

# Wave Buoy

Know your Ocean!



## What is a wave buoy?

A wave buoy is an instrument that follows the movement of the ocean surface to measure wave height and wave direction. Wave monitoring buoys record wave data and transmit it via satellite to a shore station for analysis.

## Why is wave information important?

Wave buoys are important because they inform a range of people on the ocean conditions in near-real time.

Users of this information include scientists, divers, lifesavers, fishermen, boat operators and surfers.

The collected data is also used in coastal management and engineering, as well as for weather forecasting and monitoring, and assessing coastal flooding and erosion.



### WAVE INFORMATION IS CRITICAL FOR:

*Understanding the impacts of extreme wave events during cyclones and storms*

*Coastal developers*

*Climate change adaptation planning*

*Safe and efficient navigation*

*Renewable energy assessments*



**Real-time Wave Buoy Data Link:**  
<http://www.pacgeo.org/static/wavebuoy/>



Pacific  
Community  
Communauté  
du Pacifique

## How does it work?

As a wave monitoring buoy floats up and down each passing wave, its motion or movement is measured and electronically processed. Data from the wave monitoring buoys are transmitted via satellite to a nearby receiver station.

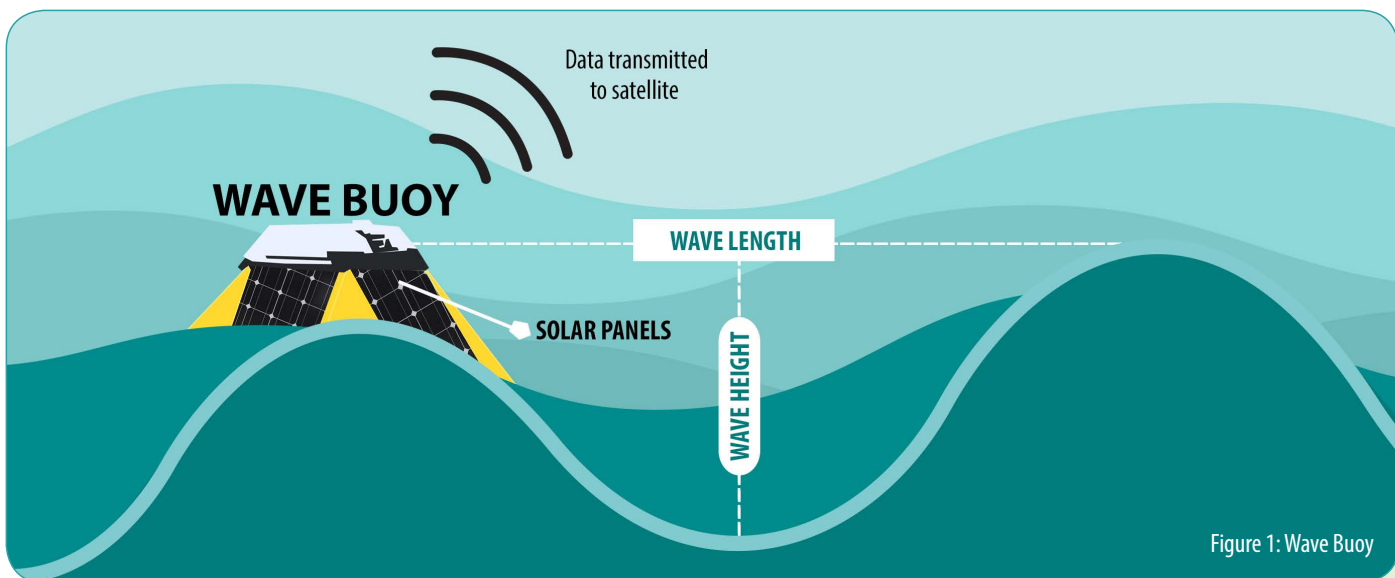


Figure 1: Wave Buoy

## How is the information used in Fiji?

The Fiji Meteorological Office uses this information for weather monitoring and forecasting.

The collected data will help forecasters improve their predictions and give out early warnings for coastal flooding events and extreme ocean conditions.

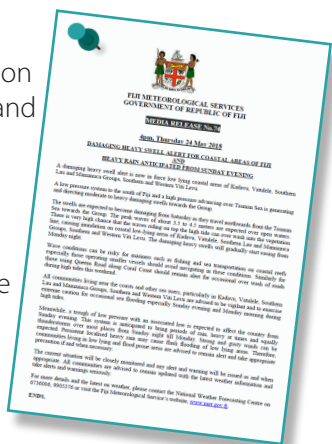


Figure 2: Advisory issued to public about the coral coast and over wash of roads during high tides.

## About the project:

The aim of Coastal Inundation Forecasting Demonstration Project in Fiji (CIFDP) is to strengthen the national forecasting and warning services on flooding and inundation in coastal zones, and in particular, to provide these tools for use by the Fiji Meteorological Service (FMS).

A team of ocean experts from the Pacific Community (SPC), the Fiji Meteorological Service, the Fiji Navy, the University of the South Pacific's Centre for Environment and Sustainable Development (PaCE-SD, USP), and the French National Research Institute for Sustainable Development (IRD) teamed up on the deployment of this wave buoy.

The mooring is a combination of a surface wave buoy, which is a key component of the Coastal Inundation Forecasting Demonstration Project in Fiji (CIFDP), and a subsurface array of temperature sensors, which is a component of the Coastal Oceanography in the Pacific, Risk and Adaptation project (COPRA).

## What should I do if I see a wave buoy?

Wave buoys should be left alone as they regularly transmit data and are rarely lost. If you are fishing, please do not use this as a mooring or anchor as it will get damaged.

### Please do not tamper with the instruments:

They have no commercial value but are collecting important data.

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