2.4 TSP Australia Report

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OFFICIAL

TSP Australia Structure

TSP Australia is operated by the JATWC (Joint Australian Tsunami Warning Centre), consisting of:

Geoscience Australia (GA), Canberra: Earthquake Monitoring and Alerting
Bureau of Meteorology (BOM), Melbourne & Brisbane: Sea Level Monitoring and Tsunami Warning

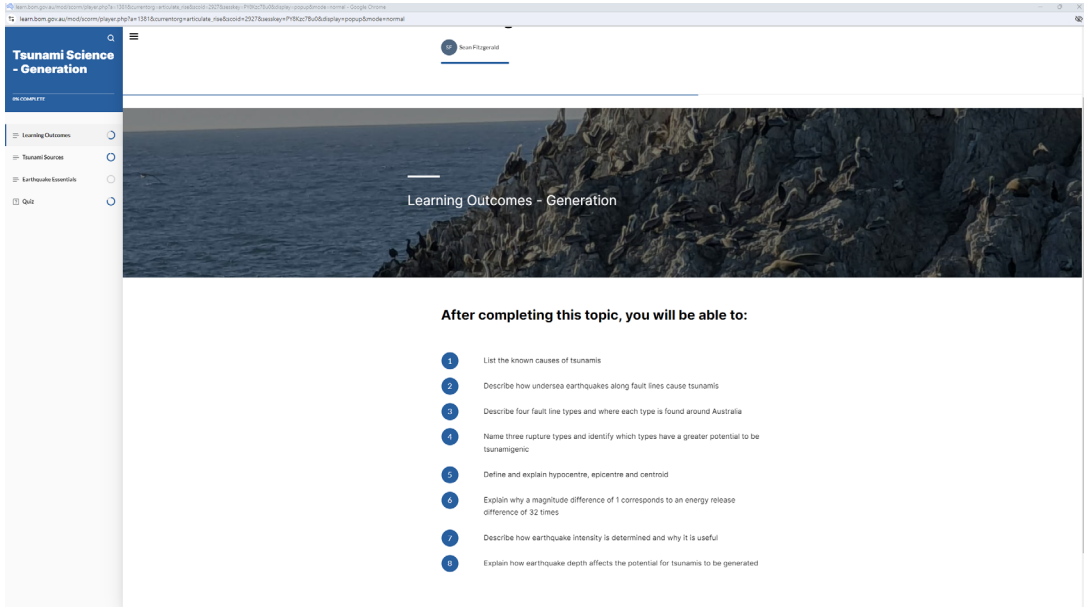
JATWC staff located at Geoscience Australia (left) and Bureau of Meteorology (right)

TSP Australia Recent Developments

- The Bureau's Tsunami Warning Services, part of the JATWC, has been internationally accredited as an ISO 9001 compliant quality managed system in July 2020. With recent successful audits in 2023 and 2024.
- GA-JATWC has commenced work towards ISO 9001:2015 accreditation for GA-JATWC systems (as input to BOM-JATWC accredited system).
- GA-JATWC have upgraded to SeisComP5.
- GA-JATWC have tested seismic array processing and are running the processor in real-time, in parallel to GA-JATWC operations. Assessment of performance is continuing ahead of plans to operationalise the seismic array processor.
- No threat Bulletins for the Indian Ocean and Australia were issued in response to the eruption of Ruang on the 30th of April. This is the first non-seismic product issued by a TSP for the Indian Ocean.

TSP Australia Future Developments

- The Bureau's ROBUST Program is enhancing BOM-JATWC tsunami applications and systems to be more secure and resilient. As part of this we have a contract with gempa to replace our current tsunami Decision Support Tool with TOAST. Go-live planned for September. (examples given in next 3 slides)
- GA-JATWC will upgrade to SeisComP6 in 2024
- The Bureau is currently reviewing and upgrading its training and competency package and implementation guide.



File Settings Simulation Traces View Extras Help

Database - Simulations

Simulations: Show all
Sort by: M

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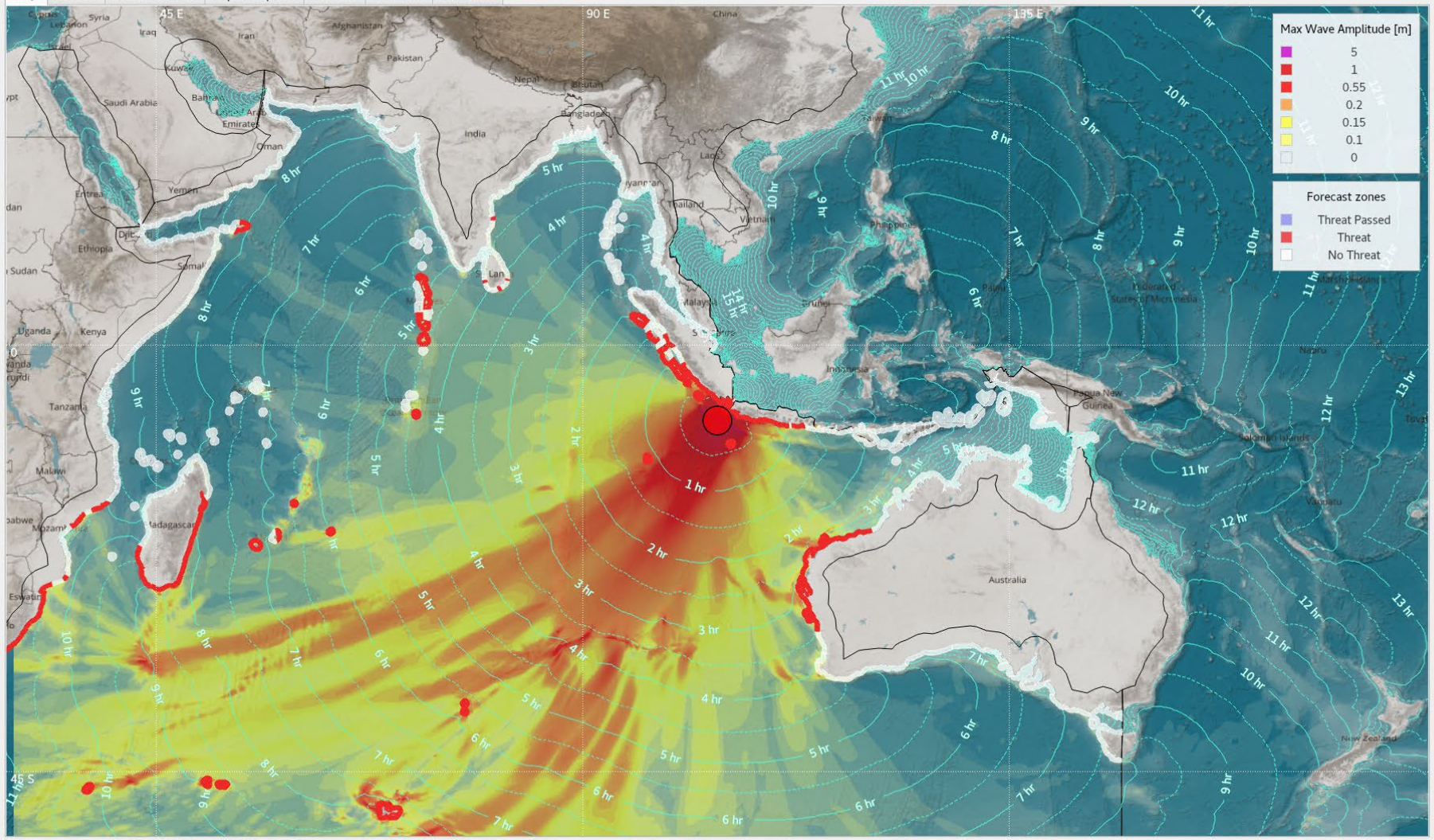
8.6	BOM MOST	Yes	50c#86
8.6	BOM MOST	Yes	49c#86
8.6	BOM MOST	Yes	48c#86
8.6	Geoware TTT	Yes	6628add902040...
8.2	BOM MOST	Yes	49b#82
8.2	BOM MOST	Yes	48b#82

7/7 simulations shown

2024-08-07 03:29:15
6m and 41s ago
Southwest of Sumatra, Indonesia (7.97° S 104.17° E)

M 8.6 D 10 km
TOAST20240807033001144041
Earthquake

Map | Arrivals | Forecast Zones | Impact Reports | EXTRAS | IOTWMS | EXERCISE



Map Layers

Color Profile: BOM-IOTW

- Displacements
- Faults
- Forecast zones
  - Colorize by
    - Impact time
    - Max Beach
    - Threat level
  - Fill
  - IDs
  - Inactive
  - Points
    - IDs
    - Names
- Legends
- POIs
- Rupture area
- Simulation layer
- Wave propagation
  - Arrival lines
  - Arrival times
  - Iso chrones
  - Max Wave Amplitude

Wave Propagation

Max Wave Amplitude	0.07 m

Incident/20240807033001.144097.445: Finished Geoware TTT simulation 6628add90204082caee5b1cebb475c81d3a5fd08 in 12.00 seconds

Coordinate: 7.285° N 82.005° E | Operational | BOM, AU

Map | Arrivals | Forecast Zones | Impact Reports | IOTWMS | EXERCISE

Template: **/IOTWMS/Potential Threat**

System (IOTWMS).

1. TSUNAMI SOURCE INFORMATION
IOTWMS-TSP AUSTRALIA has detected an earthquake with the following details:

Magnitude: 8.6 M
Depth: 10 km
Date: 07 Aug 2024
Origin Time: 0329 UTC
Latitude: 7.97S
Longitude: 104.17E
Location: Southwest of Sumatra, Indonesia

2. EVALUATION
Events of this size are capable of generating tsunamis. However, so far there is no confirmation about the triggering of a tsunami.

An investigation is under way to determine if a tsunami has been triggered. This TSP will monitor sea level gauges and report if any tsunami wave activity has occurred.

Based on pre-run model scenarios, the zones listed below are POTENTIALLY UNDER THREAT.

3. TSUNAMI THREAT FOR THE INDIAN OCEAN
The list below shows the forecast arrival time of the first wave estimated to exceed 0.5m amplitude at the beach in each zone, and the amplitude of the maximum beach wave predicted for the zone. Zones where the estimated wave amplitudes are less than 0.5m at the beach are not shown.

The list is grouped by country (alphabetic order) and ordered according to the earliest estimated times of arrival at the beach.

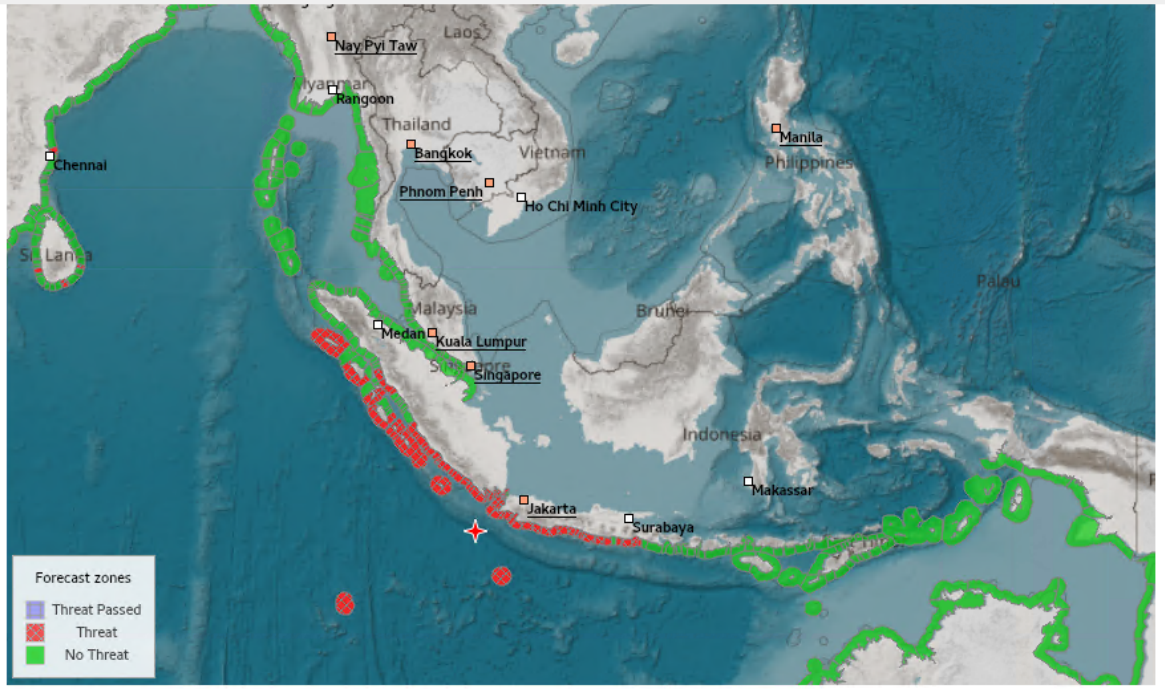
Please be aware that actual wave arrival times may differ from those below, and the initial wave may not be the largest. A tsunami is a series of waves and the time between successive waves can be five minutes to one hour.

The threat is deemed to have passed two hours after the forecast time for last exceedance of the 0.5m threat threshold for a zone. As local conditions can cause a wide variation in tsunami wave action, CANCELLATION of national warnings and ALL CLEAR determination must be made by national/state/local authorities.

AUSTRALIA		
CHRISTMAS ISLAND	03:41Z 07Aug2024	9.88 m
COCOS ISLAND	04:33Z 07Aug2024	2.35 m
NINGALOO COAST	05:53Z 07Aug2024	1.48 m
PILBARA COAST WEST	06:43Z 07Aug2024	0.81 m
GASCOYNE COAST	06:59Z 07Aug2024	1.11 m
GERALDTON COAST	07:37Z 07Aug2024	0.56 m
PILBARA COAST EAST	07:41Z 07Aug2024	0.71 m
HEARD ISLAND AND MCDONALD ISLANDS	12:11Z 07Aug2024	3.18 m
AURORA BANK	12:25Z 07Aug2024	3.86 m
FRANCE		
ILE SAINT-PAUL-NORTH	09:19Z 07Aug2024	1.74 m
ILE SAINT-PAUL-SOUTH	09:29Z 07Aug2024	3.23 m
SAINT-PIERRE	11:11Z 07Aug2024	1.04 m
SAINT-DENIS	11:29Z 07Aug2024	0.57 m

EXTRAS

Template: **/Extras/IOTWMS Maps**



Disseminate

Disseminate

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9.2	BOM MOST	No	53d#92
9.2	BOM MOST	No	52d#92
9.2	BOM MOST	No	51d#92
9.2	BOM MOST	No	50d#92
9.2	BOM MOST	No	49d#92
9.2	BOM MOST	No	48d#92
9.2	BOM MOST	No	47d#92
9.2	BOM MOST	No	46d#92
9.2	BOM MOST	No	45d#92
9.2	BOM MOST	No	44d#92
8.7	BOM MOST	No	50c#87
8.7	BOM MOST	No	49c#87
8.7	BOM MOST	No	48c#87
8.7	BOM MOST	No	47c#87
8.6	BOM MOST	Yes	47c#86
8.6	BOM MOST	Yes	50c#86
8.6	BOM MOST	Yes	49c#86
8.6	BOM MOST	Yes	48c#86
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8.2	BOM MOST	Yes	48b#82

22/22 simulations shown

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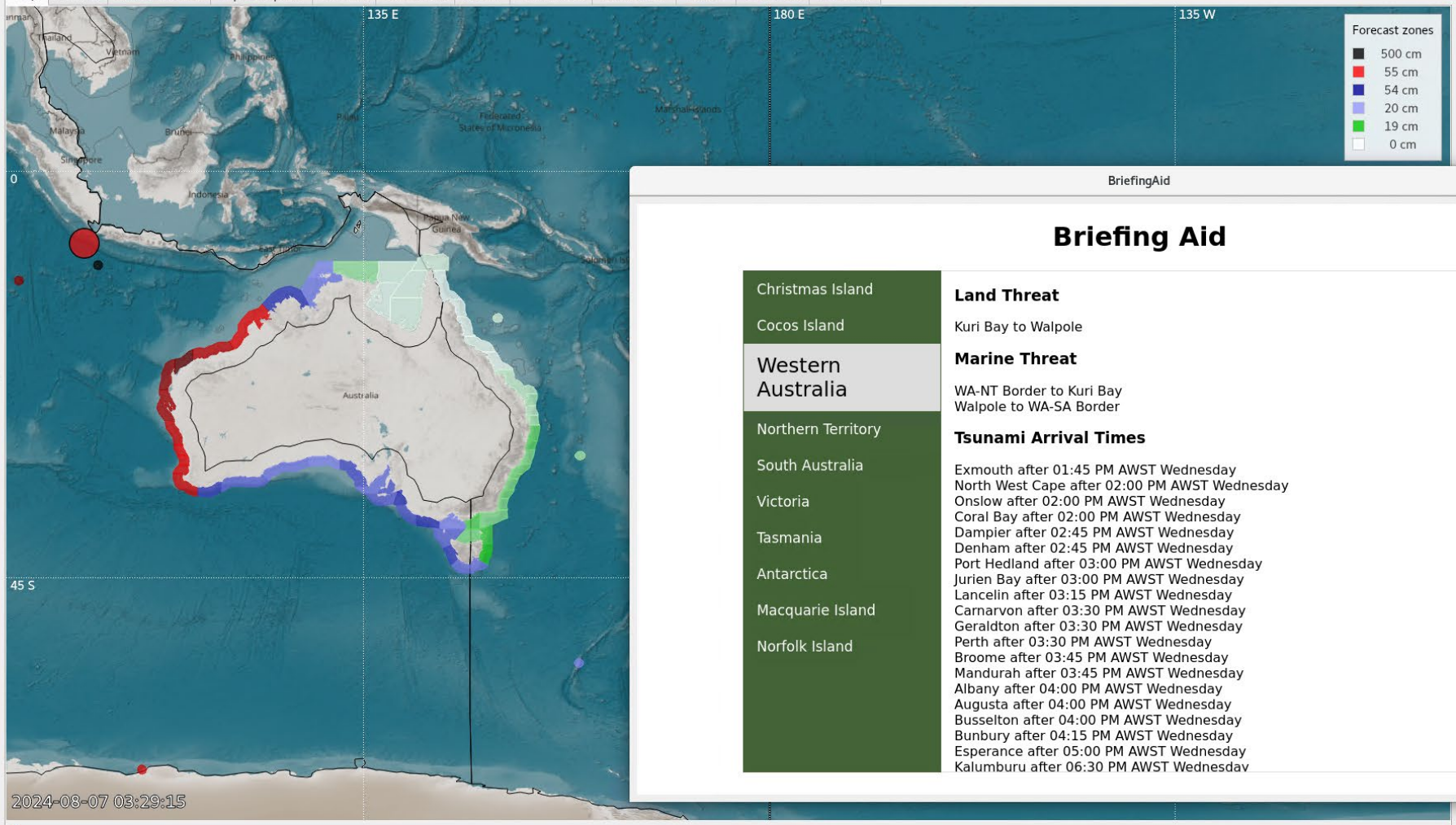
16m and 31s ago
Southwest of Sumatra, Indonesia (7.97° S 104.17° E)

M 8.6 D 10 km
TOAST20240807033001144041
Earthquake

Map | Arrivals | Forecast Zones | Impact Reports | EXTRAS | NATIONAL | STATE | OFFSHORE | ANTARCTIC | TWEET | EXERCISE | BRIEFING



0:00 / 85:13:03

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  - Fill
  - IDs
  - Inactive
    - Colorize
  - Points
- Legends

BriefingAid

Briefing Aid

- Christmas Island
- Cocos Island
- **Western Australia**
- Northern Territory
- South Australia
- Victoria
- Tasmania
- Antarctica
- Macquarie Island
- Norfolk Island

Land Threat

Kuri Bay to Walpole

Marine Threat

WA-NT Border to Kuri Bay
Walpole to WA-SA Border

Tsunami Arrival Times

Exmouth after 01:45 PM AWST Wednesday
North West Cape after 02:00 PM AWST Wednesday
Onslow after 02:00 PM AWST Wednesday
Coral Bay after 02:00 PM AWST Wednesday
Dampier after 02:45 PM AWST Wednesday
Denham after 02:45 PM AWST Wednesday
Port Hedland after 03:00 PM AWST Wednesday
Jurien Bay after 03:00 PM AWST Wednesday
Lancelin after 03:15 PM AWST Wednesday
Carnarvon after 03:30 PM AWST Wednesday
Geraldton after 03:30 PM AWST Wednesday
Perth after 03:30 PM AWST Wednesday
Broome after 03:45 PM AWST Wednesday
Mandurah after 03:45 PM AWST Wednesday
Albany after 04:00 PM AWST Wednesday
Augusta after 04:00 PM AWST Wednesday
Busselton after 04:00 PM AWST Wednesday
Bunbury after 04:15 PM AWST Wednesday
Esperance after 05:00 PM AWST Wednesday
Kalumburu after 06:30 PM AWST Wednesday

Operational | 0 0 | BOM, AU

Thank you

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unesco
Intergovernmental Oceanographic Commission