



Australian Government
Bureau of Meteorology

Severe Tropical Cyclone *Rhonda* 11 – 16 May 1997

Perth Tropical Cyclone Warning Centre
Bureau of Meteorology

A. Summary

TC *Rhonda* was a late season cyclone that formed from an area of persistent convection near 10°S 80°E. It had become a cyclone by the morning of 11 May and tracked in an east southeast direction for its entire lifetime. *Rhonda* intensified to a Category 4 storm during 14 May south-southeast of Cocos Island and then weakened before dissipating and being absorbed into a cut-off low pressure system near the west coast of West Australia during 17 May.

There was no known direct impact except for the large swell from *Rhonda* being reported at Cocos Islands, which disrupted ferry services, and also off the northwest Australian coast, where one vessel was reported to be swamped by swell.

B. Meteorological Description

Intensity

Rhonda formed from an area of persistent convection near 10°S 80°E in an active phase of the ISO. It reached cyclone strength on 11 May 1997. *Rhonda* remained south of the mid to upper-level ridge axis and tracked in an east-south-easterly direction on the northeast flank of a mid-level trough for its entire life-time. Good upper outflow allowed *Rhonda* to intensify to 105 knots during 14 May when south of Cocos Island. As the system moved further south, upper shear increased and *Rhonda* then weakened quickly before dissipating and being absorbed into a cut-off low pressure system near the west coast of Western Australia during 17 May.

Motion and Structure

At all stages during its lifetime *Rhonda* remained south of the mid to upper level ridge axis and tracked in a east southeast direction on the northeast flank of a mid-level trough to its southwest. As it intensified it accelerated to the east southeast before finally shearing in the increasing upper north-westerly flow. The operational forecasting problem was: would *Rhonda* continue to accelerate and intensify as it moved to the southeast ahead of a cut-off low pressure system to its southwest? TC *Rhonda* always remained on the far northeast flank of the mid-level trough to its southwest and thus never came under the influence of a more north-westerly steering flow to the east of the mid-level trough.

C. Impact

Cyclone watches were briefly issued for Cocos Island and cyclone warnings were issued for the upper west coast of Western Australia, but there was no direct impact on either of the islands or Western Australia from the system. However large swell from *Rhonda* was reported at Cocos Islands, which disrupted ferry services, and also off the northwest Australian coast, where one vessel was reported to be swamped by swell.

There was no report of significant impact on either the islands or Western Australia from *Rhonda*.

D. Observations

There was no report of significant rainfall and winds associated with TC Rhonda.

Table 1. Best track summary for *Rhonda*, 10 – 17 May 1997. Note: Add 8 hours to convert to WST. Refer to best track database for complete track details.

Year	Month	Day	Hour (UTC)	Position Latitude S	Position Longitude E	Max wind 10min knots	Central Pressure hPa	Rad. of Gales nm
1997	05	10	0100	11.0	84.5	25	1000	
1997	05	10	1300	11.0	87.0	30	998	
1997	05	11	0100	11.5	90.1	35	995	80
1997	05	11	1000	11.9	91.0	40	990	85
1997	05	11	1600	12.0	91.3	40	990	90
1997	05	11	2200	12.2	91.5	45	985	95
1997	05	12	0400	12.2	91.7	45	985	95
1997	05	12	0700	12.3	91.8	55	980	105
1997	05	12	1000	12.4	92.0	55	980	110
1997	05	12	1600	12.5	92.3	60	975	110
1997	05	12	2200	12.8	92.8	60	975	110
1997	05	13	0400	13.2	93.1	65	970	110
1997	05	13	0700	13.4	93.3	70	965	110
1997	05	13	1000	13.6	93.8	75	960	110
1997	05	13	1600	14.3	94.9	80	955	110
1997	05	13	2200	15.1	95.9	85	950	110
1997	05	14	0100	15.5	96.3	90	945	110
1997	05	14	0400	15.9	96.8	95	935	110
1997	05	14	0700	16.4	97.4	95	940	110
1997	05	14	1000	17.0	98.0	90	945	110
1997	05	14	1600	17.8	99.2	85	950	110
1997	05	14	2200	18.7	100.6	80	955	110
1997	05	15	0100	19.1	101.2	70	965	110
1997	05	15	0400	19.7	101.9	65	970	110
1997	05	15	1000	20.8	103.4	60	975	90
1997	05	15	1600	22.0	104.9	55	980	80
1997	05	15	2200	23.1	106.8	45	985	65
1997	05	16	0100	23.6	107.6	40	990	55
1997	05	16	0400	24.1	108.3	35	995	55
1997	05	16	0700	24.6	109.0	30	998	
1997	05	16	1000	24.7	109.3	25	1000	
1997	05	16	1300	24.8	109.6	25	1000	
1997	05	16	1600	24.8	109.8	25	1000	
1997	05	16	1900	24.8	110.1	25	1000	
1997	05	16	2200	25.1	110.5	25	1000	
1997	05	17	0100	25.6	110.8	25	1000	
1997	05	17	0400	26.0	111.3	25	1000	
1997	05	17	1000	27.3	112.2	20	1005	

Figure 1. Track of Tropical Cyclone Rhonda, 11 -17 May 1997
All times in WST.

