

METEOROLOGICAL SERVICES:

- GEO-HAZARDS
- OBSERVATION
- FORCAST
- CLIMATE
- CLIMATE CHANGE
- IT/ ENGINEERING

CLIMATE SERVICES:

- SEASONAL FORCAST
- ENSO ALERT
- AWARENESS
- AUXILLARY RF NETWORK
- ARCHIVE/ RESEARCH.

OBSERVATION:

- SYNOBTIC OBS
- UPPER AIR
- METARS
- CYCLONE WARNING

FORCAST SERVICES:

- CYCLONE WARNING
- AVIATION FORCAST
- PUBLIC WEATHER
- MARINE FORCAST
- TSUNAMI WARNING

CLIMATE CHANGE:

- ADAPTATION
- MITIGATION
- NEGOTIATION
- AWARENESS

There are 7 observatories in all provinces :

Analgauhat, Whitegrass, Lamap, Pekoa, Sola, Bauerfield,
Nambatu (Main station)

Research Website: <http://www.pmel.noaa.gov/tao/el-nino/el-nino-story.html>



Vanuatu Meteorological
Service

FOR MORE INFORMATION CONTACT US
OR COME TO THE OFFICE.

VANUATU METEOROLOGICAL SERVICES IS
LOCATED AT NAMBA TU AREA.

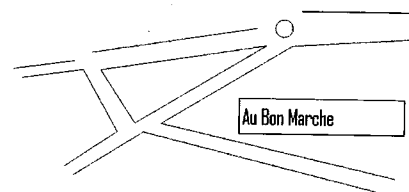


Visit Vanuatu Meteorological Department website on

www.meteo.gov.vu for more information on

- Daily weather
- Rainfall Outlook
- Tropical cyclone information
- Drought information
- Tsunami information

And many more weather related information. You can also visit us in person. The VMS is located at Namba 2 Area (rue de Maine), Port Vila next to SDA mission or opposite Au Bon Marche supermarket.



We are here

Meteorological Department



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Port Vila

Republic of Vanuatu

La Niña
In
Vanuatu

Your business tag line here.

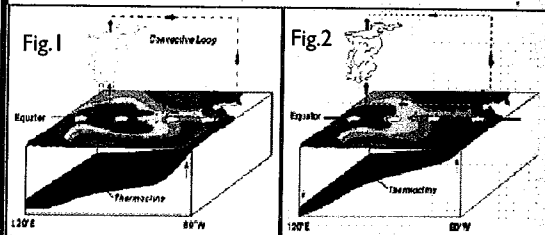
What is La Niña.

A La Niña like El Niño is also an even that occurs when cooler than normal sea surface temperatures form along the equator in the Pacific Ocean, specifically in the eastern to central Pacific.

The cooler water temperatures associated with La Niña are caused by an increase in easterly sea surface winds. Under normal conditions these winds force cooler water from below up to the surface of the ocean. When the winds increase in speed, more cold water from below is forced up, cooling the ocean surface.

The cool water temperatures of a La Niña slow down cloud growth overhead, causing changes to the rainfall patterns. Fig. 1 shows the Pacific Ocean surface temperature during normal times and Fig. 2 shows the surface temperature during an La Niña event.

The increased circulation that brings up cold water from below also brings up with it nutrients from the deeper waters. These nutrients feed the organisms at the bottom of the food chain, starting a reaction that increases life in the ocean.



La Niña and El Niño episodes tend to occur every three to five years. La Niña's are often preceded by an El Niño, however this cycle is not guaranteed.

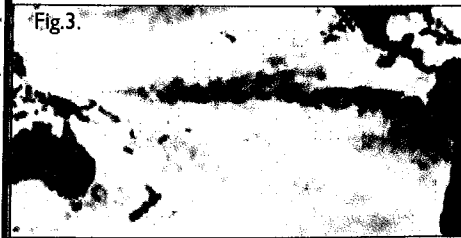


Fig. 3. show in blue the body of cool water, in other words cooler surface water (La Niña) flowing further West.

EFFECTS OF LA NIÑA

In the even of a La Niña areas west of the Pacific that have tropical climate will experience high intensity rainfall.

On the other hand countries situated East of the Pacific Ocean that are dry during normal weather conditions will experience even longer and more dry periods.

In Vanuatu the event of a la Niña causes intense rainfall all over the country and this affects the life's of the people by; damaging their homes, destroying infrastructure such as roads therefore costing the government reparation money. For farmers and people who depend on subsistence and commercial farming the downpour over long periods of time causes decay and rotting of crops.

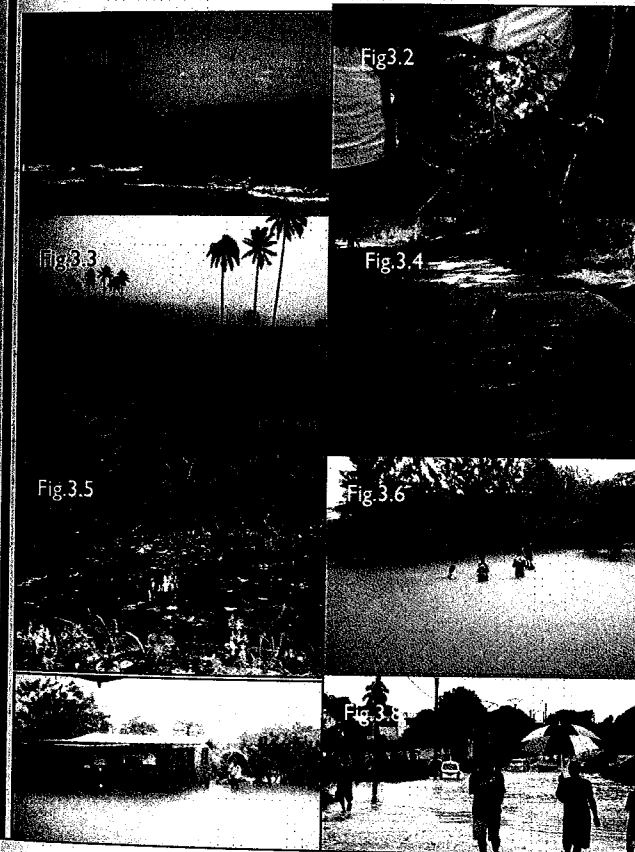


Fig.3.1: sedimentation, 3.2: Fungi growth, rotting of root crops and low yield, 3.3: flooding and extension of Swamps, 3.4: damaging of Infrastructures, 3.5 & 3.6: flooding of plains, 3.7 & 3.8: intense rainfall

For people living on flat plains they experienced flooding and damaging of their homes. Swampy areas were extended and problems arose when the roads in town were filled with rain water and vehicles were unable to pass through.

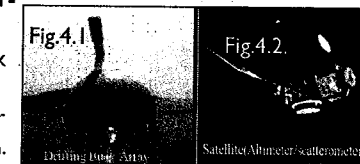
Also in the coastal areas, due to the intense rain fall, the rate of erosion inland was higher and this led further to increased runoff and sedimentation and siltation. The pictures on the left show some of these events during the La Niña event of 2008 in Vanuatu.

Although La Niña is commonly known for its negative impact on the environment, there are some positive impacts of the events. For instance La Niña events cause a lot of rainfall which encourages pasture growth, this then provides cattle with abundance of food resulting in healthy cattle that further results in the increase in livestock or the Cattle Industry.

MONITORING LA NIÑA.

There are scientists all over the world that study weather patterns, monitor and analyze natural events such as La Niña so that they can alert the public for the purpose of awareness and better preparation. Some equipments used to monitor these events are shown in Fig. 4.1 & 2. These equipments monitor ocean current and temperatures then report back the weather stations where this information is processed and analyzed so that the public and other sectors such as the aviation sector can use for the safety of aircrafts.

The Vanuatu Meteorological services has 4 sections that work together to provide people with weather forecast information.



This sections are:

observation, Forecast, climate and climate change. Together they collect raw data from 7 observatories in all the provinces. In addition to that there are also 30 of 60 national rainfall networks already established and operating in the country.

Fig. 5 & 6 show some of the equipments used by the Vanuatu Meteorological services to measure air temperature, Humidity and Rainfall.



Together with weather stations abroad such as BoM and NIWA, The Meteorological office is able to alert the public of upcoming natural events such as La Niña.