

An aerial photograph of a tropical island, likely in the Great Barrier Reef, showing a vibrant turquoise lagoon with a white sandy beach and a small green island in the center. The water transitions from shallow, clear turquoise to deep blue as it extends towards the horizon under a bright blue sky with scattered white clouds.

Fiscal Responses to climate change in Australia: a comparison with California

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Three Big Questions



- **Is there climate change?**
- **Is it caused by manmade emissions?**
- **What can we do about it?**

Is there climate change?

Take Australia's case

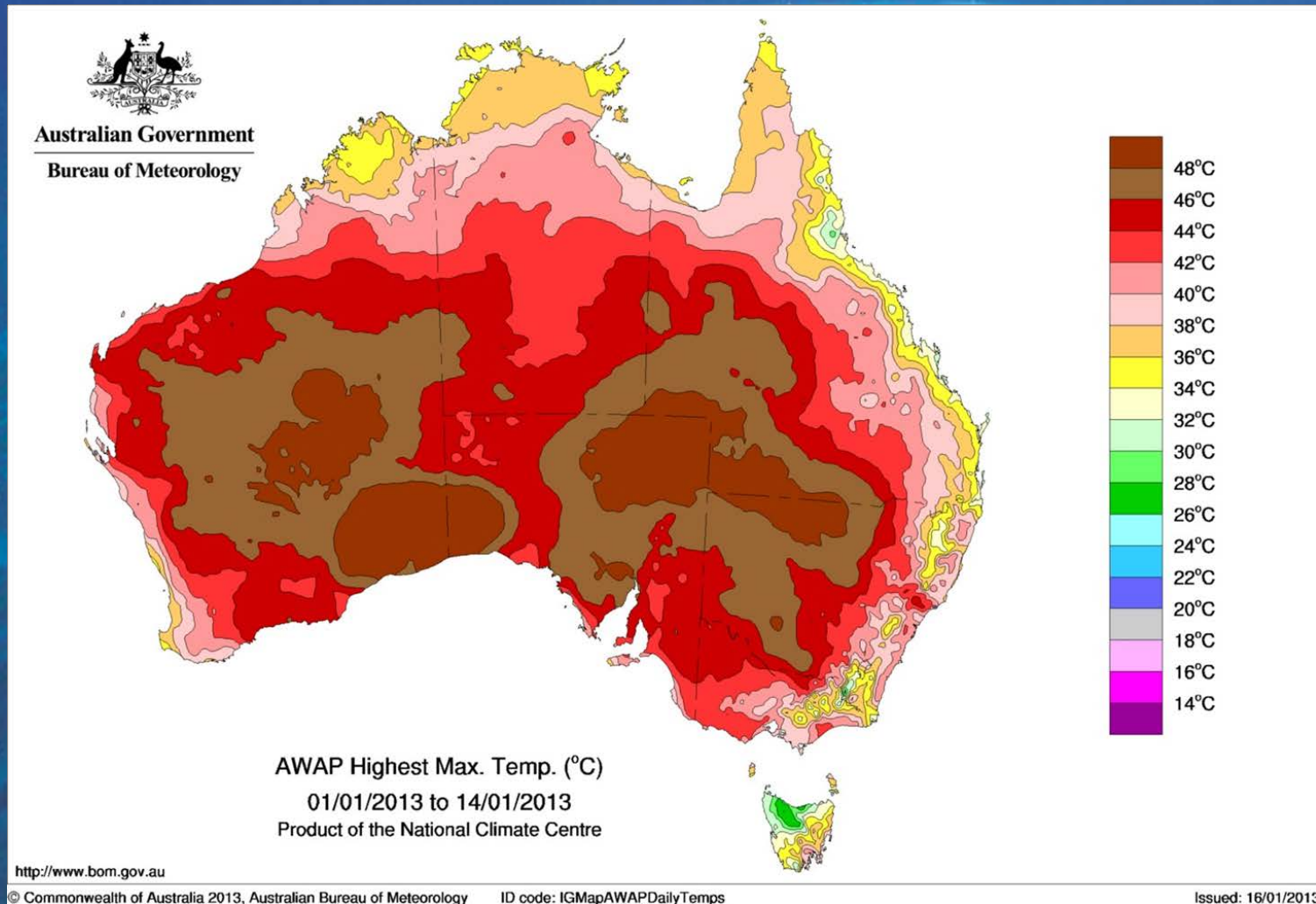
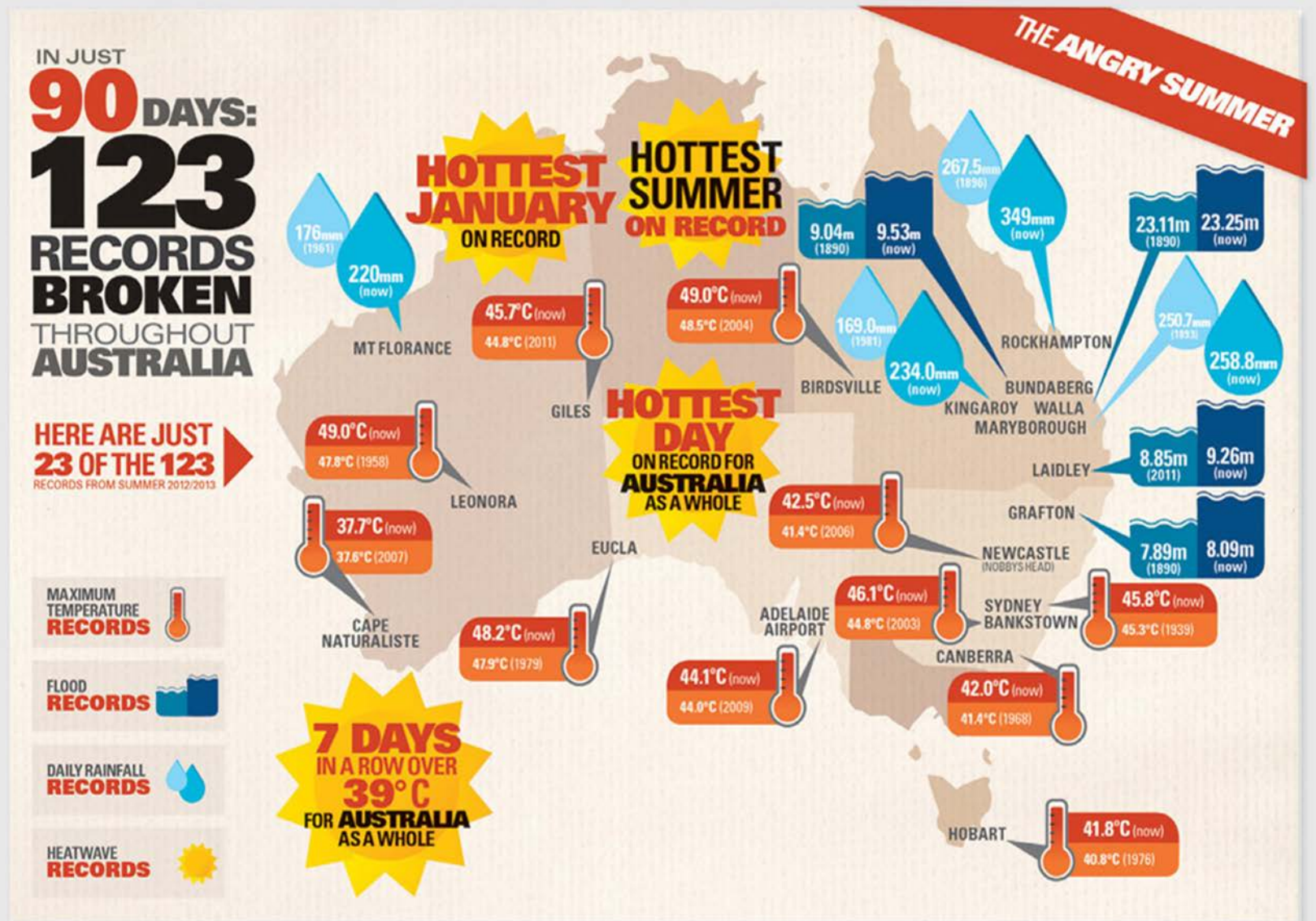
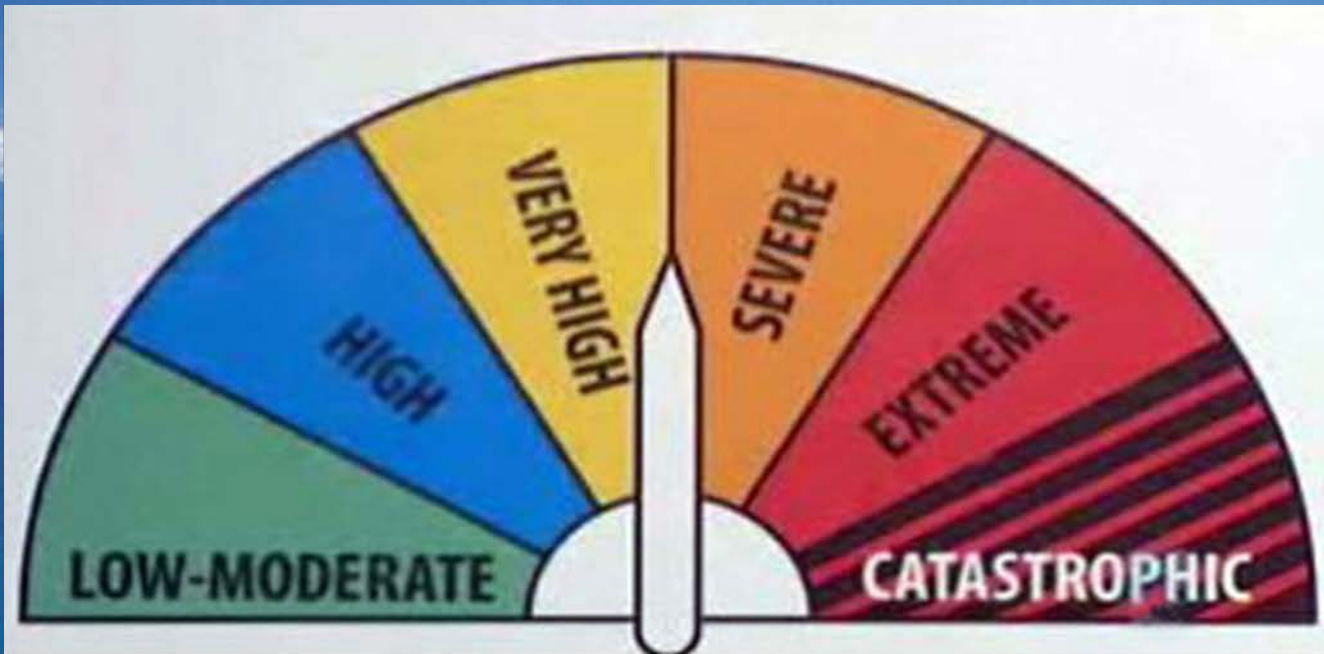


Figure 1: During the summer of 2012/2013 a series of extreme events hit the nation.



Data sources: BoM, 2013a,b



An aerial photograph of a coral reef system. The water transitions from deep blue to light turquoise, revealing the intricate patterns of the reef. A small, green island is visible in the center of the reef. The sky is clear blue with a few wispy clouds on the horizon.

**Is it caused by manmade
emissions?**

Precautionality principle

What can we do about it?

- **Command and control v carbon pricing**
- **Carbon tax v market mechanism (ETS)**

ETS Considerations



- **Settings caps**
- **Carbon leakage**
- **Market manipulation**
- **Double dividend**
- **Linkage**
- **Cost containment v environmental integrity**

Australia's Path

- **Top10 per capita emitter**
- **Coal industry and tyranny of distance**
- **Extreme weather events, drought, fires, reef destruction, beach erosion (IPCC Report 2013)**
- **2007 bi-partisan acknowledgement**
- **Ratification of Kyoto Protocol**
- **Reduction commitment (5% of 2000 by 2020)**
- **ETS version 1 (defeated 2009)**
- **ETS version 2 (2012 - 2014)**
- **Emissions Reduction Fund (2015 - ?)**

The Political Economy



Emissions Reduction Fund

- **AUD \$2.55 Billion Fund**
- **Offset projects and additionality**
- **Reverse auctions and abatement contracts**
- **Safeguard mechanisms: emissions caps for large businesses (100,000 tonnes pa)**
- **Fines or purchase credits?**
- **Carbon trading?**

California



- **A success?**
- **Domestic focus**
- **Issues: reserves, holding limits, offsets**
- **EU lessons (price floor)**
- **Linkage with Quebec**

ETS Comparison

Design Feature	Australian ETS (from 1 July 2018)	Californian ETS (from 1 Jan 2015)
Jurisdiction details (2012)	Population: 23 million. GDP: US\$1.56 trillion. Emissions: 555 million tonnes.	Population: 38 million. GDP: US\$1.9 trillion. Emissions: 459 million tonnes.
Type of target	Absolute (160 million tonnes by 2020)	Absolute (60 million tonnes by 2020)
Ex-post adjustment of caps	No	No
Price floor	No	US\$10 (2012 rising with inflation + 5%)
Price cap and/or market intervention (cost containment) measures	Price cap at AUD\$20 above expected EU carbon price for 2014/15 until 2018.	Reserve of 7% of allowances held at three tiers of price level adjusted annually.
Borrowing	Up to 5%.	Prohibited
Banking	Unlimited	Subject to holding limits.
Commitment periods	Annual surrender of emissions – caps specified five years in advance.	Annual surrender of 30% of emissions with balance at end of three years – caps specified three years in advance.
Target stringency	Never specified.	Emissions cap declines annually at 3% (from 2015).
Limits on foreign allowances	50% foreign (100% from 2020). 12.5% Kyoto units sub-limit.	No foreign allowances recognized.
Other domestic offsets/credits	Carbon farming initiative (unlimited provided Kyoto compliant).	US domestic programs and capped at 8% of allowances held.
Level of compulsion, governance and enforcement	Mandatory (Clean Energy Regulator (CER))	Mandatory (Air Resources Board (ARB))

Design Feature	Australian ETS (from 1 July 2018)	Californian ETS (from 1 Jan 2015)
Compliance (trading) period	Annual (1 July – 30 June)	Three years (calendar year)
Monitoring, verification and reporting	Reports of large emitters (125,000 tonnes p.a.) must be audited. Other audits by the CER possible.	Annual reporting of independently verified emissions.
Sanctions for shortfalls	200% of the average price of units for the year.	4:1 penalty.
Allocation of allowances	Free allocations for trade exposed industries only (phases out). Primarily by auctions (no price floor).	All entities receive free units initially set at around 90% of emissions up to 100% for trade exposed industries (phases out). Supplemented by auctions (price floor set).
Level of application	Upstream bias (large emitters).	Upstream bias (large emitters).
Sector and gas coverage	Large emitters (emissions exceeding 25,000 tonnes) in most sectors nationwide. Four types of gases covered. (60% of emissions – 294 businesses).	Electricity utilities, industrial complexes and fuel distributors (emissions exceeding 25,000 tonnes). All six Kyoto gases and fluoridated gases covered. (85% of emissions – 360 businesses).
Leakage control	Trade exposed industries received free units (phases out).	Free allowances to trade exposed industries decline at reduced rates.
Registries and trading mechanism	Online registry. Units measured in per tonne of CO _{2e} . Units tradeable by account holders once acquired. Auctions expected to set price signal.	Online registry. Allowances measured in per tonne of CO _{2e} . Allowances may be traded until moved to compliance account. Auctions expected to set price signal.
Kyoto Protocol (allowances shadowed by Kyoto units – ie. convertible to ERUs)	Unspecified	No
Existing linkage partners	EU (proposed 1 July 2018 with partial linking intended from 1 July 2014).	Quebec (1 January 2014).

Australian ETS, ERF v California's ETS

- **Market based v government regulation**
- **Market pricing v central price setting**
- **Consumer v taxpayer funded**
- **Mandatory v voluntary**
- **Comprehensive v project based**
- **Domestic v foreign emissions reductions**
- **Linkage: EU v California**

Conclusion

Did Australia dodge a bullet?

