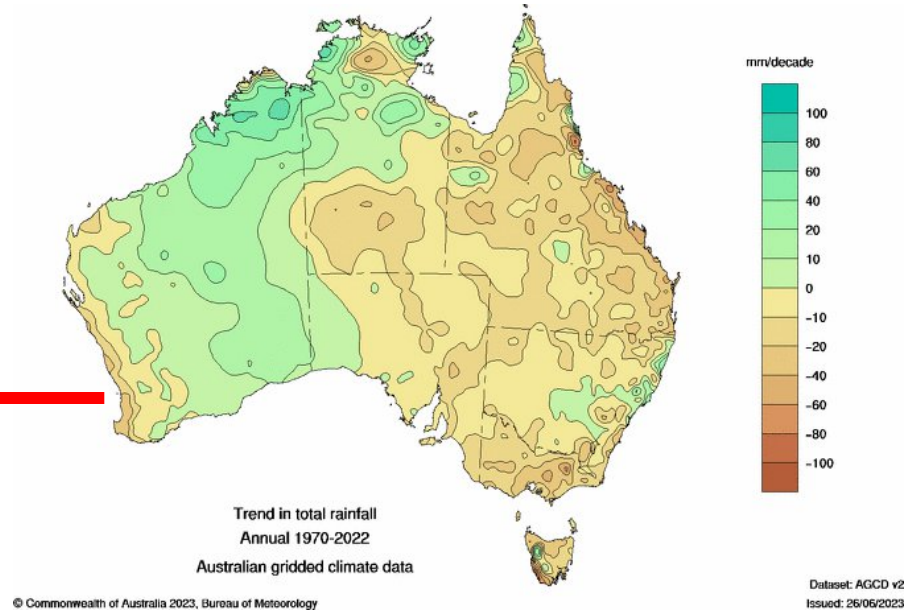
Western Australia – a big place, big water challenges

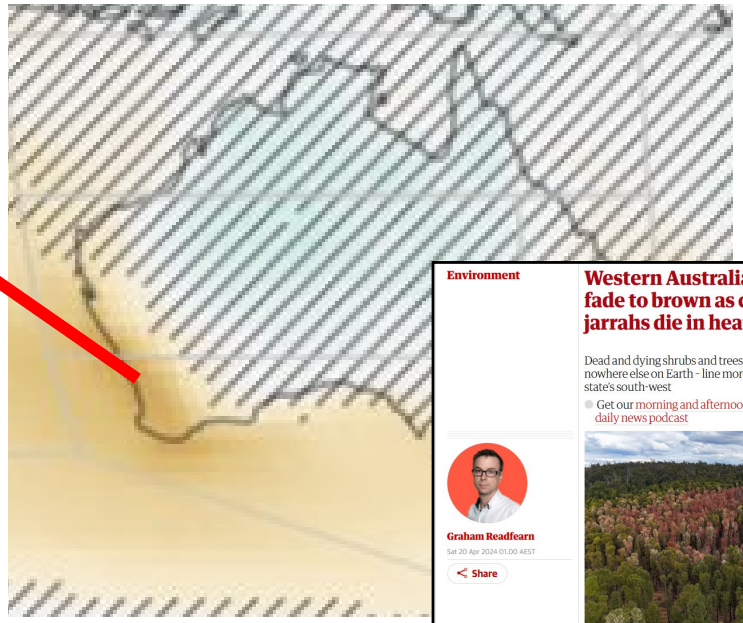
Southwest:
Climate change

- Past trend – decrease for decades, strong climate change signal (formal D&A) – some land use change, mostly Greenhouse gases, strongest in cool (wet) season
- Projection – ongoing drying, more dry years, obs. tracking drier than dry end – worry that projections are too optimistic

Risk consideration:

- Policy has already responded – demand reduction, ground water, series of desal plants: staged to ensure social support
- Further policy ready to go – but trigger points unclear, and concerns of limits of adaptation





Environment

Western Australia's eucalypt forests fade to brown as century-old giant jarrahs die in heat and drought

Dead and dying shrubs and trees – some of which are found nowhere else on Earth – line more than 1,000km across the state's south-west

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Sat 20 Apr 2024 01.00 AEST

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Drone video shows Western Australia's forests dying in heat and drought – video

Western Australia – a big place, big water challenges

Northwest (Piilbara):

Climate change:

- Past trend – increase in rainfall, a ‘warming hole’, not completely clear roles of aerosol, Greenhouse gases, natural variability
- Projection – direction of change unclear
  - Could continue increasing
  - Could reverse and become drier

Risk consideration:

- Storylines approach applied – illustrated essential futures, showing some common challenges in each, some not!
- Water managers can’t tolerate 3 years of failure – asymmetric manage risk of dry events
- Currently planning to build to cope with more dry years – but with adaptation pathway approach