

**SECOND JCOMM MARINE INSTRUMENT WORKSHOP
FOR WMO REGIONAL ASSOCIATION IV
WITH FOCUS ON WAVE MEASUREMENTS FROM MOORED BUOYS**

(Gulfport and Stennis Space Centre, Mississippi, USA, 29 February-2 March 2016)

On the study of oceanography in the Dominican Republic, this has considerably taken small steps toward the goal of having a steady oceanographic monitoring.

Between oceanic features we can identify are:

- Warm coastal water throughout the year (ranging from 24 ° / 29 ° C).
- A high salinity due to high vaporization in the region (we have a measurement of 36 parts per thousand).
- Marine water low in oxygen, which is related to the high temperatures and salinity of the seas.
- Predominant semidiurnal Tides small amplitude, average of 90 cm in the northern coast and 30 cm on the south coast (two high and two low tides per day).
- Surge seen in the coast, they are caused by the trade winds (most of the time these winds move east). The waves of longer period, most often comes from the southeast. These waves are formed by disturbances in the Caribbean. During the summer, waves 2-4 meters high coming from Southeast 5% of the time.

Currently are used data the three buoy closer
to our territory: 41046, 42058 and 42059.
Also marine products
(<http://www.nhc.noaa.gov>).



National Office of Meteorology
Dominican Republic



In this same aspect is working with a topobathymetric map, they stand the marine protected areas, giving precise details of the country located between;

latitudes 17.5 and 21.0 north
lengths 67.5 and 72.5 west

National Office of Meteorology Dominican Republic



- Another measuring instrument are Buoy CREWS which to measure and monitor the impact of climate change in the coral settlements (this is a resource for early warning coral reefs). Coral buoys have integrated weather sensors.

Related to this we have to bear in mind that the measurements and observations in the private sector who make established organizations and oceanography authorized to work in the country lead us to directly suggest the needs that arise in relation to measurements and observations on the ocean, in principle understand as needs:

- Harmonize information both public and private sector. The Authority National Maritime Affairs (ANAMAR) is designed to monitor, supervise and control Oceanography at the Dominican Republic public institution, then it is the body that should handle all public and private information about it (this will allow more efficient state resources and keep a watch on the most complete observations).

- Work towards efficient provision of specialized instruments, which guarantee complete observations in accordance with internationally accomplishments achieved (in this part must be a constant training for technicians working these areas).
- Impulse and promotion of oceanographic, hydrographic and meteorological studies which throw specific information about the reality of the oceanic waters of the Dominican Republic.
- Creating a profile or a clear background on the seas and oceans of the Dominican Republic, including the general and specific characteristics thereof.
- The financial and logistical support of the Dominican State for entrepreneurship in this science.
- Social and civic awareness of the issue and promoting the study of this science.

Weaknesses facing the Dominican Republic in ocean observations:

- Network security monitoring (vandalism, theft).
- Maintenance and sustainability of networks.
- Retention of qualified personnel in institutions.
- Budgetary constraints.
- Training of technicians and officials.
- Establishment of quality control information.
- Definition of processes, protocols, implementation of quality management systems.

- Establishment of Permanent National Forum linking the various public, private, decentralized organizations sectors, among others.
- The need for horizontal cooperation between institutions.
- Do not have the expertise to apply existing technology and produce local marine warnings for coastal development, preparation and navigation.
- Establish mechanisms for transmission of maritime information to stakeholders (port, fishermen, hotels, coastal communities, among others.).
- There is a great imbalance in the distribution of oceanographic buoys.

We can not say with great precision in the Dominican Republic are officially recognized standards for oceanographic measurements, however we must point out that there have been small steps towards achieving this goal. Such as the installation of two coral buoys CREW by the project with the Caribbean Community Climate Change Center (CCCCC), four tide gauges through a project with the Puerto Rico Seismic Network (PRSN), in the case of the Authority National Maritime Affairs (ANAMAR) made is topobathymetric map of the country and finally the demonstration project Coastal Flood Forecasting with the World Meteorological Organization (WMO) and the National Oceanic and Atmospheric Administration (NOAA) for the application of the model SLOSH.

The tide gauge data reported high tide and low tide.



TIDE GAUGE NETWORK



While the coral buoys meteorological data and oceanographic report.

Among the ocean are; sea temperature, salinity, turbidity, chlorophyll, blue-Green algae phycocyanin and fluorescent dissolved organic matter.

Between weather is; wind gust, wind speed, wind direction, air temperature, relative humidity, barometric pressure and rain amount.



Below are links to access data from tide gauges and buoys coral is:

Links Tide Gauge Punta Cana

<http://www.prsn.uprm.edu/Spanish/mareografos/index2.php?STATION=PUNTA%20CANA&OUTPUT=plot>

Links Tide Gauge Santo Domingo

http://www.prsn.uprm.edu/Spanish/mareografos/index2.php?STATION=SANTO_DOMINGO&OUTPUT=plot

Links Tide Gauge Barahona

http://www.prsn.uprm.edu/Spanish/mareografos/index2.php?STATION=BARAHONA_DR&OUTPUT=plot

Links Tide Gauge Puerto Plata

<http://www.prsn.uprm.edu/Spanish/mareografos/index2.php?STATION=PUERTO%20PLATA&OUTPUT=plot>

Links Buoy CREW Boca Chica

http://www.coral.noaa.gov/static/data_cwdr1_Web_12.html

Links Buoy CREW Puerto Plata

http://www.coral.noaa.gov/static/data_ppdr1_Web_12.html

Companies and public and private institutions interested in them have electronic links to get the data.

The Dominican Republic in regarding to the management of data quality is advancing, creating procedures and establishing the organizational structure to carry them out. Thus achieve the desired results by ONAMET.

**THANK
YOU**