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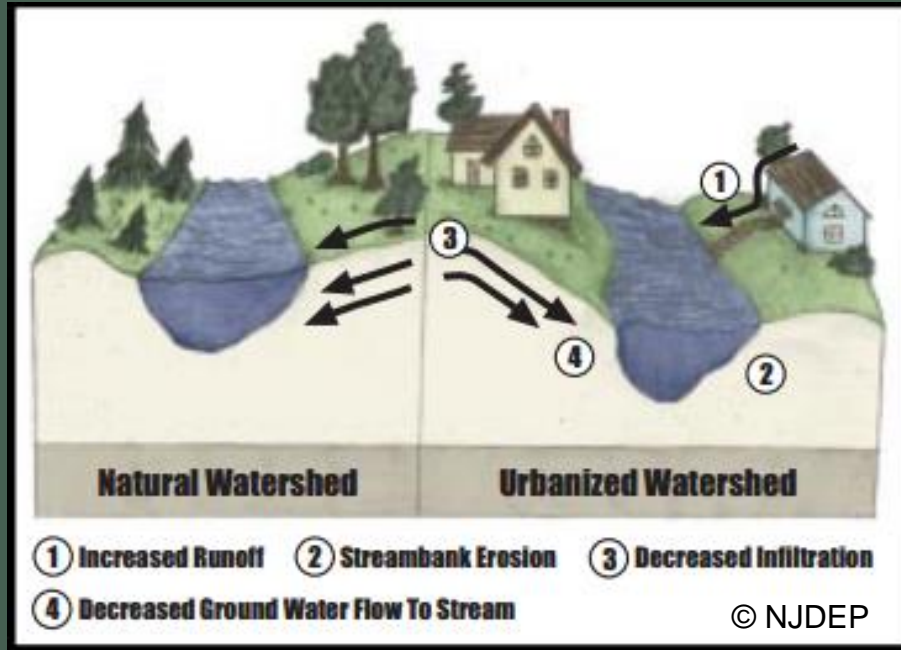




WHAT ARE THE DYNAMICS OF SEDIMENT INPUT TO MAUNALUA BAY?

Blaire Langston, Brendan Martin, Carmen Antaky,
Courtney Payne, Tanya Harrison

Watersheds and sediment transport



© Gaby Sombra

Why is sedimentation a threat?



Why is sedimentation a threat?



Buried staghorn coral.
Hollywood, Florida
Photo credit: Cry-of-the-Water



© Dan Derret

Project Overview

Question 1: Which watersheds export the greatest amount of sediment?

Question 2: Where is the sediment coming from?



© Clippn

Methods: InVEST Sediment Delivery Ratio

- What is InVEST SDR?
 - Models sediment runoff and delivery into stream
- What are the inputs?
 - Land cover, elevation, watersheds, soil, rainfall, and long term averages of erosion
- What are limitations?
 - Annual measurements only
 - Cannot capture storm events

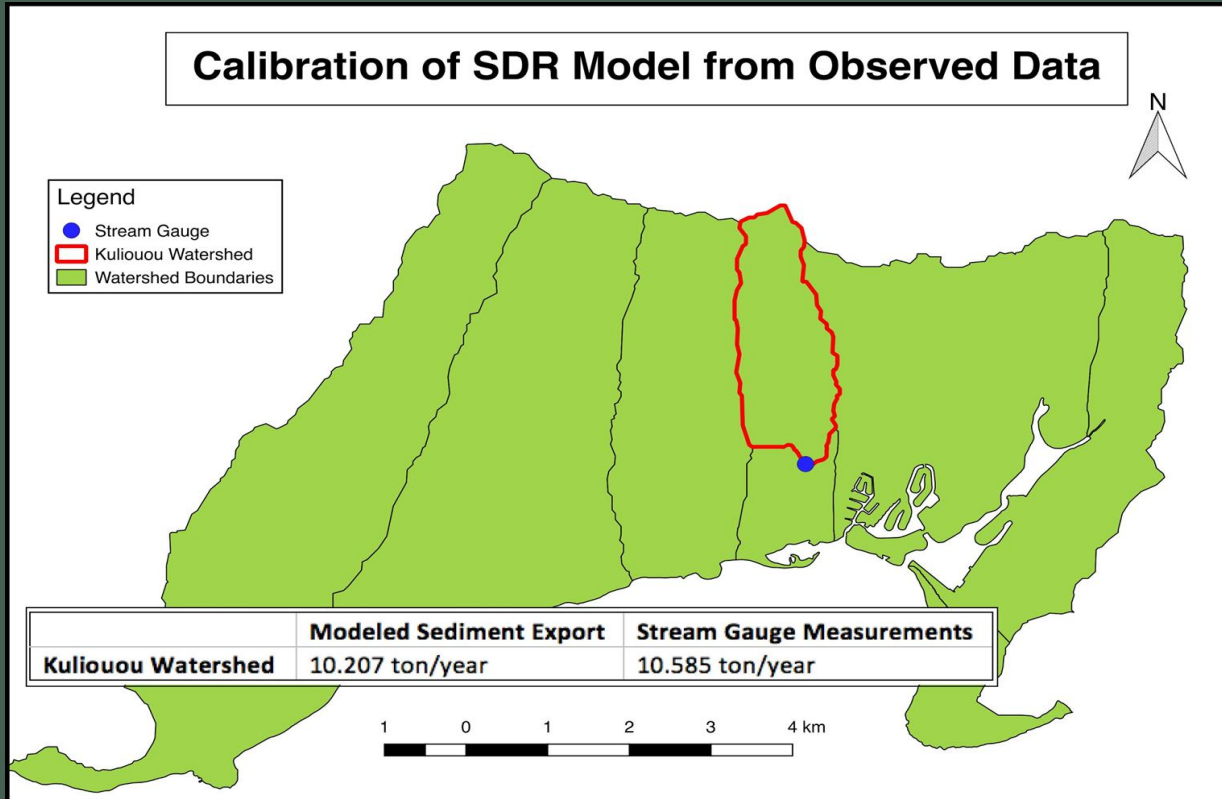
InVEST

integrated valuation of
ecosystem services
and tradeoffs

© Natural Capital Project

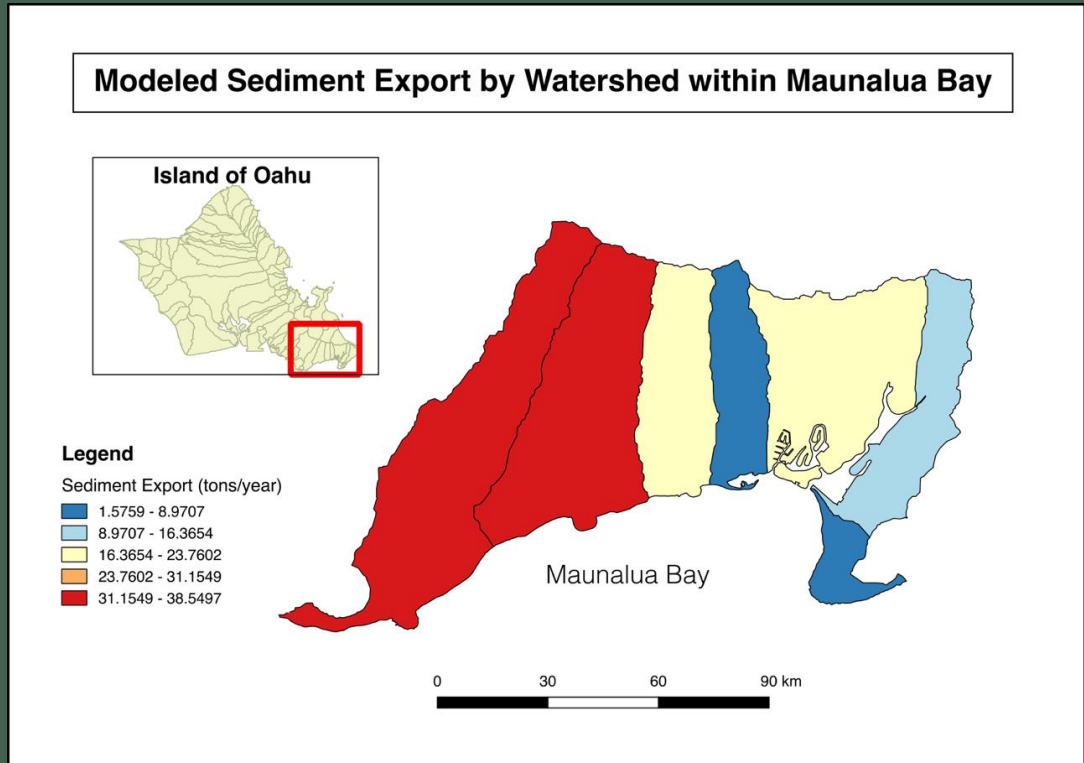
Calibration and Validation

Calibration of SDR Model from Observed Data



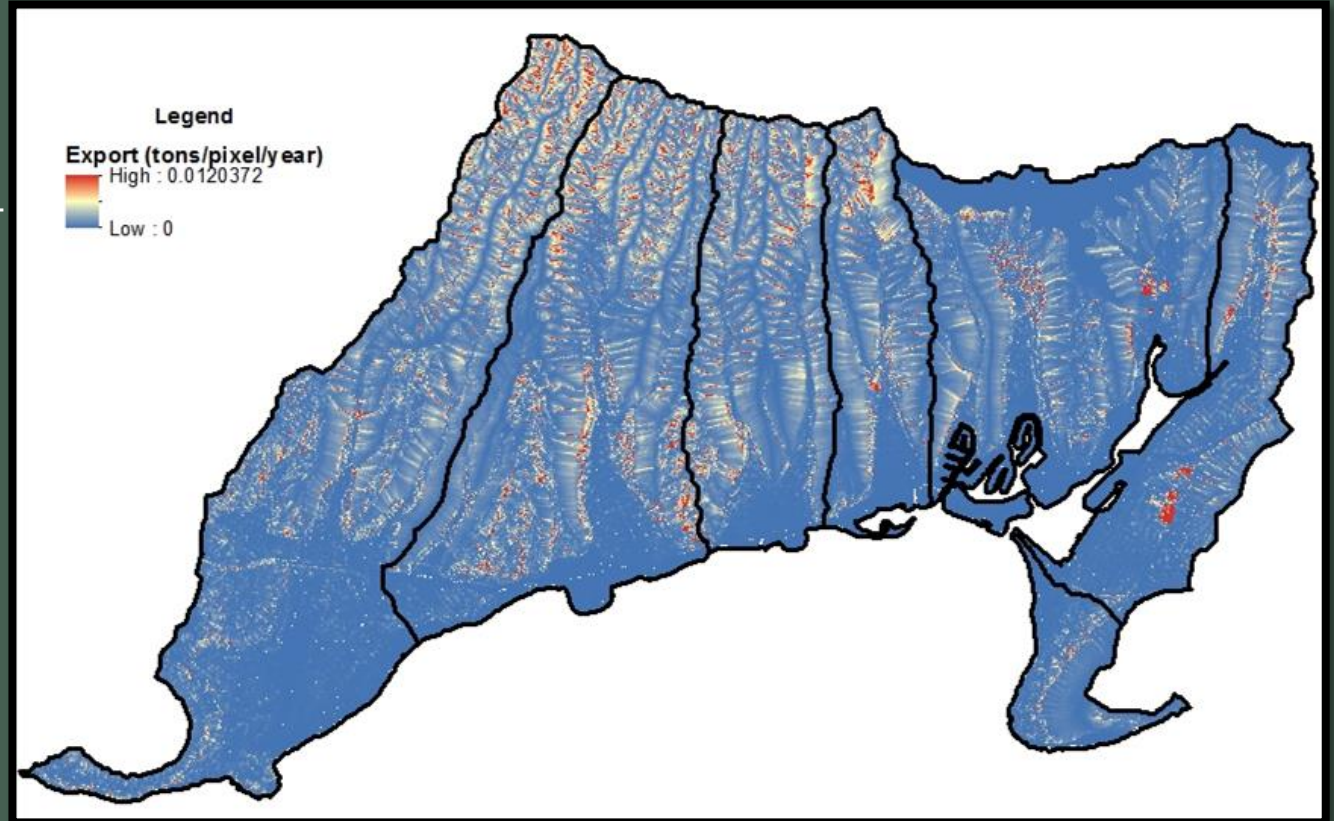
Question 1: Which watersheds export the greatest amount of sediment?

- Most sediment is exported in the Bay by Waialaenui and Wailupe Watersheds



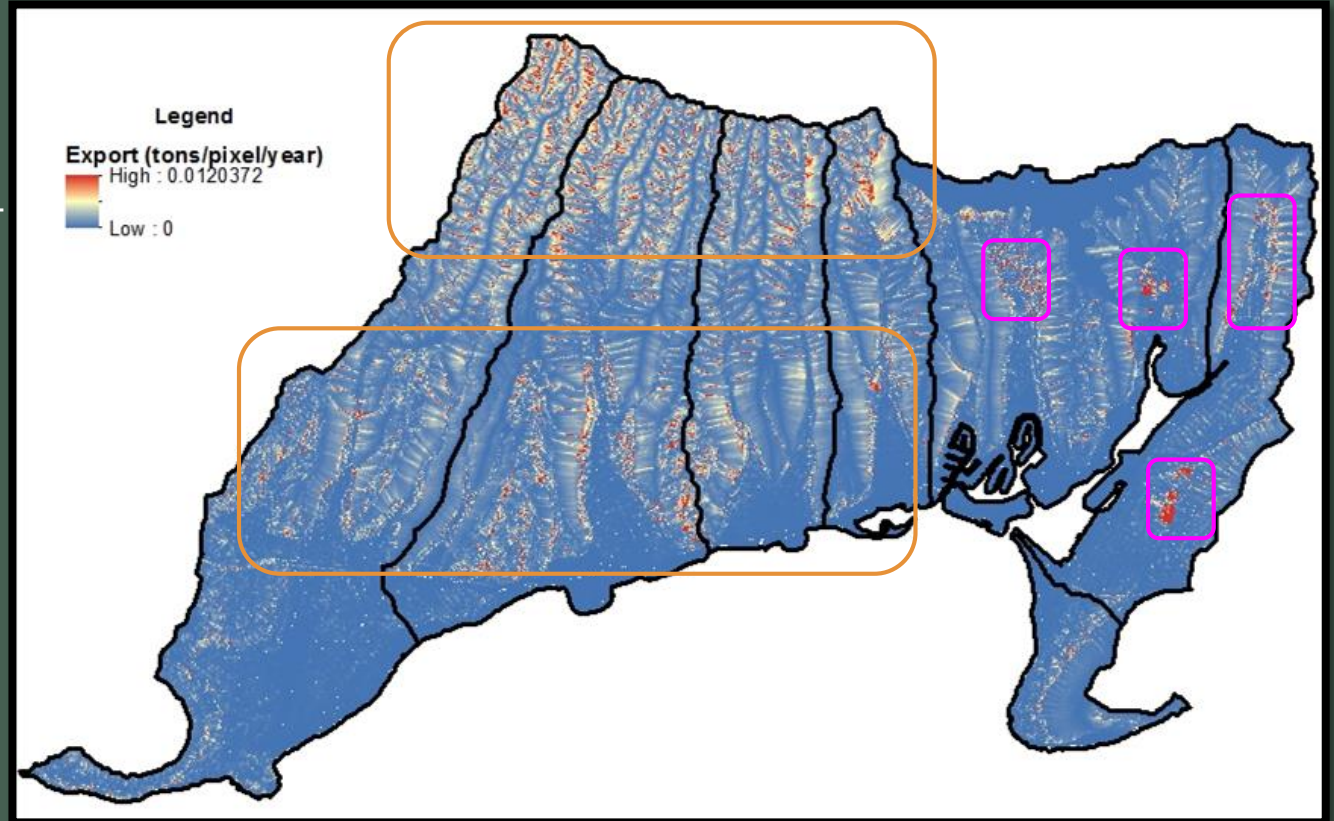
Question 2: Where is the sediment coming from?

- Sediment Export Map
- Red = high
- Yellow = med
- Blue = low



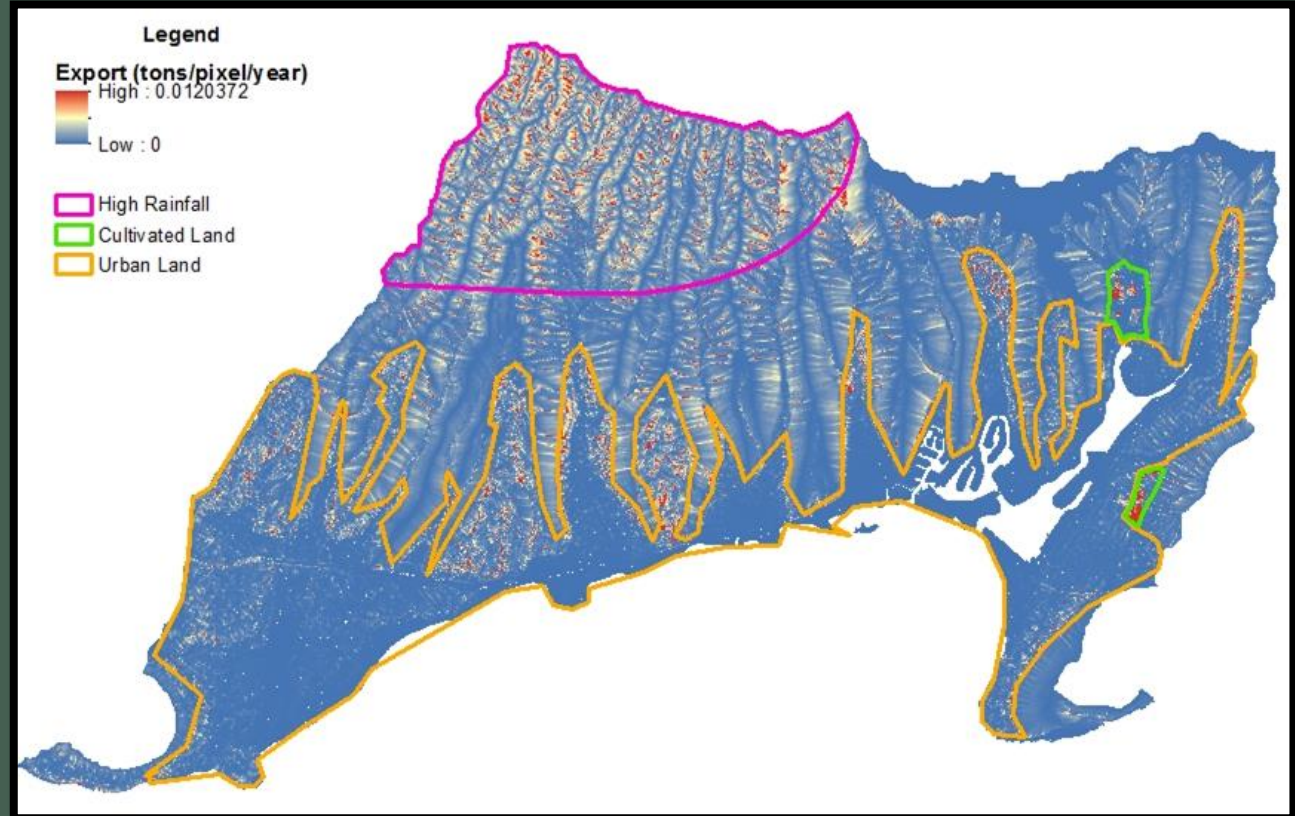
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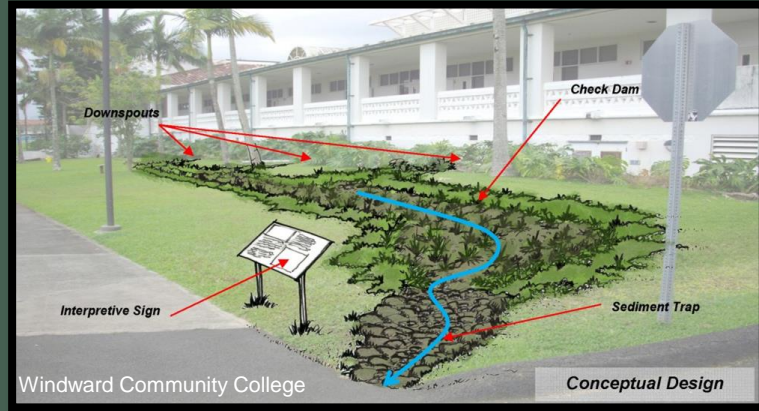


Question 2: Where is the sediment coming from?

- Natural vs. human sources



How to help?



National Library of Medicine, photo: Kauila Clark



Water Quality...

What happens
to water quality
when pollution
enters the bay?

