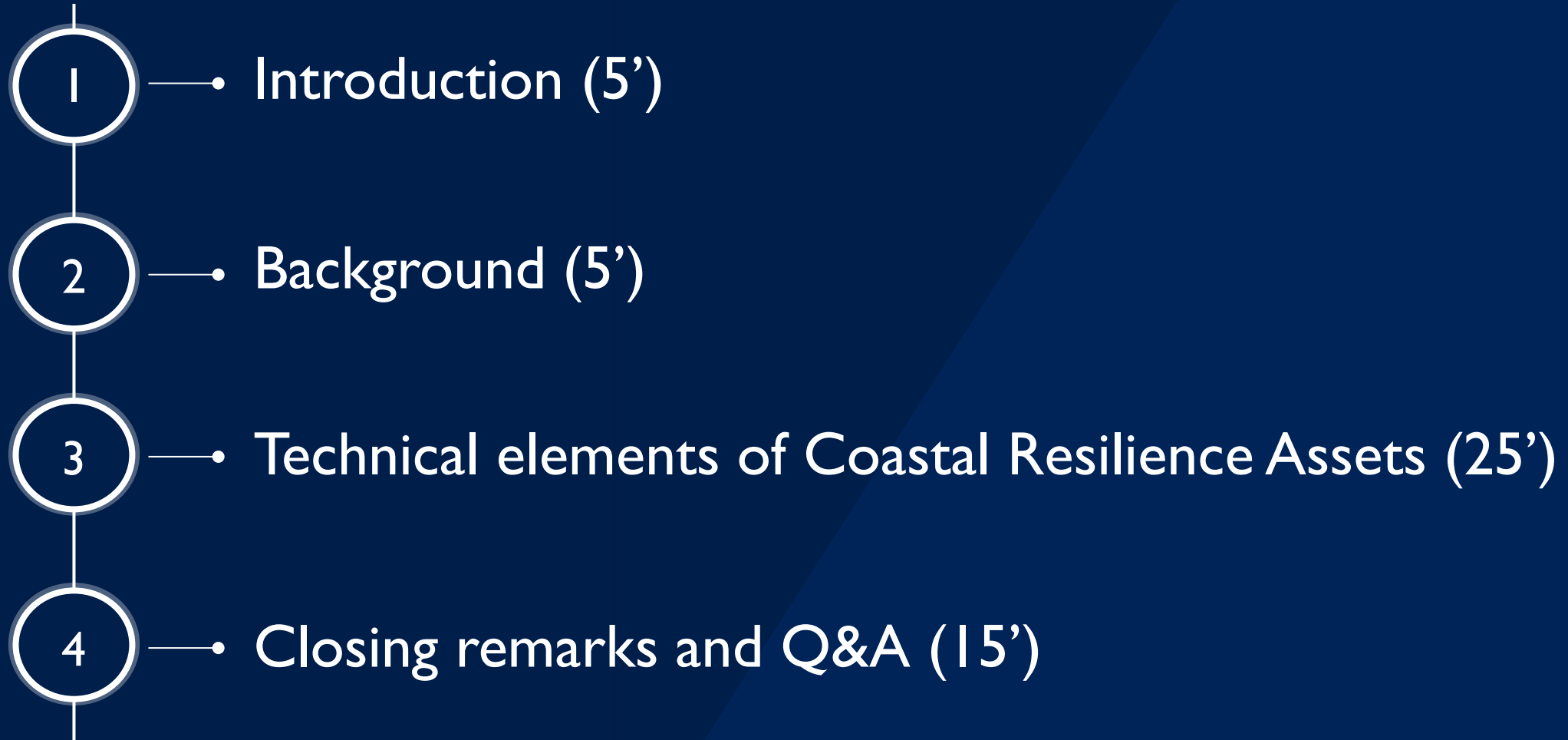




Launch Webinar:
Methodology for Coastal Resilience
Benefits from Restoration and
Protection of Mangroves
and Tidal Marshes, v1.0
(Coastal Resilience Methodology)

June 2026

Agenda



INTRODUCTION

A man in a green jacket and purple headband carries a large log on his shoulder through a dense forest. In the background, other people are visible on a path. The scene is overlaid with a blue tint.

SD VISTa Program and the Coastal Resilience Methodology

SD VISTa Program

Flexible standards program for certifying projects generating sustainable development benefits

Coastal Resilience Methodology

Asset methodology with specific requirements and quantification approaches to measure benefits from protecting and restoring mangroves and tidal marshes

Projects applying this methodology contribute to SDGs:

11 SUSTAINABLE CITIES AND COMMUNITIES



13 CLIMATE ACTION



Coastal Resilience Assets

Coastal Resilience Assets represent the reduction in property damage at risk of coastal flooding each year (in USD)



Projects generating Coastal Resilience Assets can also claim **“People Resilience Benefits”** representing the reduction in number of people at risk of coastal flooding each year

A silhouette of two people on a boat in the ocean at sunset. The word "BACKGROUND" is overlaid in white text.

BACKGROUND

Coastal Blue Carbon Ecosystems

Critical yet underfunded

Tidal Marsh



Seagrass



Mangrove



The Path to Financing Blue Carbon Ecosystems

Verra

Standards programs



Est. 2007
Last updated: v5.0, June 2026



Est. 2012
Last updated: v4.1, August 2024



Est. 2005
(Verra took management in 2014)
Last updated: v3.1, June 2017



Est. 2019
Last updated: N/A

Coastal Resilience Methodology

SD VISta asset methodology
Launched: April 2026



Est. 2021
Last updated: N/A



Under development

SDGs 11 and 13

Goals 11.5 and 13.1

11.5: By 2030, significantly reduce the number of deaths and of people affected and substantially decrease the direct economic losses relative to global GDP caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

13.1: Strengthen resilience and adaptive capacity to climate-related disasters



Development Contributors



Funded by:



BUILDERS VISION



A man in a red shirt is shown in a close-up, looking intently at a plant. He is holding a branch with several small, colorful berries (red, green, and black) in his hands. The background is a soft-focus green, suggesting an outdoor setting. The image has a dark blue overlay, and the text is centered in white.

**TECHNICAL ELEMENTS OF
COASTAL RESILIENCE ASSETS**

Applicability Conditions

Eligible activities

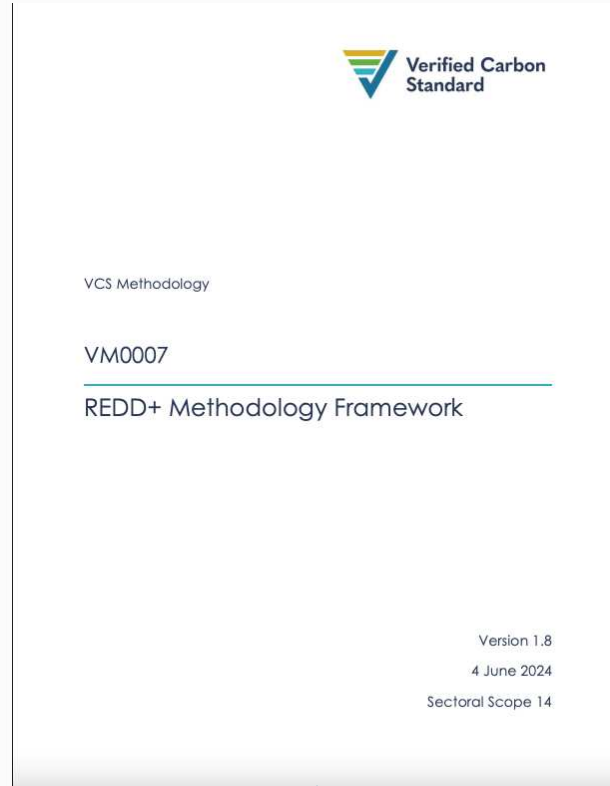
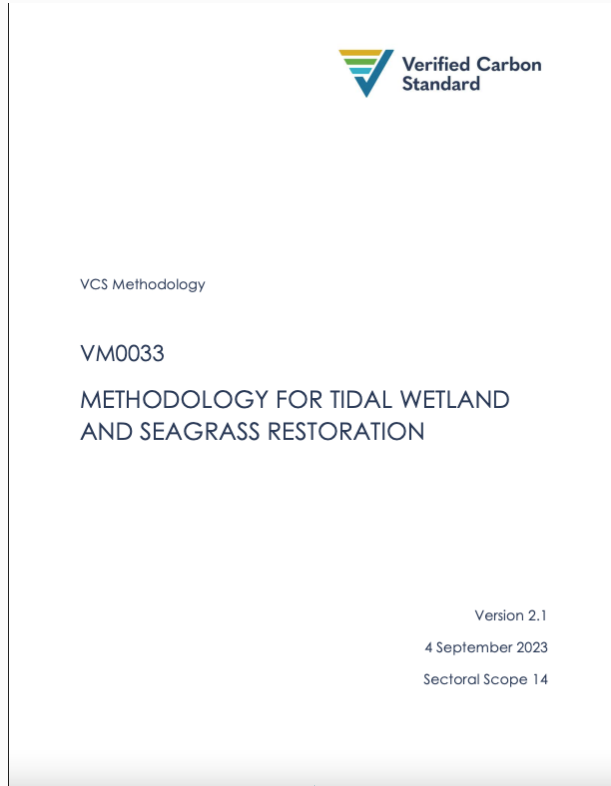


Protection of mangroves and tidal marshes
(e.g., preventing hydrological disruptions or conversion)



Restoration of mangroves and tidal marshes
(e.g., reconnecting natural tidal flows or enhancing sediment delivery)

Relationship to VCS Methodologies



Used for

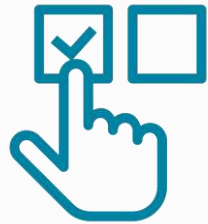
- Additionality
- Baseline scenarios

VMD0052 – Demonstration of additionality

VMD0006 – B/L Unplanned
VMD0007 - B/L Planned

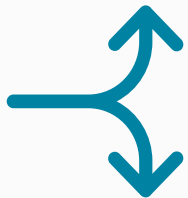
Additionality

Demonstration of additionality is optional



Coastal resilience assets must not be used to offset or compensate for negative impacts that increase property at risk of flooding

Two-pronged test



- Regulatory surplus test
- Activity method: Positive list

Baseline Scenarios

In the project area

Restoration activities



Must occur on:

- degraded mangrove or tidal marsh
- shallow open water without wetlands



Baseline reassessed every 10 years

Protection activities



Must be conversion of mangrove or tidal marsh to another land use

Conversion amounts based on VCS methods



Baseline reassessed every 5 years

In the project impact area

Must consider existing and planned land use and coastal defenses

Project and Project Impact Boundaries

I. Project Area



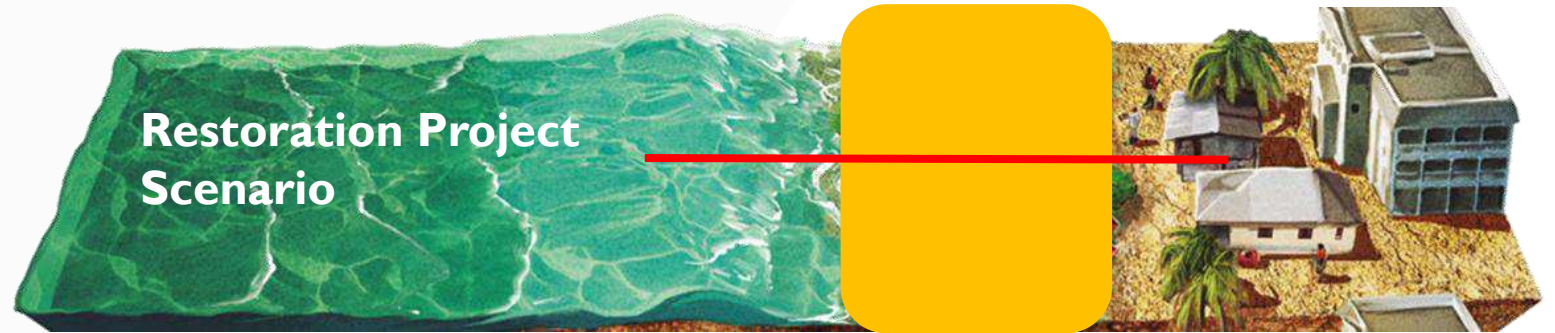
Project and Project Impact Boundaries

- I. Project Area
(area of inter-tidal wetland being restored or conserved)



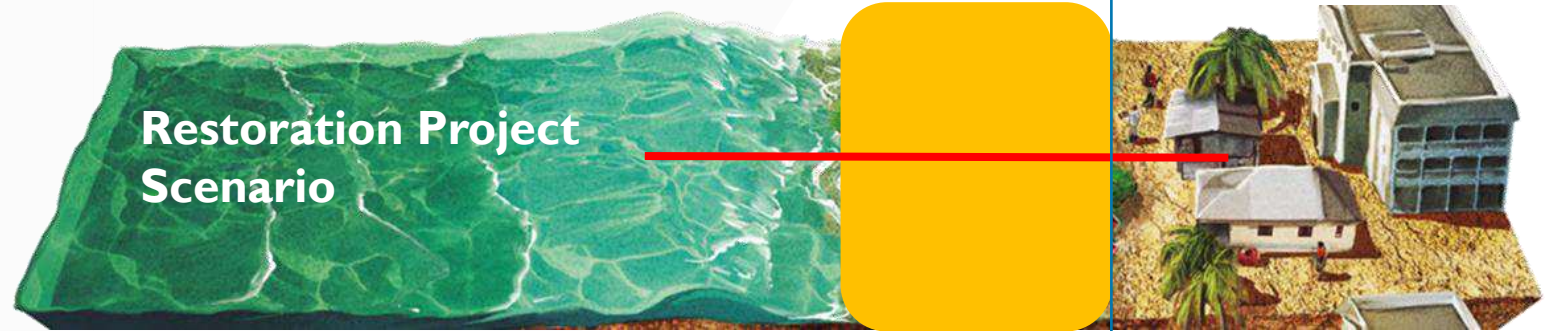
Project and Project Impact Boundaries

1. Project Area
2. Perpendicular transect from offshore to land (to orient direction of expected coastal flooding)



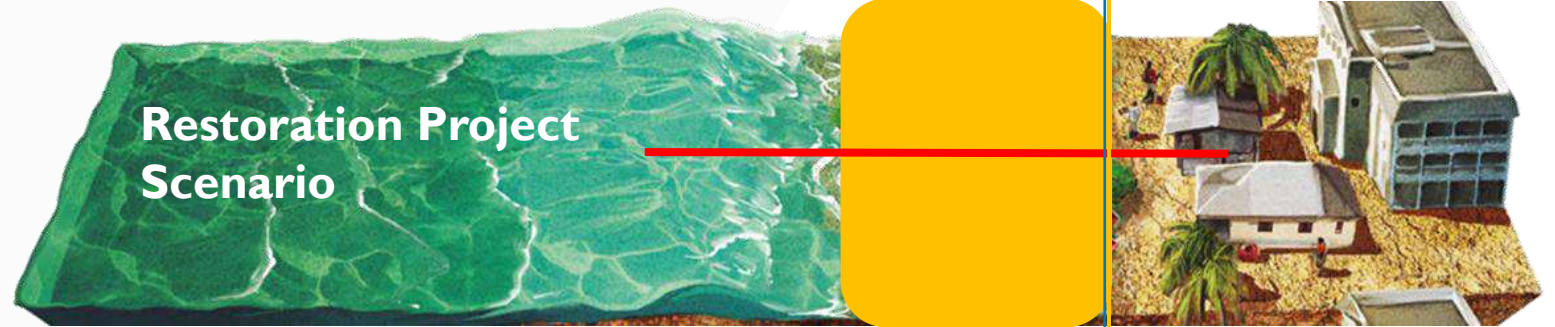
Project and Project Impact Boundaries

1. Project Area
2. Perpendicular transect
3. Shoreline
(2x project length; to delineate project impact area and select deemed estimate data points)



Project and Project Impact Boundaries

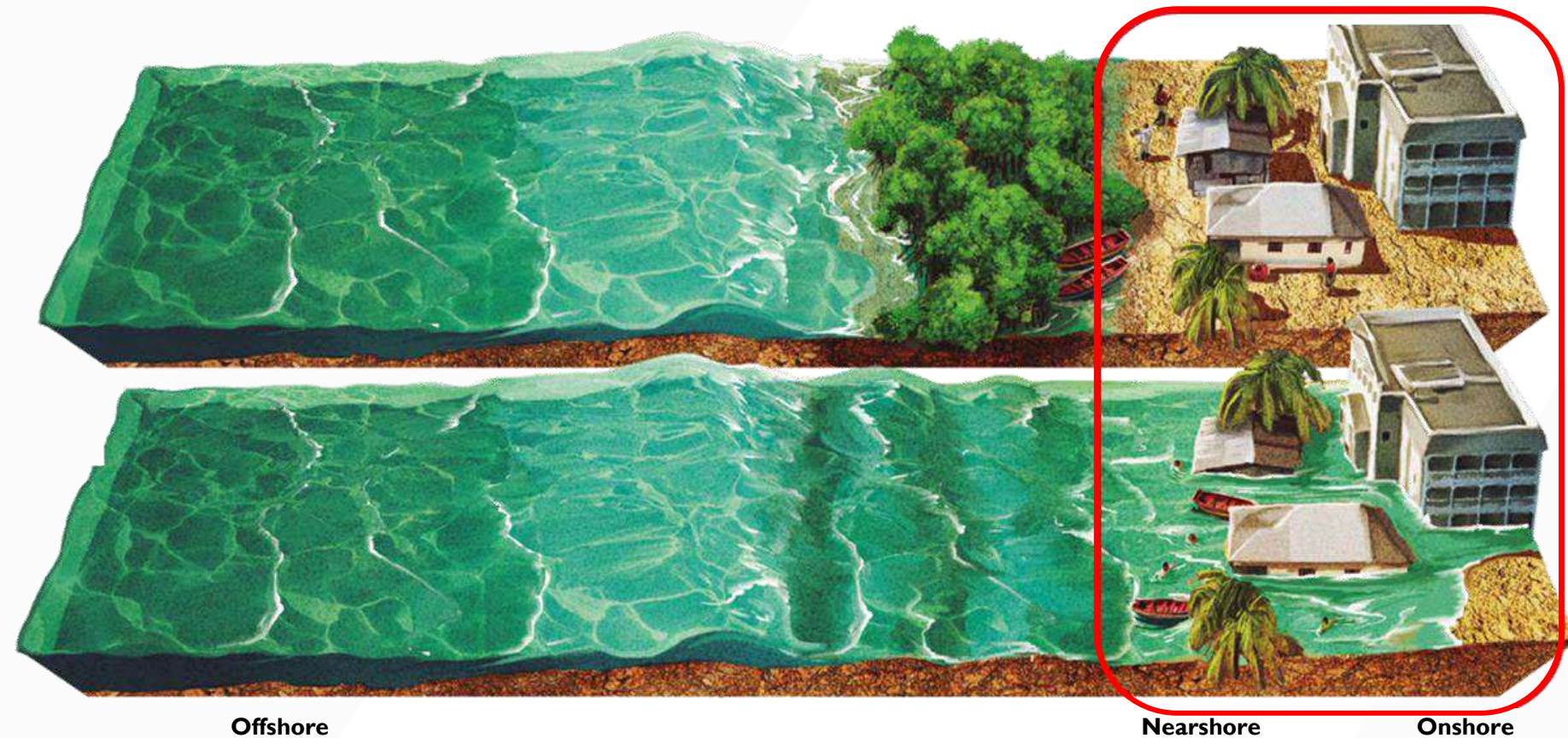
1. Project Area
2. Perpendicular transect
3. Shoreline
4. Project Impact Area
(inland 100-yr storm
floodplain)



Scenario Method

Estimating Expected Annual Avoided Flood Damages due to inter-tidal wetland project

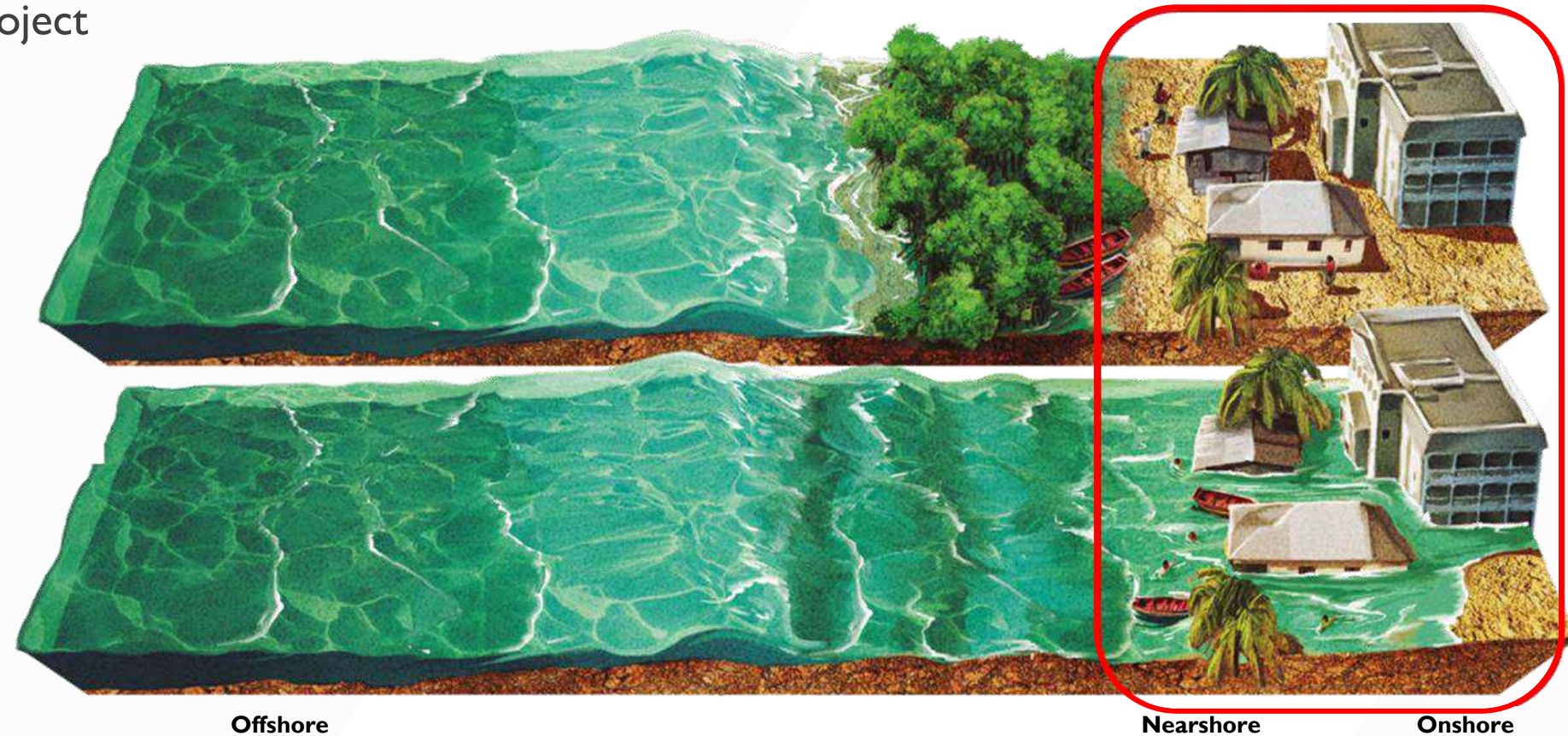
- How much flood damage to property (valued in USD) is reduced every year due to the project?



Scenario Method

Expected Annual Avoided Flood Damages:

- to property value (assets in USD) and people (only claims)
- by inter-tidal wetland project
- relative to baseline



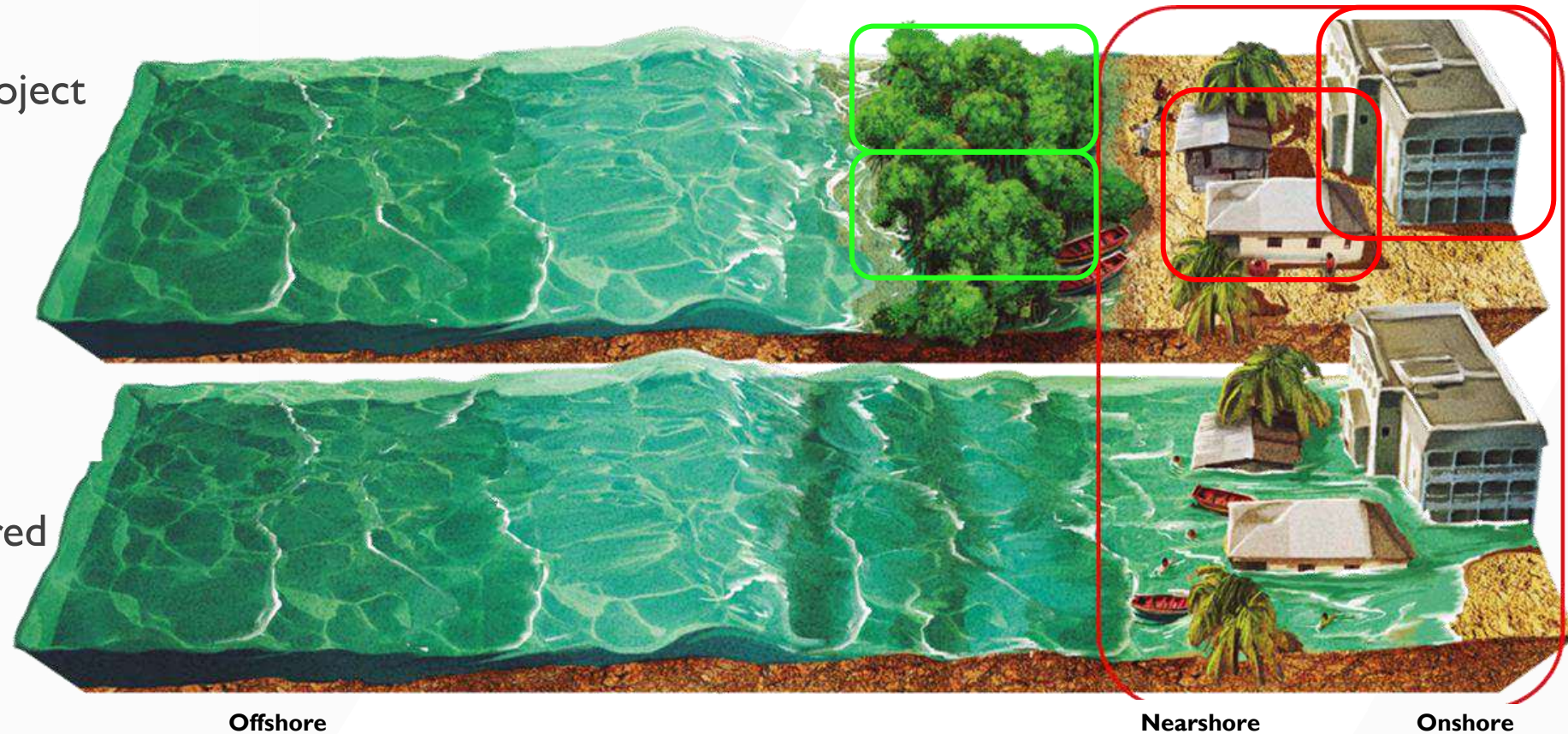
Scenario Method

Flood Damages Avoided:

- to property value (assets in USD) and people (only claims)
- each year
- by inter-tidal wetland project
- relative to baseline

Assets based on:

- property value (in USD) protected
- per ha of wetland restored or conserved



Scenario Method

4 storm return periods (incl. 1% storm)

Offshore storm boundary conditions

Nearshore water levels & waves

Land-cover as Friction Coefficients

Flood heights from 4 storms → annual damages in Project Impact Area

Project scenario

Baseline scenario

Benefits = Baseline - Project

2-D Physics-based Coastal Model



Offshore

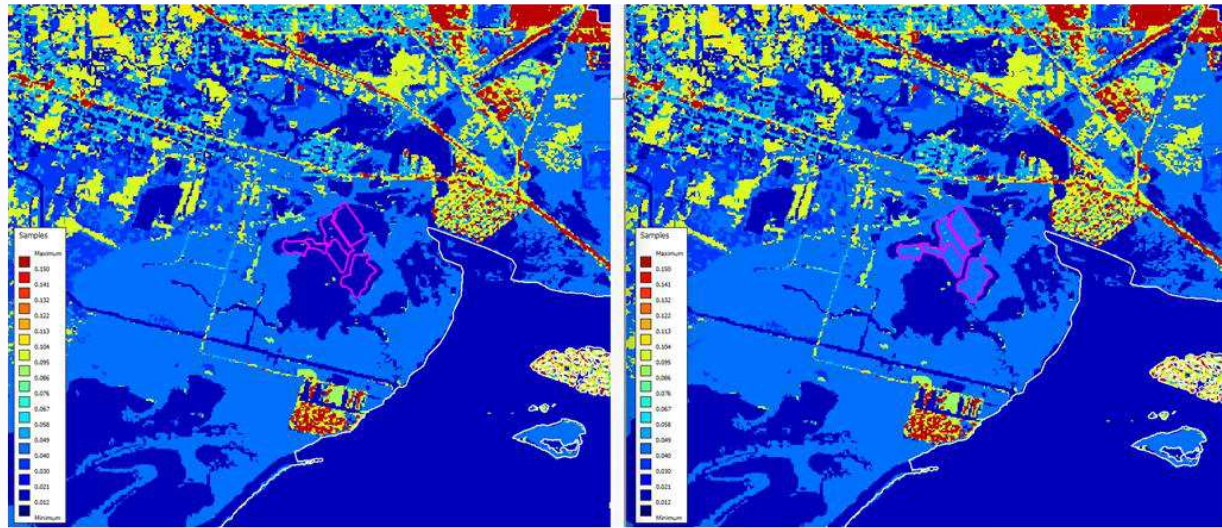
Nearshore

Onshore

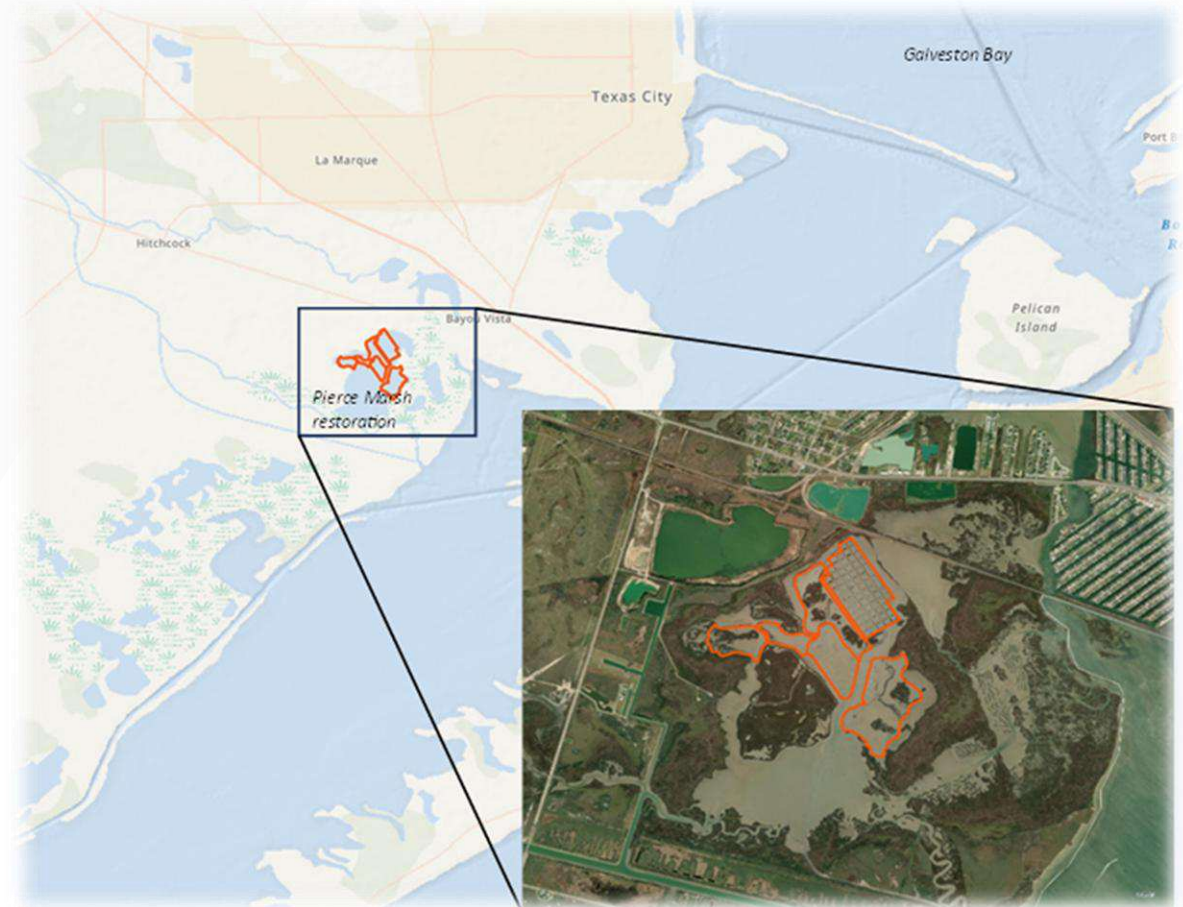
Scenario Method

- Restored Wetland Area: 97 ha
- Project scenario: tidal marsh (friction, $n = 0.045$)
- Baseline: open water (friction, $n = 0.012$)
- 2D flood model for damages from 4 storms
 - Jerry 1989 (10% annual chance)
 - Unnamed 1943 (4%)
 - Ike 2008 (2%)
 - Alicia 1983 (1%)

Project reduces flooding by \$YY/yr
Coastal Resilience Assets = \$X/ha/yr

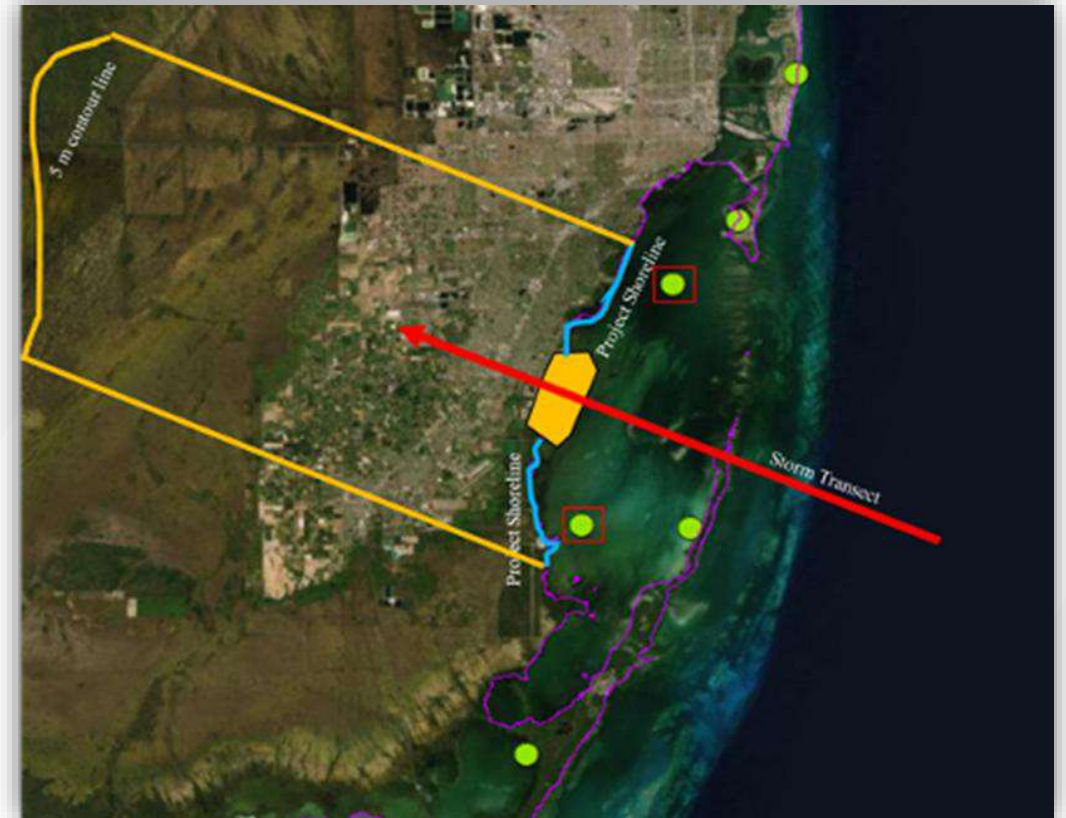


Friction coefficient values for baseline and project scenarios



Deemed Estimate Method

- Peer-reviewed, widely-used, Verra-approved data
- Available for all mangrove habitats globally
- Menéndez et al. 2020 – <https://www.nature.com/articles/s41598-020-61136-6>
- Data = Mangrove benefits in people & property protected per ha/year – <https://osf.io/ecs4p/>
- Deemed Estimate Method: use two nearest data points to project area
- Average value * Project Area = Value of Coastal Resilience Asset



Article | [Open access](#) | Published: 10 March 2020

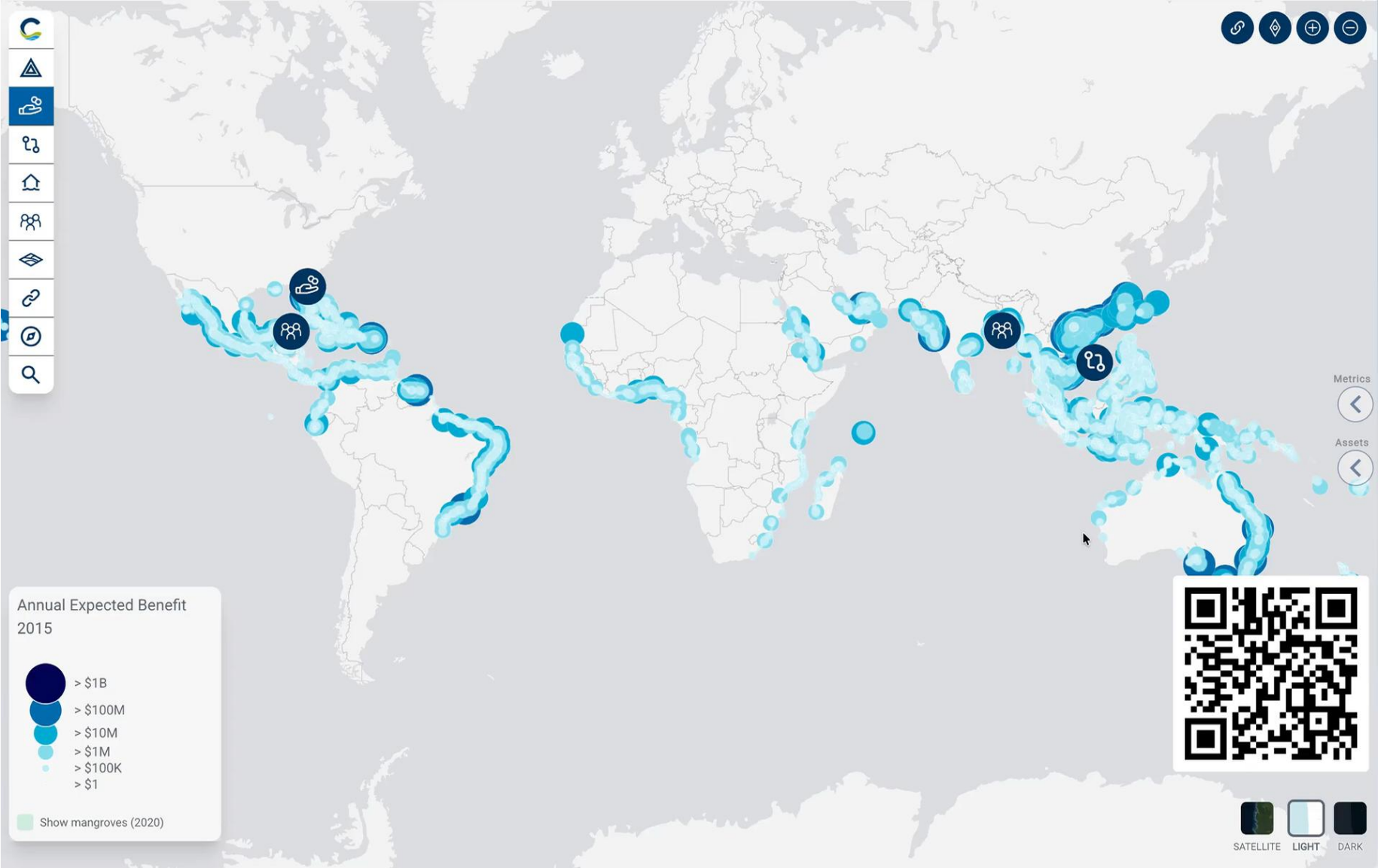
The Global Flood Protection Benefits of Mangroves

[Pelayo Menéndez](#)  [Iñigo J. Losada](#), [Saul Torres-Ortega](#), [Siddharth Narayan](#) & [Michael W. Beck](#)

[Scientific Reports](#) **10**, Article number: 4404 (2020) | [Cite this article](#)

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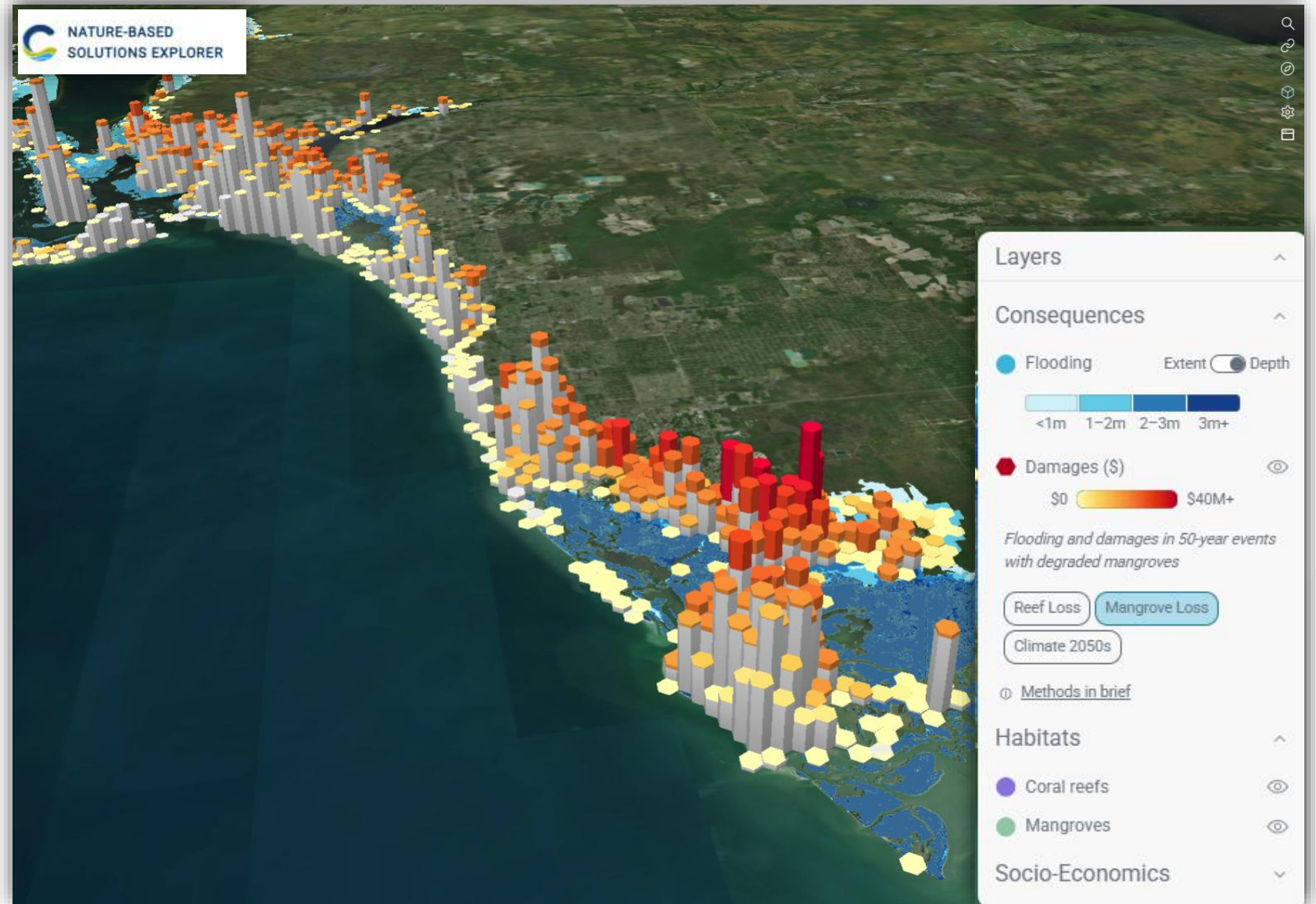
Deemed Estimate Data & Asset Value Calculator



Additional Data Sources

- Other valid data can be used

Nature-based Solutions Explorer



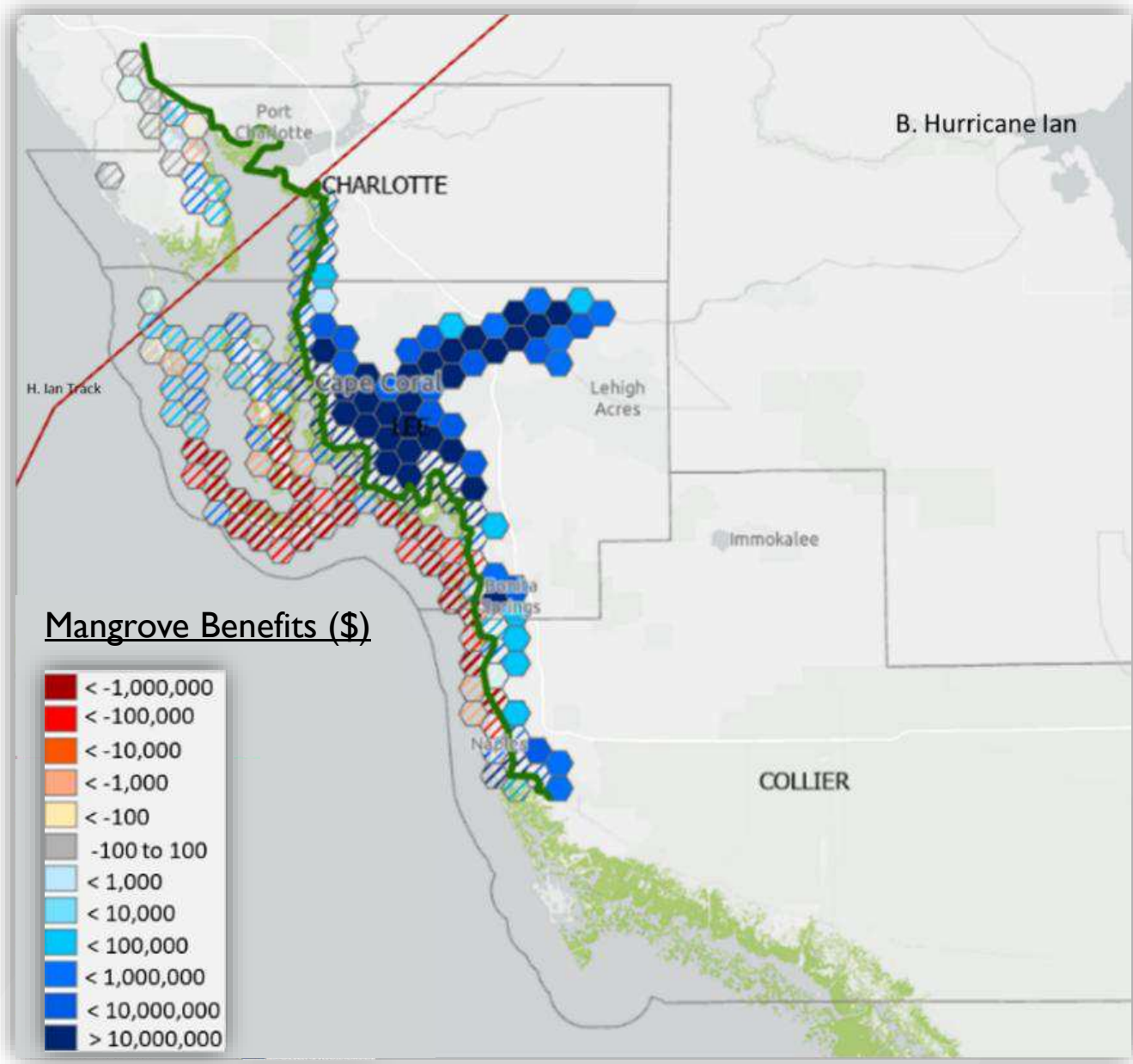
Additional Data Sources: Industry

Mangrove Benefits

Hurricane Ian = \$4.1 Billion

Hurricane Irma = \$725 Million

Annual (Collier Co.) = \$67 Million



MOODY'S



Q&A



Coastal Resilience
Methodology, v1.0



Methodology
Flyer



THANK YOU

For further questions, please contact: secretariat@verra.org