

KEY FINDINGS OF THE IPCC FIFTH ASSESSMENT REPORTⁱ

Emissions reductions targets: Delaying greenhouse gas reductions could be costly for Australia

- Warming of the earth is unequivocal and there is a greater than 99.999% chance that human activities are the causeⁱⁱ.
- As one of the most vulnerable developed countries in the world, action on climate change is in Australia's national interest.
- Early and significant emission reductions reduce cumulative GHG emissions and the likelihood and severity of unwanted impacts.
- Delaying action on climate change is likely to increase the difficulty of the transition to low longer-term emissions, narrow the range of options consistent with maintaining temperature change below 2°C and reduce the cost and challenge of the adaptation task.
- Emission-reduction targets backed up with solid policy and programs can be integrated with other national interests to provide multiple benefits.

(A) Risks from climate change... (B) ...depend on cumulative CO₂ emissions...

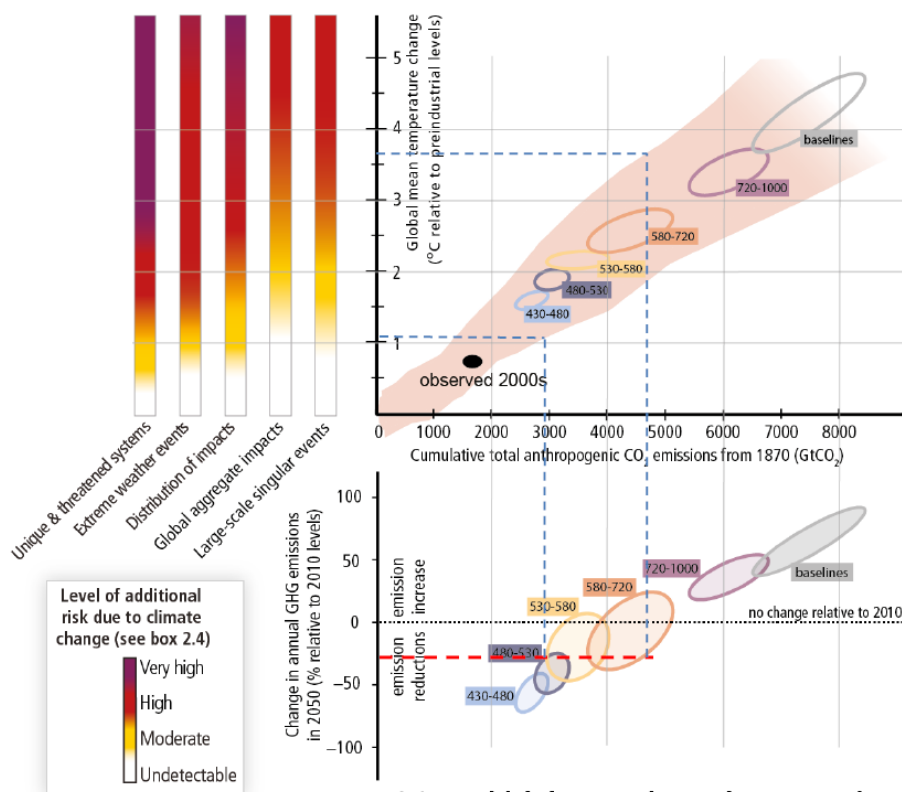


Fig 1 The relationship between emission-reduction targets, CO₂-e emission scenarios, cumulative CO₂ emissions, temperature change and impacts of concern. For example, an emission reduction target of 30% will result in a temperature rise of 1 to 3°C with a mid-point of 2°C (see arrows). Similarly, for a given temperature target, the necessary emission reductions can be assessed.

Action on climate change provides numerous opportunities and co-benefits for Australia

Climate policy intersects with other societal goals creating the possibility of co-benefits (or reducing adverse side-effects). These intersections can strengthen the basis for undertaking climate action.

Decarbonisation of the economy can increase energy security, lead to improved public health outcomes and provide significant economic opportunities

- Mitigation scenarios reaching a 30-60% reduction in global emissions by 2100 show reduced costs for achieving air quality and energy security objectives, with significant co-benefits for human health, food security, water resources and ecosystem impacts.
- The costs of achieving policy objectives in these areas in an integrated way is much less than if these are addressed separately.

Effective adaptation can bring local and national benefits

- Recent extreme climatic events show significant vulnerability of some ecosystems and many human systems and the frequency / or intensity of such events is projected to increase.
- Timely adaptation to climate changes can deliver significant benefits by limiting this increasing vulnerability in many circumstances and by taking advantage of opportunities as they arise.
- Effective adaptation planning can help with the achievement of other national goals and can help avoid mal-adaptation such as when decisions taken now prevent better alternatives being implemented in the future.
- Effective climate adaptation requires effective adaptation technologies, information, institutions and support.

An example: Urban development

- In urban areas, climate change will increasingly raise risks for people, economies and ecosystems, including risks from heat stress, storms and extreme precipitation, inland and coastal flooding, water scarcity, sea-level rise and storm surges.
- Most GHG mitigation options for buildings have considerable and diverse co-benefits in addition to energy cost, such as increasing liveability and reducing water consumption.
- Infrastructure developments and long-lived products that lock societies into GHG-intensive emissions pathways (e.g. poorly designed buildings reliant on air-conditioning) may be very difficult or costly to change, reinforcing the importance of early action to reduce emissions.

ⁱ IPCC Fifth Assessment Report

ⁱⁱ Kokic et al. (2014) Climate Risk Management 3: 1-12