Every Winch Tells a Story

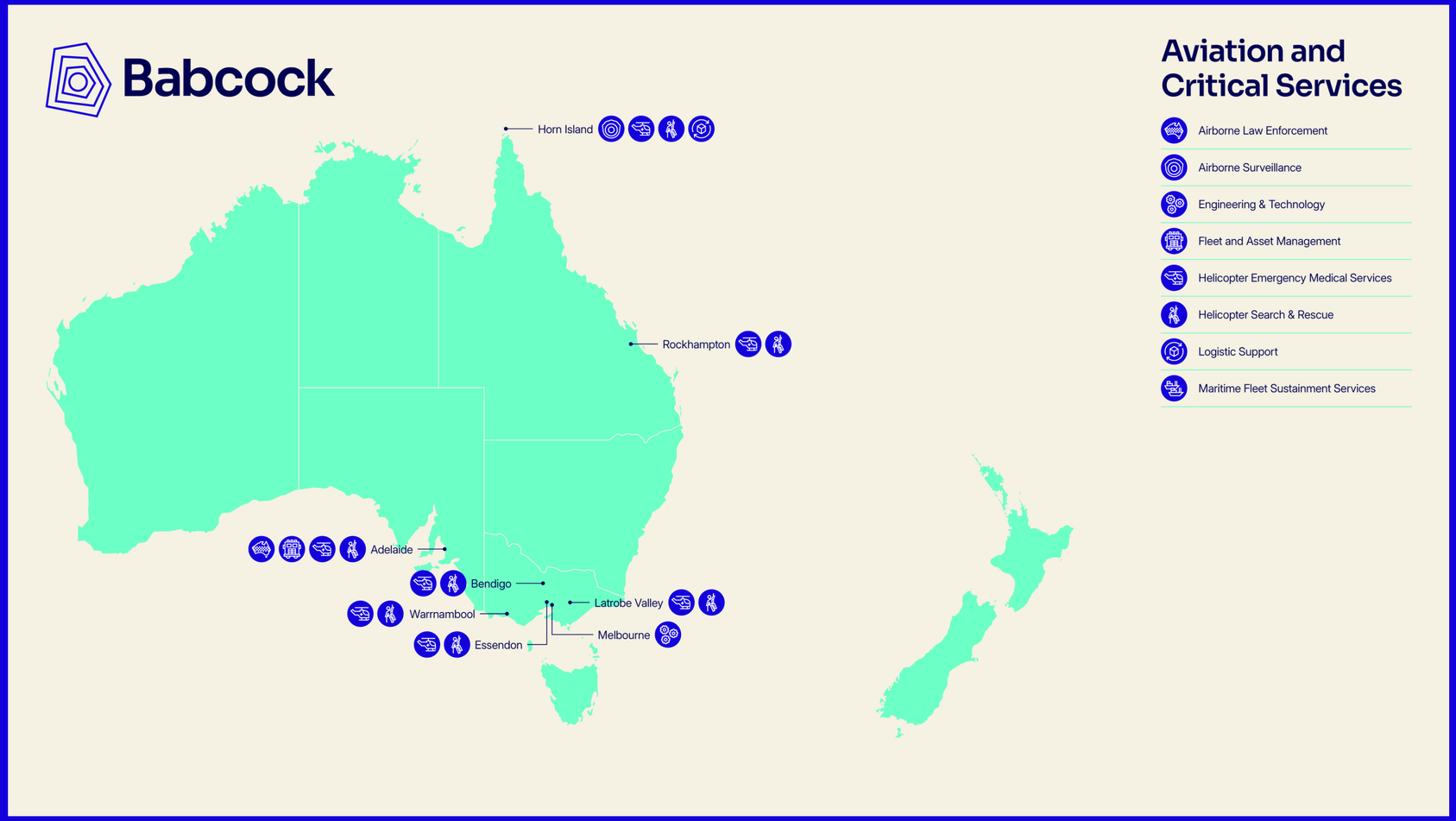
A Global Perspective & Retrospective Review of Babcock Mission Critical Services 2023–2026 Winch Data

Ryan Hurrell | Deputy Chief Aircrew Officer



Babcock

Babcock Australia Aeromedical Area of Operations



Victoria

Essendon, Bendigo, Warrnambool, Latrobe Valley

South Australia

Adelaide

Queensland

Rockhampton

Torres Strait

Horn Island

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Our operating environments

Victoria



Alpine terrain



Coastal rock platforms

South Australia



Remote outback airstrips



Flooded outback tracks

Queensland and Torres Strait



Coastal headlands



Over-water operations

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Agenda

01 Our company

02 Evidence-based practice

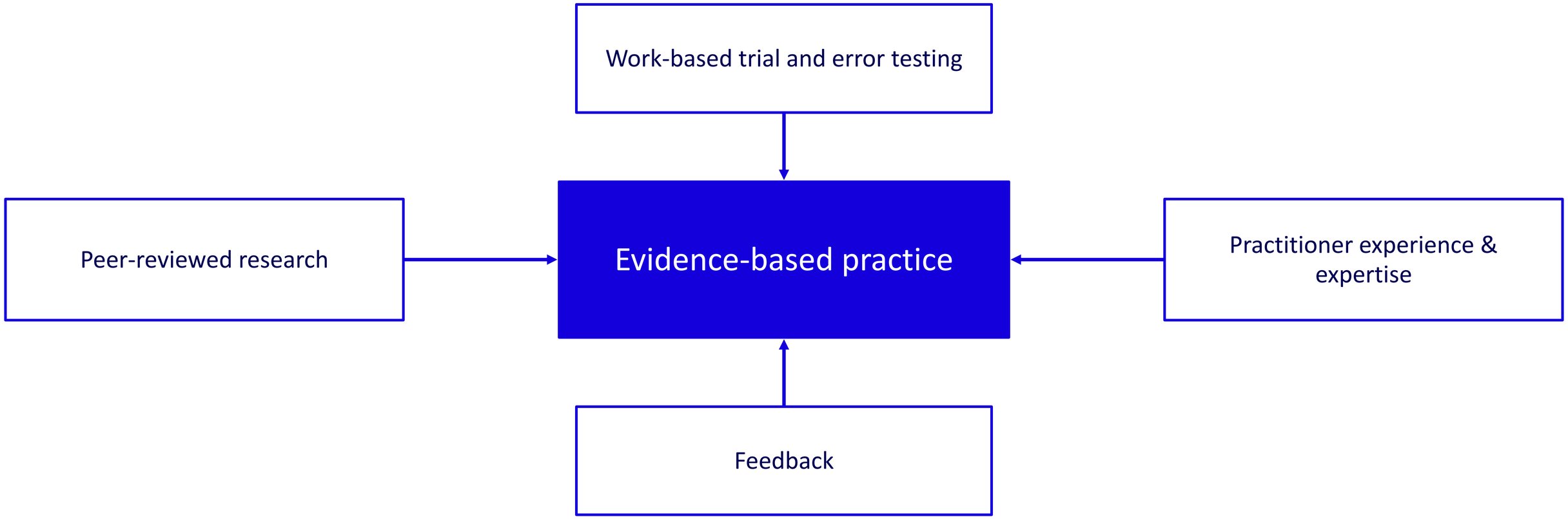
03 Global peer reviewed evidence

04 Babcock 2023–26 winch data

05 Key safety and performance insights

06 Future directions

Evidence-based practice



Global evidence

28

peer-reviewed papers

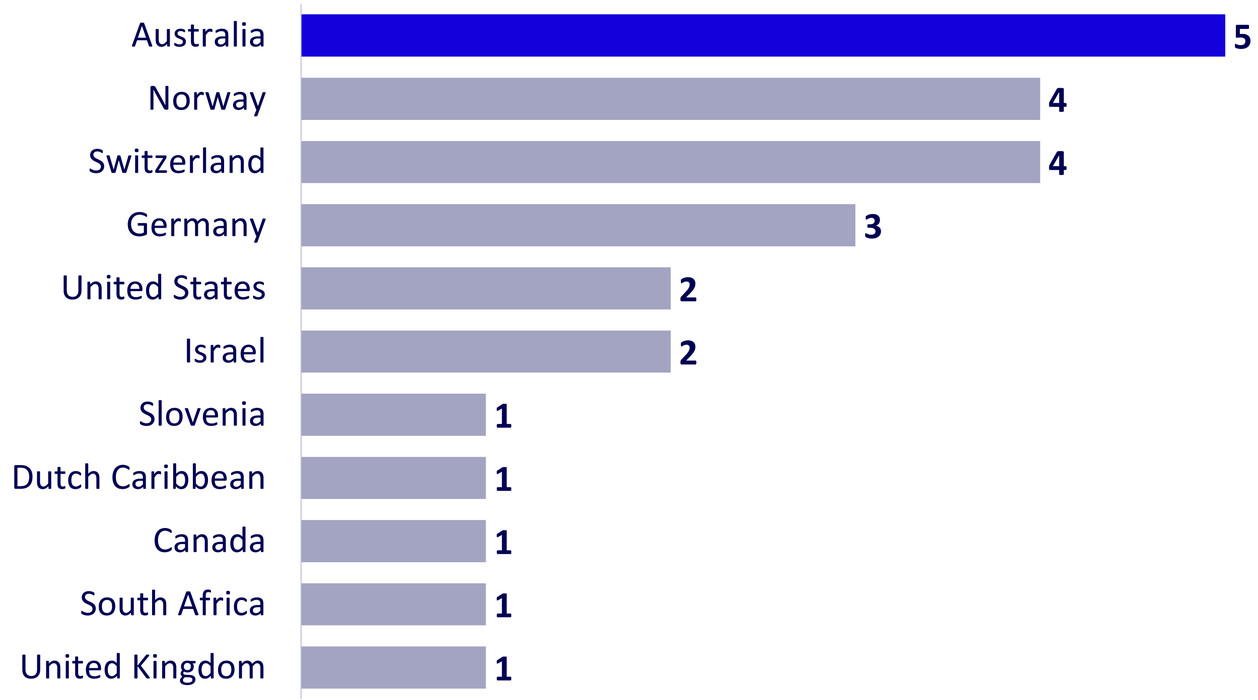
27,460

operational winches

11

countries

Papers by country of study (25 of 28 papers record a country)



Method: each global figure is the average of the percentages reported by the papers that measured it; papers are not weighted by size. Services and definitions differ between papers.

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Global evidence: when and who

Time of day

13.4%

of winch missions flown at night

n = 6 papers (19,192 winches)

Day of week

45%

of winches on weekends: 2.1x as many per weekend day as per weekday

n = 5 papers (1,047 winches)

Patient age

39

mean patient age, years

n = 11 papers (4,235 winches)

Patient gender

71%

of winched patients male; 29% female

n = 14 papers (4,615 winches)

Source: scoping review of 28 peer-reviewed papers; each figure is the average of the percentages reported by the papers that measured it. Study details are in the shared version of this deck.

Global evidence: how sick and where

NACA (National Advisory Committee of Aeronautics)-

32.6%

of patients NACA 4 or above (potentially life-threatening)

n = 8 papers (14,725 winches)

RTSc (Revised Trauma Score)

11.3%

of patients with an abnormal Revised Trauma Score (RTSc)

n = 2 papers (245 winches)

Intubation

4.0%

of winched patients intubated

n = 11 papers (18,572 winches)

Water rescues

14.6%

of winches were water rescues; 85.4% on land

n = 8 papers (4,076 winches)

Babcock Australia 2023–2026 trends

271
reported operational winches, Jan 2023 to Oct 2026

64%
of winches in Victoria (174 of 271)

20%
of Victorian winches in the Grampians hotspot

38.7%
of extractions by ARV; 33.9% by stretcher

15.5%
of winches at night (NVG); average winch height 19.9% higher

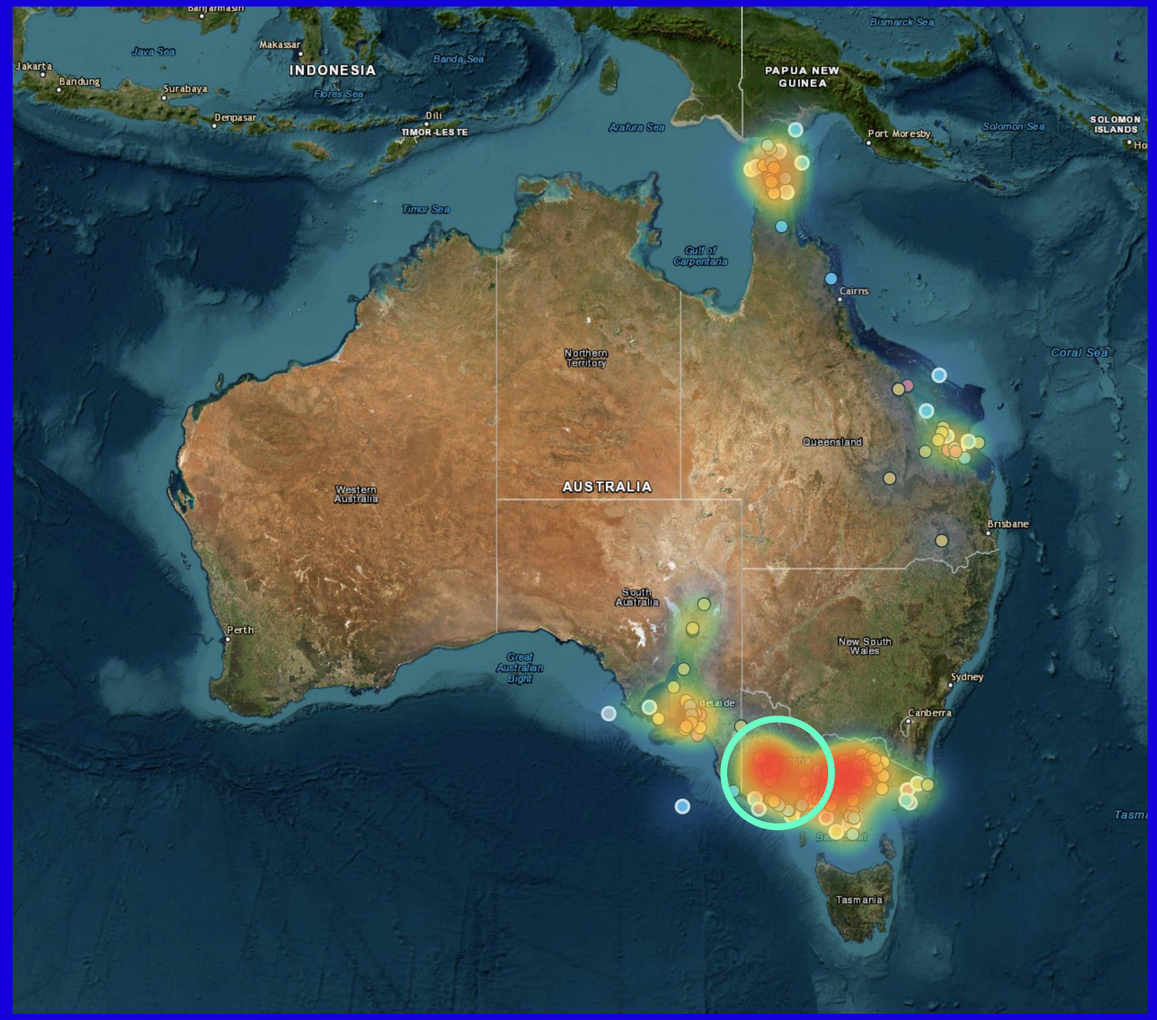
16.6%
of winches had a reported swing or spin (45 of 271)

Winches per year 2023: **63** 2024: **82** 2025: **60** 2026 (to date): **66**

Source: Babcock Mission Critical Services winch data, Jan 2023 to Oct 2026. 2026 is year to date. Night = NVG used.

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Winch locations, 2023–2026



271 winches across three states

64%
Victoria · 174

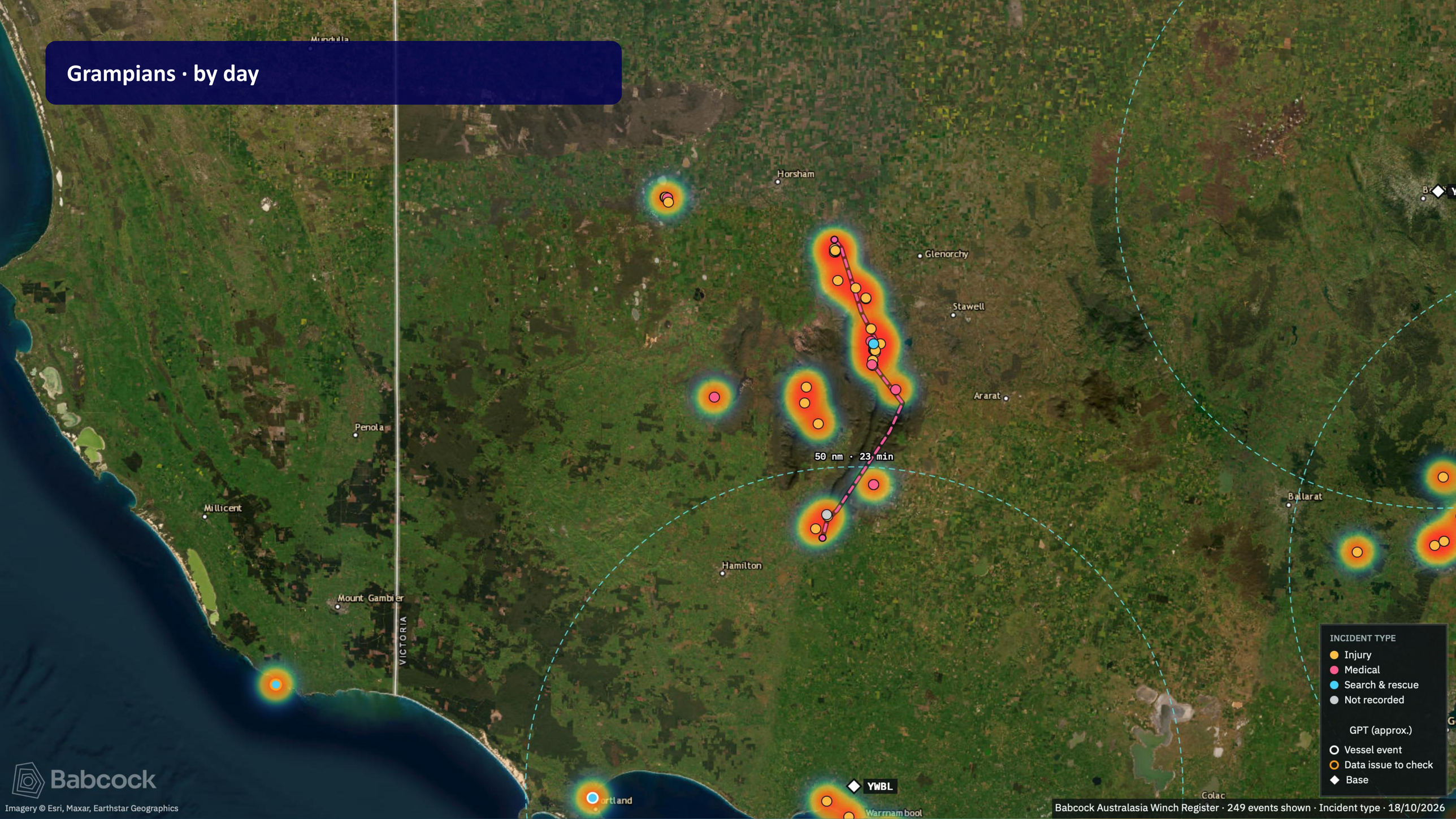
21%
Queensland · 57

15%
South Australia · 40

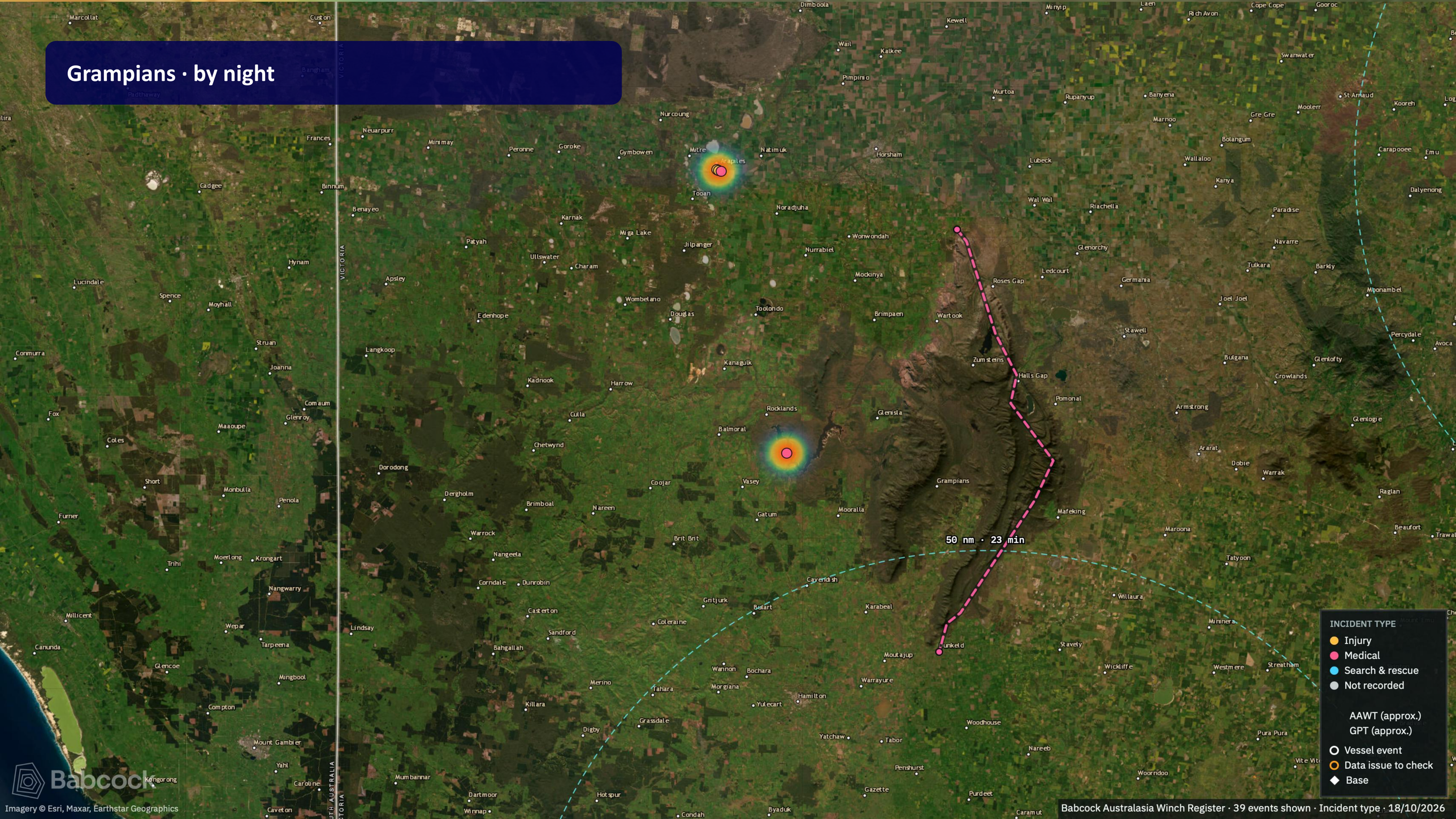
Three operating environments

- **Grampians:** rock ledges and escarpments
- **Gippsland:** alpine and forested ranges
- **Torres Strait:** islands and open water

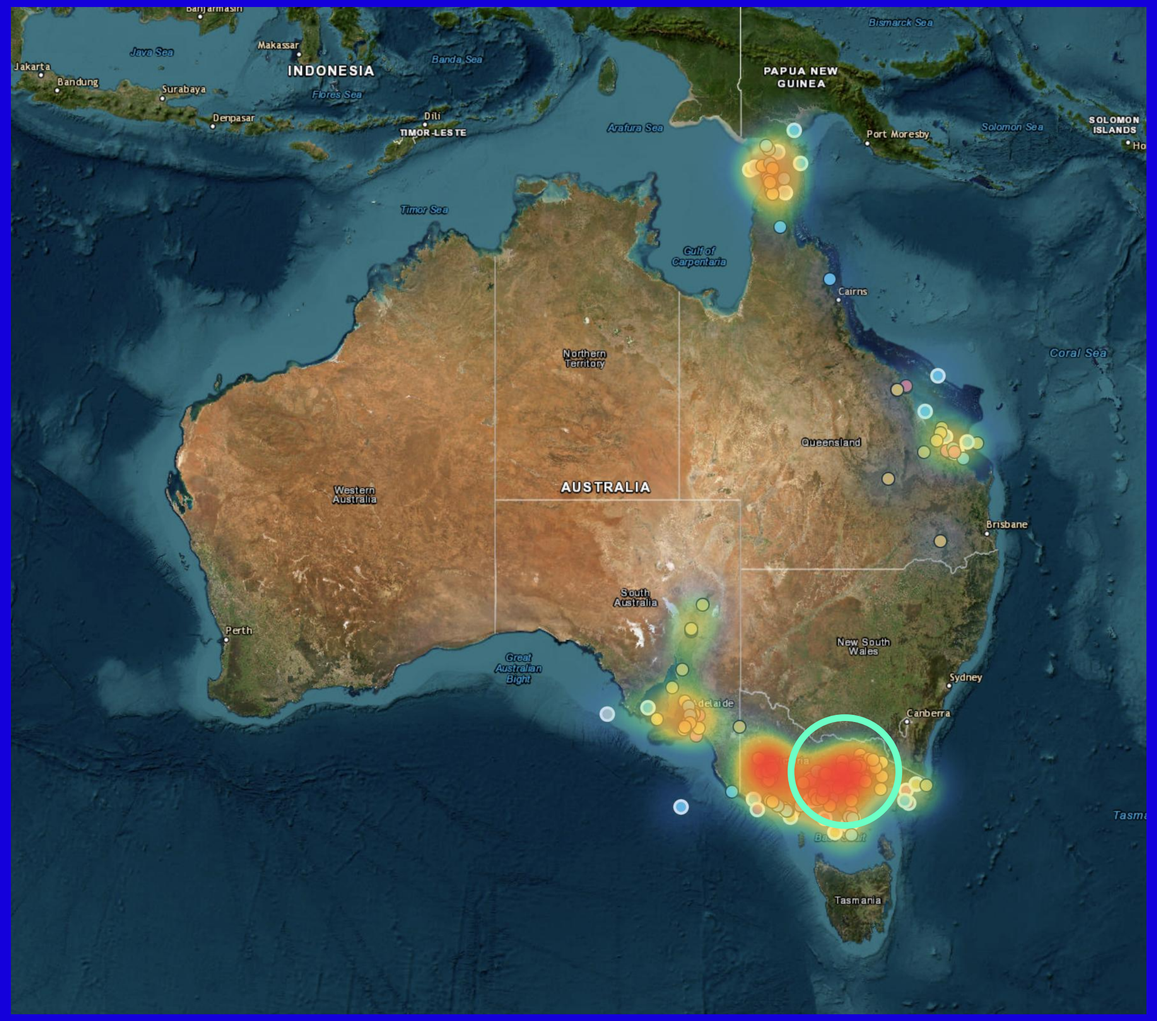
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Grampians · by day
Horsham
Glenorchy
Stawell
Ararat
Penola
Millicent
Mount Gambier
VICTORIA
Hamilton
Ballarat
Colac
Warrnambool
50 nm · 23 min
YWBL
INCIDENT TYPE
Injury
Medical
Search & rescue
Not recorded
GPT (approx.)
Vessel event
Data issue to check
Base
Babcock
Imagery © Esri, Maxar, Earthstar Geographics
Babcock Australasia Winch Register · 249 events shown · Incident type · 18/10/2026

Grampians · by night

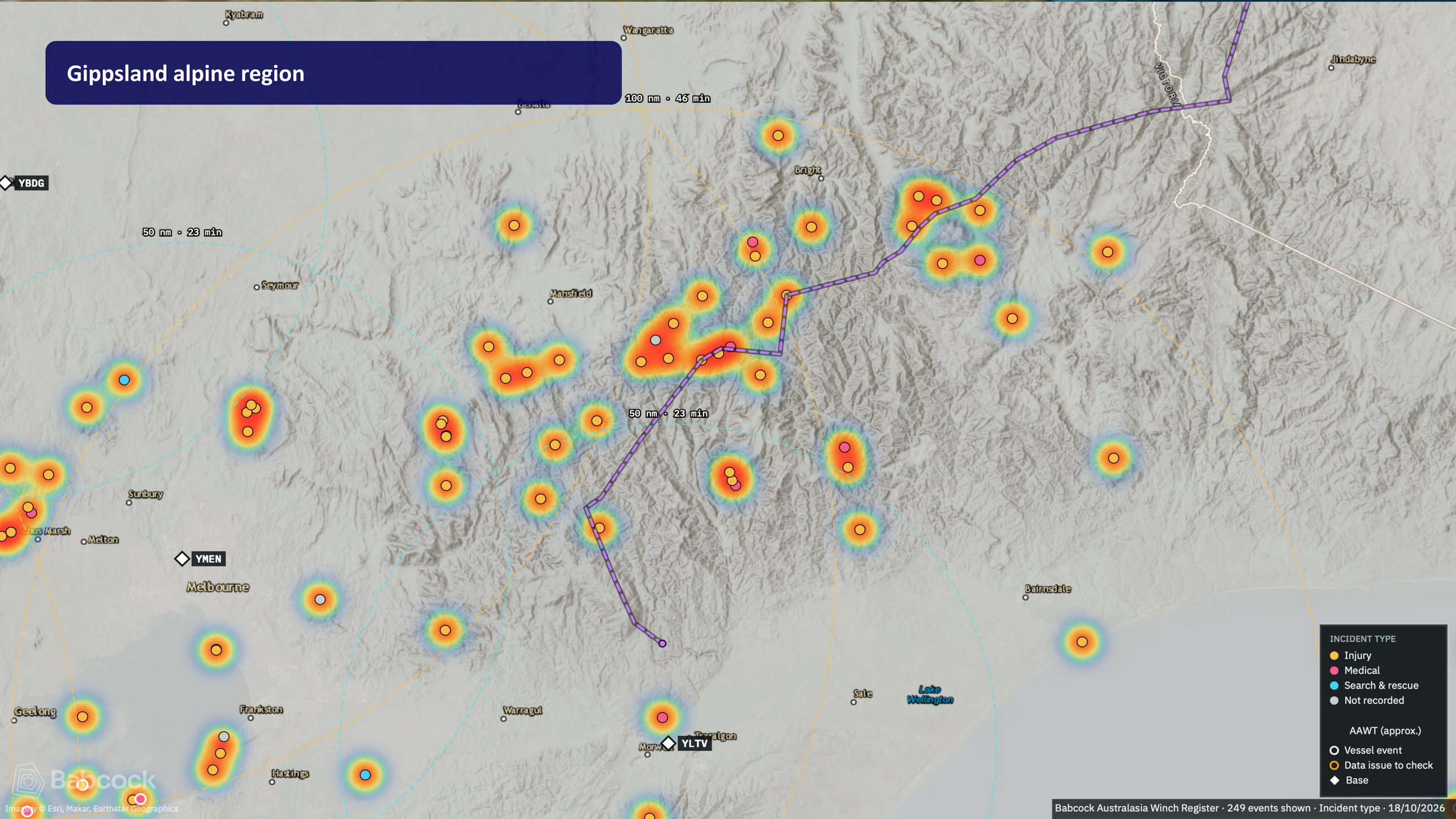


Next: Gippsland alpine region



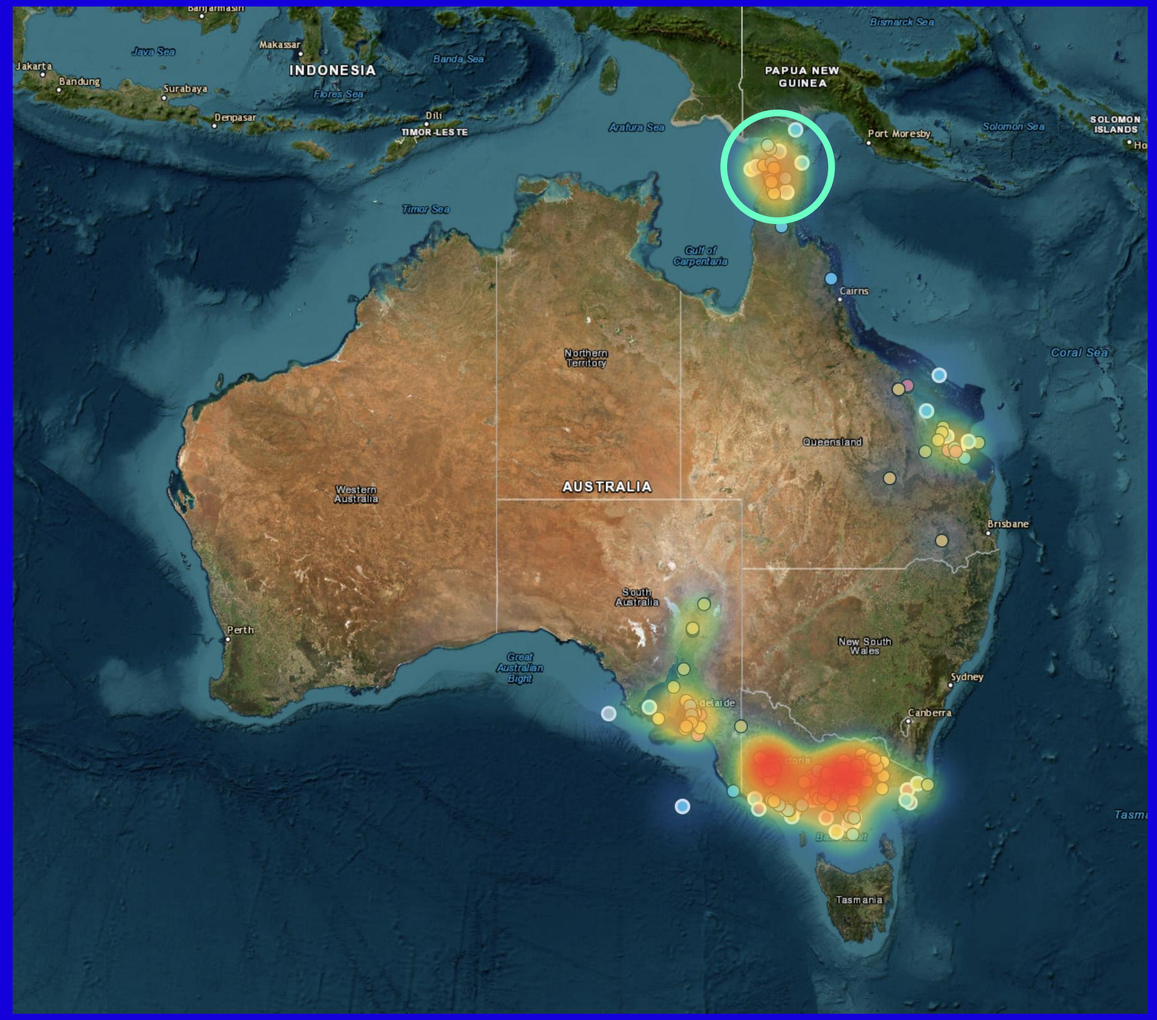
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Gippsland alpine region

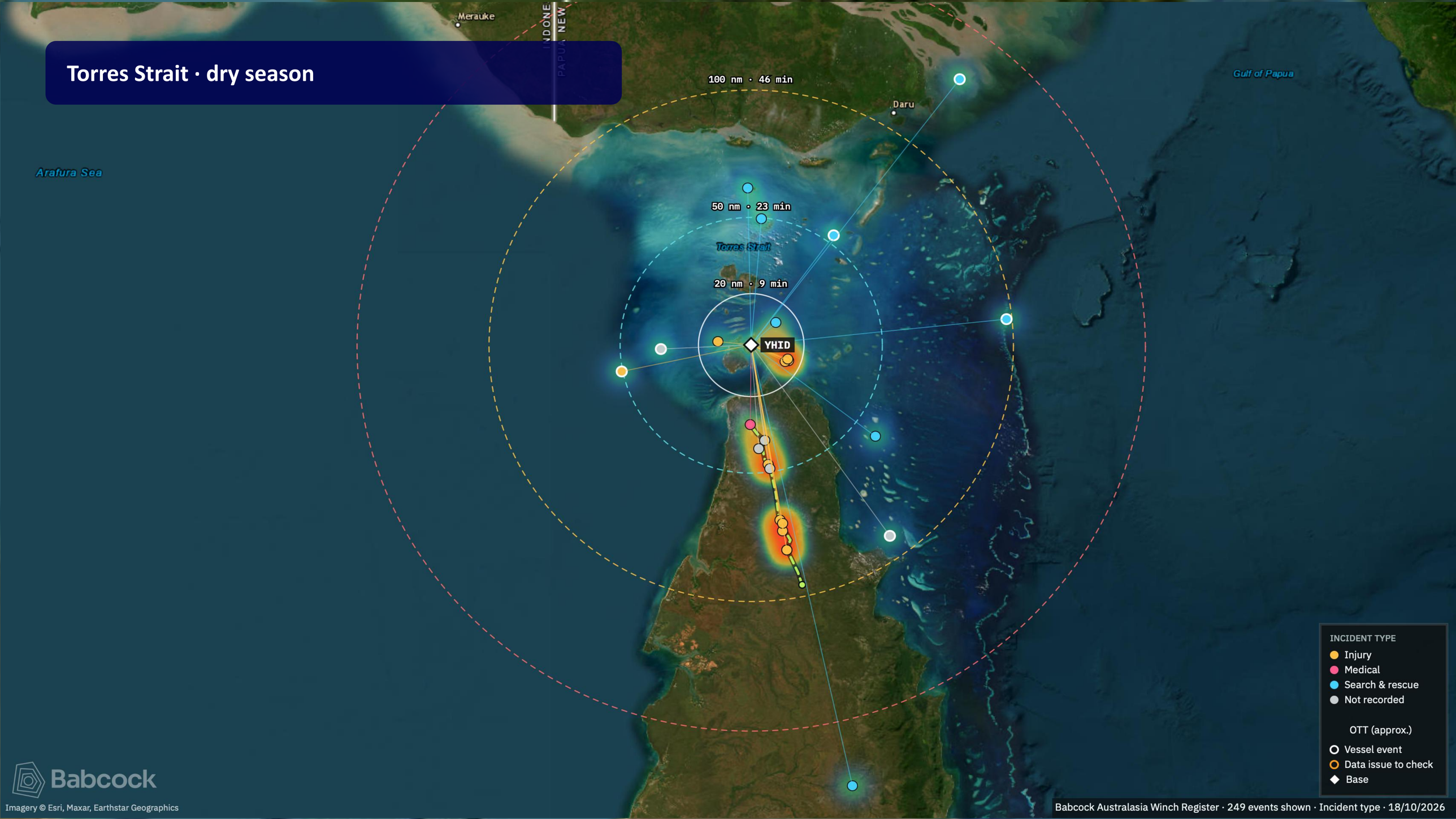


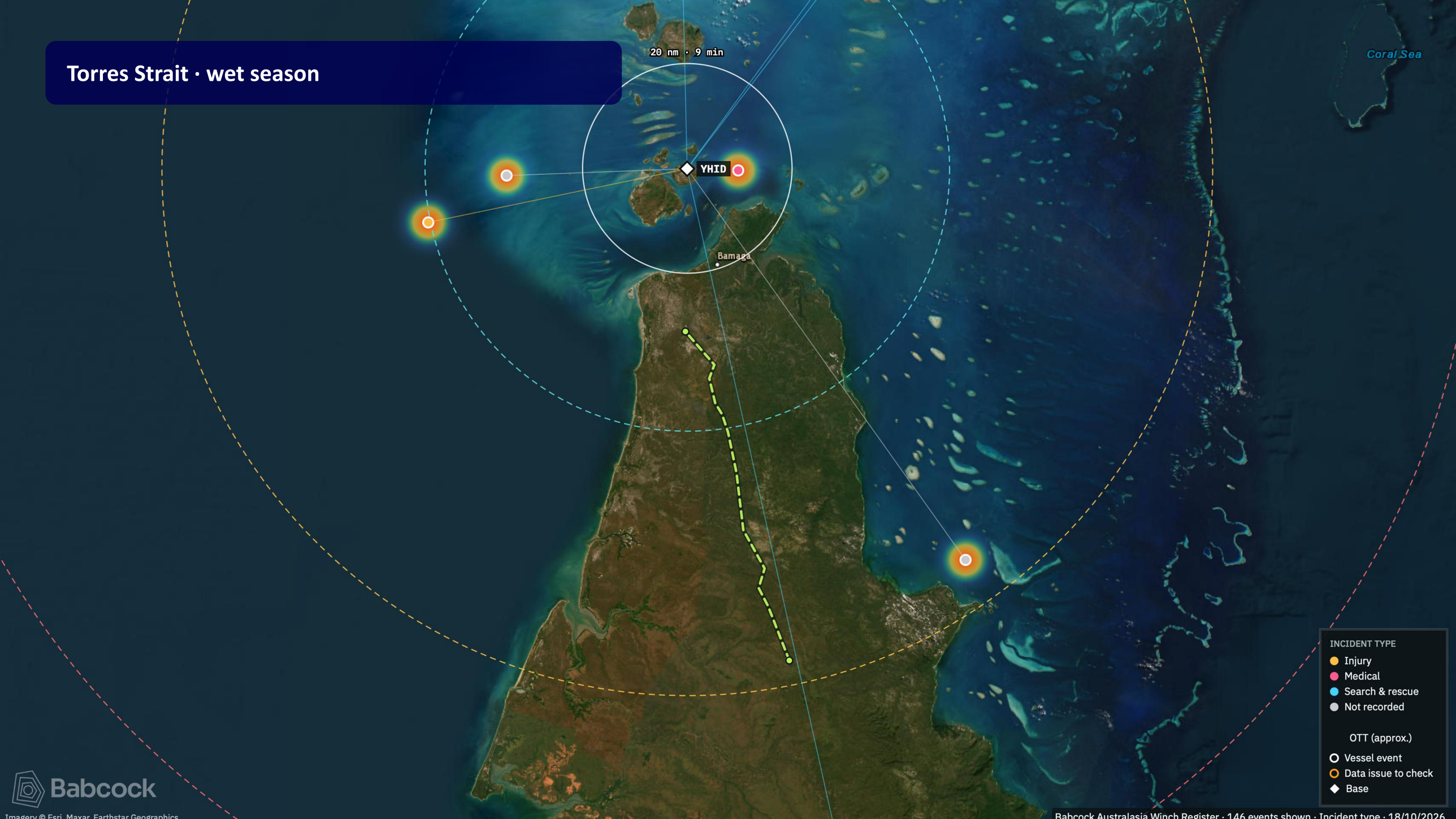
Babcock
Imagery © Esri, Maxar, Earthstar Geographics

Next: Torres Strait

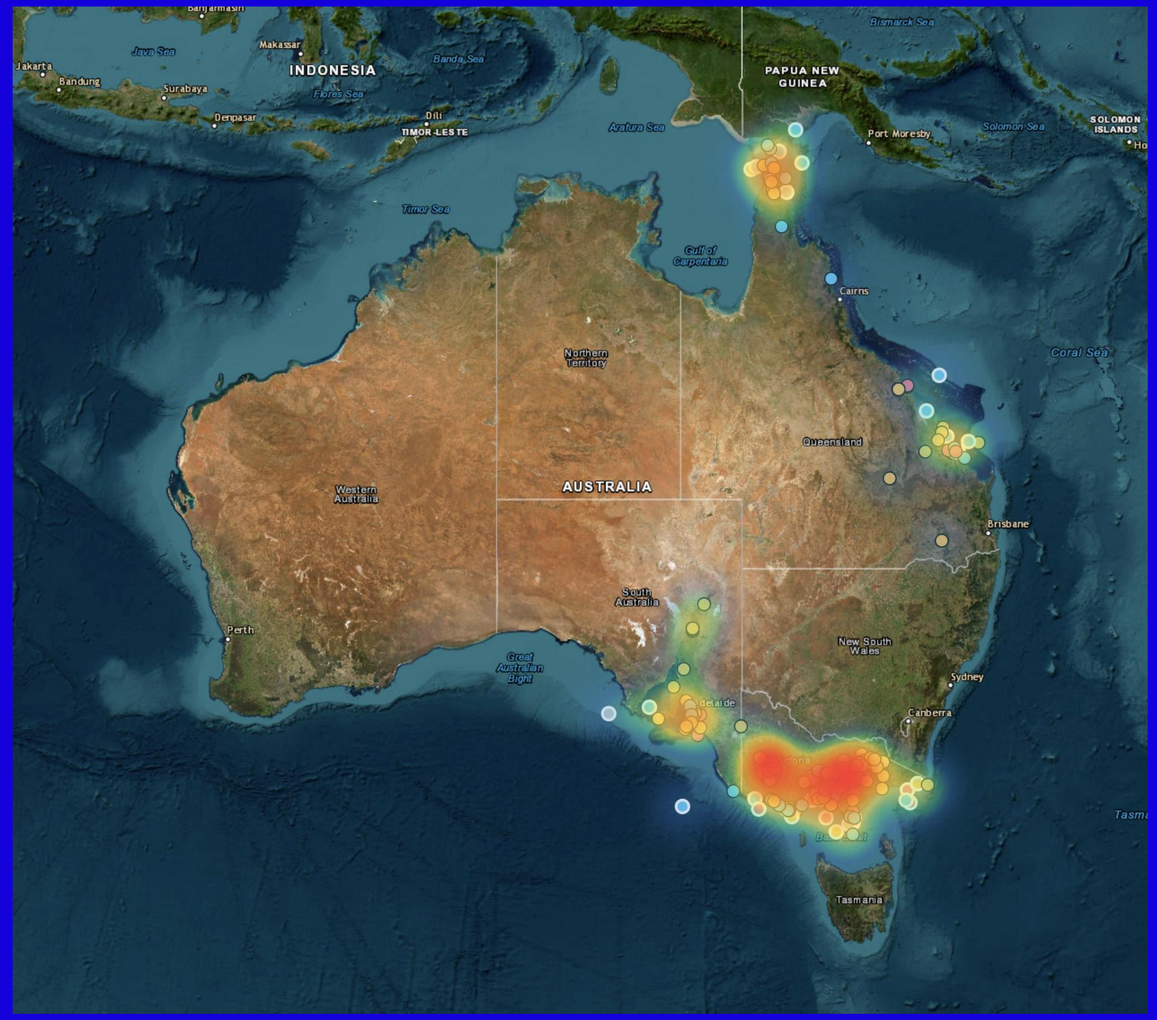


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Torres Strait · dry season
Merauke
INDONESIA
PAPUA NEW
100 nm · 46 min
Daru
Gulf of Papua
Arafura Sea
50 nm · 23 min
Torres Strait
20 nm · 9 min
YHID
INCIDENT TYPE
Injury
Medical
Search & rescue
Not recorded
OTT (approx.)
Vessel event
Data issue to check
Base
Babcock
Imagery © Esri, Maxar, Earthstar Geographics
Babcock Australasia Winch Register · 249 events shown · Incident type · 18/10/2026


Torres Strait · wet season
20 nm · 9 min
YHID
Bamaga
Coral Sea
INCIDENT TYPE
Injury
Medical
Search & rescue
Not recorded
OTT (approx.)
Vessel event
Data issue to check
Base
Babcock
Imagery © Esri, Maxar, Earthstar Geographics
Babcock Australasia Winch Register · 146 events shown · Incident type · 18/10/2026

Winch locations, 2023–2026



271 winches across three states

64%	21%	15%
Victoria · 174	Queensland · 57	South Australia · 40

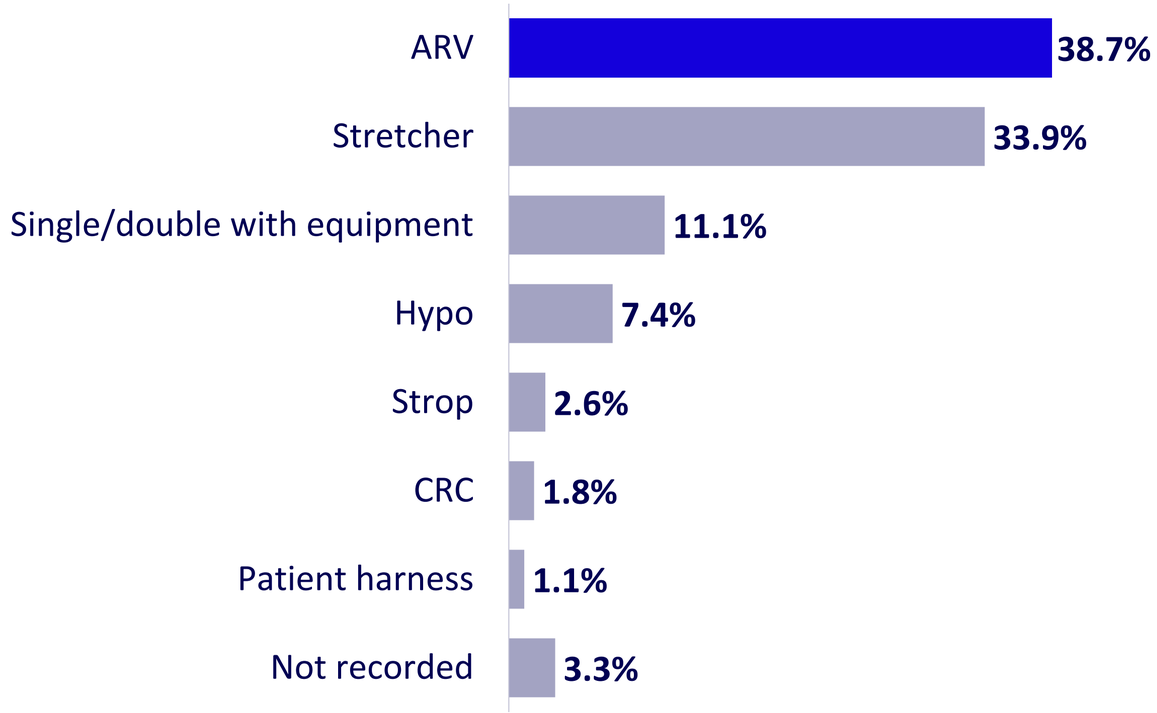
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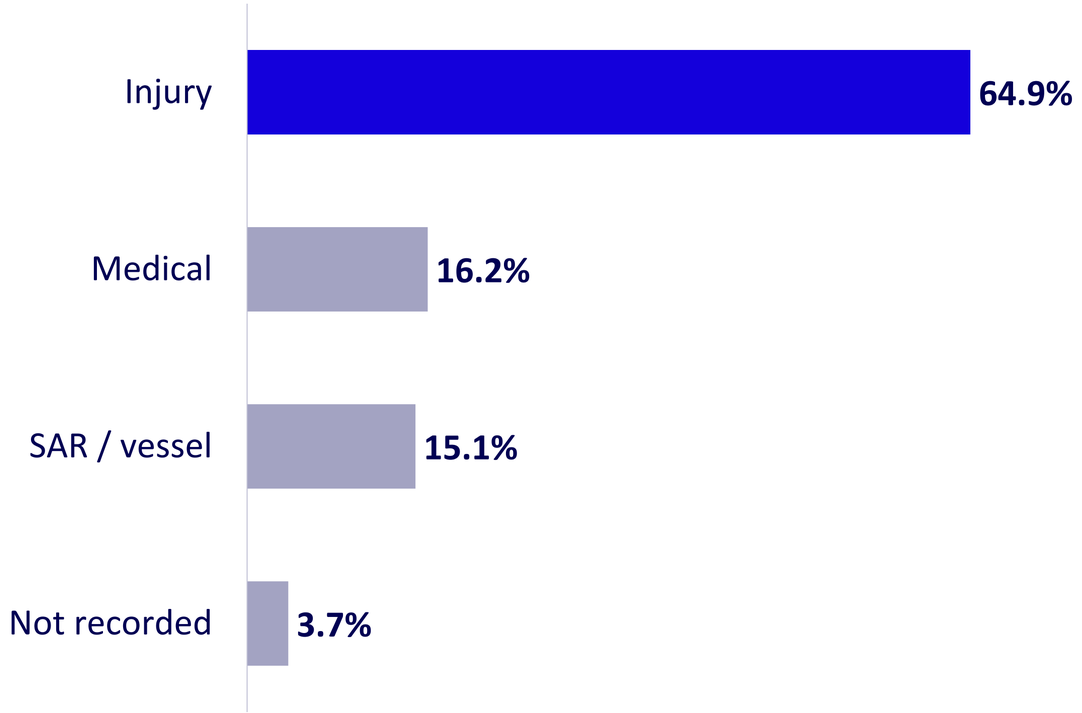
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Recovery equipment and patient condition

Share of 2023–2026 winches by recovery equipment



Share of 2023–2026 winches by recorded condition



Source: Babcock Mission Critical Services winch data, Jan 2023 to Oct 2026 (2026 year to date). Equipment entries listing several items are grouped by the first matching keyword; conditions grouped from the free-text field; SAR / vessel includes searches, ships and kayakers.

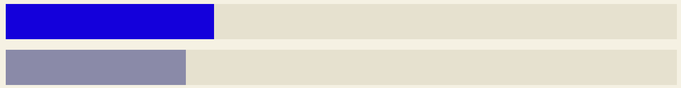
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Babcock vs global evidence

Night winches

15.5% Babcock

13.4% Global evidence



Difference: **+2.1 pts**

Babcock 42 of 271 · Global 6 papers, 19,192 winches

Weekend winches

43.5% Babcock

45.1% Global evidence



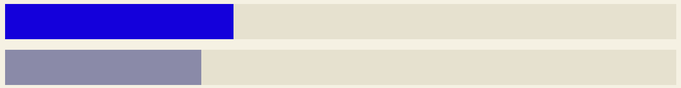
Difference: **–1.6 pts**

Babcock 118 of 271 · Global 5 papers, 1,047 winches

Water and vessel winches

17.0% Babcock

14.6% Global evidence



Difference: **+2.4 pts**

Babcock 46 of 271 · Global 8 papers, 4,076 winches

All three measures sit within 2.5 percentage points of the global evidence.

Global: scoping review of 28 peer-reviewed papers (average of reported percentages). Babcock: MASTER winch data, Jan 2023 to Oct 2026 (2026 year to date). Night = NVG used; water = vessel and other water events.

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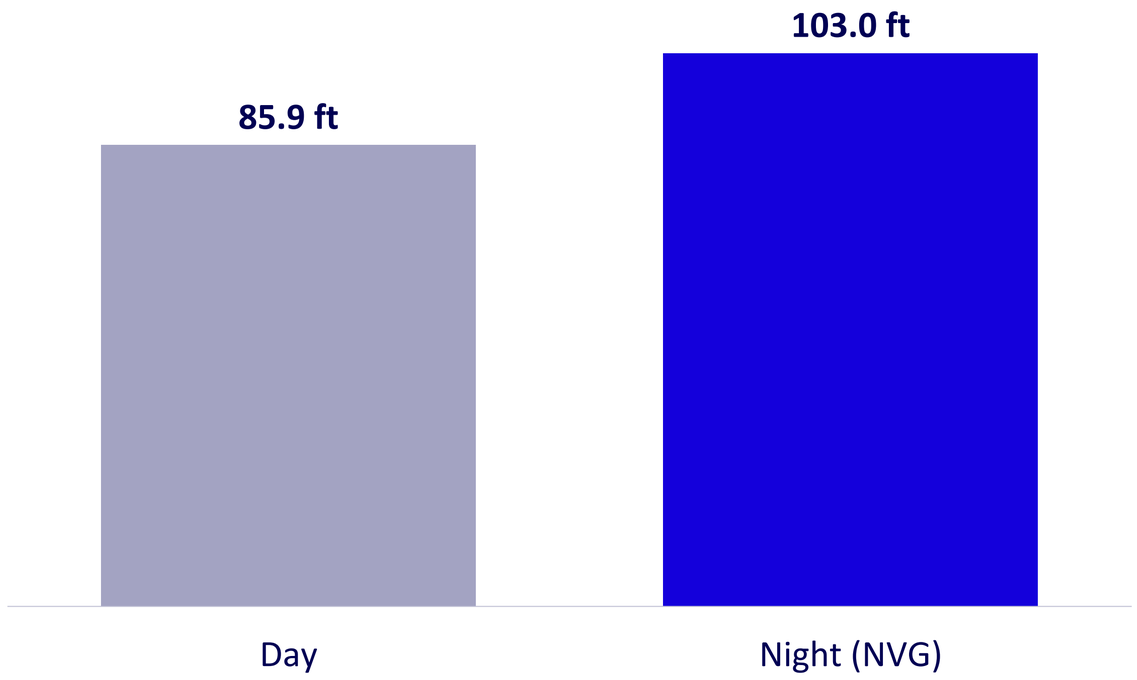
Day vs night winching

19.9%

higher average winch height at night (NVG) than by day

- 15.5% of winches at night; 84.5% by day
- Day height average 85.9 ft
- Night height average 103.0 ft

Average winch height, 2023–2026

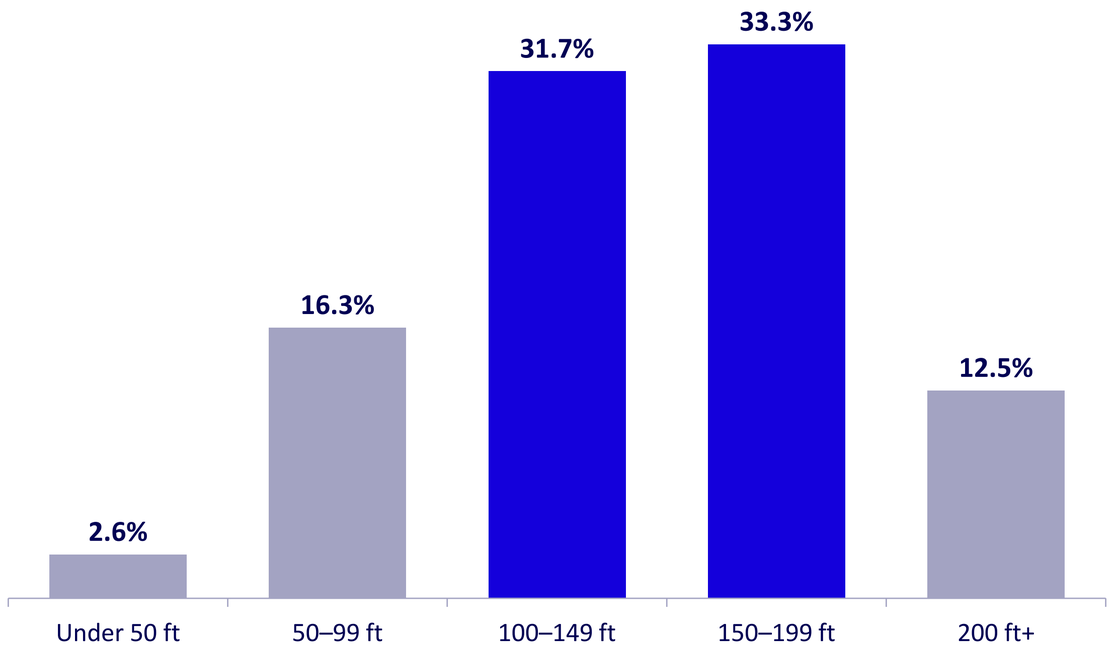


Source: Babcock Mission Critical Services winch data, Jan 2023 to Oct 2026. NVG: night vision goggles. Heights from 200 winches with a recorded height.

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Spin rate rises with winch height

Swing or spin rate by winch height, 2023–2026



Highest rate

33.3% of winches at 150–199 ft (9 of 27)

Under 50 ft: 2.6% (1 of 38)

Stretcher 22.8% vs ARV 13.5%; night 19.0% vs day 16.2%

Qualitative factors

- Downwash
- Terrain
- ARV (splinted patient)
- Limited reported wind
- AW139

Mitigators

- Swing and spin in emergency briefs, including flyaway
- Taglines for ARVs
- Spin emergencies practised in training and checking flights

Source: Babcock MASTER winch data, Jan 2023 to Oct 2026. Rate = swing/spin events ÷ events with a recorded outcome. 70 winches with no recorded height not shown; only 8 winches were above 200 ft.

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Extraction by other means





Last resort

winching is used when other extraction methods are not viable

- Winching operations carried out as a last resort
- Growing access to ground and high-angle rescue teams

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Future directions

01

Global data

Further global data collection

02

Benchmarking

Comparison of Australian NACA and RTSc scores to global trends

03

Flight data

Strengthen our data with input of Flight Data Analysis Program (FDAP)

04

Training

Ensure training remains relevant



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Let’s stay in touch

Ryan Hurrell

Deputy Chief Aircrew Officer, Babcock Australia

ryan.hurrell@babcock.com.au

+61 413 815 653

Scan to save my contact

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