

ToR [a] recent trends on the frequency of extreme weather events, including but not limited to drought, bushfires, heatwaves, floods and storm surges;

Sea Level and Planning

The latest work profiles the last 40 million years of behaviour of the polar ice under a regime of 400ppmv of atmospheric CO₂(-e). It flags, within a margin of error, a 9 metre rise in sea levels over time.

The last Interglacial maximum, 125,000 years before present, saw the sea level remain above today's by between 4 and 6 metres for 7,000 years.

Such changes may follow a rate of 1 metre per century, but they are inexorable.

One advantage is this change occurs over a period allowing for a programmed response.

The other is that the same study shows some stability follows the rise until CO₂ reaches levels above 650ppmv. If those levels are reached such as if the release of GHG from natural sinks escalates due to warming caused by lower values.

Such changes are indicated by the behaviour of the tundra and other polar lands and seas.

All land use planning needs to take account of this projection. No new permanent infrastructure should be constructed on land vulnerable to this inundation.

Measure should be taken to establish alternative infrastructure secure from such impacts, for example a second airport for Sydney.

I would suggest that at the extremes of possibility following runaway climate instability scenarios based on the higher end of CO₂ concentrations following the failure of the international community to enact comprehensive adequate and timely mitigation measures the degree of dislocation and change cannot be planned for.

Those measures are reasonably well understood and should need no iteration. If a binding international agreement to restrain GHG below 450ppmv cannot be reached in this period of negotiation the national response to future changes in climate stability and the concomitant impacts on national life should be reviewed to allow Australian the opportunity of making informed decisions about the future.

Reference; Dr Gavin Foster et al. The relationship between sea level and climate forcing by CO₂ on geological timescales. Proceedings of the National Academy of Sciences, 2013.

ToR [c] an assessment of the preparedness of key sectors for extreme weather events, including major infrastructure (electricity, water, transport, telecommunications), health, construction and property, and agriculture and forestry;

Natural Disaster Planning - Power Supply

The States seem unable to address the hardening of the power supply infrastructure even under the NEM pricing benefits.

Although recommended in the Victorian Royal Commission into the Black Saturday fires the idea was dismissed as too expensive.

It would seem therefore that Federal intervention is necessary to ensure that at least identified areas of importance as evacuation nodes in times of natural disaster have their electricity supply hardened or an alternative generation system in place.

The recent [04JAN13] fires on the Tasman Peninsular serves as an example.

A major global tourist attraction is located almost at the end of a long above ground power supply. Normal access to the area is limited to one road, although an alternative by sea can be arranged to deal with an emergency. It was an Evacuation Centre.

The population of the Forrestier and Tasman Peninsular are always vulnerable to interruption to supply and may thus be better prepared than visitors.

It is these communities, where evacuation routes are limited and there is a danger, that should receive priority in ensuring a hardened supply to local evacuation nodes.

ToR [f] progress in developing effective national coordination of climate change response and risk management, including legislative and regulatory reform, standards and codes, taxation arrangements and economic instruments;

Local planning schemes should phase out the wooden fence for homes adjacent to bush or farmland.

As was demonstrated in the Canberra fires wooden fences only act as fuses for fires reaching into the suburban landscape.

Urban planning is governed by many regulations in place in the interests of the whole community.

Protection of adjoining properties by setback distances and firewalls is common practice for built up areas.

Over time such a change should reduce risk to the community.

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