insurance industry

# Utilising the available data

## Data hungry

Proper representation of risk requires capture of as much detail as possible about the asset insured.

## Location

street address level

Lat/Long

## Construction

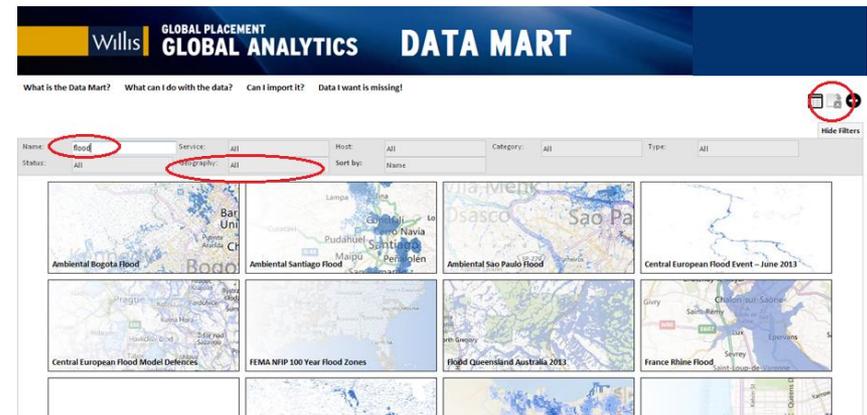
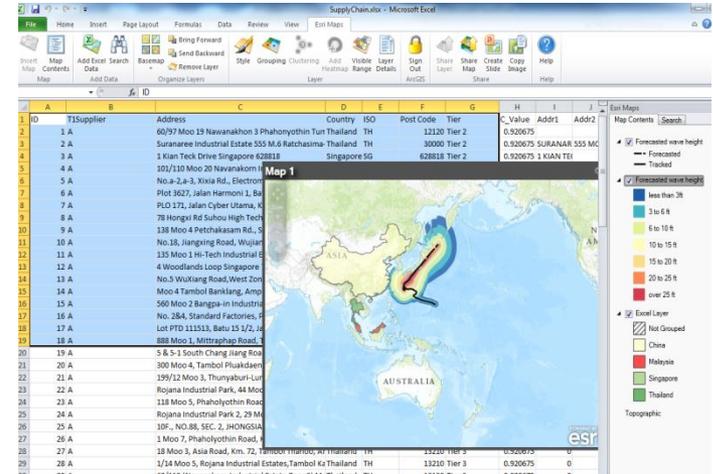
materials, year built, building codes adhered to etc

## Occupancy

office, factory, hospital, school

## Supply chain

Tier 1, Tier 2, Tier 3 .... Tier 20 ???



# The tools to support understanding of the impacts and risks of extreme weather events and climate change

## Catastrophe risk models

Widely used by the insurance industry since the 1990s

Integrating the latest scientific thinking

## Geographic Information Systems

Location is a key risk driver

## Risk indices

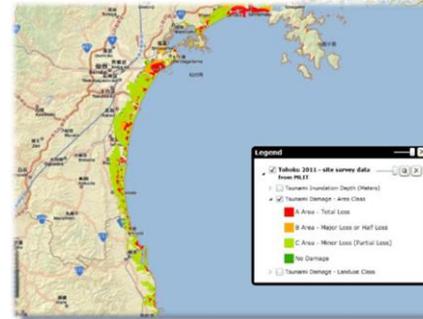
Natural hazards, political risk, economic risks etc

## Financial models

Actuarial analysis

## Portfolio management tools

Managing risk accumulation



The screenshot shows the Willis Research Network website. At the top left is the logo "Willis Research Network". To the right is the tagline "The Science of Managing Extremes" and a search bar with a "Go" button. Below the header is a navigation menu with links: HOME | ABOUT | RESEARCH & IMPACT | NETWORK | PUBLICATIONS | NEWS | EVENTS | CONTACT US. The main content area features a large blue graphic with a white text box on the left and a white dropdown menu on the right. The text box contains the following text: "Welcome to the world's largest collaboration between public science and the financial industry. Based in London, led and sponsored by Willis, a global insurance broker, the Willis Research Network was formed to integrate science, insurance and resilience at a scale before envisaged. It has become the world's largest collaboration between public science and the financial industry with a membership of around fifty leading research institutions. Read more about the Willis Research Network." The dropdown menu lists the following categories: Economic Capital & ERM, Natural Hazard & Risk, Man-made & Liability Risks, Core Technologies & Methods, Tropical Cyclones, European Windstorm, Tornado & Hail, Flood, Earthquake, Other Perils, Exposure, Vulnerability & Physical Impacts, and Socio-Economic Impact & Industry Risks. Below this is a row of four image-based sections: "Managing Extremes" (desert landscape), "Resilience, Security & Sustainability" (person at computer), "Insurance, Risk Sharing & Transfer" (hand holding a pen), and "Mastering the Modelled World" (3D model).

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