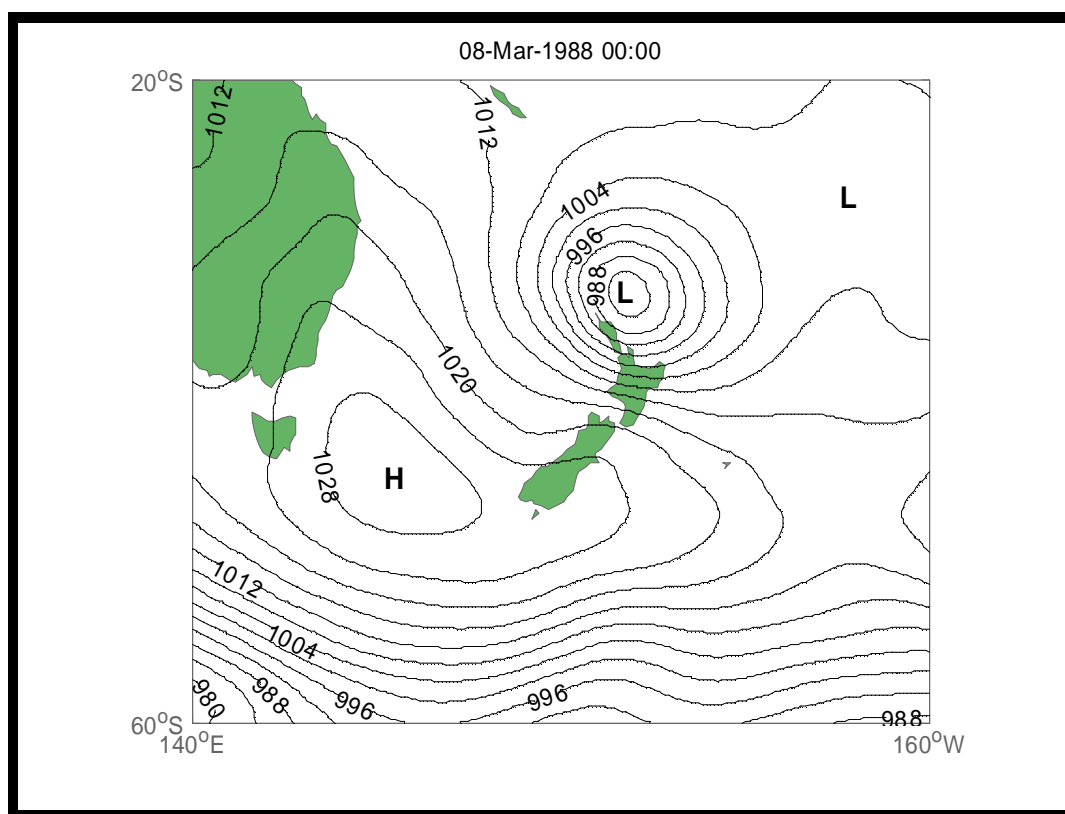


Coastal Storm Database - Event Summary

Date: 7-9 Mar 1988	Wind Direction: SE
Event Type: Wind	Gisborne Duration (Hours): 34
Location: Gisborne/Wellington	Wellington Duration (Hours): 37
Origin: Subtropics	Pressure Gradient: NE to ENE
Type: Subtropical Low	



Synoptic Conditions

A cyclone from the subtropics north of New Caledonia moved southward towards NZ. This cyclone was the remnants of tropical cyclone Bola. On the 6th, the cyclone extended over the North Island when it was north-northeast of North Cape. The pressure gradient strengthened considerably on the 7th, partly due to a large intense anticyclone in the south Tasman sea having a ridge over the South Island. Very strong ENE winds swept the upper North Island and continued through to the 8th as the cyclone became stationary near North Cape and the ridge across the South Island strengthened and moved northward. The cyclone was then forced to move westward (i.e. retrograde) after the anticyclone crossed the South Island on the 8th, and this weakened the ENE to NE pressure gradient over the North Island. The cyclone then moved southward in the eastern Tasman Sea.

Maximum Wave Statistics

Location	Max Wave Height (m)	Period (s)
Wellington	3.9	8
Napier	3.7	7
Gisborne	4.2	8

*Highest Significant Wave Height

Maximum Wind Gusts (kph and dir)

	Date	Gisborne	Napier	Wellington
	07-Mar-88	85 (SE)	78 (SE)	115 (S)
	08-Mar-88	93 (SE)	70 (SE)	111 (S)
	09-Mar-88	65 (E)	74 (E)	70 (S)

Impact Area

Gisborne

Impacts and Damages

- Heavy flooding at Mangatuna near Tolaga Bay
- By 3am on 8th Waipaoa river reached record level of 11.42m (breaching 10.5m stopbanks)
- Estimated 3000 people evacuated from houses in Poverty Flats area
- Drowned stock and flattened crops (maize, tomatoes, kiwifruit, grapes)
- Sewage spread through city and rivers
- Water supply contaminated and led to shortages
- Major telephone and power failures throughout district; ~75% of East Coast without power)
- 200m breach of the Waipaoa stopbank led to extensive flooding over Poverty Bay flats; state of emergency declared
- Both main roads into Ruatoria washed out
- 3 people died as car swept away in floodwaters at Tolaga Bay

Wairoa

- Wairoa Bridge was destroyed and severed town water supply

Wellington

- Cook Strait ferries cancelled
 - Wellington airport closed due to low cloud
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Data Source

- 1 Three Die in Storm, Town Evacuated: Dominion Post, 8/03/1988, p1
 - 2 Violent Storm Kills Four: Evening Post, 8/03/1988, p1
 - 3 City Yet to Feel Full Effect of Waipaoa Breach: Gisborne Herald, 8/02/1988, p1
 - 4 Telephone's Disrupted: Gisborne Herald, 8/03/1988, p3
 - 5 Trouble Restoring Power: Gisborne Herald, 8/03/1988, p3
 - 6 Water Lost as Washout Splits Town: Gisborne Herald, 8/03/1988, p16
 - 7 City's Awash in Sea of Sewage: Gisborne Herald, 8/03/1988, p16
 - 8 Airport Reports Rainfall Eases: Gisborne Herald, 9/03/1988, p1
 - 9 Bad Weather Halts Flights: Evening Post, 7/03/1988, p3
 - 10 Wind Up-ends Small Car: Evening Post, 8/03/1988, p1
 - 11 Highway Repairs after Bola will take Five Years and about \$20m: Gisborne Herald, 25/11/1989, p20
 - 12 Disaster Leaves Trail of Misery: Dominion Post, 9/03/1988, p13
 - 13 Thousands Flee Floods: Dominion Post, 9/03/1988, p1
 - 14 Flood-hit Towns Run Out of Water: Dominion Post, 10/03/1988, p1
 - 15 Newly-Made Stopbanks 'Save Town': Gisborne Herald, 8/03/1988, p3
 - 16 Highest Rainfalls Recorded by District Stations: Gisborne Herald, 8/03/1988, p16
 - 17 2000 Evacuated in Bola's Aftermath: Gisborne Herald, 9/03/1988, p3
 - 18 Cost of Farming Loss to Be in Millions: Gisborne Herald, 9/03/1988, p12
 - 19 Coast Hammered; Towns in Isolation: Gisborne Herald, 9/03/1988, p1
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