

Tropical cyclone advisories

The Bureau of Meteorology operates one of 7 Tropical Cyclone Advisory Centres (TCAC), providing monitoring and forecasting of tropical cyclones for the aviation industry.

Tropical cyclone advisories

Tropical cyclone advisories in textual form (TCA) and graphical form (TCG) provide information concerning the position of the tropical cyclone's centre, its direction and speed of movement, the central pressure and the maximum surface wind near the centre.

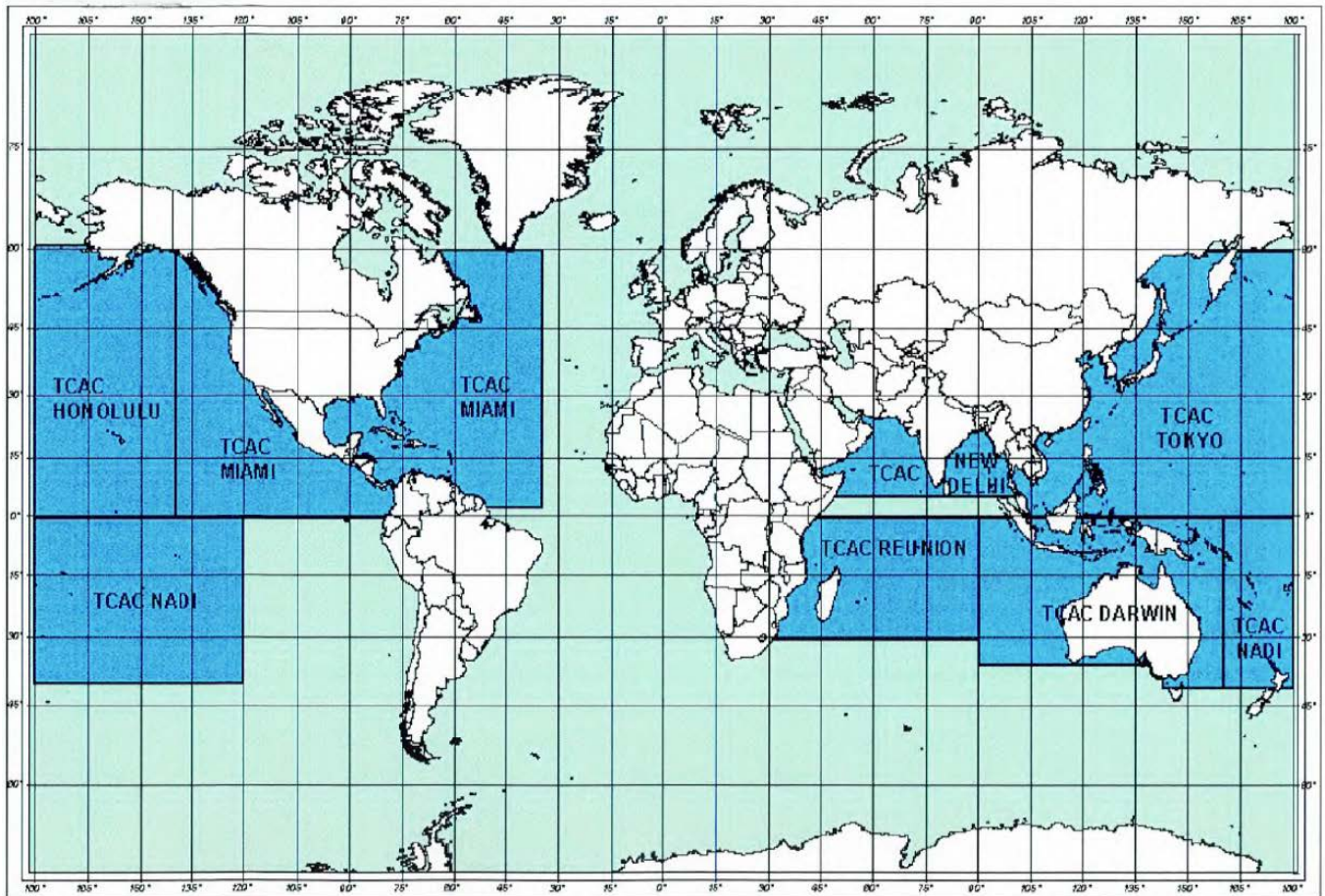
The TCAC Darwin is one of 7 ICAO-designated TCACs that issue TCAs. Tropical cyclone SIGMET messages are then prepared by the relevant Meteorological Watch Offices (MWO) from the information contained in the TCA.

The Bureau of Meteorology operates the TCAC Darwin and the Tropical Cyclone Warning Centre (TCWC) Melbourne. The TCWC is staffed by meteorologists who are specially trained in the observation and forecasting of tropical cyclones.

Issue frequency: TCA are issued every 6 hours, or more often if significant new information becomes available.

TCA message structure

WMO Header	The World Meteorological Organization header (facilitates international message exchange)
TC ADVISORY	The message identifier is TC (tropical cyclone) ADVISORY
STATUS	The status indicator is only used when the message issued is a test (TEST) or an exercise (EXER)
DTG	Time of origin of the advisory. The date/time group (DTG) is in the format: year, month, day and time of issue, followed by the letter Z (coordinated universal time, UTC).
TCAC	Name of issuing office (the Tropical Cyclone Advisory Centre)
TC	Tropical cyclone name, or NN for an unnamed TC
ADVISORY NR	Year in full and message number. There will be a separate sequence for each tropical cyclone.
OBS PSN	Day and time (in UTC) and position of the centre of the tropical cyclone (in degrees and minutes)
CB	Location of CB cloud (referring to latitude and longitude (in degrees and minutes)) and vertical extent (flight level). In the case of CB clouds associated with a TC covering more than one area, this element can be repeated.
MOV	Movement, indicated by a direction using one of the 16 compass radials, and the speed in knots (KT). The abbreviation STNR (stationary) is used if no significant movement is expected.
INTST CHANGE	Changes of maximum surface wind speed at time of observation: Intensifying (INTSF), weakening (WKN) or no change (NC)
C	Central pressure of the tropical cyclone in hectopascals (HPA)
MAX WIND	Maximum surface wind near the centre (mean over 10 minutes, in knots (KT))
FCST PSN (+6, 12, 18, 24 HR)	Date and time in UTC (+6, +12, +18 and +24 hours from the time of origin of the advisory (DTG)) Forecast position (in degrees and minutes) of the centre of the tropical cyclone
FCST MAX WIND (+6, 12, 18, 24 HR)	Forecast of maximum surface wind in knots (KT) (+6, +12, +18 and +24 hours from the time of origin of the advisory (DTG))
RMK	Remarks, as necessary
NXT MSG	Expected year/month/day and time (in UTC) of issuance of the next advisory. NO MSG EXP is used when no further advisories are expected.



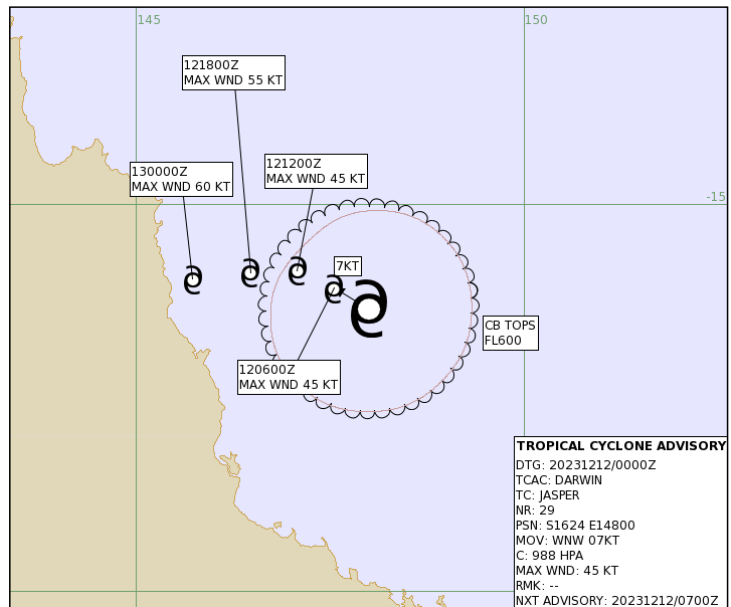
Tropical Cyclone Advisory Centres – areas of responsibility

TCA example

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FKAU05 ADRM 120049
TC ADVISORY
DTG: 20231212/0000Z
TCAC: DARWIN
TC: JASPER
ADVISORY NR: 2023/29
OBS PSN: 12/0000Z S1624 E14800
CB: WI 150NM OF TC CENTRE TOP FL600
MOV: WNW 07KT
INTST CHANGE: NC
C: 988HPA
MAX WIND: 45KT
FCST PSN +6HR: 12/0600 S1606 E14736
FCST MAX WIND +6HR: 45KT
FCST PSN +12HR: 12/1200 S1554 E14706
FCST MAX WIND +12HR: 45KT
FCST PSN +18HR: 12/1800 S1554 E14630
FCST MAX WIND +18HR: 55KT
FCST PSN +24HR: 13/0000 S1600 E14542
FCST MAX WIND +24HR: 60KT
RMK: NIL
NXT MSG: 20231212/0700Z
    
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TCG example



Further aviation educational resources produced by the Bureau of Meteorology can be found at www.bom.gov.au/aviation/knowledge-centre.

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| A vertical line in the margin indicates a change or addition since last update.

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