



Australian Government
Bureau of Meteorology

Tropical Cyclone *Bessi*

27 - 30 November 2001

Perth Tropical Cyclone Warning Centre
Bureau of Meteorology

A. Summary

An Indian Ocean low was named Tropical Cyclone *Bessi* on 27 November near 8°S 94°E, about 560 km NW of Cocos Island. *Bessi* moved in a general southwesterly direction and did not affect any island communities. *Bessi* moved west of 90°E at about 1900 UTC on 29 November entering the area of responsibility of Mauritius/La Reunion Meteorological Services and was renamed TC *Bako*.

B. Meteorological Description

Intensity analysis

A low was first identifiable on the monsoon trough on 24 November. Strong low-level westerlies to the north combined with fresh trade winds to the south to provide the convergence for development through to 27 November when the low was named TC *Bessi*.

Motion

The low initially moved to the southwest under the influence of mid to upper-level northeasterlies. Later on 28 November the low-level southeasterlies weakened and *Bessi* moved into an area of stronger upper level north to northeasterly winds. The increased shear weakened the cyclone and the stronger steering winds accelerated *Bessi* to the south particularly on 29 November.

At about 0500 WST 30 November *Bessi* moved west of 90°E into the area of responsibility of La Reunion and was subsequently renamed TC *Bako*. On 30 November the cyclone moved close to the upper level ridge and redeveloped as it recurved to the west southwest. Intensification continued on the 1st December but by then the cyclone was well west of 90°E.

Structure

Bessi was a mid sized cyclone that had a radius of gales around 180km. It reached maximum intensity (while east of 90°E) on 28 November demonstrating stronger rotational features and surface winds reaching 50 knots on the 0800 WST Quikscat image. However, subsequent images, for example the 2000 WST SSMI microwave image show that the low-level

centre was east of the deep convection and the operationally-located centre that was based on earlier images, for example the IR image at 1225 WST. The difference in location also resulted in a less intense central pressure than the operational values.

C. Impact

While there were no direct impacts to coastal or island communities there was an economic impact owing to the disruption to industry in the northwest.

D. Observations

Nil.

Table 1. Best track summary for *Bessi* 27 November – 1 December 2001.

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
2001	11	25	0600	7.0	95.6	20	1004	
2001	11	25	1200	7.6	94.9	20	1004	
2001	11	25	1800	7.7	94.9	20	1004	
2001	11	26	0000	7.8	94.8	25	1002	
2001	11	26	0600	7.9	94.8	25	1000	
2001	11	26	1200	8.0	94.8	30	998	
2001	11	26	1800	8.2	94.4	30	998	
2001	11	27	0000	8.3	94.0	35	995	95
2001	11	27	0600	8.3	93.6	35	994	95
2001	11	27	1200	8.6	93.2	40	992	95
2001	11	27	1800	8.9	92.8	40	990	95
2001	11	28	0000	9.5	92.4	50	985	95
2001	11	28	0600	9.7	92.3	55	980	95
2001	11	28	1200	10.4	92.3	50	984	95
2001	11	28	1800	10.9	92.0	45	988	80
2001	11	29	0000	11.2	91.8	40	990	65
2001	11	29	0600	12.2	91.5	40	992	45
2001	11	29	1200	13.4	91.2	35	994	30
2001	11	29	1800	13.9	90.2	35	994	25
2001	11	30	0000	14.2	89.3	40	992	25
2001	11	30	0600	14.5	88.9	40	990	30
2001	11	30	1200	14.7	88.0	45	988	45
2001	11	30	1800	14.9	87.0	50	985	55
2001	12	1	0000	15.0	86.2	50	982	55
2001	12	1	0600	15.1	85.6	55	978	80
2001	12	1	1200	15.3	85.5	60	972	80

Figure 1. Track of Tropical Cyclone Bessi 25 November – 1 December 2001
All times in WST.

