







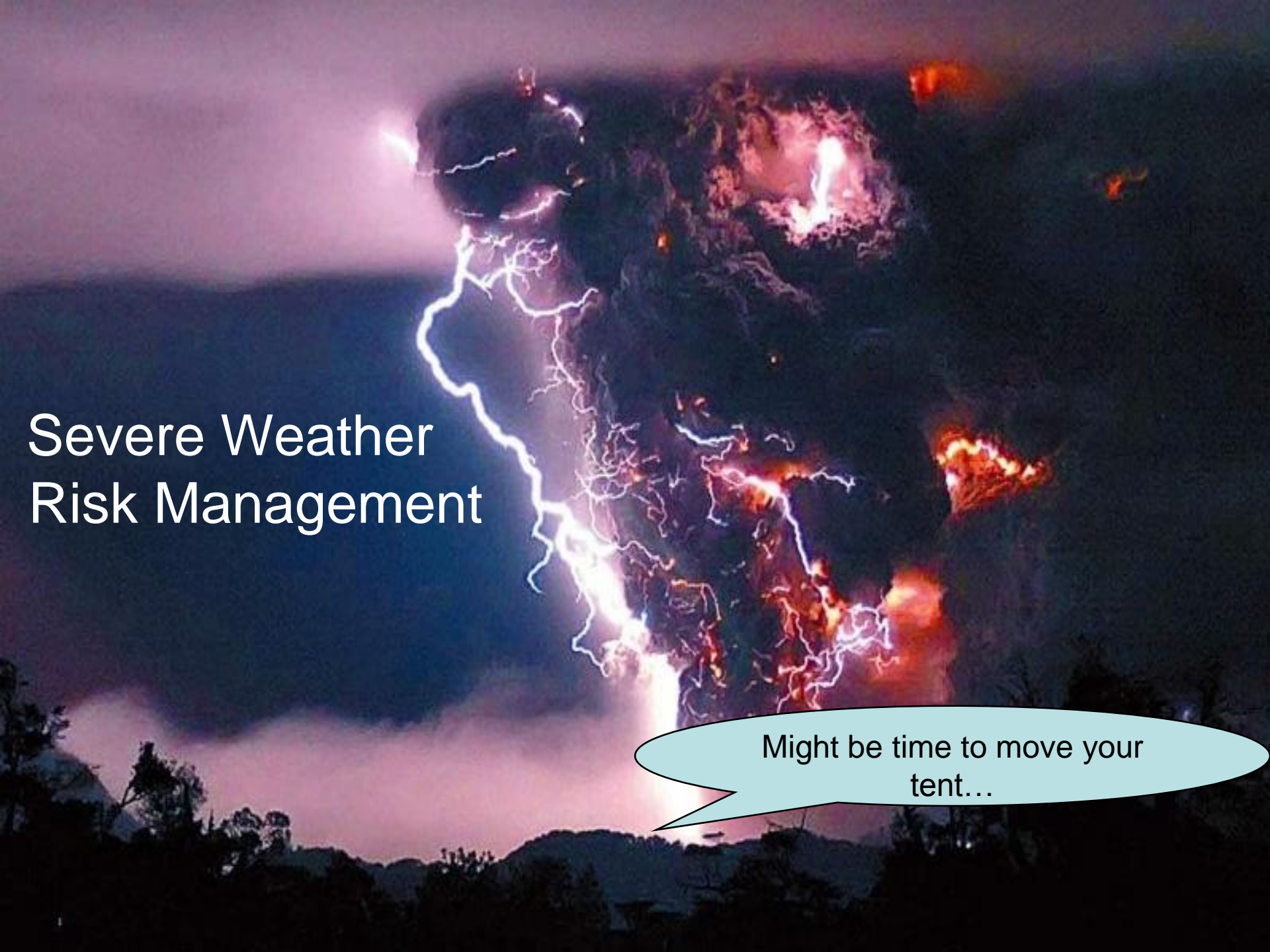




# Severe Weather Risk Management



# Severe Weather Risk Management



Might be time to move your  
tent...

# What risks for outdoor activities are associated with severe weather?



- Bushfire
- Tree fall
- High wind
- Lightning
- Hail
- Flood
- Cold injury (hypothermia, frostbite)
- Heat injury (hyperthermia, dehydration)



Frequency and severity of severe weather events is increasing.

Who says so?

# EXTREME WEATHER EVENTS TO CONTINUE AND LIKELY INCREASE; EFFECTS ON SOCIETY MORE INTENSE

NOAA (National Oceanic & Atmospheric Administration, US Dept Commerce) 13 Sept 2000



As our climate changes, extreme weather events such as droughts, floods, heat waves, heavy rainfall, tropical storms and hurricanes are expected to increase, according to a team of scientists, led by David R. Easterling of NOAA's National Climatic Data Center in Asheville, N.C. Scientists reached this conclusion after reviewing hundreds of studies that used data and climate models to examine past and future changes in climate extremes. Their work, which includes reviews of studies using observations, modeling, and impacts, is reported in the September 22 edition of *Science* magazine.

# Extreme weather on the rise

Thursday, July 3, 2003 Posted: 0838 GMT ( 4:38 PM HKT)



**(CNN) -- Anecdotal evidence that the world's weather is getting wilder now has a solid scientific basis in fact following a dramatic global assessment from the World Meteorological Organization.**

A study released Wednesday by the WMO -- a specialized climate science agency of the United Nations -- says the world is experiencing record numbers of extreme weather events, such as droughts and tornadoes.

Laying the blame firmly at the feet of global warming, the agency warned that the number and intensity of extreme weather events could continue to increase.

# IPCC Fourth Assessment Report



**The climate of the 21st century is virtually certain to be warmer, with changes in extreme events.**

Heatwaves and fires are virtually certain to increase in intensity and frequency (high confidence). Floods, landslides, droughts and storm surges are very likely to become more frequent and intense, and snow and frost are very likely to become less frequent (high confidence).

~p.509, Climate Change 2007: Impacts, Adaptation and Vulnerability, Chapter 11: Australia and New Zealand



“In September 2007, I stood with Euan Ferguson the South Australian Fire Commissioner and the President of the Australasian Fire and Emergency Services Authorities Council in the hills behind Adelaide.

We were releasing a ground breaking study into impacts of climate change on the intensity of bushfires in south east Australia. The Climate Institute commissioned the CRC for Bushfires, CSIRO and the Bureau of Meteorology to examine recent bushfire trends and projections under climate change.

The Fire Commissioner said at the launch words that were chillingly prophetic:  
Climate change is having an impact on bushfire severity. Longer fire seasons, more extreme days and greater extremes of bushfire conditions...**there will be times when no force known to mankind can suppress these bushfires.**

The Fire Commissioner’s message was that we have to dramatically increase our preparedness for these fires, fires that are establishing a new frame of reference for firefighters and our communities.

The reports message was global warming, even if only partly addressed, will significantly increase the number and intensity of the fires of this new frame of reference – the fires of climate change.  
**In our view what we have seen in Victoria, with such devastating ferocity, are the fires of Climate Change.”**

*~This is an extract of a speech delivered by John Connor, CEO of The Climate Institute, to the Future Leaders event in Melbourne on 19th February 2009*



Public concern about the risks associated with severe weather is increasing.

# Why review this now?



The current review in Victoria was triggered by survey data gathered from outdoor providers following the February bushfires. Data indicated that \$27.5m of an estimated annual \$182m turnover was lost due to the fires. It appears that a majority of that loss was due to concern about possible risk rather than actual risk.

## Parents nervous about bush camps

Cameron Stewart | *February 23, 2009*

Article from: The Australian



**PARENTS are expressing concerns about the safety of school bush camps in Victoria as the psychological wounds of the Black Saturday fires begin to be felt in schools.**

Many of the state's largest schools are reviewing their outdoor education programs and deferring or cancelling plans for school camps in bushfire zones in the wake of the deadly blazes of February 7.

Schools report some parents are refusing to allow children to attend bush camps because of concern about bushfires.

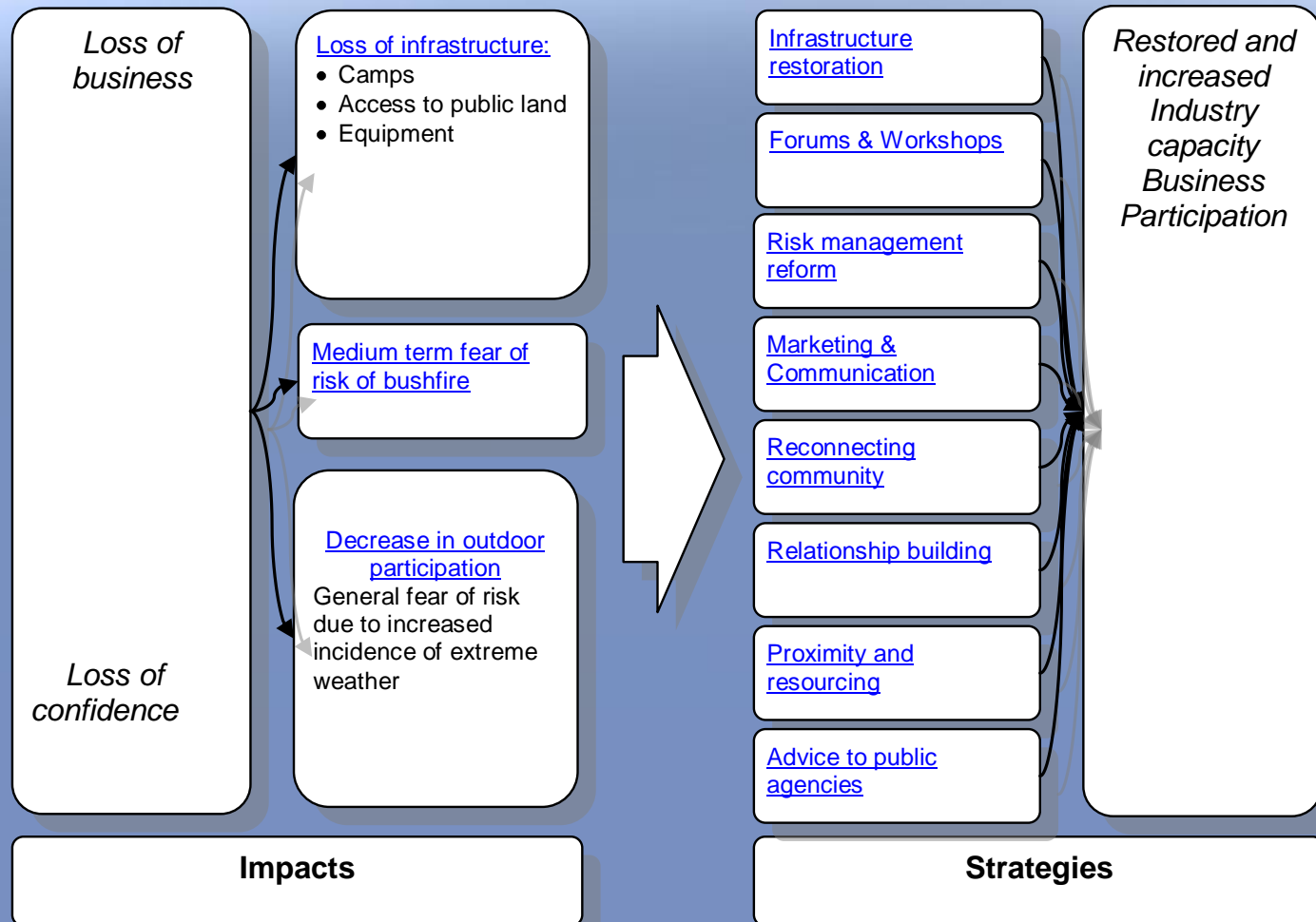
Melbourne Grammar School headmaster Paul Sheahan said: "There is a bit of nervousness (from parents) and we are sensitive to that."

Melbourne Grammar is one of many Victorian schools to have cancelled their first-term bush camps in bushfire-prone areas.

# Victorian Outdoor 'Industry' Taskforce



## Outdoor Industry Recovery & Development Plan 2009 / 2010



## **Review and improve available Risk Management systems.**



Review and, where necessary, reform regulatory frameworks (AAS, SGEO, ACA accreditation) to provide more detailed guidance on managing risks associated with extreme weather.

# Improve marketing and communications



- Acquire resources (such as a consultant) to enable a communication strategy/protocols that collectively manages media and effectively circulates information/releases
- Public promotion of the benefits of the outdoors
- Restore public confidence

# What roadmap can we use?



The Australian Standard on Risk Management AS 4360 and the new International Standard on Risk Management ISO 31000 share as their central feature, a process of ongoing Risk Assessment:

Risk assessment = Risk consciousness



**Communicate & Consult**

**Establish the Context**

**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**



**Communicate & Consult**

**Establish the Context**

**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**



**Communicate & Consult**

**Establish the Context**

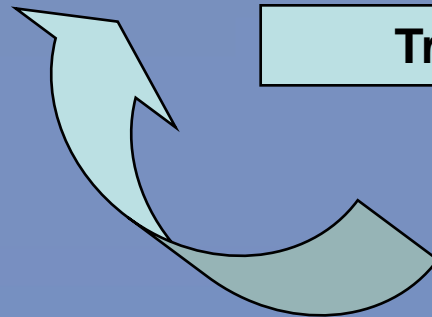
**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**





**Communicate & Consult**

**Establish the Context**

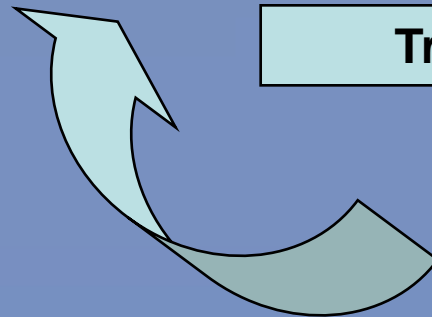
**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**





**Communicate & Consult**

**Establish the Context**

**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**



**Communicate & Consult**

**Establish the Context**

**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**



**Communicate & Consult**

**Establish the Context**

**Identify the Risks**

**Evaluate the Risks**

**Treat the Risks**

**Monitor & Review**

**Document**

## Step 1: A.A.S. S.W.R.M. advice



- Public forum scopes issues, selects expert group
- Expert group creates initial draft
- Draft circulated to forum attendees, feedback invited, resulting in draft 2
- Draft 2 published on ORC website, public comment invited
- ORC technical group sifts & incorporates relevant public feedback -> draft 3
- ORC CoM to ratify final version
- Final version published alongside AAS



## The current draft

To download a copy of the current draft:  
[www.orc.org.au/aas](http://www.orc.org.au/aas)

A large, intense fire burning in a field, with a large, dark, leafless tree in the foreground and a fence line visible.

**Questions?**

**[tony@voea.vic.edu.au](mailto:tony@voea.vic.edu.au)**