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NATIONAL REPORT OF COSTA RICA

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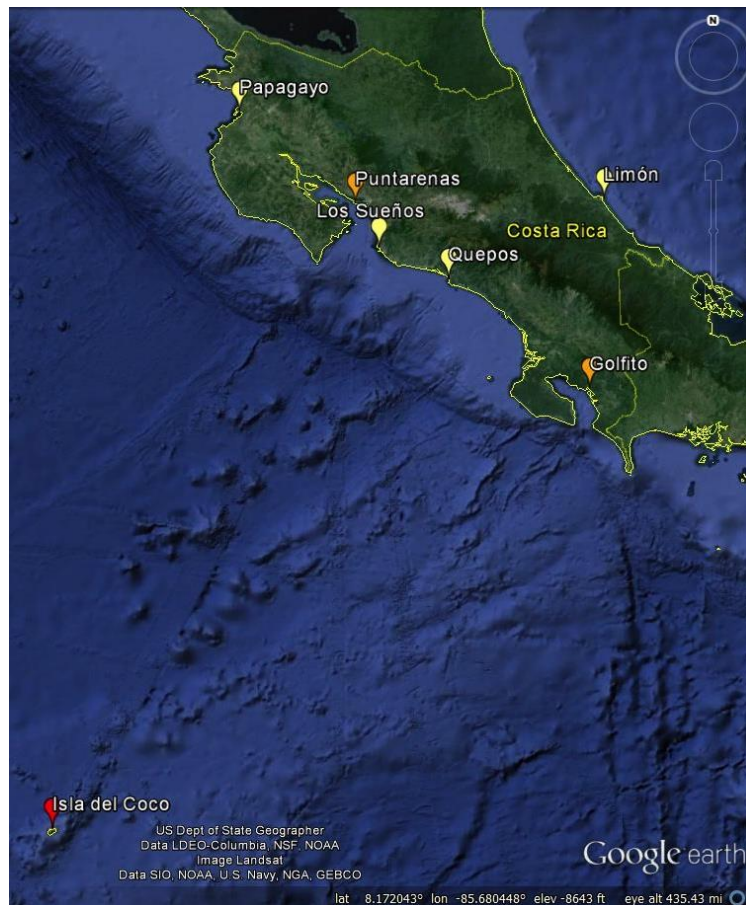
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MAPS

Yellow: tidal gauges currently installed.

Orange: tidal gauges to be installed during 2017.

Red: tidal gauge to be installed during 2017-2018.



GAUGES

Costa Rica currently has four tidal gauges, three at the Pacific Coast and one more at the Caribbean Coast.

In the following table are listed the stations, their code name, coordinates, status, sensors, record and transmission rates.

<i>Name</i>	<i>Code</i>	<i>Lat.</i>	<i>Lon.</i>	<i>Status</i>	<i>Sensors</i>	<i>Rec. Rate</i>	<i>Transm. Rate</i>
Los Sueños	losu	9.6499	-84.6663611	Temporary not transmitting	Pressure Aquatrak	1min	5min
Papagayo	papa	10.6420 278	-85.656	Temporary not transmitting	Pressure Aquatrak	1min	5min
Quepos	quepo	9.4	-84.1666667	Operational	Pressure Radar	1min	5min
Limón (Caribbean coast)	limon, limn	10	-83.033333	Operational	Pressure Radar	1min	5min

The gauges in Limón and Quepos are from Sutron and were installed by the University of Hawaii Sea Level Center (UHSLC). UHSLC performs maintenance on them every couple of years. Basic maintenance is performed by RONMAC program more often.

The gauges in Los Sueños and Papagayo are from Campbell and have presented problems since their installation in 2014.

FUTURE GAUGES

We have two more gauges to be installed in Puntarenas and Golfito, where gauges existed in the past. We have the sensors already and will deploy them during 2017.

We are working together with NOAA Tsunami Program to install a tidal gauge in Cocos Island, through UHSLC. The National Emergency Commission (CNE) from Costa Rica will buy the sensors and UHSLC will deploy it with the support of RONMAC Program. It will be under the same scheme as Limón and Quepos gauges. Due to bureaucracy and rain season it will very likely be installed in 2018.

GPS

GPS plays a small role directly in our tide gauges. It is used to keep the internal clock accurate and to keep the transmitter frequency accurate. More information can be found in the Sutron Satlink manual.

<http://www.sutron.com/documents/satlink2-user-manual-2.pdf>

The OVSICORI-UNA (Vulcanological and Seismological Observatory of Costa Rica from National University) owns a GNSS/GPS network of 49 continuous stations. Attached a KMZ file with location of the stations.

DATA AVAILABILITY

We have the following data:

HOURLY AVERAGES:

From 1940 to 1969 at Limón. From 1941 to 1969 at Quepos. From 1957 to 1969 at Puntarenas.

PAPER ROLLS:

We have paper rolls for Quepos, Puntarenas and Limón, from 1969 to 1996. The following table shows data availability. Green cells show full year of data, yellow cells show more than 6 months of data, red cells show less than 6 months of data and blank cells show no data for the corresponding year.

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Quepos	Green	Green		Yellow	Yellow	Yellow	Green	Green		Red			Red	Yellow	Green	Green	Red			Green	Green	Red	Yellow		Red		Yellow	Red
Puntarenas	Red	Red		Red							Red																	
Limón			Red	Yellow	Yellow		Red						Red												Yellow			

DIGITAL DATA:

Quepos: 1999-2003, 2006-20007, 2009-present

Limón: 1997-2001, 2009-present

Los Sueños: 2013-present

Papagayo: 2014-present

Golfito: 1998-2003

Puntarenas: 1995-2003

Caldera: 1998-2003

FURTHER INFORMATION

With the Report's Authors.

All data is available for non-profit purposes. Please contact the Report's Authors.