



## Ocean and coastal extreme waves (8m), 2010

Title  
Ocean and coastal extreme waves (8m), 2010

Creator  
Stats NZ

Date  
2010

Date  
2019-10

Description  
These data estimate the occurrence of extreme wave events in coastal and oceanic waters for 2010, 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

Identifier  
<https://data.mfe.govt.nz/layer/104081-ocean-and-coastal-extreme-waves-8m-2010/>

Type  
grid

Language  
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Subject  
New Zealand

Subject  
CLIMATE-AND-WEATHER

Subject  
CLIMATE-AND-WEATHER-Meteorology

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

Subject  
MARINE-Meteorology

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MARINE-Coasts

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OCEANOGRAPHY

Subject  
OCEANOGRAPHY-Physical

Subject  
climatologyMeteorologyAtmosphere

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oceans

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environment