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FOUNDATION

ENVIRONMENTAL PROTECTION & SUSTAINABILITY

Improved Environmental Protection & Sustainability

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INTRODUCTION

The environment in Australia is incredibly diverse and rapidly changing. This document provides a snapshot of the current state of the environment by highlighting key trends and statistics, and pointing to key areas of need in terms of environmental protection and sustainability. More in depth information can be found via the list of official sources.

Filmmakers can use this guide as a starting point for research on their issue area, including pressing environmental needs, concerns and progress over time. In addition, where appropriate, the data sources can support filmmakers to track environmental outcomes for their films and impact campaigns.

Overall, the findings provide evidence of significant human impacts on climate change in Australia. Strained consumption of resources like energy and water, population growth, urban development, and increasing production and pollution has lead to higher emissions. Australia's emissions are reaching alarming levels compared to the rest of the world, with tangible impacts on our atmosphere, biodiversity and ecosystems.

Due to the greenhouse gas effect, land and water temperatures are rising in unprecedented ways. The resulting extreme weather patterns are affecting the biodiversity of our highly diverse terrain. Drier conditions in southwestern and eastern Australia are intensifying drought conditions, which became even worse than usual through the bushfire season of 2019-2020. Loss and destruction of native animals and their habitats was widespread.

Gradual warming of the oceans has lead to the consecutive years of mass bleaching of our coral reefs, especially in the Great Barrier Reef where its health remains poor.

There is a huge disparity between Australia's responsibilities as per the international agreements it has signed to tackle climate change, and the actions being taken to fulfil these responsibilities. Future projections warn we are not on track to reach most of our goals, and Australia is tracking quite poorly compared to other OECD countries.

However, Australians are starting to care more than ever about climate change as they acknowledge the impacts it is having on our lives. The majority of Australian show great concern about the future of our environment and believe climate change is one of our biggest threats.

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CLIMATE CHANGE: ATTITUDES, AWARENESS AND KNOWLEDGE

Key statistics:

- Over the last decade, the concern about climate change amongst Australians and their willingness to take action has been gradually rising. [1]
- However, concern and readiness for action has appeared to have stalled or even regressed in early 2020. Just over half of Australians (56%) agreed that 'global warming is a serious and pressing problem, and believe we should should begin taking steps now even if this involves significant costs', down from 61% in 2019. This is likely due to the economic uncertainty resulting from the COVID-19 pandemic overshadowing climate change concern.[1]
- The highest point of climate change concern was reported in 2006, when 68% of Australians agreed that 'global warming is a serious and pressing problem, and believe we should should begin taking steps now even if this involves significant costs'. Attitudes declined from here to the lowest point of climate change concern in 2012 with only 36% agreeing with this statement. [1]
- Interestingly, the percentage of Australians reporting 'until we are sure that global warming is really a problem, we should not take any steps that would have economic costs' reduced slightly from 2017 to 2019 (37%-28%), but has increased to a third (34%) of Australians in 2020.[1]

Graph: The Lowy Institute: Attitudes Towards Climate Change Action

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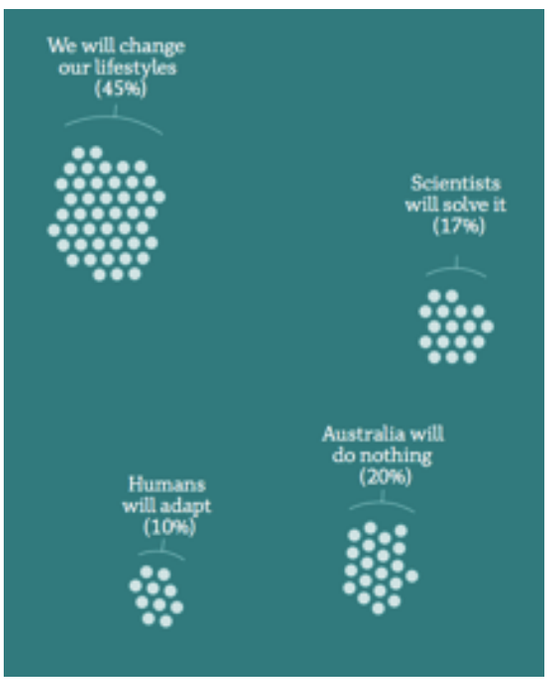
CLIMATE CHANGE: ATTITUDES, AWARENESS AND KNOWLEDGE

Key statistics:

- Australians are feeling the impacts of climate change. In January 2020, 57% reported they are experiencing climate change effects, compared to 44% in July 2019. [2]
- In February 2020, 72% of Australians saw climate change as a problem facing them personally, and climate change was ranked higher than problems saving for retirement and health. [3]
- In 2019, 64% of Australians said climate change was the biggest threat to Australia's vital interests, up from 58% in 2018.[1]
- After the 2019/20 bushfires, Australians reported strong sentiments: 72% believe the recent bushfires are a 'wake-up call for the world on the impacts of climate change' and 67% acknowledge that 'climate change is making bushfires worse.' [2]
- However, 15% of Australians believe climate change requires NO action. [3]
- When looking to the future of climate change action, Australians hold mixed beliefs about what will be done: 45% believe we will have to change our lifestyles to reduce energy consumption, 20% believe Australia will do nothing about climate change, 17% believe scientists will solve the issue, and 10% think humans will adapt to a warmer climate.[3]
- Australians strongly support moves towards renewable energy sources: 83% of people would like to see more solar power, 68% support the use of wind power and 62% more hydro power. [3]

More Australians are feeling the impacts of climate than ever before



ABC, Common beliefs to reduce energy consumption

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CLIMATE CHANGE

Key statistics:

- Climate change and its impacts are still on the increase, and are projected to keep increasing. [4] [5] [6] The Australian State of the Environment report warn that some of these impacts are irreversible! [5]
- Our greenhouse gas emissions are still on the rise. CO_2 levels have increased 30% since 1960. Average concentration has reached 411ppm, a rise of 2.5ppm in the last year, which is 12% faster than the rate of increase from 2000-2018. [4]
- Australian per capita emissions have risen to levels 3.3 times the world average, putting us above even the US and EU. ANU reports our high levels are due to 'high per-capita energy use, the use of polluting coal and high non-CO2 emissions'. [4]
- As a result, our earth is getting warmer. Australia's mean surface air temperature has increased by 1°C since 1910. [5]
- 2019 was our hottest year on record- it was a whole 1.5°C above the average from 1961-1990. [4]
- These extreme temperature rises have increased the severity of droughts occurring during periods of low rainfall. [6]
- Projections for NSW predict that the number of days with severe fire danger will only increase in summer and spring. [7]
- Key strategies that Australia is a part of to tackle climate change are the United Nations Framework Conventions on Climate Change, the Kyoto Protocol, the Paris Agreement and the Montreal Protocol.
- According the Climate Council, Australia's current emissions reduction target of 26-28% is 'woefully inadequate to protect us from the intensifying climate change', and that we are not on track to reach our targets with the Paris Climate Agreement. [9]
- The Climate Change Authority suggests that Australia's emissions reduction targets should be set at 40-60% by 2030. [11]

2019 was the hottest year on record - a whole 1.5C above the average from 1961-1990 [4]

Australia is *not* on track to reach our emissions reduction target as per the Paris Climate Agreement [9]

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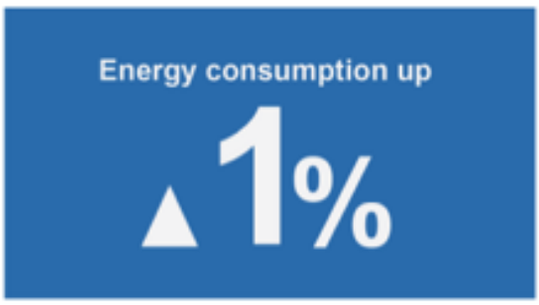
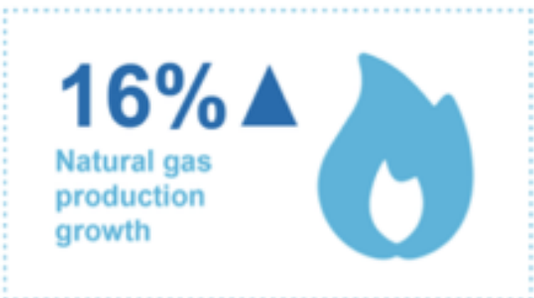
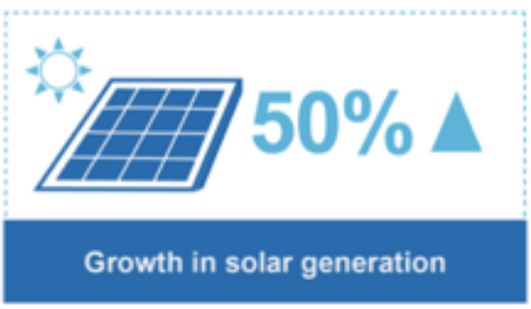
CLIMATE CHANGE: ENERGY, CONSUMPTION & PRODUCTION

Key statistics:

- Australia's total energy consumption rose by 1% between 2018-2019. [8]
- Australia shares just 0.3% of the worlds population, but our greenhouse gas emissions takes up over 1.3% of the world total. [10] [13]
- Australia's expanding pipeline of gas projects, if burned, would contribute more to climate change than any other countries total annual emissions, and takes up over a quarter of the **global** 1.5°C carbon budget for the zero emissions deadline of 2050. [12]
- Emissions from fossil fuels continue to increase and are the main contributor to the observed growth in atmospheric CO_2. [6]
- Production in the fossil gas industry has increased dramatically. Rates tripled between 1990 and 2010 and then tripled *again* between 2010 and 2019. This has made us the worlds biggest exporter of liquefied natural gas, and the third largest exporter of fossil fuels, only behind Russia and Saudi Arabia. [12]
- Since 2000, Australia's coal production for exports have more than doubled. [13]
- Pollution from the electricity sector takes up 33% of our total emissions. [9]
- While our levels of fossil fuels have been increasing, so have our use of renewables; growth in renewables rose by 5% in 2018-2019. There was also a 50% growth in solar production, and 21% of our electricity generation came from renewable sources in 2018-2019. [8]
- In fact, recently in South Australia, they became one of the first major jurisdictions in the world to be completely powered by solar (even if it was only for an hour)![19]







Statistics for 2018-2019, from Australian Energy Statistics [8]

'Australia's potential carbon footprint from prospective fossil gas resources is equal to around three times the annual emissions from the entire world.'
The Australia Institute

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LAND

Key statistics:

- Since European settlement in Australia, 44% of our forests and woodlands have been cleared. [14]
- Agriculture remains Australia's most prominent land use- 58% of the continent of Australia is used for agricultural production (4.5 million square kilometres). [15]
- Just 8% of the continent of Australia has been reserved for nature conservation. [15]
- Between 1996 and 2011, the percentage of land classed for nature conservation, protected areas and minimal use increased from 34% to 38.3%.
- The State of the Environment report warn that the biggest threat to land use in Australia is climate change. [5]
- During the 2019-2020 bushfire season, it's estimated that 17 million hectares of land was burnt. In NSW alone, 5.4 million hectares was burnt, which is 42% of all our state forest! [17]
- 3.9 million hectares of forests have grown between 2011 and 2016.

The biggest threat to our land in Australia is climate change

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BIODIVERSITY

Key statistics:

- 35% of Australia's native forest land is currently protected for biodiversity conservation. [15]
- Australia has more endemic species (i.e.: not found anywhere else in the world) than any other country in the world- with 84% of plants, 83% of mammals, and 45% of our birds being unique to our our diverse country. [5] [16]
- However, there has still been wide reporting of a decline in our biodiversity, despite being hard to measure and define. [5] [16]
- In fact, Australia has the worst track record of all the continents for biodiversity losses: recording the largest decline in biodiversity of any continent in the previous 200 years. [16]
- 50 species of Australian animals and 60 species of plants have been classed as extinct since European settlement.
- There has been a 36% increase since 2000 in the amount of species on the Threatened Species List. [4]
- The State of the Environment report says one of Australia's biggest threats to biodiversity is extensive land clearing. [5]

Australia has recorded the largest decline in biodiversity of any continent on earth in the last 200 years

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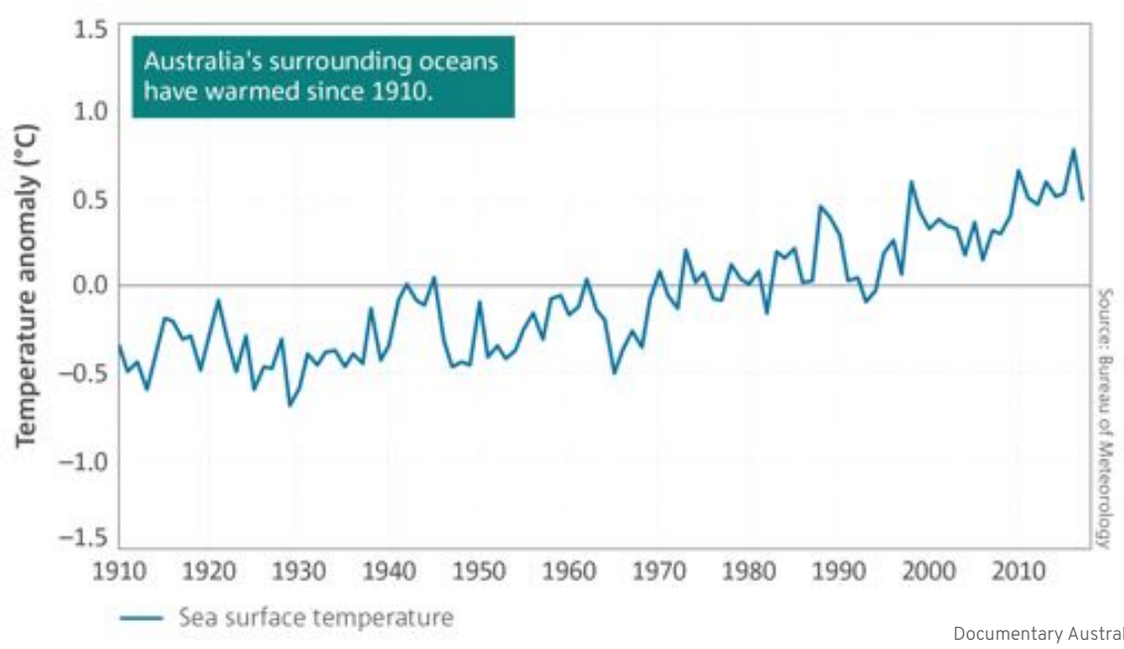
OCEANS & COASTS

Key statistics:

- Industrialisation, as with the land, has placed the ocean in peril, with industrialised fishing, habitat loss, species loss and pollution threatening to irrevocably alter the nature of our oceans.
- Australian sea levels are rising at a rate much faster than the global average. The global sea level average has risen 95 mm since 1993, compared to the highest rise in Australia at the Tasman Sea, which has risen more than 150 mm since 1992. [4] [18] The CSIRO says the rate of rise is becoming more rampant in recent times.
- Sea temperatures have been on the rise by a whole 1°C since 1910. In fact, the CSIRO says the oceans retain 93% of the heat generated by climate change. [18]
- These rising sea temperatures are resulting in more extreme marine heat waves, with disastrous results for the health for the Great Barrier Reef, which is currently in poor condition. [18] Over the last three decades, coral cover on the Great Barrier Reef has halved.[20]
- Another concerning issue for the Great Barrier Reef and elsewhere is the acidification of the ocean. The CSIRO says that this is having tangible effects on our reefs and their health, such consecutive years of mass bleaching. [18]
- The State of the Environment Report has revealed that another burgeoning issue for the ecosystems of our oceans and coasts is the growing amount of human litter. They report that plastic litter takes up the majority of debris found on Australian coasts. [5]
- This year alone, 50 million plastic bags will enter the litter stream from Australia, making our country the second largest waste producer, per capita.[21]
- Since 1980, half of all marine life worldwide has been lost, with plastic infiltrating waterways, oceans, and marine creatures themselves, killing hundreds of thousands of creatures every year. [22]
- By 2050 there will be more plastic in the ocean than fish.[23]



CSIRO- *Sea surface temperature anomalies*

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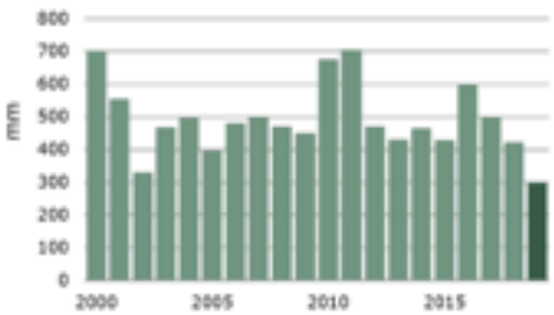
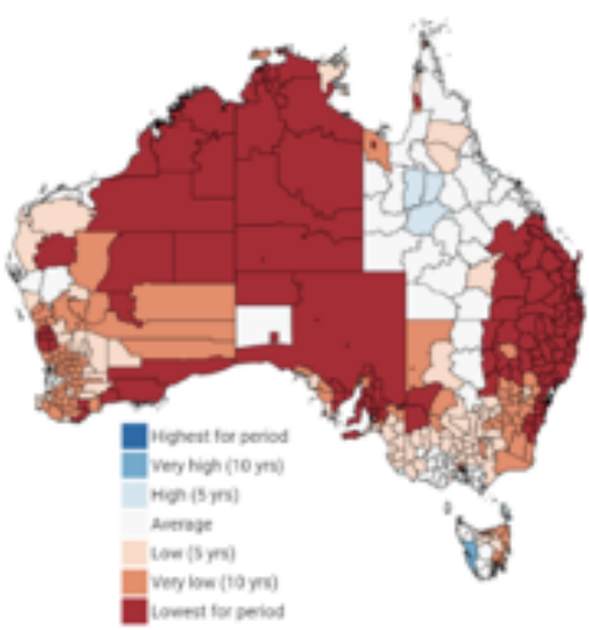
WATER

Key statistics:

- Australia has just experienced 2 consecutive years of below average rainfall, as 2019 recorded the lowest rainfall in 119 years. This was 40% lower than the average for the 2000-2018 period. [5]
- The CSIRO reports rainfall extremes are becoming more severe across the country, with southeast and western Australia becoming drier, and northern Australia becoming wetter. [18]
- Water resources have been reaching concerning levels as the disparity between urban supply and demand increased. Urban demand has increased significantly and conversely, supply levels decreased in many cities. In 2019, Sydney' supply dropped by 28%, Canberra's by 26% and Brisbane's by 25%. [4]
- By the end of 2019, total water storage levels across Australia reached a 10 year low due to dry conditions; from 63% full in 2018 to 46% full at the end of 2019. [4]
- Prolonged droughts, population growth and urban development has put more pressure on water capacities. [4]



Annual rainfall across Australia



Rank of 2019 rainfall by local government area

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Where to find out more

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