

Project Status Report: CEEEn-2018CPST-0DR-004

Report Date: 11/19/2018

Team Members: Jared Lillywhite, Wade Roberts, Seth Barrus, Dan Costa

Project Title: Flood Mapping

1) Summary of technical/non-technical challenges encountered

- Technical Challenges
 - How do we develop a flood-impact curve?
 - What data do we need from ESRI/INDRHI?
 - How can we use satellite imagery to validate the flood extent mapping?
- Non-Technical Challenges
 - Team members have conflicting schedules and limited time to dedicate.

2) Team approaches & resolutions to overcome challenges

- We will reach out to Water Resources professors to see if anyone has expertise in developing flood impact curves.
- We will begin researching flood-impact curve generation methods independently.
- We will search the Dartmouth Flood Observatory archives and collect satellite data for future validation efforts.

3) Status of challenge resolutions & potential project impact

- Dr. Nelson gave some limited direction on Depth-Damage curve generation. We will reach out to other Water Resources professors to learn more.
- Wade has downloaded shapefiles of historical floods in the Dominican Republic from the Dartmouth Flood Observatory.
- Dan has researched Depth-Damage curve generation. We are now considering alternatives such as using curves that have been generated for other areas and modifying them for the D.R.
- Jared will reach out to Fidel to learn more about previous flood-damage curve generation efforts in South America.

4) Project status & summary

- We have received some population and boundary data and have some resources to obtain more.
- Our two main tasks of emphasis are:
 - Researching Depth-Damage Curve generation.
 - We are looking at countries that are economically comparable to the Dominican Republic to look at using pre-existing damage curves.
 - Collecting data from the Dartmouth Flood Observatory