



Australian Government
Bureau of Meteorology

Tropical Cyclone *Max* 9 -19 March 1981

Bureau of Meteorology

A. Summary

A low that formed near the Top End coast early in March formed into Tropical Cyclone *Max* near the coast and passed close to Darwin on 12 March. *Max* then intensified as it moved west then west southwest over open waters peaking on 15 March before dissipating on 19 March.

Only minor structural damage was experienced at Darwin. Nevertheless, a large number of trees were uprooted, some bringing down power lines and blacking out parts of the city.

B. Meteorological Description

Max was the only cyclone to develop in the Northern Region during the 1980-81 season. In early March the monsoon trough moved northward to lie along the north coast. A low was detected on synoptic charts and an organised cloud mass was apparent near Darwin on 3 March. The system tracked eastwards into the Arafura Sea and showed signs of development before moving inland near Maningrida on 7 March. Re-intensification occurred on 9 March as the low moved back into the Arafura Sea near Elcho Island, on a west-northwest track.

After crossing the Cobourg Peninsula during the morning of 11 March, *Max* changed direction to west-southwest, eventually passing within 15 km of Darwin Airport radar at 1900 UTC 11 March. The detailed track that it was possible to maintain when the cyclone was within radar range showed sinusoidal-type oscillations from this basically west-southwest direction. Maximum sustained winds of 74 km/h were recorded at the airport and the central pressure was estimated at 993 hPa.

Max intensified and changed course to westerly as it moved away from the Top End coast and into the Timor Sea.

The cyclone tracked steadily westward during the 14 March along the northern edge of a high pressure ridge that became well established over Western Australia. GMS imagery showed a well-defined eye late on the 14 March and *Max* peaked in intensity on 15 March with a central pressure estimated at 960 hPa and maximum winds of about 150 km/h.

On the 15 March and 16 March, *Max* changed direction to the west southwest. It finally weakened as it came under the influence of a strong upper level north-

westerly flow which sheared the cloud away from the storm's centre during the 17 and 18 March.

The first cyclone warning for Darwin was issued at 5 am CST 11 March and by mid afternoon all normal business activity had ceased. An estimated 2500 people left the city, while 7000 spent the night in public cyclone shelters. Darwin Airport was closed at 10 pm and all light aircraft ferried inland to Batchelor or Tindal. Small craft moved to sheltered areas in Darwin Harbour, while large vessels left port.

Widespread flooding occurred in the uranium province, with most rivers at their highest known levels; the Pan-continental Mining camp at Jabiluka was evacuated on 12 March

C. Impact

No loss of life or major injuries was reported and only minor structural damage was experienced at Darwin. Nevertheless, a large number of trees were uprooted, some bringing down power lines and blacking out parts of the city.

D. Observations

Wind

Darwin recorded a maximum wind gust of 107 km/h from the southeast at approximately 1915 UTC 11 March. At this time *Max* was located 15 km north northwest of the airport.

Rain

Heavy rainfall was reported over Arnhem Land during this period; 368 mm at Cooper Creek in the 24 hours to 9 am 7 March, and 426 mm at Maningrida in the 24 hours to 9 am 10 March.

Table 1. Best track summary for Tropical Cyclone *Max* 9 – 19 March 1981.

Note: Add 8 hours to convert to WST. Refer to best track database for complete track details.

Year	Month	Day	Hour (UTC)	Latitude S	Longitude E	Max Wind knots	Central Pressure hPa	Radius of Gales nm
1981	3	9	2000	11.6	135.1		1007	
1981	3	9	2300	11.6	135.0		1007	
1981	3	10	0200	11.6	134.8		1006	
1981	3	10	0500	11.5	134.5		1004	
1981	3	10	0800	11.4	134.3		1002	
1981	3	10	1100	11.4	134.1		1000	
1981	3	10	1400	11.4	133.7		1000	
1981	3	10	1700	11.5	133.4		998	
1981	3	10	2000	11.5	133.2		998	
1981	3	10	2300	11.5	133.0		998	
1981	3	11	0200	11.5	132.8		998	
1981	3	11	0500	11.7	132.5		998	
1981	3	11	0800	11.9	132.2		996	
1981	3	11	1100	11.9	131.8		994	
1981	3	11	1400	11.9	131.5		994	
1981	3	11	1700	12.2	131.0		993	
1981	3	11	2000	12.3	130.8		993	
1981	3	11	2300	12.4	130.5		992	
1981	3	12	0200	12.4	130.2		990	
1981	3	12	0500	12.6	129.7		985	
1981	3	12	0800	12.8	129.3		985	
1981	3	12	1100	12.8	128.8		985	
1981	3	12	1400	12.9	128.3		980	
1981	3	12	1700	12.9	127.8		980	
1981	3	12	1800	12.9	127.6		980	
1981	3	12	2000	12.9	127.3		980	
1981	3	12	2300	12.9	126.9		975	
1981	3	13	0500	12.8	125.9		975	
1981	3	13	0800	12.7	125.5		975	
1981	3	13	1100	12.5	125.3		970	
1981	3	13	1200	12.3	125.3		969	
1981	3	13	1400	12.4	125.0		970	
1981	3	13	1700	12.2	124.5		967	
1981	3	13	1800	12.2	124.5		967	
1981	3	14	0000	12.1	123.4		965	
1981	3	14	0600	12.0	122.5		963	
1981	3	14	1200	12.0	121.4		962	
1981	3	14	1800	12.1	120.1		961	
1981	3	15	0000	12.4	118.9		960	
1981	3	15	0100	12.5	118.8		960	
1981	3	15	0600	12.7	118.1		961	
1981	3	15	1200	13.0	117.2		962	
1981	3	15	1800	13.4	116.4		963	
1981	3	16	0000	13.8	115.4		965	
1981	3	16	0600	14.4	114.5		967	
1981	3	16	1200	14.8	113.5		969	
1981	3	16	1800	15.2	112.5		972	
1981	3	17	0000	15.4	111.5		975	
1981	3	17	0600	15.6	110.4		978	
1981	3	17	1200	15.6	109.2		982	
1981	3	17	1800	15.7	107.7		987	
1981	3	18	0000	16.0	106.2		995	
1981	3	18	0600	16.3	104.4		1000	
1981	3	18	1200	16.6	102.6		1003	
1981	3	18	1800	16.8	100.7		1005	
1981	3	19	0000	17.0	98.8		1006	

Figure 1. Track of Severe Tropical Cyclone Max 9 – 19 March 1981.
All times in WST.

