

Communicating Climate Change

Module 15

An initiative of the National Agriculture and Climate Change Action Plan

August 2008

The implications of climate change for insurable climate risks

Australia's agricultural sector is likely to become more exposed to the risks of climate change. Insurance can help producers face the challenge of adapting to those risks.

Key facts

- Some weather extremes pose risks to agricultural production. One management option is to take out insurance cover against certain weather events such as fire, frost and flood.
- Overall losses from weather catastrophes have increased since 1980. Insurance has covered only 24 per cent of these losses.
- Projections suggest that climate change will increase the risk to agricultural productivity from weather extremes.
- Climate change is likely to increase insurance premiums for the agricultural sector.

Weather and climate risks to agriculture in Australia

It is important to distinguish between weather and climate in the context of managing insurable risks. Weather is a description of environmental conditions over a short period of time. Climate is the average of weather conditions recorded over a long period of time.

Climate change will certainly impact on agriculture in the long term, but it is the increase in extreme short-term weather events that may present the leading threat to agricultural production. Climate change will alter the likelihood of extreme weather events such as fire, heat waves, frost and flood.

The agricultural sector is highly exposed to climate risks. A risk-management approach is the best way to address this exposure.

Producers can manage climate risks by:

- reducing risk, through mitigation
- spreading risk, through diversification
- coping with risk, through cost cutting, saving and borrowing
- transferring risk, through sharing practices such as mutual funds, futures and insurance

Insurance allows an individual producer to transfer risks to the wider community by paying a small premium to a third party that reflects the long-term costs associated with those risks.

A cooperative venture between



Australian Government
**Department of Agriculture,
Fisheries and Forestry**
Bureau of Meteorology
Bureau of Rural Sciences



Insurance products for primary producers

Producers can buy insurance products to help protect themselves against loss or damage caused by low-frequency, high-consequence events such as hail, flood, frost and fire. Premiums are determined by the sum insured, the type and value of the crop, location, regional loss history, individual claim history, and the type of excess.

Frost insurance in Australia is only available for horticultural crops.

Multi-peril crop insurance—which covers drought, frost, flood, insect damage and disease, bundled together in a single policy—is too expensive for the Australian market. Low-cost alternatives such as index insurance may become available in the near future. This product bases indemnity payments on a ‘weather index’ calculated from cumulative measurements of precipitation and temperature for a specified region and timeframe.

Some crop insurance policies include additional benefits such as loss of yield caused by straying livestock or chemical overspray, loss or damage to stored grain caused by fire, and accidental loss or damage to harvested grain while in transit.

Farm and income-protection insurance are also important components of business risk management. If the agricultural enterprise is also the producer’s home and livelihood, any loss of assets, legal liability claim, or interruption to trade could be disastrous. These forms of insurance are designed to protect a producer’s business and standard of living in the event of serious misfortune such as fire, machinery breakdown, or loss of stock. Again, premiums are determined by a number of criteria.

When buying any form of insurance, it is important that producers consider their individual risk requirements and buy a policy that suits their individual circumstances. In general, the insurance industry is highly competitive, so it is advisable to shop around. Remember that the cheapest policy may not always provide the most appropriate level of cover for individual circumstances.

Climate change and insurable risks in Australia

There is a rising trend in overall losses from catastrophic weather events in Australia since 1980 (Figure 1).

Insured losses over this timeframe have increased only slightly, but the gap between insured losses and overall losses is steadily widening. This gap is only partially covered by government programs (e.g. drought assistance and Natural Disaster Relief and Recovery Arrangements), with the remainder borne by individuals and local communities.

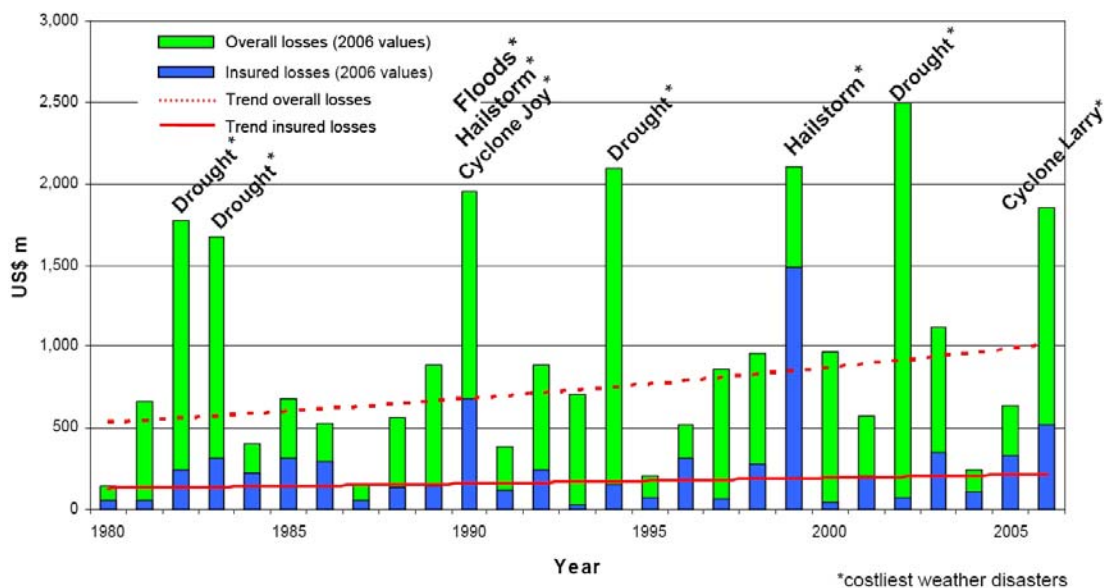
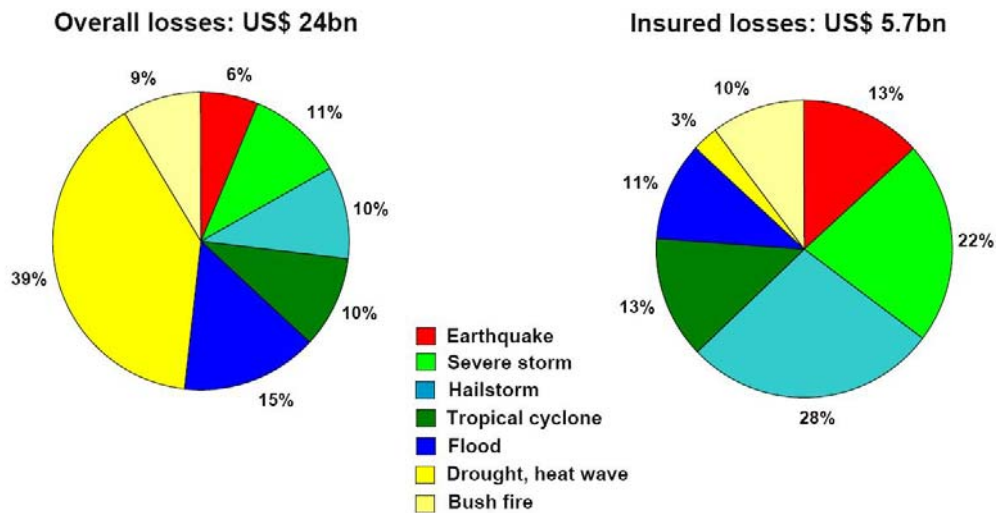


Figure 1: Overall and insured losses from weather catastrophes 1980–2006 in Australia (Source: 2007 Munich Re, Geo Risks research, NatCatSERVICE).

Only 24 per cent of overall losses from natural catastrophes in Australia between 1980 and 2006 were insured (Figure 2). Most of these insured losses were due to severe storm and hail events (~50 per cent).

Although the drought and heatwave losses represent 39 per cent of the total, only 3 per cent of such losses were covered by insurance.



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Figure 2: Overall and insured losses from natural catastrophes 1980–2006 in Australia (Source: 2007 Munich Re, Geo Risks research, NatCatSERVICE).

With a changing climate, we will see an increase in risks to production across all farming industries. This will most likely emerge as an increase in the frequency or intensity of natural disasters.

The increase in weather-related losses will require producers to implement new adaptive management practices.

Climate change is likely to increase financial pressure on producers, as a result of increased premiums and a possible increase in insurance exclusion zones.

New risk management opportunities may arise as the insurance industry responds to climate change by developing new policies and products. In particular, climate change will have an impact on:

- insurable risks, claims and litigation management (new methods for assessing damages by professionals)
- causation issues (was the crop or farm sustainable?)
- mitigation (developing strategies to minimise loss)

Weather events are predicted to become more severe. The ability of communities to withstand and recover from these events is vital.

Climate change projections

Projected changes in the Australian region include:

- less rainfall in the temperate climate zone
- a higher number of extreme cyclones in the tropical north
- increased wind speeds in coastal areas
- increased fire risk in south-eastern Australia
- less frequent frosts (but changes in the timing of crop growth)
- increased hail risk along the south-eastern coastline
- decreased hail risk and thunderstorm activity along the south coast

Sources

The information presented here is sourced from:

- Best, D 2007, *Managing Agribusiness Claims for Climate Change*, Australian Insurance Law Association Conference on Insurance & Climate Change, 17–18 May 2007, Noosa.
http://www.aila.com.au/speakersPapers/downloads/2007_Intensive/07-05-17_Daniel_Best.pdf
- CSIRO and the Bureau of Meteorology 2007, *Climate Change in Australia*, a report, CSIRO, Canberra. <http://www.climatechangeinaustralia.com.au>
- CSIRO 2008, *An Overview of Climate Change Adaptation in the Australian Agricultural Sector - Impacts, Options and Priorities*, report prepared for Land & Water Australia, LWA, Canberra. <http://www.csiro.au/files/files/pleo.pdf>
- Faust, E 2007, *Climate Change and Insurance Industry: Substantial Risks and Large Opportunities*, Greenhouse2007 conference, 3 October 2007, Sydney.
http://www.greenhouse2007.com/downloads/keynotes/071003_Faust.pdf
- What is Grain Co-Production: <http://www.macrofunds.com.au/whatisgcp.htm>
- Insurance Council of Australia: <http://www.insurancecouncil.com.au/>

Further information

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