

Queensland Fire and Emergency Services

Fire Season Potential Outlook Northern Queensland 2015/16

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RFSQ Research

Content

- Northern Australia Fire Season Potential 2014 (Fire Season Review)
- Climate and Fuel conditions
- Fire Season Potential 2015/16 - Discussion

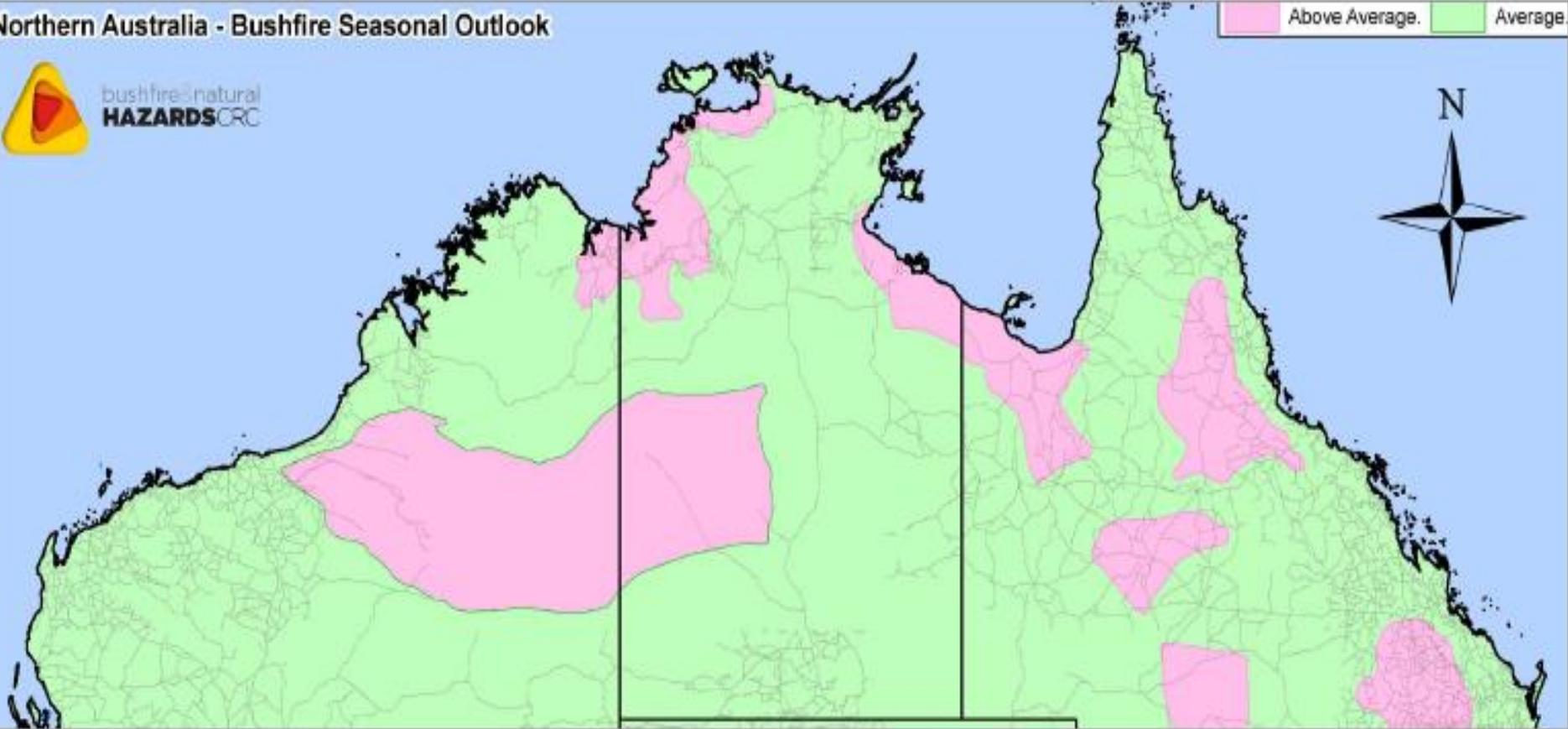


2014 Fire Season Potential

Northern Australia - Bushfire Seasonal Outlook

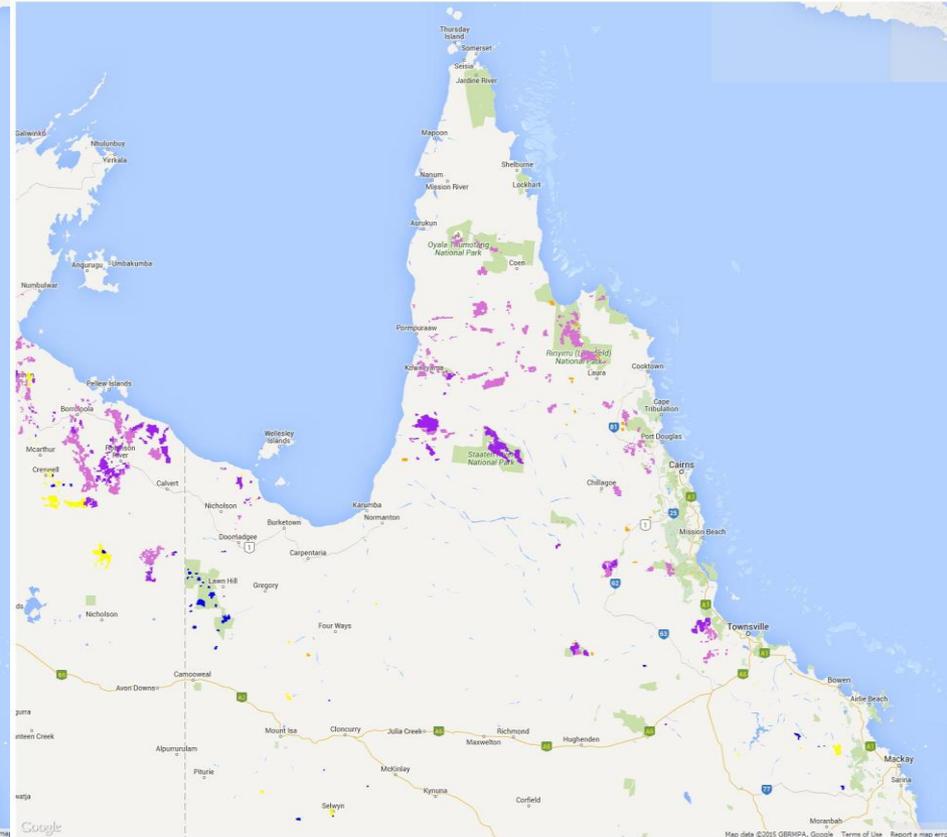
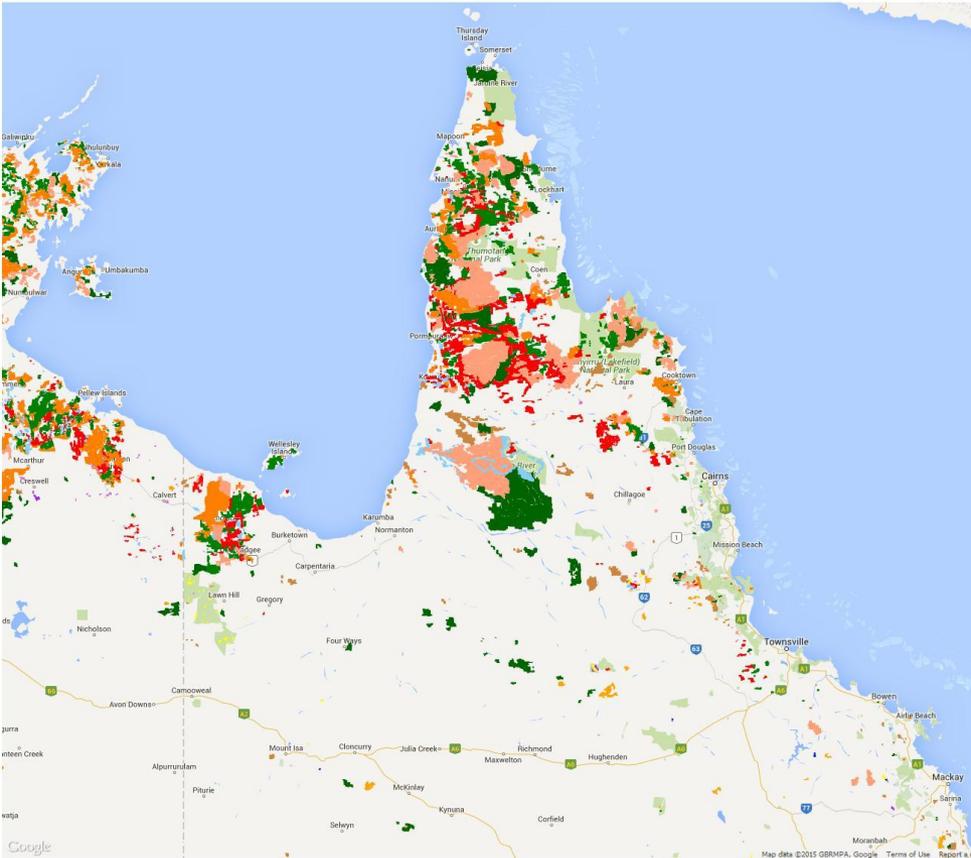
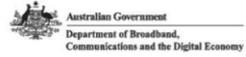


Above Average. Average



Fire History QLD

2014



- Burnt Areas - January
- Burnt Areas - February
- Burnt Areas - March
- Burnt Areas - April
- Burnt Areas - May
- Burnt Areas - June
- Burnt Areas - July
- Burnt Areas - August
- Burnt Areas - September
- Burnt Areas - October
- Burnt Areas - November
- Burnt Areas - December

Bounds
134.102636,-21.134591, 151.296239,-11.08017
Notes

- Burnt Areas - January
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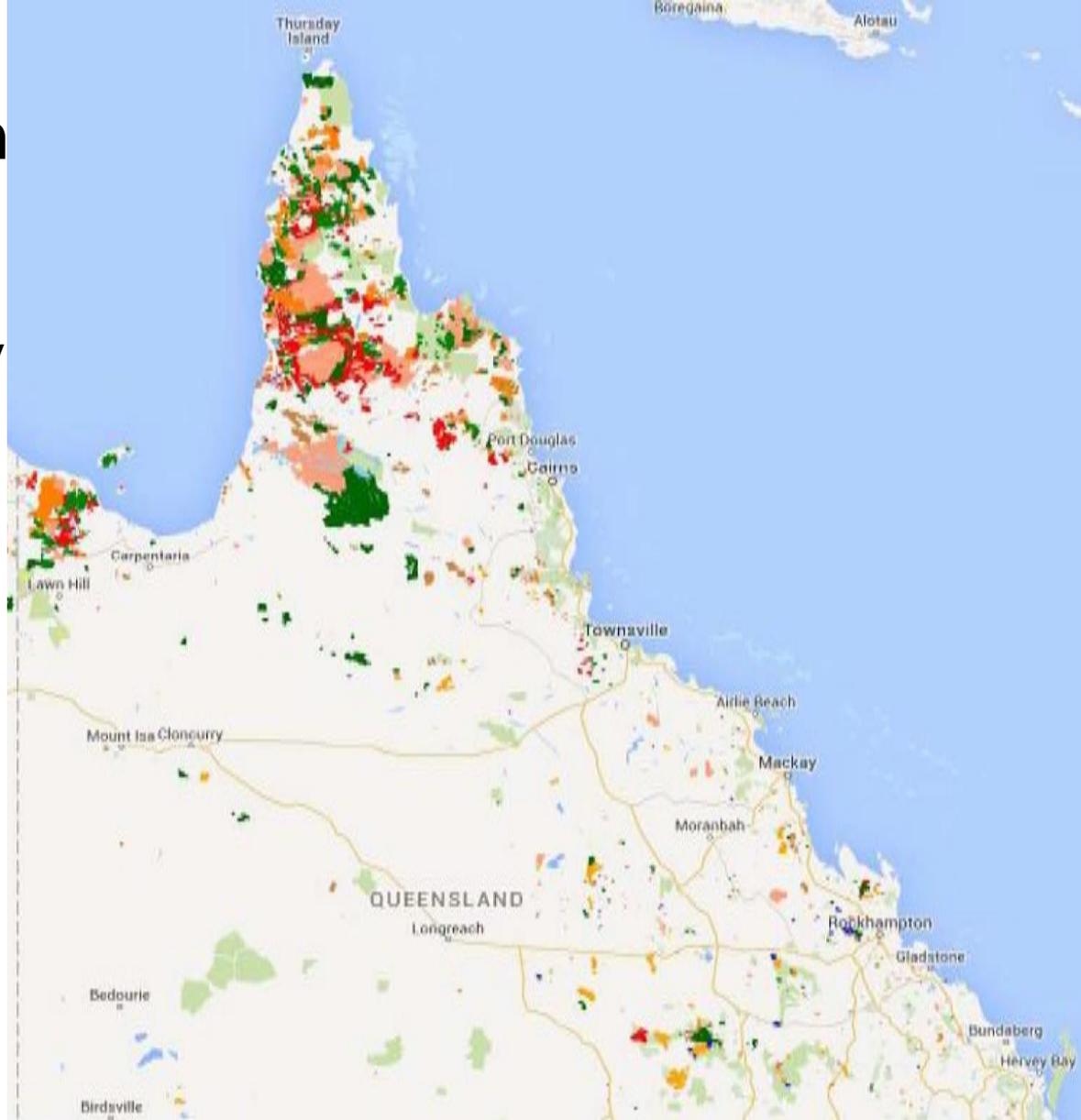
2014/15 Fire Season

Early fire activity in Central Highlands and western Wide Bay Burnett Region (July to Sept)

Late fire season in far northern part of the State

Large area fires, late fire season in the Gulf and Cape York Peninsula (Sept – Nov 2014)

2 Severe Weather Events:
Cyclone Marcia (Central QLD)
Cyclone Nathan (Far North QLD)



Current conditions

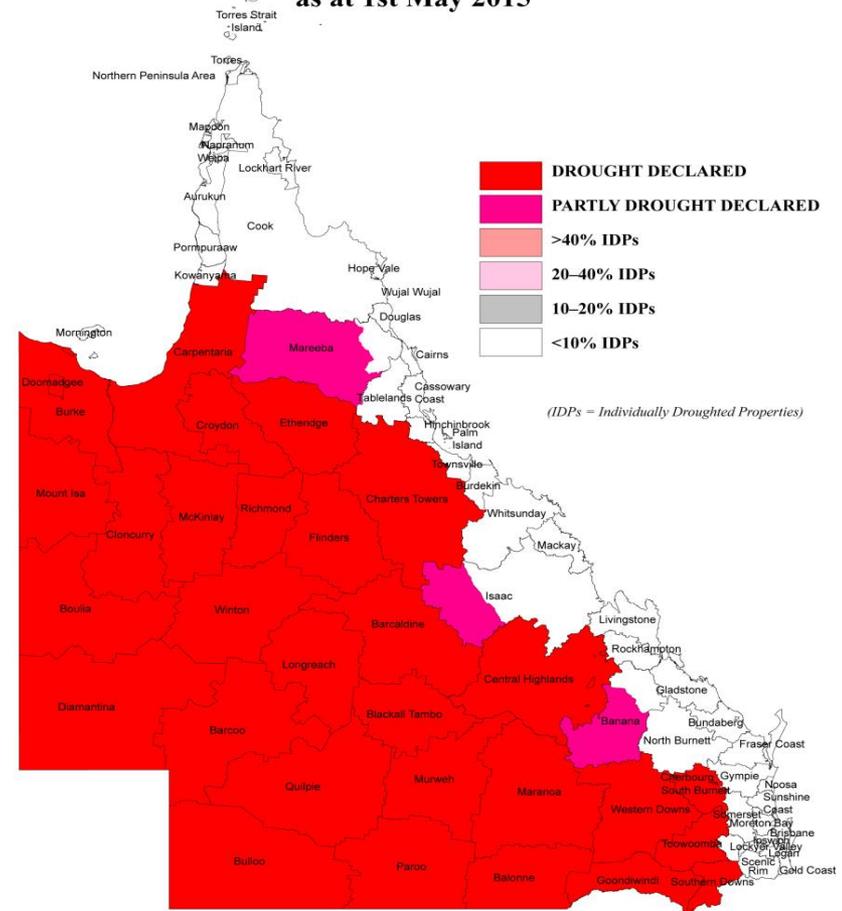
Drought

- Over 80% of QLD are drought declared
- 32 entire local government areas, three part local government areas and 66 Individually Droughted Property declarations in an additional six local government areas

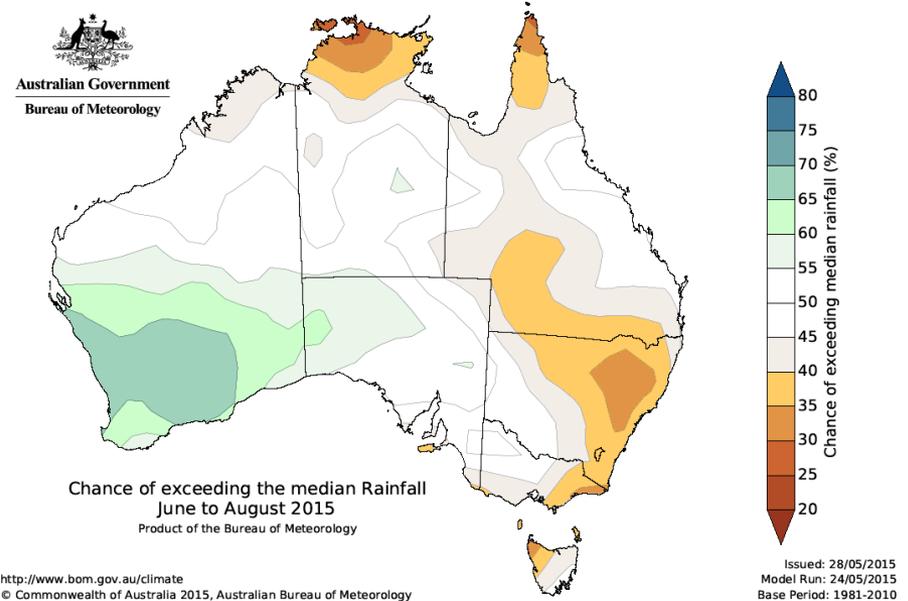
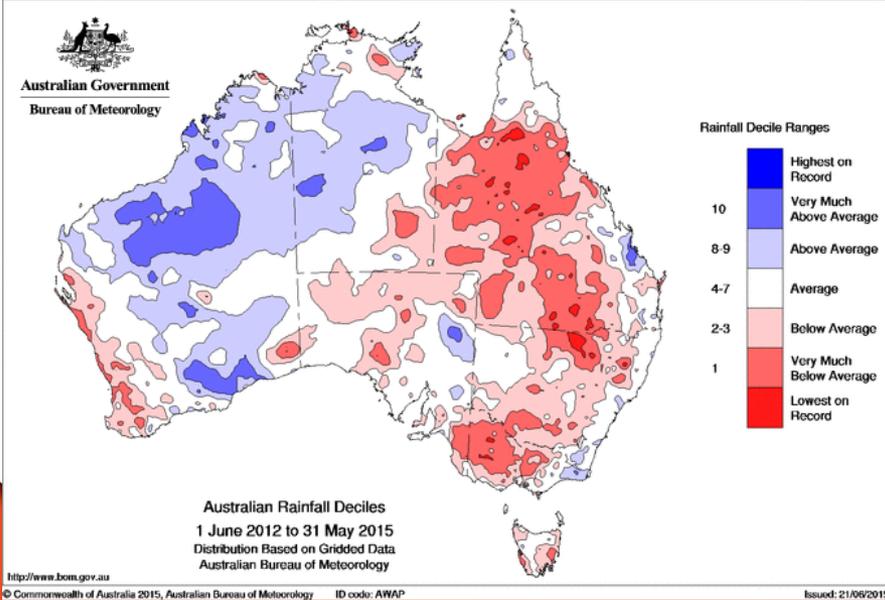
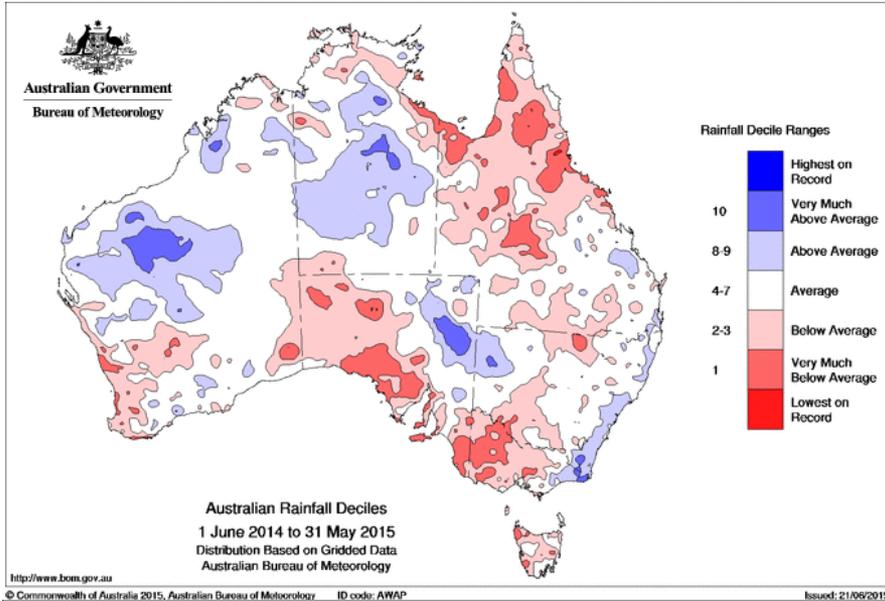
Natural Disaster Declarations

- Disaster Declarations due to TC Nathan and TC Marcia

QUEENSLAND DROUGHT SITUATION as at 1st May 2015



Rainfall (past and outlook)



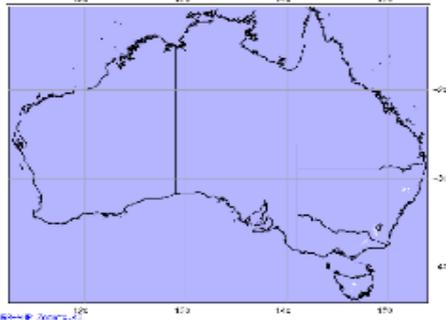
- Above average day and night temperatures over most of the tropical north and the eastern half of Australia
- Winter is more likely to be drier than normal in southern and inland QLD

Fuel and Soil Moisture

Australia - Soil Saturation Index (SSI)

Soil Saturation Index

Soil Saturation Index, June 17, 2015 (week 24)

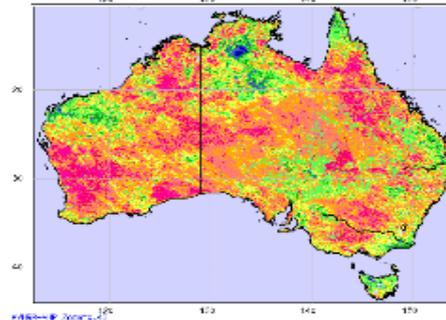


(Saturated Area: VCI<30 and TCI>70 and Rainfall > 150 mm/week)



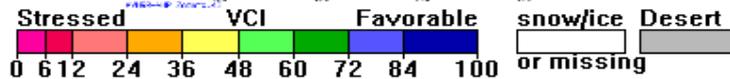
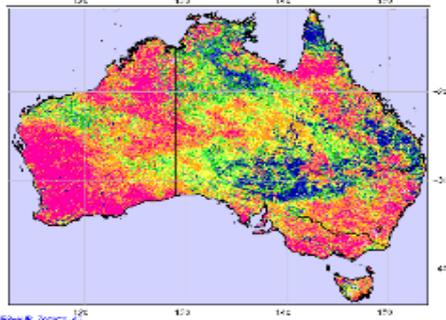
VHI

VHI, June 17, 2015 (week 24)



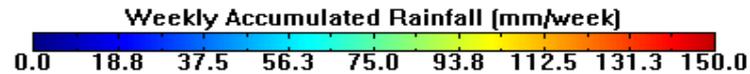
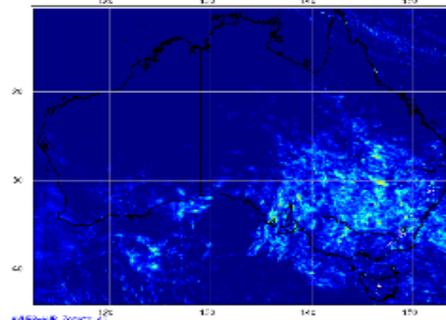
TCI

TCI, June 17, 2015 (week 24)



Rainfall

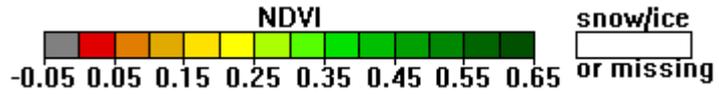
Rainfall, June 17, 2015 (week 24)



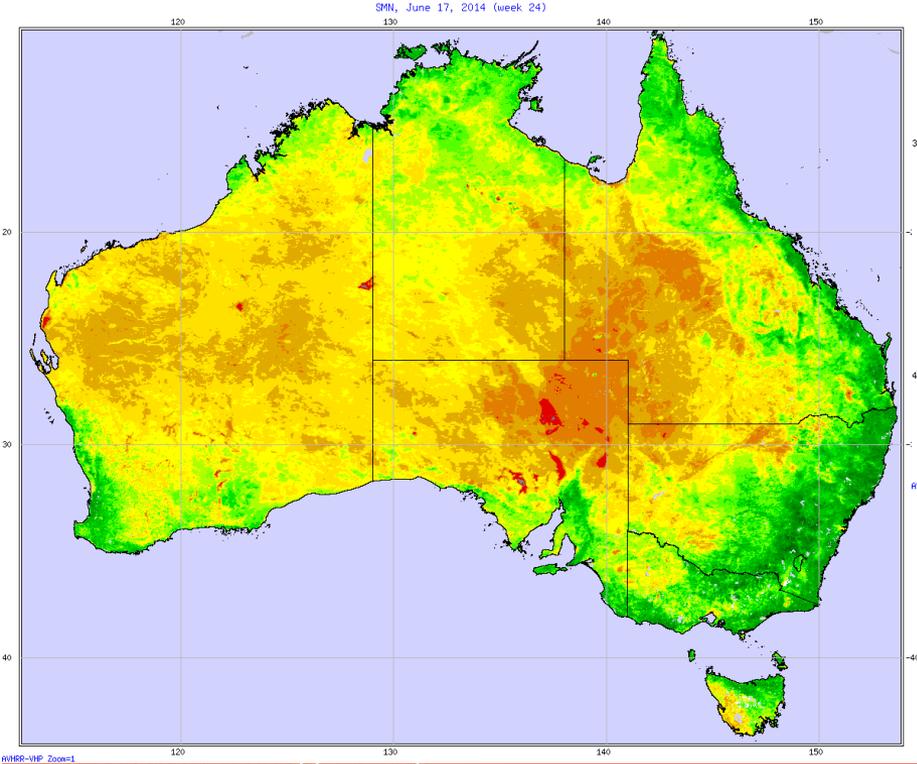
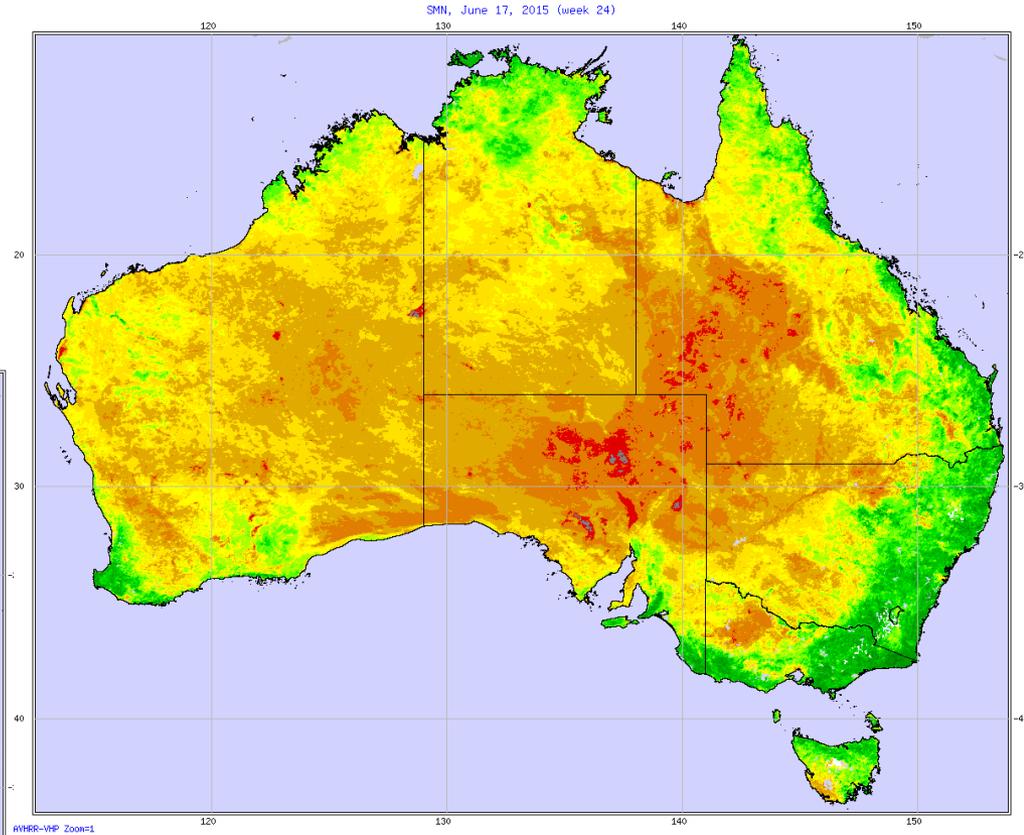
Click this image see gloabl image or show the information of the selected province.

NDVI

June 2015



June 2014

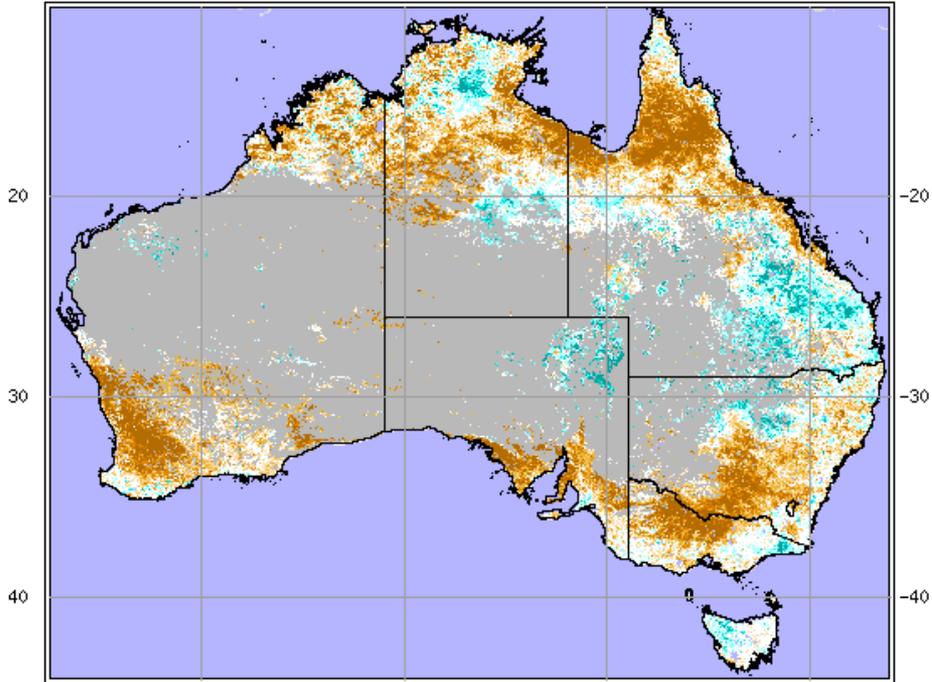


Change in Vegetation health 2014-15

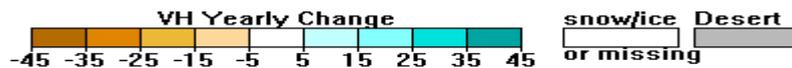
Vegetation Health (annual change)

VH yearly change, June 17, 2015 (week 24)

120 130 140 150



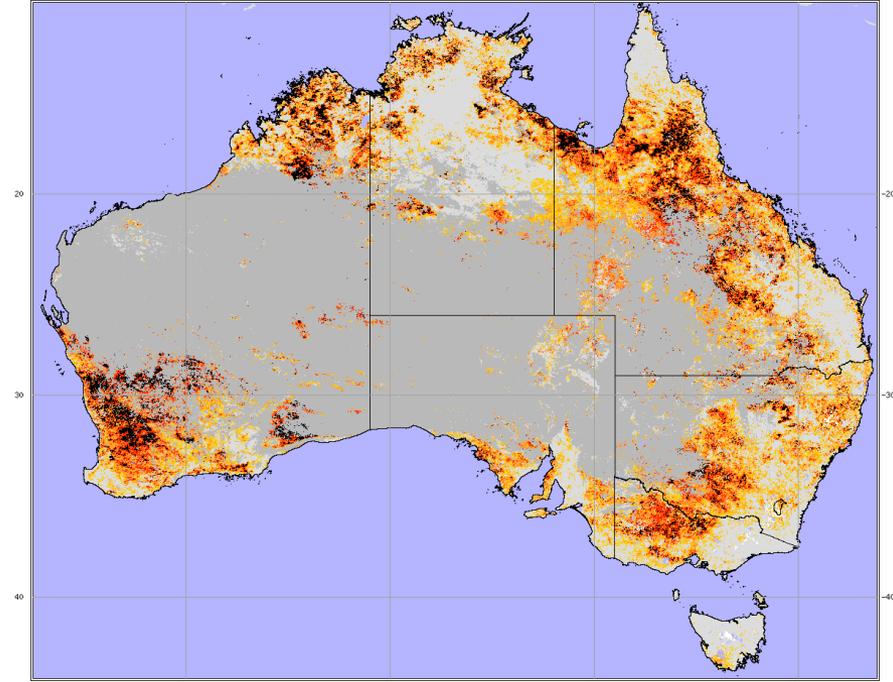
AVHRR-VHP Zoom=0.43



Drought Risk

Drought Risk, June 17, 2015 (week 24)

120 130 140 150



AVHRR-VHP Zoom=1



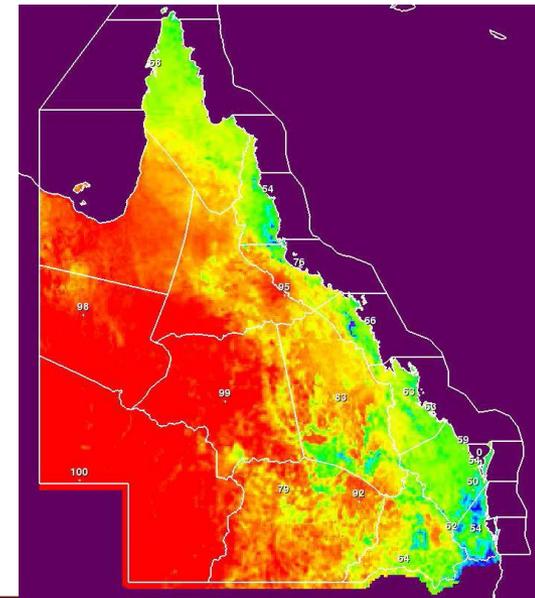
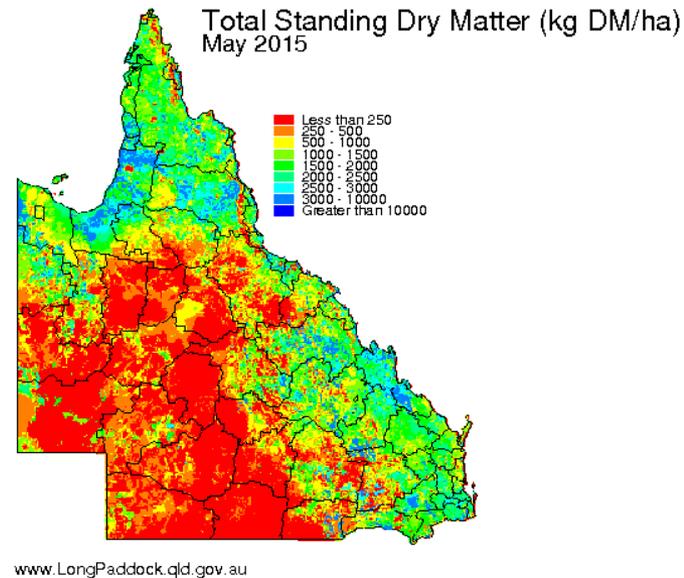
Fuel

Grassland Fuels

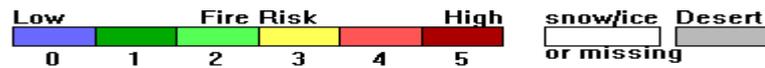
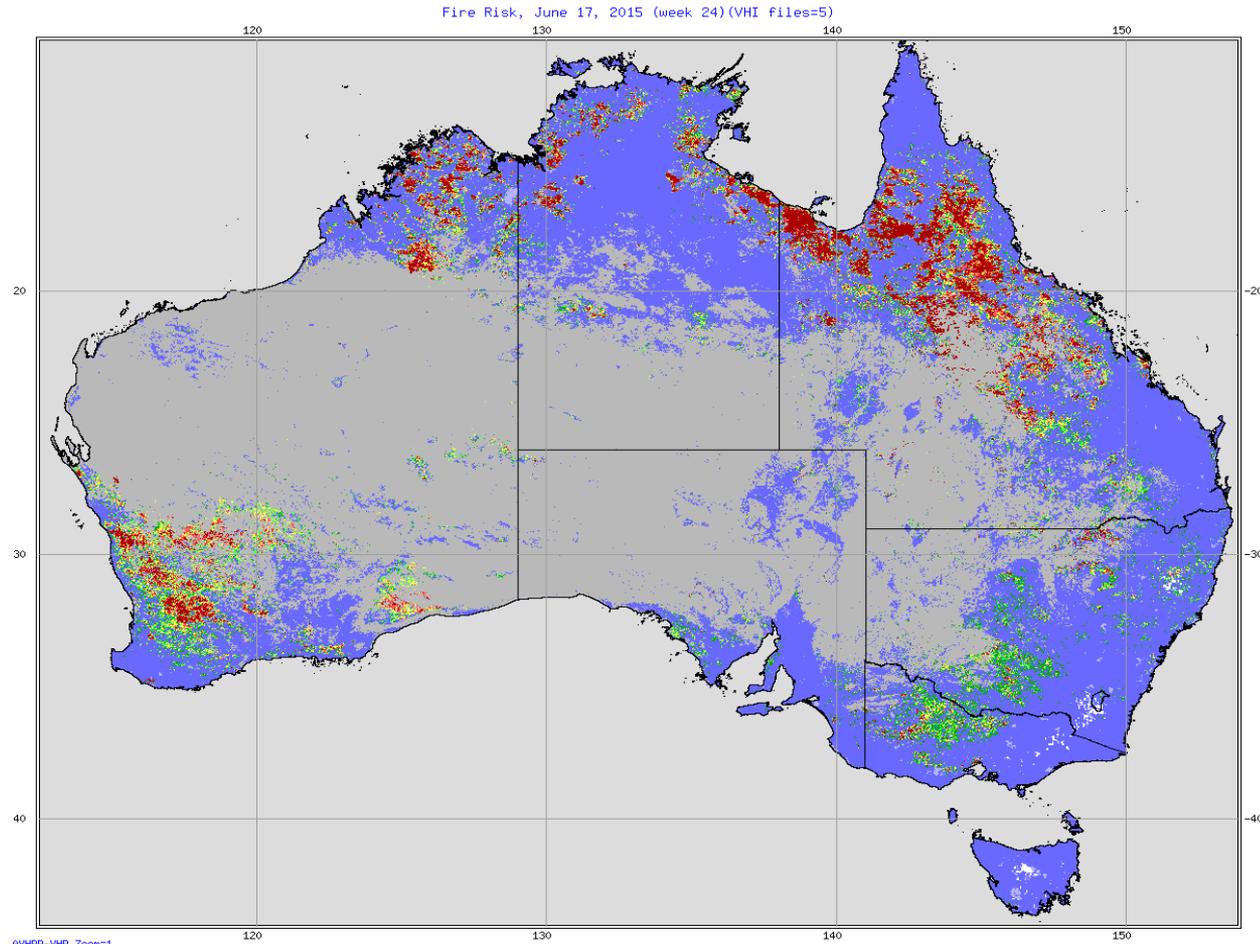
- Highly variable fuel loads across the northern part of the State
- Moderate to low fuel loads around Central Region (west of Barcaldine)
- High fuel loads in the SW Gulf south towards the Monument and other areas identified
- In areas of high and moderate fuel load grazing pressure to assist with fuel reduction prior to peak fire danger period
- Curing currently 100% in western areas
- Curing expected to change rapidly with onset of winter frosts, especially in the central inland areas

Forest Fuels

- General trend shows a drying soil moisture profile
- Increasing stress on vegetation
- Increased surface and near surface fuel in cyclone affected areas



Fire Risk



Climate Outlook

The Madden–Julian Oscillation (MJO) – After a brief period of a weakening while moving over the Indonesia/Malaysia/New Guinea area, the MJO is expected to restrengthen as it moves into the western region of the Pacific over the coming weeks.

Historically, when the MJO is over the Indonesia/Malaysia/New Guinea area at this time of the year, much of QLD, inland parts of NSW and central WA have an increased chance of above–average rainfall.

El Niño in the tropical Pacific

Although the 30 day SOI has risen in recent weeks, the 90 day SOI remains negative and continues to exceed El Niño thresholds. The El Niño in the tropical Pacific continues to develop despite some short to medium term fluctuations in SOI values due to local variability.

International climate models indicate sea surface temperatures will remain well above El Niño thresholds at least into the southern hemisphere spring.

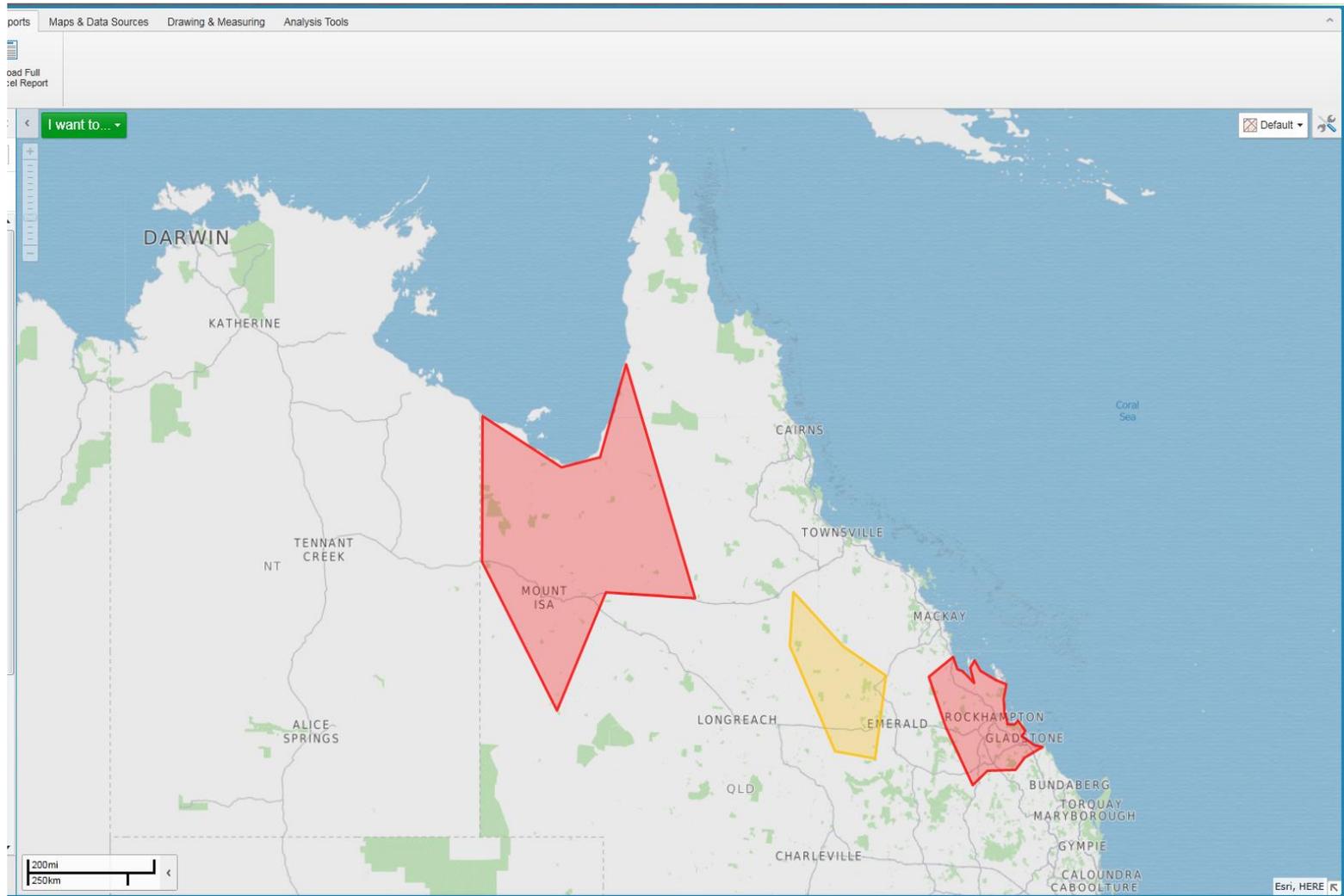
Areas of Concern

A high fire risk is expected across the NW Gulf Country from the Gulf of Carpentaria Coast to the greater Mt Isa area and south to 'The Monument' and NE towards Julia Creek

A moderate to high fire risk is expected in the impact areas of TC Marcia (Central Region). High risk areas include the coastal fringe west into the Callide Valley. A moderate risk in the remaining areas.

A moderate fire risk is expected in the Northern Central Highlands east of the Desert Uplands

Map



The End