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COASTAL HAZARDS OF PUERTO RICO

INTRODUCTION:

Welcome to <http://coastalhazards.uprm.edu>. This page is maintained by Mr. Harry Justiniano Sepulveda and Prof. Aurelio Mercado-Irizarry, both at the Physical Oceanography Laboratory (Lab from now on) of the Department of Marine Sciences, University of Puerto Rico, Mayaguez Campus (UPRM). The purpose of this page is to make available to the public the latest work carried out at the Lab, with the option of being able to download maps produced at the Lab and other products. Among these other products you will be able to find reports, maps, PowerPoint presentations, photos, and relevant latest news.

Comments and suggestions are welcome, and can be addressed to

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To use the material listed in this web page click on the pdf of interest and it will be downloaded to your computer. The storm surge maps in kmz format can be downloaded from the links given at the end of the report titled “3 - STORM SURGES IN PUERTO RICO_ THE PUERTO RICO STORM SURGE ATLAS_Intro.pdf”. The tsunami maps are still not available, but will be able once we populate the section titled “Tsunamis around Puerto Rico”. The whole island is covered by a single kmz file.

TOPICS:

As the name of the page implies, the work we do at the Lab is related with the numerical simulation of coastal hazards, and the preparation of inundation maps based on the hazards simulated. As of this moment, the hazards included are Sea Level Rise, Storm Surges and accompanying Storm Waves, and Tsunamis. Each hazard has a set of pdf documents that you can download by clicking on top of the file name in pdf.

- [1 - Introduction.pdf](#) (this is just this document)
- SEA LEVEL RISE AROUND PUERTO RICO (here I present the latest graphs on sea level rise around the island based on the monthly means published by NOAA. This page is updated once a month.)

[2 - Sea level rise watch around Puerto Rico.pdf](#)

- STORM SURGES AROUND PUERTO RICO (These documents are based on the technical report, and coastal flood maps, submitted to the funding agencies which accompanied the new Puerto Rico Storm Surge Atlas. The link to download the technical report is given in document 3 below. The available maps, in kmz format, can be downloaded using the links given in document 3. In documents 4 to 7 we examine the vulnerability of some critical infrastructure based on the maps, which also include the compounding effect of sea level rise. This type of analysis will be expanded as time allows.)

[3 - STORM SURGES IN PUERTO RICO_ THE PUERTO RICO STORM SURGE ATLAS_Intro.pdf](#)

[4 – CRITICAL INFRASTRUCTURE, SEA LEVEL RISE, AND COASTAL FLOODING IN PUERTO RICO.pdf](#)

[5 - STORM SURGES IN PUERTO RICO_San Juan airport.pdf](#)

[6 - STORM SURGES IN PUERTO RICO_Power Plants-Aguirre.pdf](#)

[7 - STORM SURGES IN PUERTO RICO_Power Plants-Costa Sur & EcoElectrica.pdf](#)

- TSUNAMIS AROUND PUERTO RICO [As required: This item was funded by Award #NAxxxxxxx by a National Tsunami Hazard Mitigation Program grant to the Puerto Rico Seismic Network from the Department of Commerce/National Oceanic and Atmospheric Administration. This does not constitute an endorsement by NOAA.]

This section still has not been prepared, but it will consist of links to Technical Reports (in pdf) submitted to the granting agency (NOAA/PRSN), and a link to a single kmz file, prepared in 2011, showing the potentially floodable areas all over the island.

We will also include photos, reports, and news related with coastal issues in Puerto Rico, including the issues with the never ending story of the maritime-terrestrial zone in the island.

THIS IS WORK IN PROGRESS. The document on sea level rise will be updated on a monthly basis as NOAA posts the data in its page. Please let us know of any errors, suggestions, etc.