



Ocean and coastal extreme waves (8m), 2012

Title
Ocean and coastal extreme waves (8m), 2012

Creator
Stats NZ

Date
2012

Date
2019-10

Description
These data estimate the occurrence of extreme wave events in coastal and oceanic waters for 2012, particularly for wave events where significant wave height exceeds a threshold of 8 metres and for a period of at least 12 hours. Significant wave height is defined as four times the square root of the variance of sea surface elevation due to wave motion.

Source
This index was generated using NIWA's operational wave forecasting model NZWAVE-12 (Gorman, 2016). This model has a 12-kilometre resolution and models wave heights. The model was created using: • wind from NIWA's NZLAM-12 weather forecast model • swell from NIWA's global wave forecast model We use a duration threshold of 12 hours as it allows semi-diurnal tides to cover their full low water to high water range. This means that there was both a high tide (when overtopping and damage to coastal infrastructure, for example, is most likely) and a low tide during an event. Gorman, R (2016). Extreme wave indices for New Zealand coastal and oceanic waters. NIWA Client Report HAM2016-014 prepared for the Ministry for the Environment.

Coverage
-54.49219 143.2617 -20.82031 184.6289

Type
grid

Language
eng

Subject
New Zealand

Subject
CLIMATE-AND-WEATHER

Subject
CLIMATE-AND-WEATHER-Meteorology

Subject
CLIMATE-AND-WEATHER-Extreme-weather-events

Subject
MARINE-Meteorology

Subject
MARINE-Coasts

Subject
OCEANOGRAPHY

Subject
OCEANOGRAPHY-Physical

Subject
climatologyMeteorologyAtmosphere

Subject
oceans

Subject
environment