



Seasonal Outlook December 2022 – April 2023

Greg Browning

*Senior Climatologist, Hazard
Preparedness and Response-National*

Bureau of Meteorology



Valid at 18 November

High Risk Weather Season summary

1. Elevated and protracted flood risk in eastern Australia
2. Bushfires are always a risk in southern Australian summer
 - Elevated risk for western and inland Australia during summer
3. Elevated risk of above-average tropical cyclone and tropical low activity



National severe weather outlook: December 2022 – April 2023 summary

Impact

Likelihood compared to recent decades



Widespread flooding (inc. landslides, tree falls)



More likely for eastern Australia



Coastal flooding



More likely eastern and northern Australia



Tropical cyclones



Above average seasonal activity likely



Fire potential



More likely in western and inland Australia



Heatwave



More likely in western and northern Australia



Marine heatwave



More likely



Storms



Similar



Drought



Less likely apart from SW WA and W Tas



Dust



Less likely

Climate drivers currently favour above-average rainfall

La Niña

- expected to persist for the remainder of 2022; may ease early 2023
- increased likelihood of spring/summer rain for northern and eastern Australia

Indian Ocean Dipole (IOD)

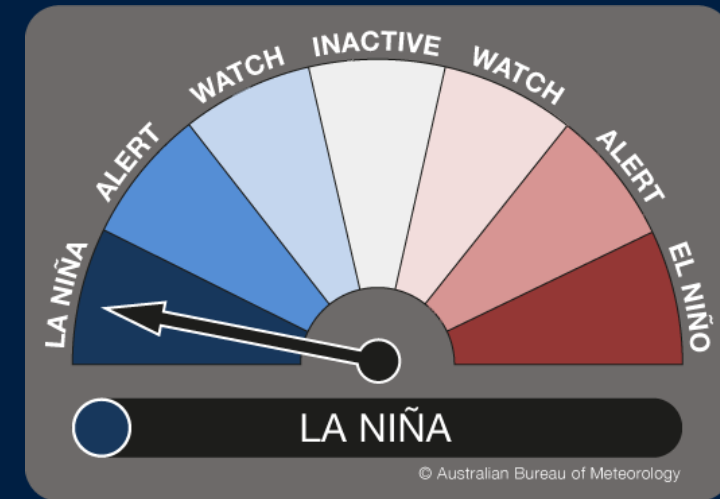
- The negative Indian Ocean Dipole event has ended

Sea surface temperature

- warm waters around Australia contribute to wet seasonal outlooks

Southern Annular Mode (SAM)

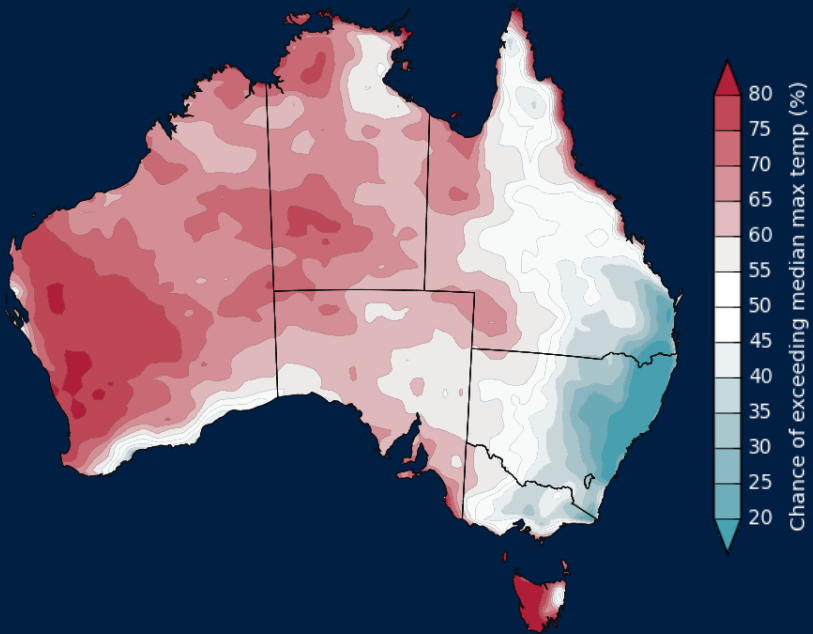
- Neutral to positive SAM likely to persist until at least the end of 2022
- increased likelihood of rain for south eastern Australia; reduced likelihood of rain for western Tasmania



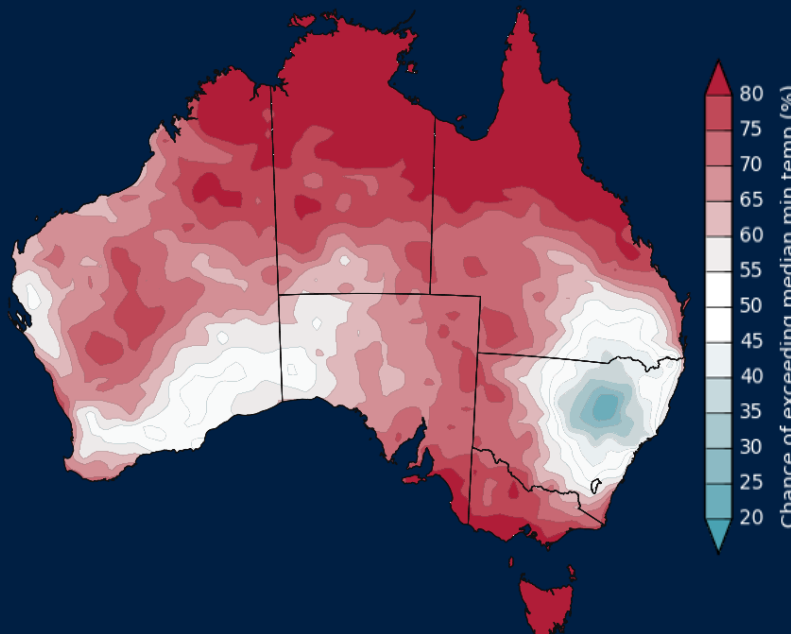
December 2022 – February 2023 long-range forecast

Chance of above median conditions as of 1 December 2022

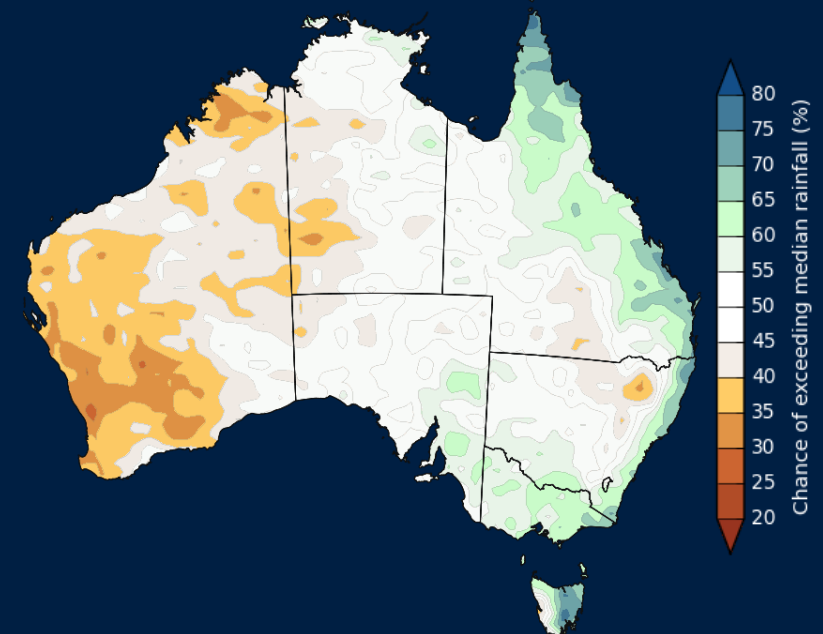
Maximum temperature



Minimum temperature



Rainfall



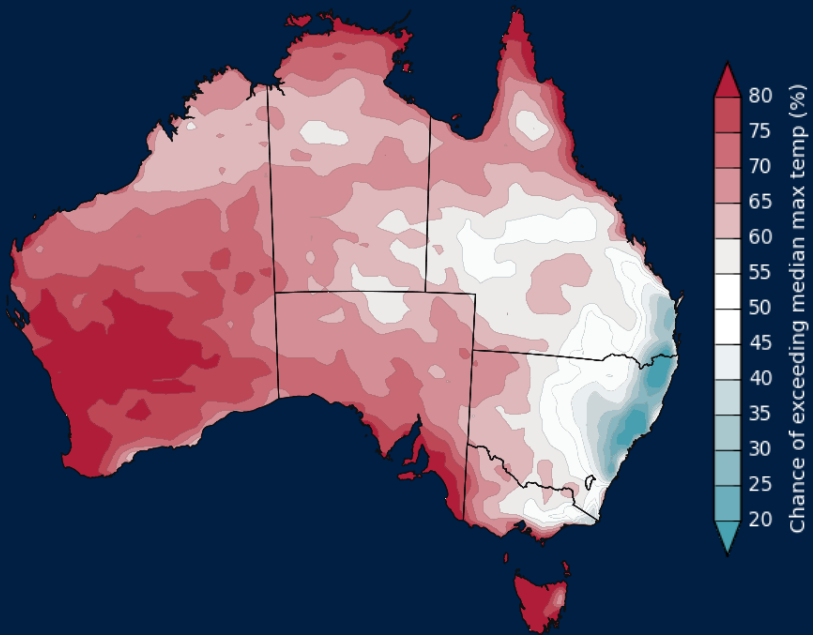
- Near- to above-median daytime temperatures likely for most regions; below median for parts of the mainland eastern states
- Near- to below-median daytime temperatures likely for most regions
- Near- to above-median rainfall likely for most regions; below median likely for parts of western Australia



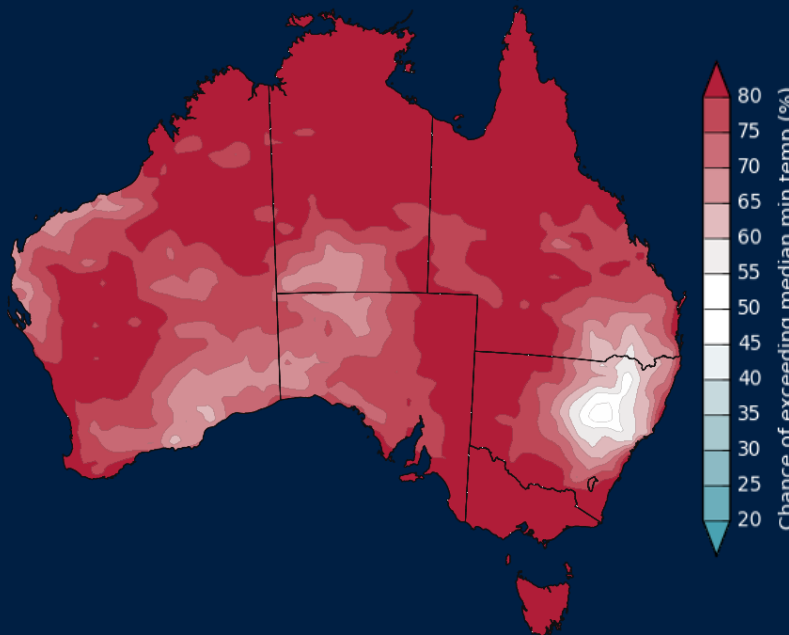
January – March 2023 long-range forecast

Chance of above median conditions as of 1 December 2022

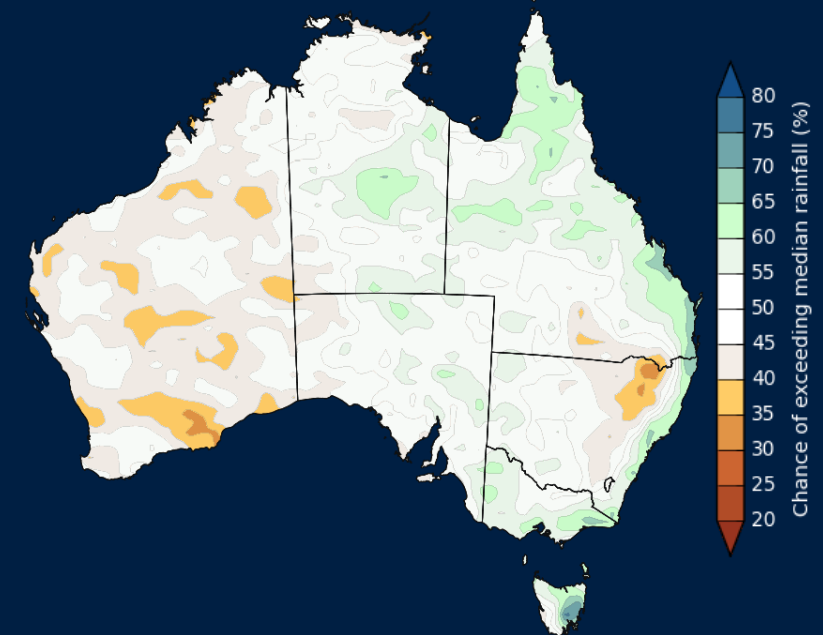
Maximum temperature



Minimum temperature



Rainfall

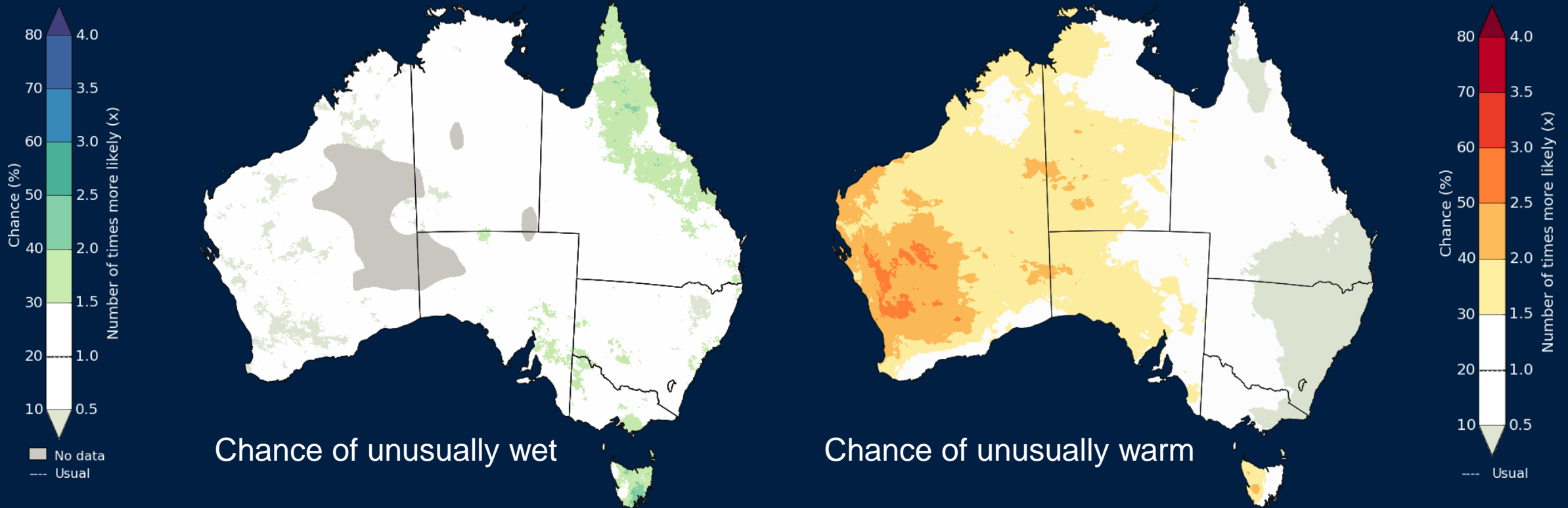


- Near- to above-median daytime temperatures likely for most regions; below median for parts of the mainland eastern states
- Near- to above-median minimum temperatures likely for most regions
- Near- to above-median rainfall likely for most regions; below median likely for parts of western Australia



December 2022 – February 2023 long-range forecast

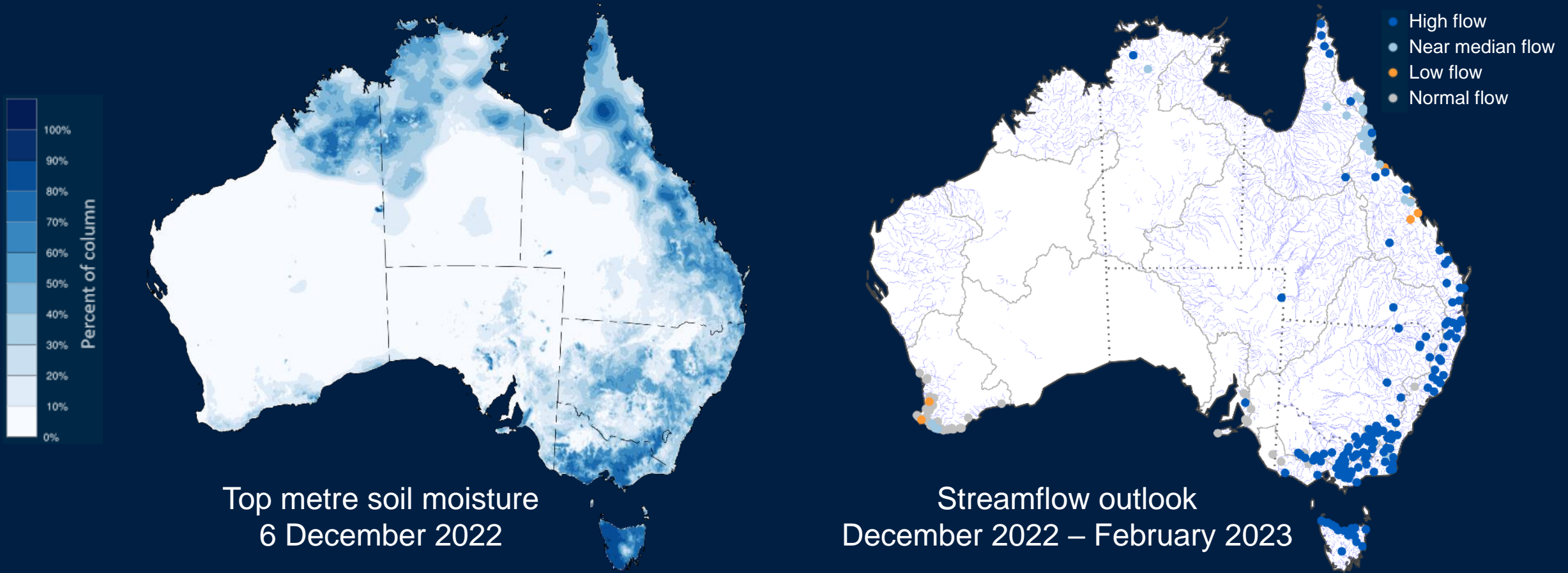
Chance of unusually wet/chance of unusually warm maximum temperatures as of 1 December 2022



- Around twice normal likelihood of receiving rainfall in wettest 20% of years for parts of eastern Australia
- 2-3 times normal likelihood of hottest 20% of years for parts of western two-thirds of Australia and Tasmania



Underlying influences on flooding



- Soils near full of water across much of eastern Australia
- High streamflows are likely across eastern Australia over the coming months

Valid at 7 December



Most water storages full or near full

Urban Storages	Percentage Full
Warragamba (Sydney)	97.3%
Wivenhoe (Brisbane)	80.0%
Thomson (Melbourne)	100.7%

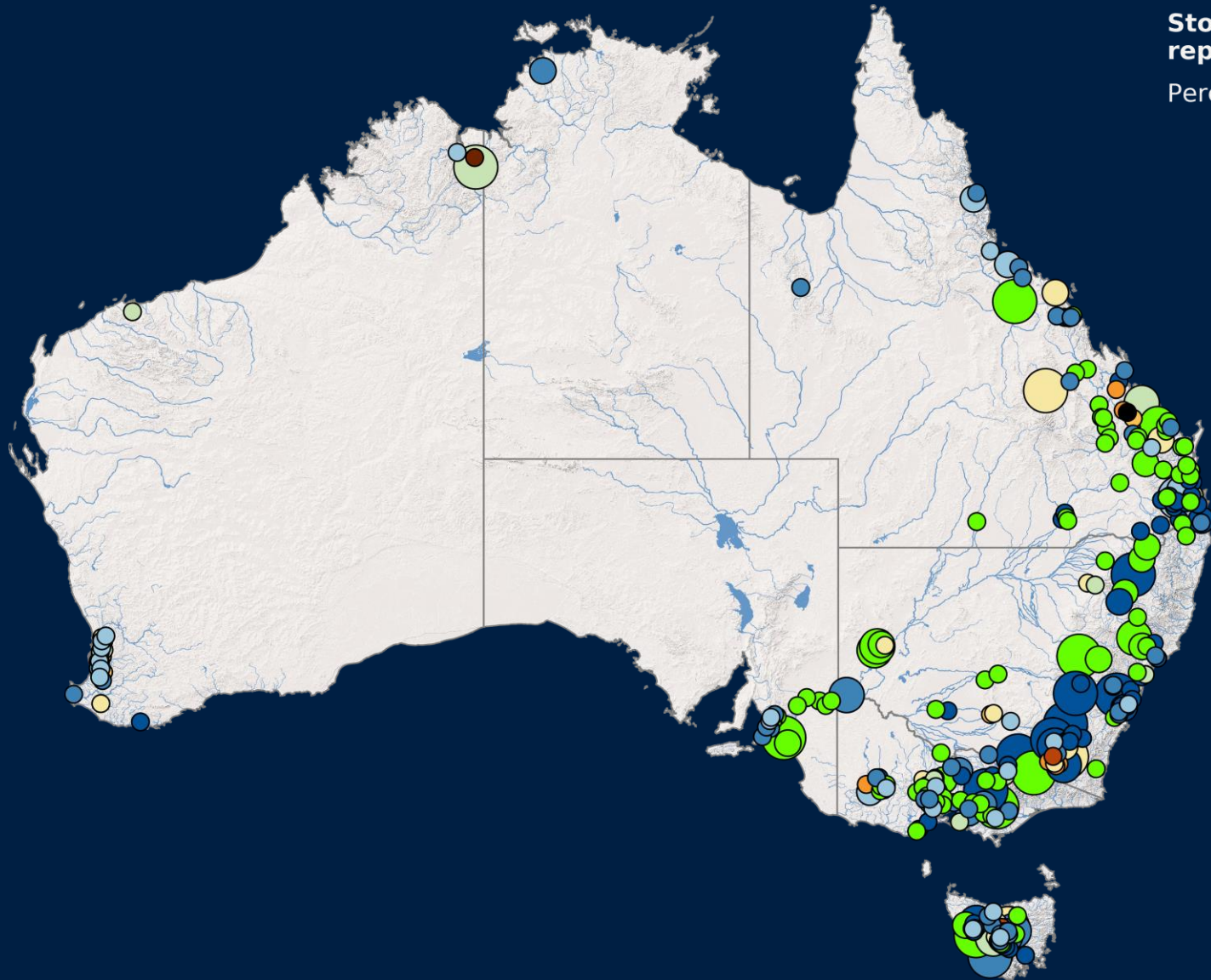
Storage volume reported at: 07/12/2022

Percentage full (%)

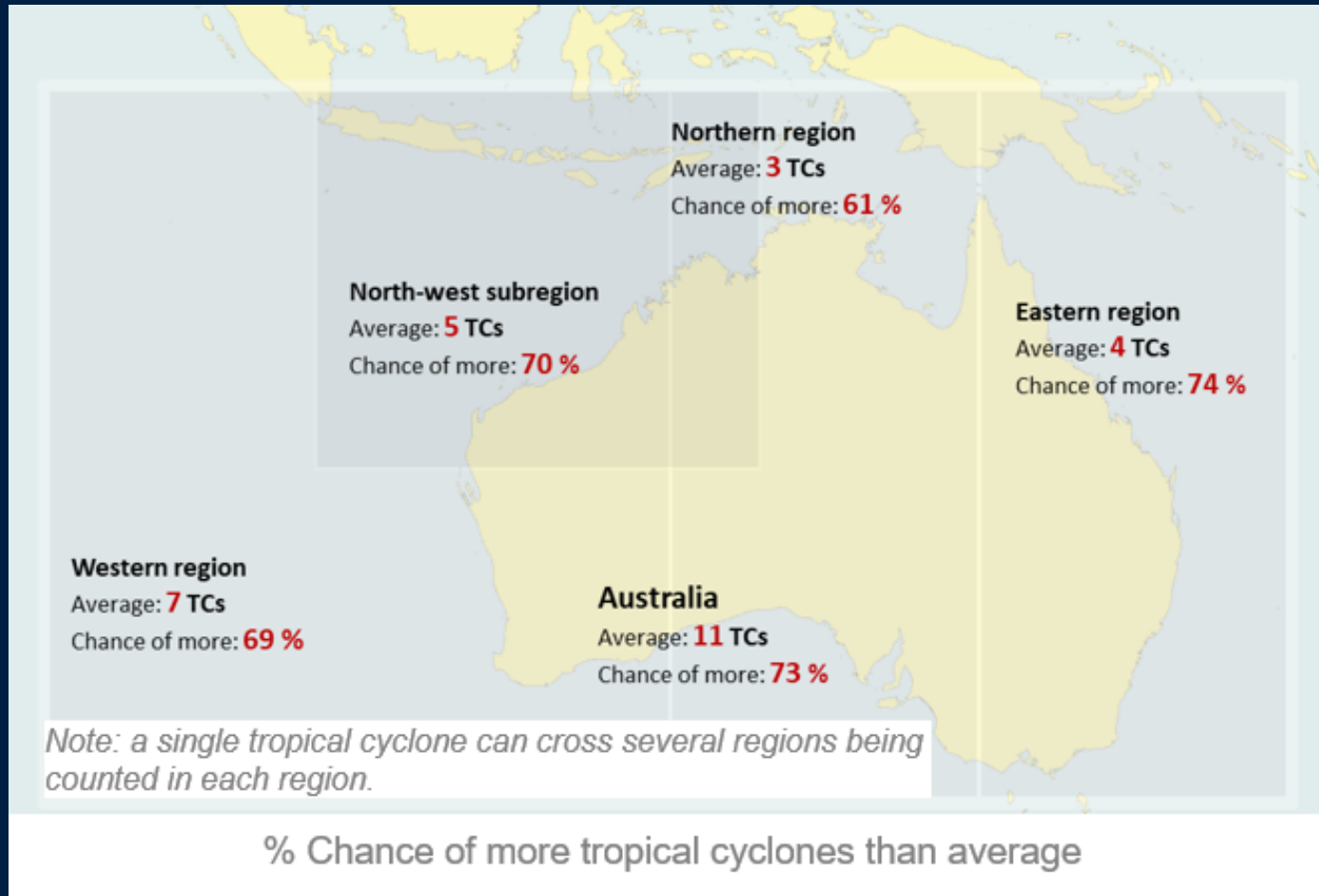
- <1
- >1-5
- >5-20
- >20-30
- >30-40
- >40-60
- >60-70
- >70-80
- >80-94
- >94-100
- >100

Capacity (GL)

- 0-200
- >200-500
- >500-1,000
- >1,000



Tropical cyclone seasonal outlook 2022–23



- Ocean temperatures to the north of the country are expected to remain warmer than average for the coming 3 months, marginally increasing the likelihood of tropical cyclones developing.
- The number of tropical cyclones in the Australian region is generally higher with La Niña.
- In recent decades, the annual number of tropical cyclones that form in the Australian Region has decreased, from an average of 11 across all seasons since Australian records began in 1969–70, to 9 for the period since 2000–01.

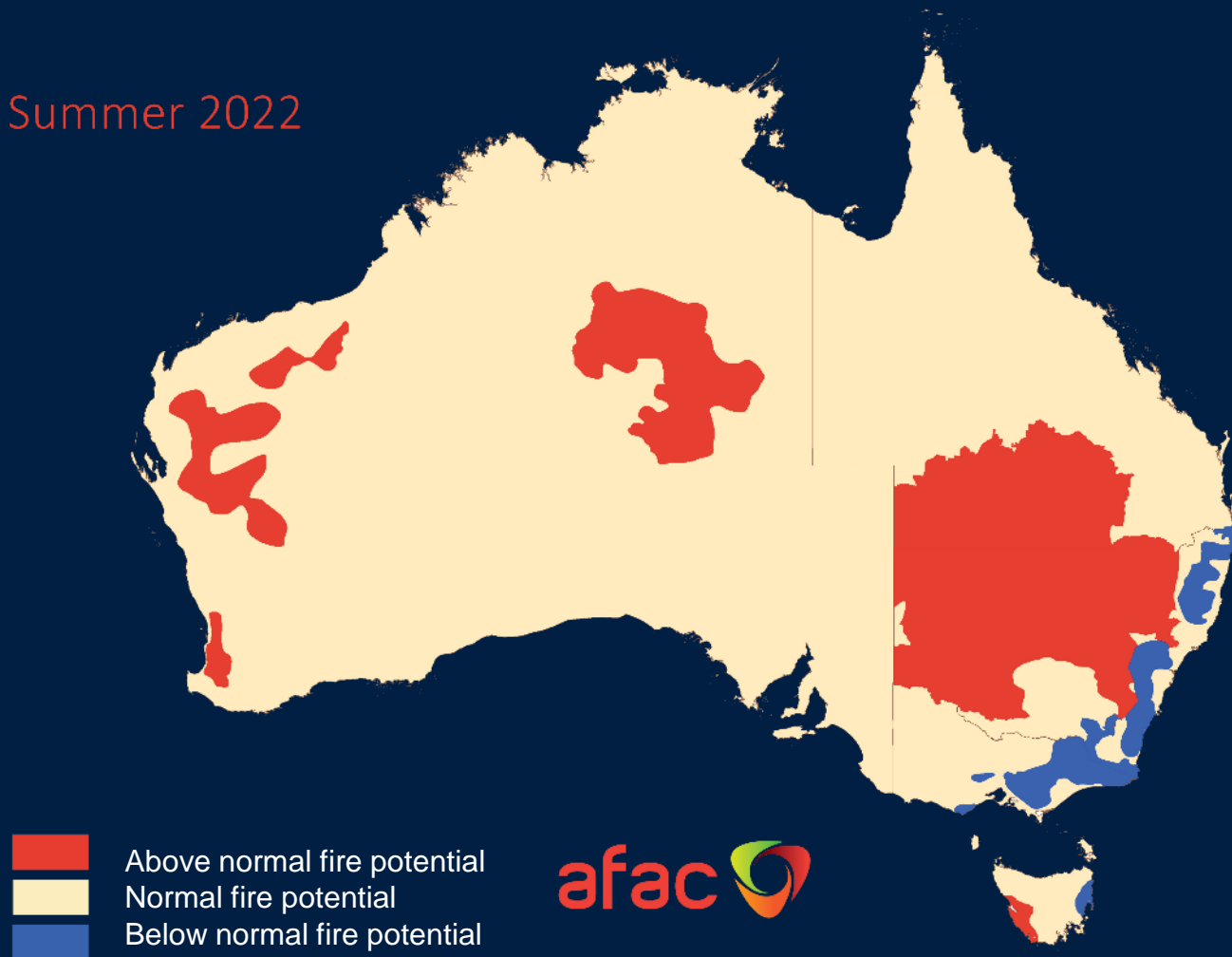
For the tropical cyclone season 2022–23:

- Around 73% chance of an above-average number of tropical cyclones across the Australian Region
- In La Niña years, the first Australian landfall typically occurs early December, about 3 weeks earlier than average



Australian Seasonal Bushfire Outlook: Summer 2022–23

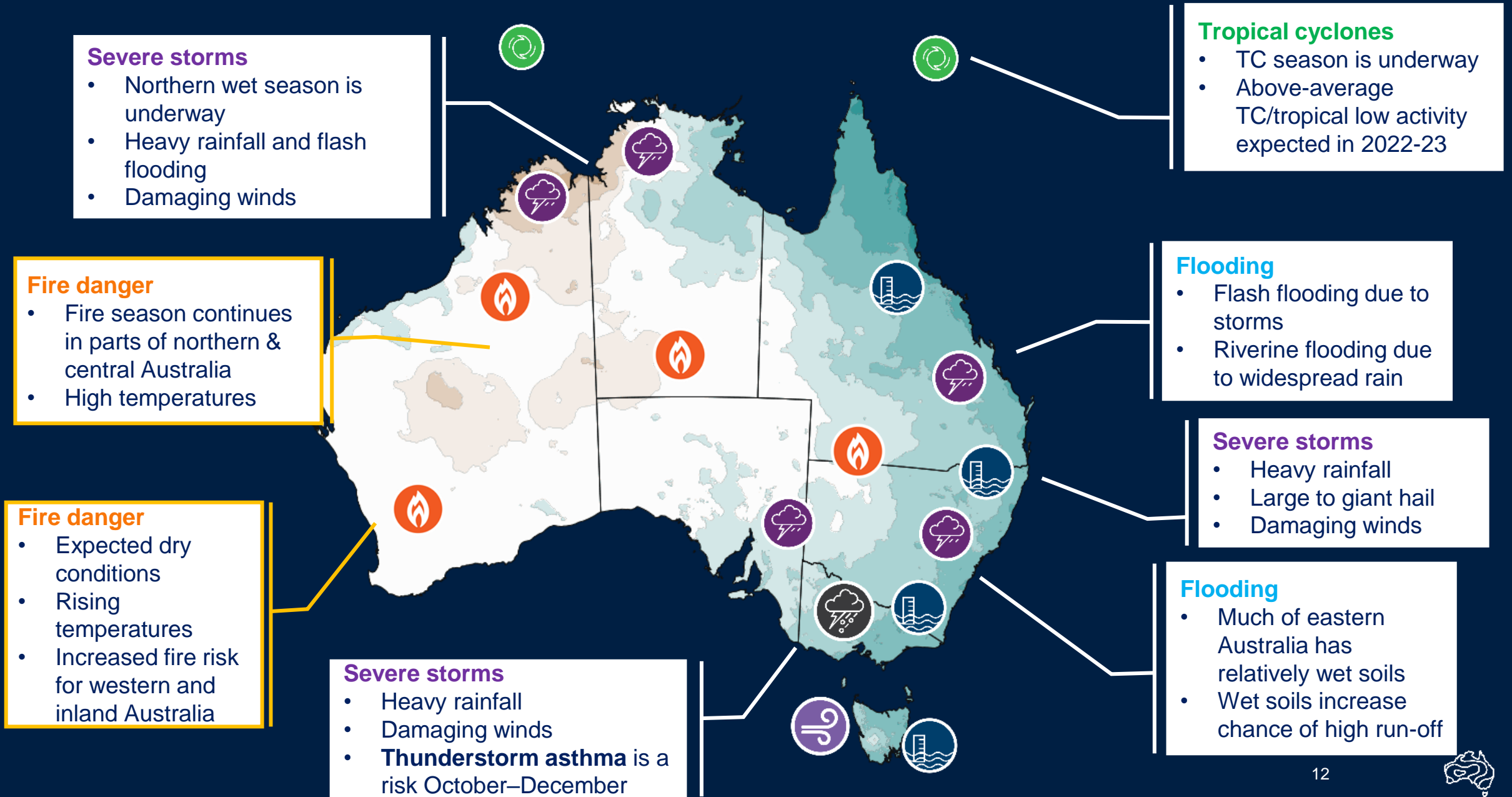
Summer 2022



- Elevated fire risk in parts of western and inland Australia
- Grassfire risk increasing through summer in NSW and southern Qld when abundant vegetation cures
- Lower than average fire risk in coastal south-eastern Australia
- Seasonal Bushfire Outlook uses the new Australian Fire Danger Rating System (AFDRS) incorporating weather, climate and fuel information
- For more information: afac.com.au



Regional hazards: summer



Connect with us

Stay up to date with the latest
forecasts and warnings at bom.gov.au
and the BOM Weather app



Thank you

name
Bureau of Meteorology
name@bom.gov.au

