Lab 6: Why Uncertainty Matters

Extreme values with depth-damage curves, Coastal flood applications, Uncertainty propagation beyond rainfall

CEVE 543 Fall 2025

2025-10-03

1 Objectives

1. Apply extreme value analysis to coastal flood risk assessment
2. Understand uncertainty propagation through depth-damage curves
3. Explore broader applications of uncertainty quantification

2 Before

> **!** Instructions
>
> Do this before the lab date so that lab itself can go more smoothly.

3 Background and Reading

4 Tasks

Modify the code section below to address the following tasks.

1. Apply extreme value analysis to coastal flood risk scenarios
2. Implement uncertainty propagation through depth-damage curves
3. Explore broader applications beyond rainfall-based risk assessment
4. Analyze compound uncertainties in flood risk quantification

5 Code

Bibliography