

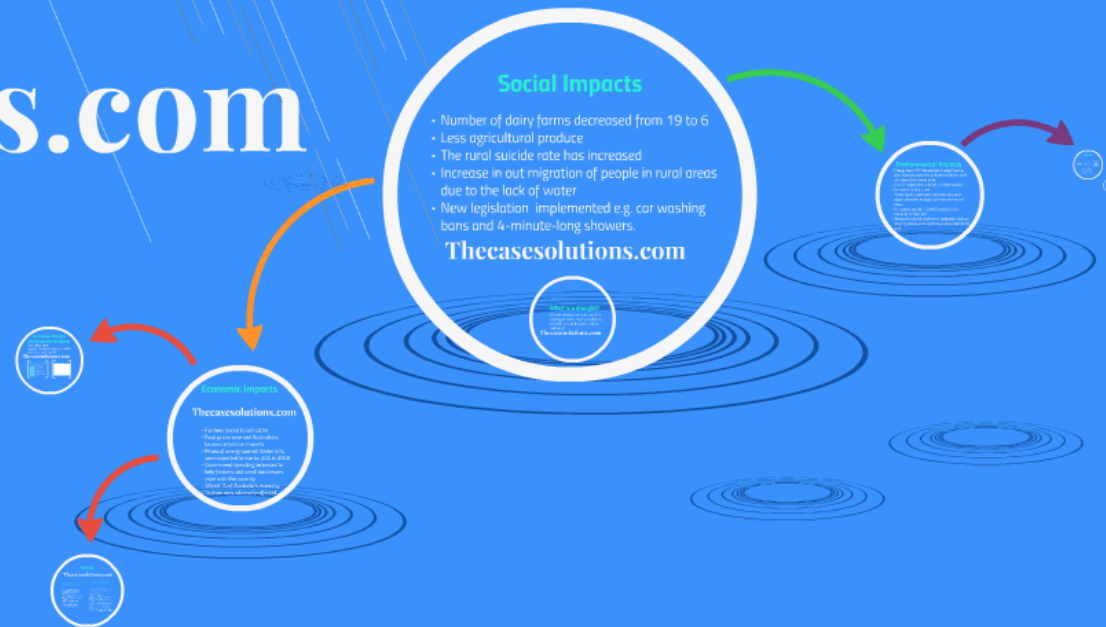
The Big Dry and Australia's Water Markets

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What is a drought?

- An extended period of dry weather leading to extremely dry conditions
- Definition depends on the culture defining it

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Australian Drought Background Information

Date: 2002-2009

Location: Murray-Darling Basin (MDB)-
South East of the country

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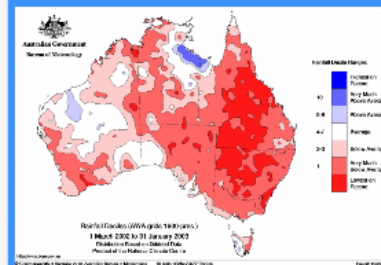
Murray-Darling Basin (MDB)

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- 40% of Australia's agricultural produce
- 70% of Australia's irrigated cropland and pasture
- 75% of Australian population's water
- Home to almost 2 million people

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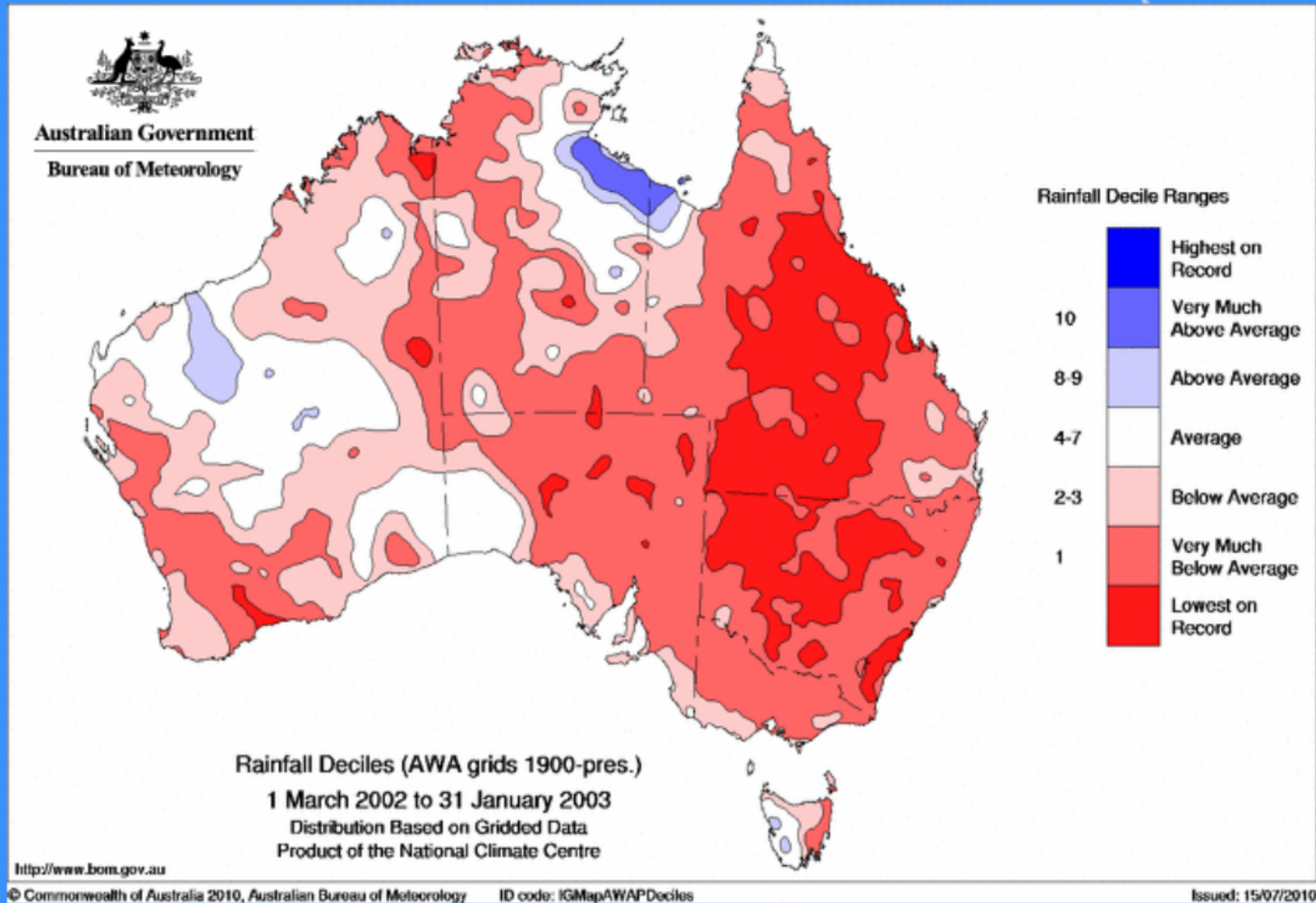
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Causes

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Causes of Arid Conditions

- **Global atmospheric circulation** - caused by dry, descending air associated with the subtropical high-pressure belt
- **Continentality (distance from sea)** - limits the amount of water carried by the wind
- **Cold offshore currents** - limit the amount of condensation
- **Human activities** - deforestation, erosion, desertification

Causes of a Drought

- **El Niño weather pattern** - the warming of the eastern Pacific that occurs at intervals between 2-10 years
 - rise in sea temperature
 - weakens easterly winds
 - moves rain clouds away from Australia
- **Thermocline** - point at which temperature changes from warm surface water to cold deep water
- In El Niño years, **trade winds reverse**, causing Australia to experience very high air pressure.
- The moist air, which is usually experienced in Australia, is instead felt in South America
- This change between normal years and El Niño years is called the **Southern Oscillation Index**.

Social Impacts

- Number of dairy farms decreased from 19 to 6
- Less agricultural produce
- The rural suicide rate has increased
- Increase in out migration of people in rural areas due to the lack of water
- New legislation implemented e.g. car washing bans and 4-minute-long showers.

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Economic Impacts

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- Farmers forced to sell cattle
- Food prices rose and Australians became reliant on imports
- Prices of energy soared. Water bills were expected to rise by 20% in 2008
- Government spending increased to help farmers and small businesses cope with this scarcity
- Wiped 1% of Australia's economy
- Tourism was adversely affected