

Climate change and the insurance industry

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Outline



- Who is IAG?
- Why climate change is important to insurers
- Key impacts and issues: how is the risk changing?
- Responding to climate change



Who is IAG?



- Largest general insurance group in Australia and New Zealand
- More than 10 million policies
 - Motor, Buildings, Contents, Boat, CTP, Rural, Commercial, Travel, Workers Comp.
- Multiple Brands
- Insure 1 in every 3 homes, 1 in every 3 cars and 1 in every 2 farms in Australia and New Zealand

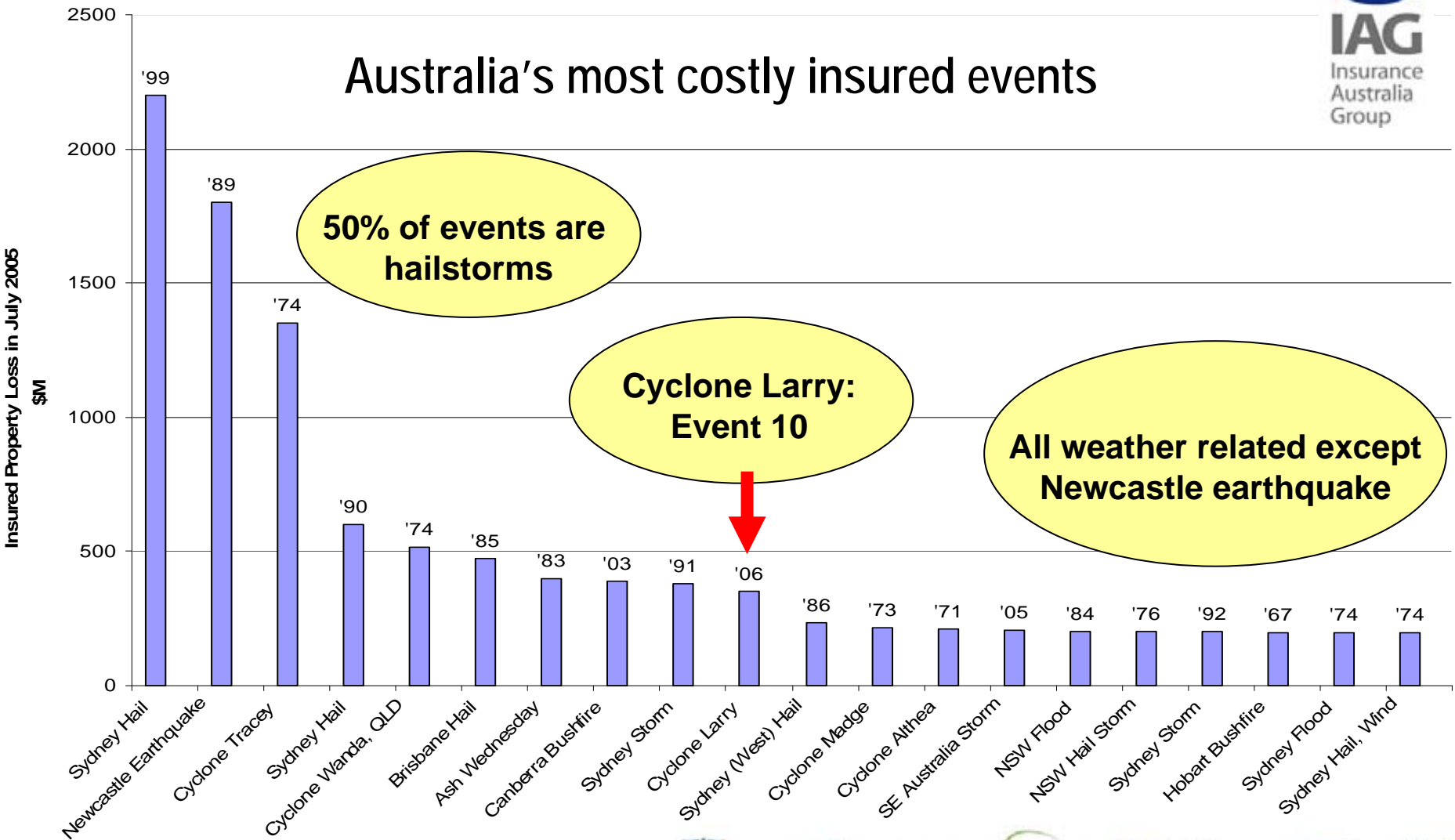


Why climate change is important to insurers

Weather and climate are core business



Australia's most costly insured events



50% of events are hailstorms

Cyclone Larry: Event 10

All weather related except Newcastle earthquake



Worldwide insurance losses

Top 10 Insured losses worldwide

1970-2005 (In US\$ b indexed to 2005)

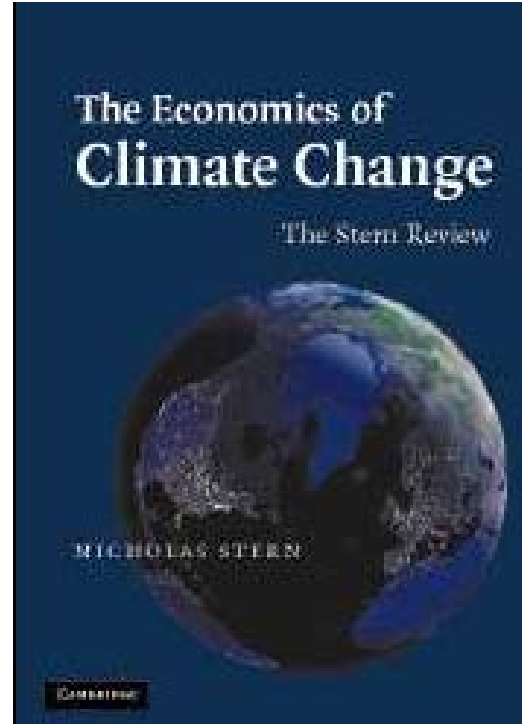
Insured Loss \$b	Event	Year
45.0	Hurricane Katrina	'05
22.3	Hurricane Andrew	92
20.7	Terror attack on WTC, Pentagon	'01
18.5	Northridge earthquake	94
11.7	Hurricane Ivan	'04
10.0	Hurricane Rita	'05
10.0	Hurricane Wilma	'05
8.3	Hurricane Charley	'04
8.1	Typhoon Mireille	'91
6.9	Winter storm Daria	'90

8 out of 10 are
weather related

5 out of 10 are
from 2004 -2005

Source: Swiss Re

Climate change scenarios and associated costs



The Stern Review released in October 2006 presents evidence that early action on climate change outweigh the costs of delayed action

Many costs of climate change could be avoided by taking action today

Key impacts and issues: How is the risk changing?

Climate change and severe weather



Impact on severe storms, floods and tropical cyclones



More hot days, less cold days



Enhanced Hydrological Cycle



Increase in global mean temperature



Climate change and severe weather



Hazard	Change in Climate	Resulting change in hazard
Cyclone	2.2°C mean temperature increase	Increase of 5-10% in cyclone wind speed
Bushfire	1°C mean summer temperature increase	17-28% increases in bushfires
Drought	1.3°C maximum temperature increase	25% increase in evaporation leading to increased bushfire risk
Flood	25% increase in 30 minute precipitation	1 in 100yr flood becomes 1 in 17yr flood

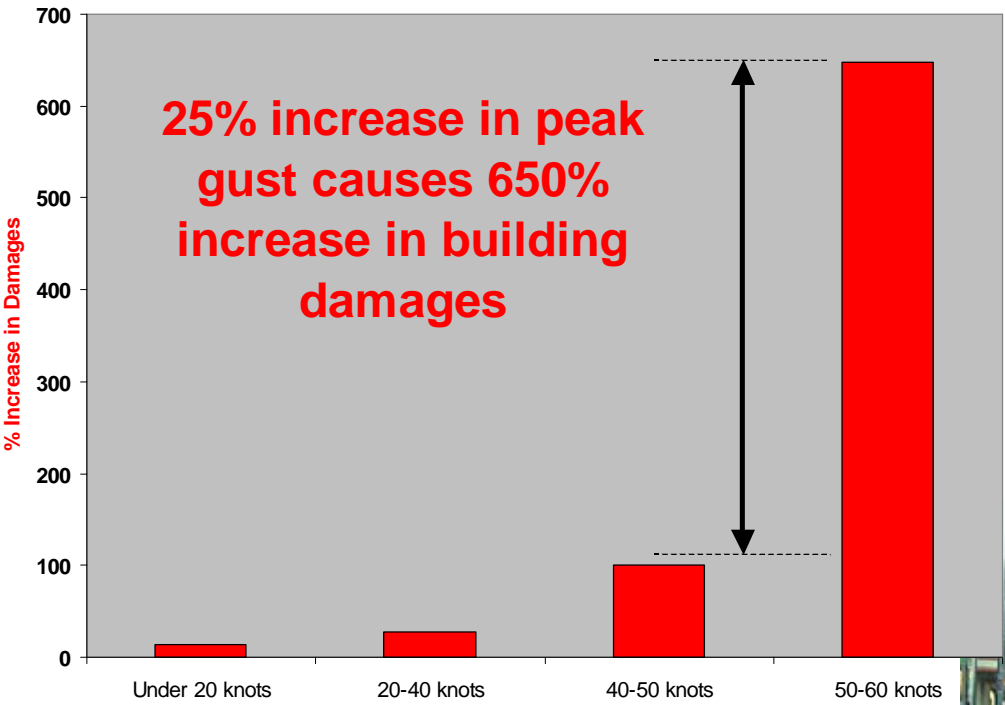
Small changes in mean climate can dramatically increase hazards



Climate change and severe weather:



It is not just the mega events!



NSW, NRMA Building Insurance only

Source: Sydney Morning Herald 25th August 2003



Climate Change: Economic Impacts



- **Agriculture (\$20 billion or 3% of GDP)**

- higher temperatures, drier conditions, less water, increased variability

- **Tourism (\$32 billion or 4.2% of GDP)**

- damage to ecosystems (Barrier reef, Kakadu, ski fields), rising sea levels, extreme weather events

- **Forestry (1% of GDP)**

- reduced rainfall, drought, increased fire hazard, pest infestations and soil erosion

- **Fishing (\$2.5bn or 1.5% of total exports)**

- winds, changing ocean currents, rising sea temperatures may affect a number of fishing industry species

Source: Australian Government Department of Environment and Heritage

Climate change risk and vulnerability



Climate change: Agricultural impacts



Sub-sector

Some potential impacts from climate change

Grazing & livestock

- increased growth from higher CO₂ levels but potentially offset by reduced rainfall and higher temperatures
- higher temperatures reducing milk yields
- decreases in forage quality
- increased rainfall variability reducing livestock carrying capacity
- heat stress in Northern Australia impacting on productivity and animal welfare
- increased risk and rates of salinisation in some areas
- increased risk of pests, parasites and pathogens

Cropping

- increased crop water-use efficiency due to higher carbon dioxide concentrations (CO₂) → potentially reduced grain quality
- reduced water availability due to both reduced rainfall and increased evaporation
- reduced crop yield
- changes to world grain trading
- increased risk of pests, parasites and pathogens



How is the risk changing for the Namoi region?



	2030 projected change	2070 Projected change
Temperature	+0.2 to +2.1°C	+0.7 to +6.4°C
Rainfall	-13 to +7%	-40 to +20%
Extreme rainfall	+2 to +13%	+4 to +40%
No. Droughts per decade	2 - 4	1 – 8
Extreme winds	-5 to +8%	-16 to +24%
Evaporation	+2 to +13%	+4 to +40%



Responding to climate change

Responding to Climate Change



1. Understand

- Better understand the effects climate change is likely to have on insurance and the community

2. Mitigate

- Work to reduce greenhouse gas emissions and thus the future impact of climate change, both internally and externally

3. Adapt

- Living with some amount of climate change, no matter what other actions are taken

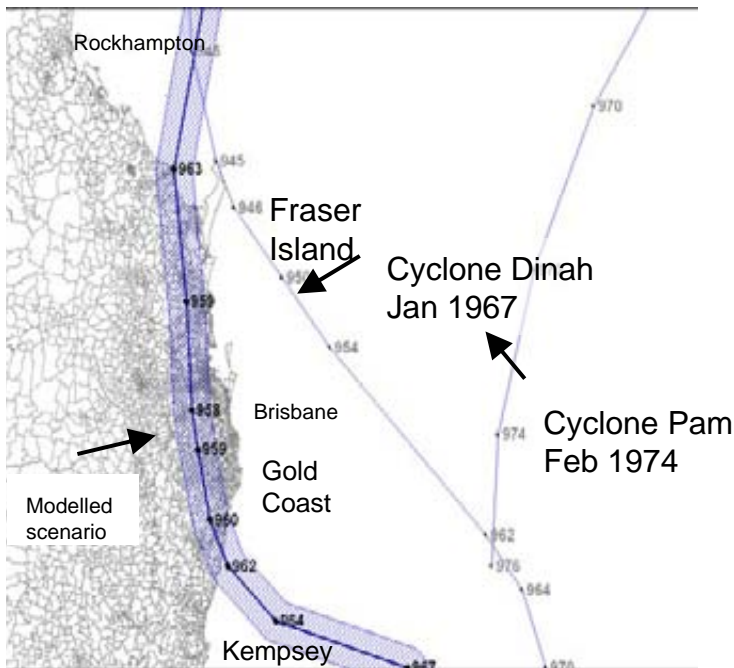
REDUCING RISK



IAG's climate change impact assessment

Queensland Cyclone risk

Severe Tropical Cyclones are expected to become more intense & move further south

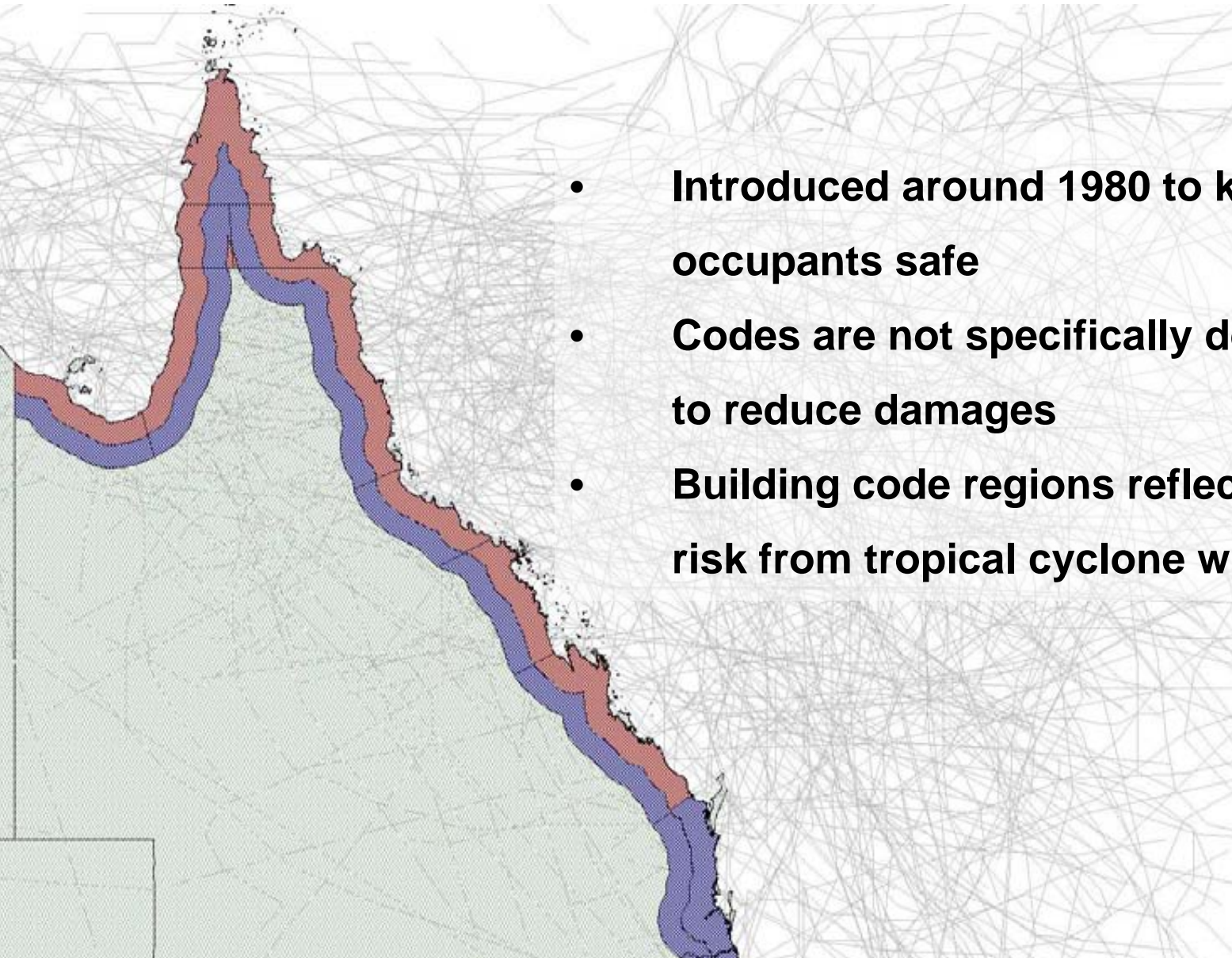


Sydney Hail risk

In a future climate, Sydney April '99 hailstorm (hail size 9cm+) that cost \$1.7bn could become twice as frequent



Risk Mitigation: Building Codes for Residential Housing



- Introduced around 1980 to keep occupants safe
- Codes are not specifically designed to reduce damages
- Building code regions reflect relative risk from tropical cyclone winds

Risk Mitigation: Cyclone Larry and building codes

Cyclone Larry damage



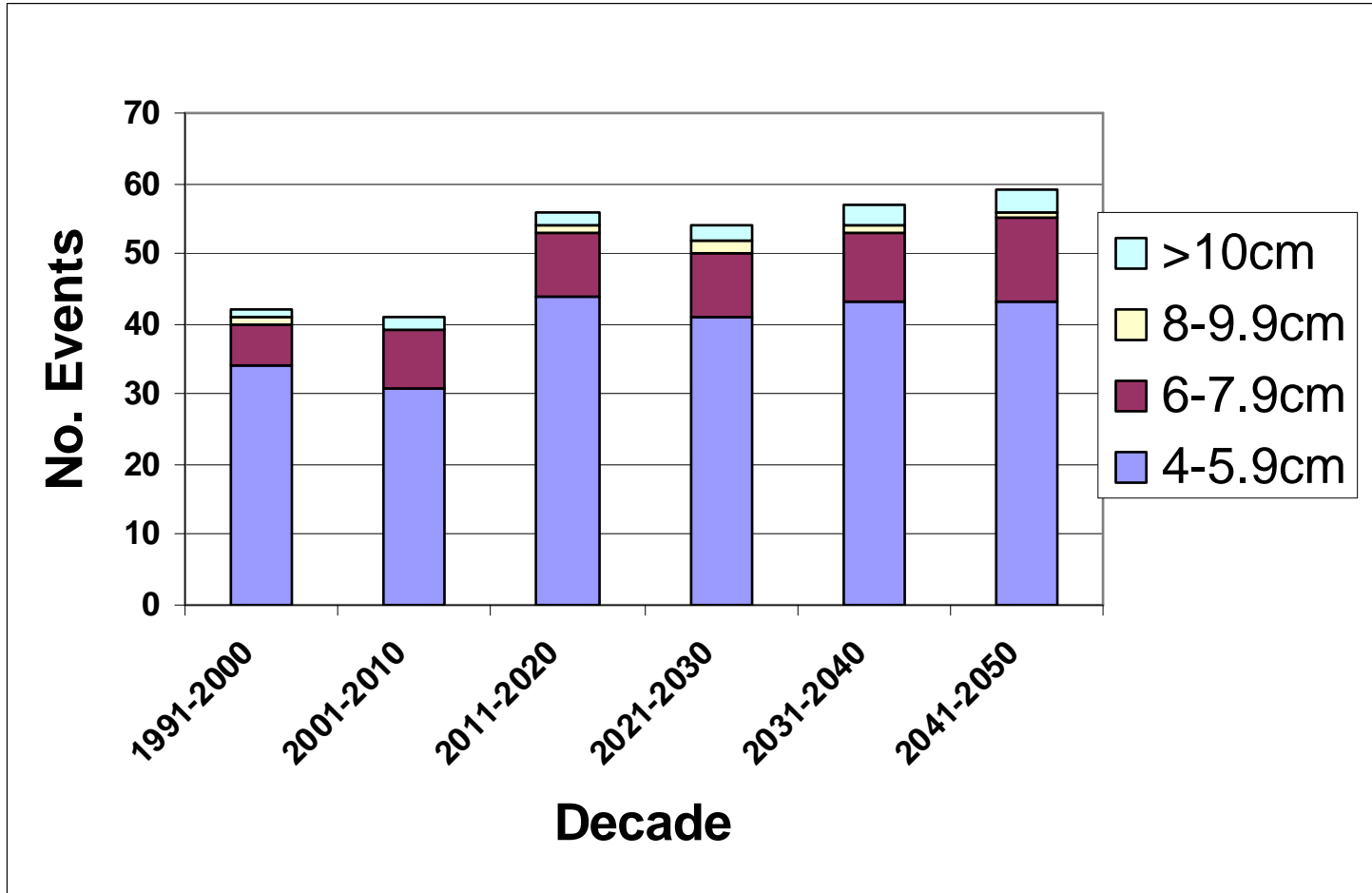
- Category 4 at landfall Innisfail, Qld.
- Estimated cost \$350m across insurance industry
- Most damage from severe winds and wind driven rain
- **Newer houses sustained little damage: potential evidence that building codes are effective**

Hail Gun: Roof material breaking point

Roof material	What size hailstone caused roof to crack?
Corrugated steel sheets	Not penetrated
Concrete tiles (new)	7cm (diameter)
Terracotta tiles (new)	7cm
Old slate (100 yrs old)	5cm
Old terracotta (50 yrs old)	5cm



How will hail storms change with further warming?



Decadal hail distributions of 4cm diameter or greater for the Sydney Basin modelling domain for the future climate numerical model IPCC IS92a scenario.

Source: IAG sponsored research

Working with Customers and Community: Flood Solutions – New Zealand

- IAG-Sponsored Climate Modelling

- Improved assessment of **current and future** flood risk

- Working with local authorities to

advise on flood solutions:

- Planning / building controls
- River and catchment management
- Engineering works
- Relocation / resumption of high risk homes



The Australian Business Roundtable on Climate Change



An unusual alliance of 6 major companies and an NGO:

- BP Australia
- Insurance Australia Group
- Origin Energy
- Swiss Re
- Visy Industries
- Westpac
- Australian Conservation Foundation (ACF)

Australian Business Roundtable on Climate Change



Represents a range of views but all seeking to:

- reduce business risk
- embrace opportunities associated with climate change



The Australian Business Roundtable on Climate Change

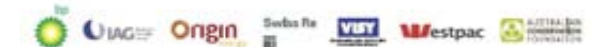
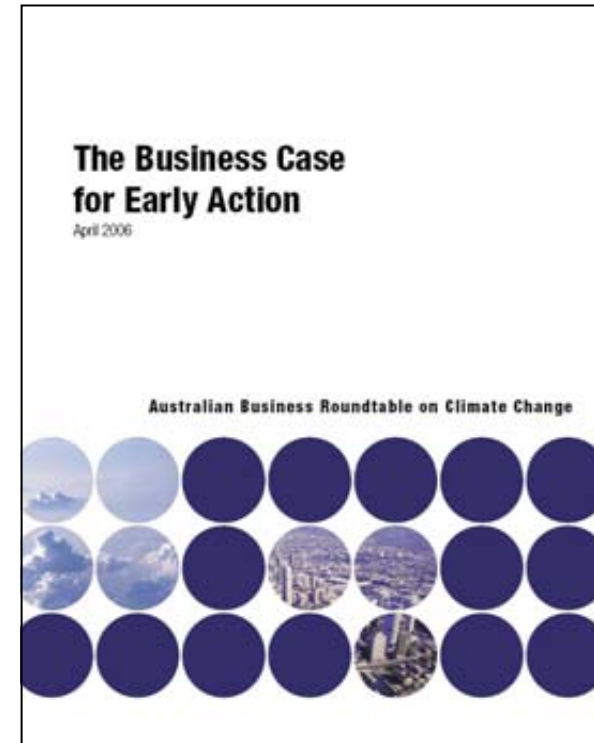


Key Findings

- Economic impacts significant & widespread
- Acting early reduces damage and buys time
- Deep cuts in emissions can be made without significant impact on economic growth

Key Recommendations

- Broad Framework & Carbon Price Signal
- Innovation and investment
- National resilience



IAG and climate change: Customers



Climate Help



Calculate your CO₂



Offset your emissions



Enter & win



Play the game

Climate Help

Climate change

Going carbon neutral

What we're doing

How you can help

FAQ

Contact

Don't underestimate the effects of climate change.

With recent events like Hurricane Katrina, persistent droughts, and worsening bushfire seasons, there are now more signs than ever that our climate is changing.

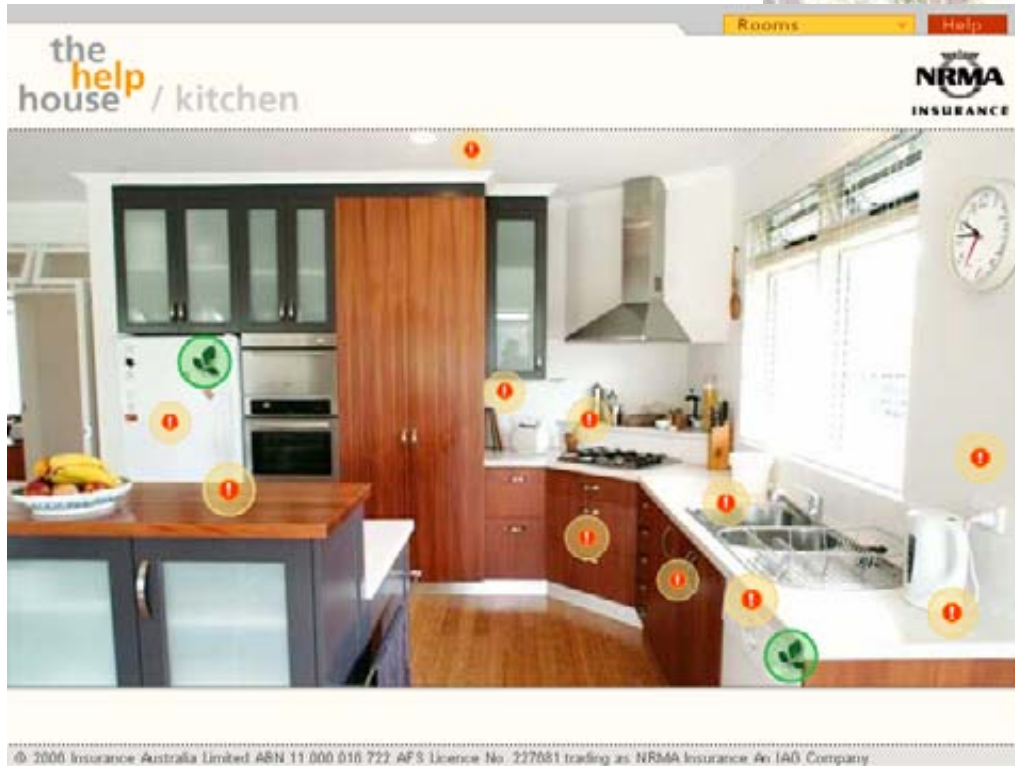
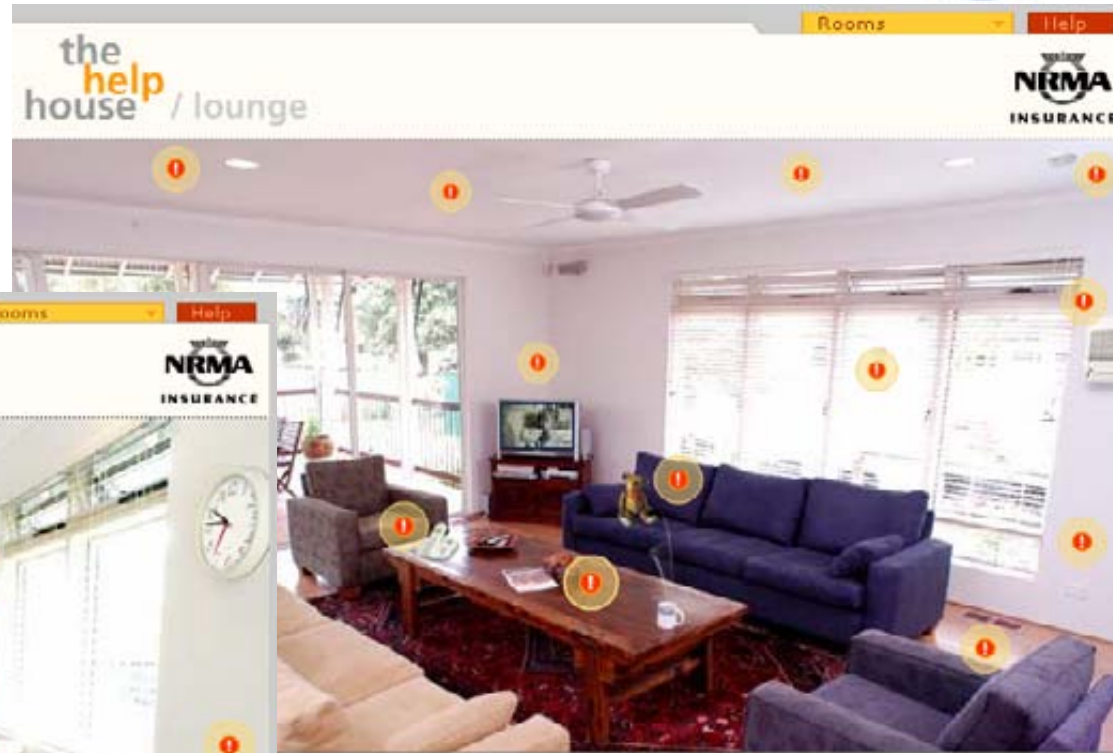
Because cars are a significant cause of climate change, NRMA Insurance has created a new environmental program called Climate Help. It shows you how to offset your car's emissions, and how to help combat climate change with a unique method called carbon credits.



IAG and climate change: Customers



Home Help



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IAG and climate change: Customers



GreenSafe Car Profiler

motor home health business other insurance community

NRMA
INSURANCE

Greensafe Car Profiler

Home page > Motor > Car research, security & safety > Greensafe Car Profiler

Search

We're here to help you choose a cleaner, safer car

Buying a car is a big personal decision but many people don't know that it also has a big social and environmental impact.

That's why we built the GreenSafe Car Profiler. It helps you to compare a range of cars on their environmental impact, safety features and running costs. That means you can make a more informed choice about which car to buy.

Choose a vehicle	Compare to another
<input type="text" value="Choose a Class"/>	<input type="text" value="Choose a Class"/>
<input type="text" value="Choose a Make"/>	<input type="text" value="Choose a Make"/>
<input type="text" value="Choose a Model"/>	<input type="text" value="Choose a Model"/>

Website help
1300 655 046



Climate Change: IAG to be Carbon Neutral

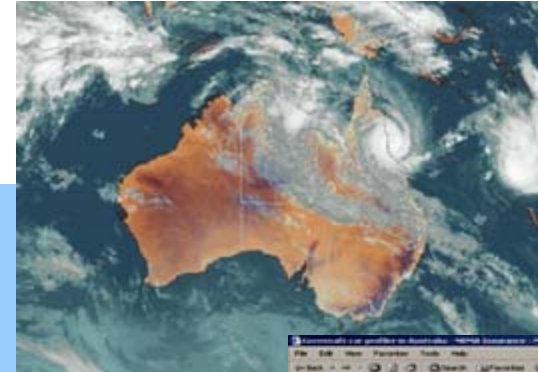


IAG
Carbon Neutral

- This means all the CO₂ IAG operations produces will be offset by:
 - purchasing greenpower
 - reducing the amount of CO₂ produced
 - continuing support of hybrid vehicles
 - expansion of climate friendly products



IAG's journey so far



"IT'S JUST GOOD BUSINESS"

- **Climate modelling**
- **Plan to be carbon neutral in 5 years**
 - Hybrid car fleet
 - Purchase of Green power electricity
 - 5 star Green building in Adelaide
 - Monitor & reduce energy consumption
- **Understanding building vulnerability - Hail Gun**
- **Climate Help product to offset car emissions**
- **Sharing knowledge with customers**
 - GreenSafe car profiler, Home Help websites
 - Smash repair industry – Bumper bars



Climate Help

Climate change
Going carbon neutral

What we're doing
How you can help

FAQ
Contact

To help reduce our use of coal, another source of greenhouse gases, we also source a proportion of our electricity from renewable energy sources.

Finally, we're making carbon credits available to help others reduce their impact on the environment. We make no profit on this program, so please join us and do all you can.

Calculate your CO₂ emissions

NRMA Insurance Building

Go Previous

IAG
Carbon Neutral



Conclusions



- 1. Climate change is real and early action is needed**
- 2. IAG is keen to ensure insurance remains affordable and available**
- 3. Action required on many fronts**
 - Understand, Mitigate and Adapt
 - Working together, action on all fronts
- 4. Insurance industry is a key player in an effective economic & societal response**

