

## The type of world that we all live in will be defined by how quickly we can phase out the use of coal, oil and gas.

The faster that we cut greenhouse gas emissions this decade - by phasing out fossil fuels - the better our future. Stronger action will limit harms; protecting more people and preserving the ecosystems that we depend on for our survival. Failing to do enough, quickly enough, could trigger changes in the Earth system that will overwhelm human societies. Every choice we make matters.



## **SEA LEVELS**

Today, sea levels have already risen by 0.2m; eroding our coasts and putting many lowlying communities in our region at risk of displacement.

For many locations in Australia, historical 1-in-100-year coastal flooding events occur more frequently, and become annual by 2100.

The atoll nations of Tuvalu, Kiribati and the Marshall Islands lose more and more land and freshwater resources to rising seas and storm surges.

Seas rise a further 0.44-0.76m by 2100.

Around 200 million people could be at risk of displacement.

Seas continue to rise 2-6m over the next 2,000 years.

Coastal inundation and storm surges increasingly impact our coastal communities, infrastructure, and

Seas rise a further 0.63-1.01m by 2100, with a possibility of larger rises of up to 2m.

Up to 250,000 Australian properties are at risk of coastal flooding.

Half a billion people could be at risk of displacement globally.

Even greater and faster rises over the next 2,000 years.

LOCAL COUNCIL 

businesses; costing hundreds of billions of dollars.

STRONGER ACTION = Limiting sea level rise so more people and their homes remain safe.

# FOOD

Across Australia and the world, shifting rainfall patterns and extreme temperatures are making life tougher for farmers. Farming is now more unpredictable and risky.

Climate change has already slashed the profitability of Australian broad-acre farms by an average of 22% since 2000.

Globally, yields of staple crops including wheat, rice, maize and soybean suffer. In Queensland, changes in growing seasons attributed to global warming decrease maize production.

Declining rainfall and more frequent droughts in south-eastern and south-western Australia intensify. Declining river flows reduce water availability.

Globally, agricultural yields fall rapidly.

Changes in growing seasons result in wheat and soy yield declines across the Australian east coast when global warming exceeds 2°C.

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Significant reductions also expected in oil seeds (-35%), wheat (-18%), fruits and vegetables (-14%), plant fibres (-7%) and other fibres (-11%) in Australia above 3°C.

Tipping points could trigger major shifts in rainfall patterns resulting in the collapse of our food systems.

STRONGER ACTION = Better food security for Australians, and fewer people going hungry worldwide.



#### DROUGHTS, FIRES & **FLOODS**

Cool season rainfall has already declined across the southem half of Australia since the 1970s. Meanwhile, heavy rainfall events are becoming more intense and increasing our flood risk.

Australia has already seen an increase in extreme fire weather. with a longer fire season, across large parts of the country since the 1950s.

Over large areas of the world, extreme agricultural droughts are projected to be at least twice as likely at 1.5°C global warming.

Globally, an extra 62 million people will be exposed to drought each year if we reach 2°C, compared to 1.5°C.

Significant increase in the frequency and severity of wildfires compared to 1.5°C.

Globally, drought, fire and flood risks, and associated damages, are projected to increase with every fraction of a degree of warming.

In Australia, the number of extreme fire days will double at 3°C or more of global warming.

STRONGER ACTION = Fewer Australians at risk of water scarcity, deadly floods and fires.



## EXTREME HEAT

globe, extreme heat million people will in eastern and southabove 50°C are very likely to be a regular events have resulted in regularly face conditions western Australian occurrence in Sydney in which it is too hot to deaths regions will need to and Melbourne work safelv consider alternative water supply options due At 3°C of warming, in In Queensland, to declining rainfall. Queensland heatwaves heatwaves occur three times a year, each lasting Tropical diseases spread occur as often as seven 7.5 days on average. to more temperate areas times a year and last on across Australia, average 16 days. including major population centres. In Queensland, heatwaves occur at least four times a year now lasting 10 days on average. STRONGER ACTION = More Australians can safely work and play, and fewer people die or fall ill due to lethal heat. 

At 3°C of warming, days Globally, around 350 In all regions of the Many communities

For references and further information, head to the report website at:

climatecouncil.org.au/resources/missionzero



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