WATERSHED WORKING GROUP

of the

U.S. Coral Reef Task Force

Steering Committee Co-chairs

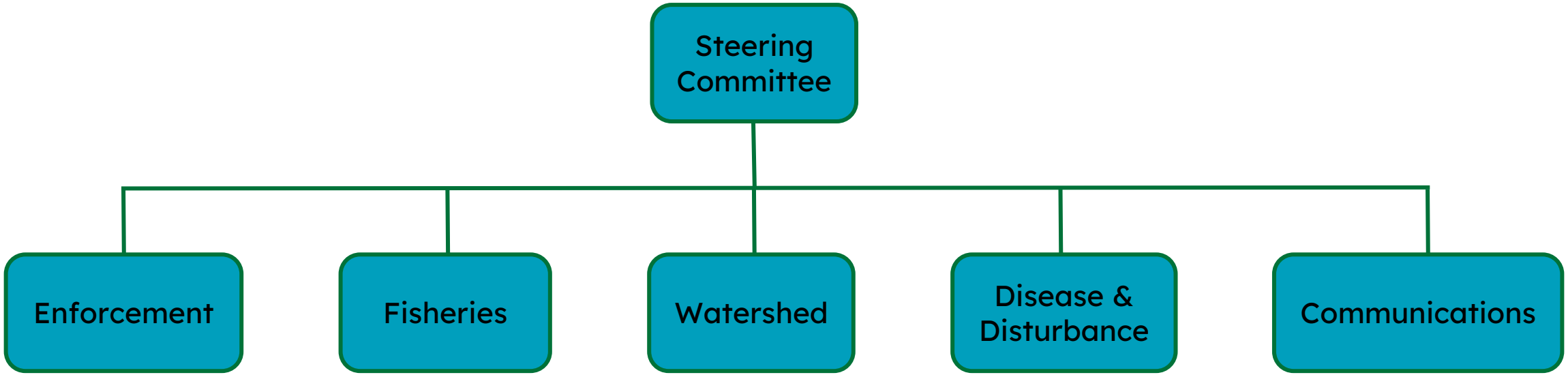
Federal Agencies

States, Territories, & Commonwealths

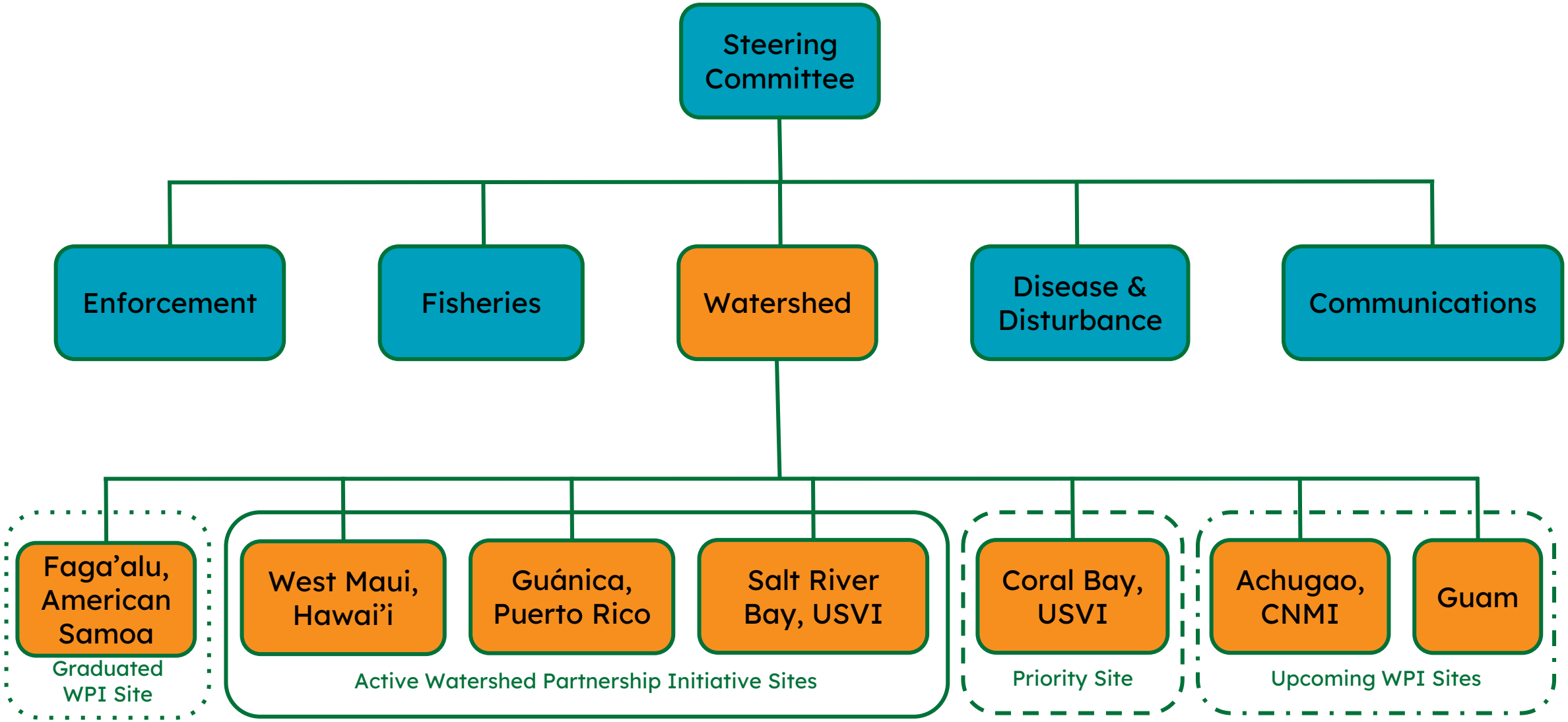
Freely Associated States

All Islands Committee

Working Groups



Working Groups



WWG Goals

A Vision:
Coral reef ecosystems are thriving, diverse, resilient, and able to sustain valuable ecosystem services for current and future generations

By 2035, state and territorial priority watersheds have stable or improved water quality.

WWG Goals

- Facilitate exchange of information and lessons learned among watersheds
- Develop tools for measuring success and tracking progress
- Develop a long term strategy for the future of the WPI
- Leverage resources (funding and others) of federal and local agencies to maximize impact

WWG Actions

Reef Condition

Severely Impacted

Minimally Impacted

Sufficient capacity and support;
Improved understanding;
Monitoring, mapping, assessment

Mitigate **Minimize** **Prevent & protect**

Management Actions

Assessment of damages, emergency response, coral restoration, interventions, ecosystem restoration

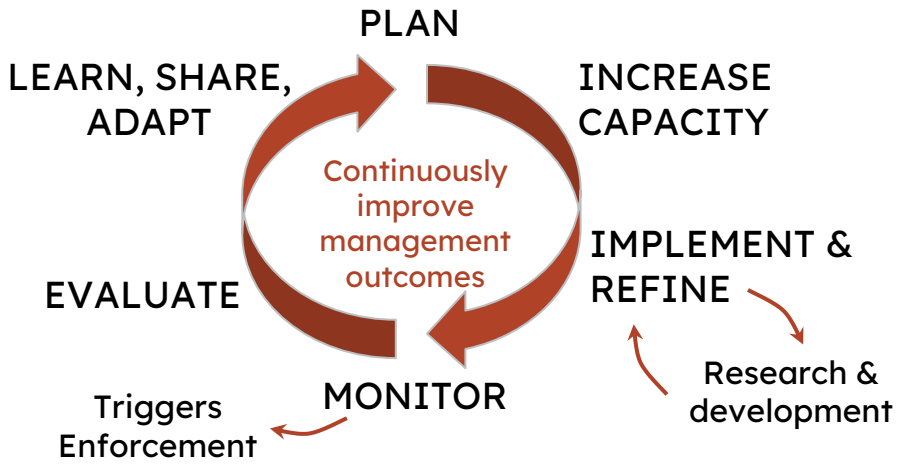
Habitat focus areas, species recovery plans, fishery management plans, technical assistance and tools, vulnerability assessments, population studies, resilience strategies

Marine protected areas, no-take reserves, fisheries closure areas

weight of actions taken based on reef condition

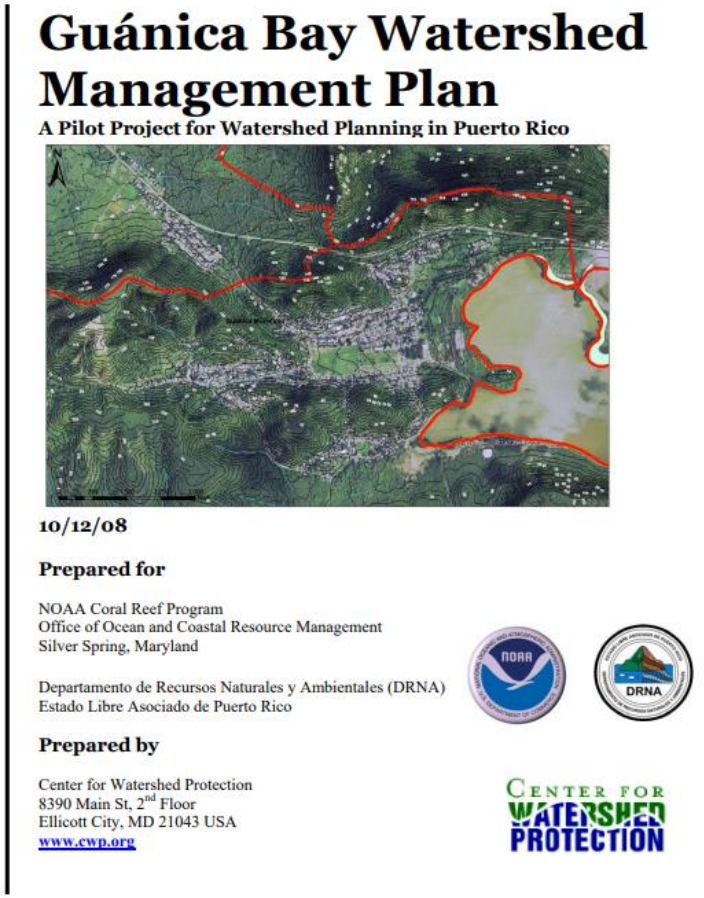
WWG Actions

- Monthly meetings to facilitate partnerships and information sharing
- Work with watershed coordinators to track progress
- Support creation of Sustainability and Implementation plans for each WPI site
- Organize learning workshops and outreach opportunities for USCRTF meetings



The Watershed Partnership Initiative

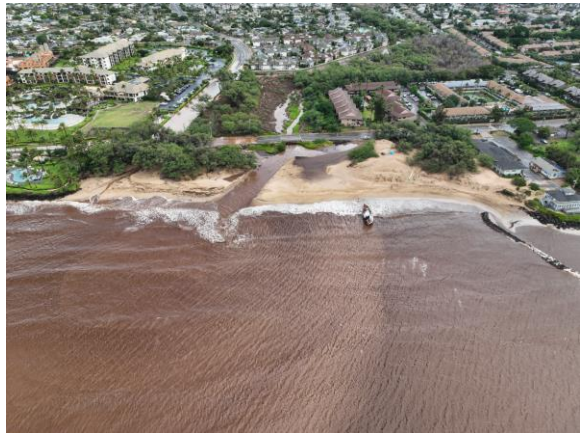
- 2008: Puerto Rico's Div. of Natural and Environmental Resources developed Watershed Management Plan for Guánica Bay
  - USDA charges USCRTF to coordinate federal agencies to aid efforts
  - All Islands Committee sees success, wants to expand program
- 2010: West Maui, Hawai'i becomes a WPI Site
- 2012: WPI codified[1]; Faga'alu, American Samoa joins as WPI site
- Started small, now at 80+ members



[1]U.S. Coral Reef Task Force Resolution 28:1

WPI Mission/Intent

The U.S. Coral Reef Task Force developed the Watershed Partnership Initiative to facilitate interdisciplinary partnerships with federal, state, territory, and local entities to mitigate pollution from priority watersheds adjacent to valuable coral reefs.



WPI Objectives

- Develop and implement clear and targeted strategies and actions that have a measurable positive increase in coral reef metrics
- Blend traditional knowledge and science-based approaches for effective management
- Empower local governments and communities to engage in management
- Support graduation of priority watersheds to allow the selection of new ones

WPI Site Selection Process

Jurisdiction submits nomination package*

Jurisdiction revises package

WWG reviews package. Does it meet the criteria?

no

yes

SC reviews package. Is there enough info?

no

yes

Jurisdiction presents package to WWG and SC members

Questions answered via email

Package meets criteria. WWG and SC recommend USCRTF Principals endorse WPI site

SC members brief their respective principals

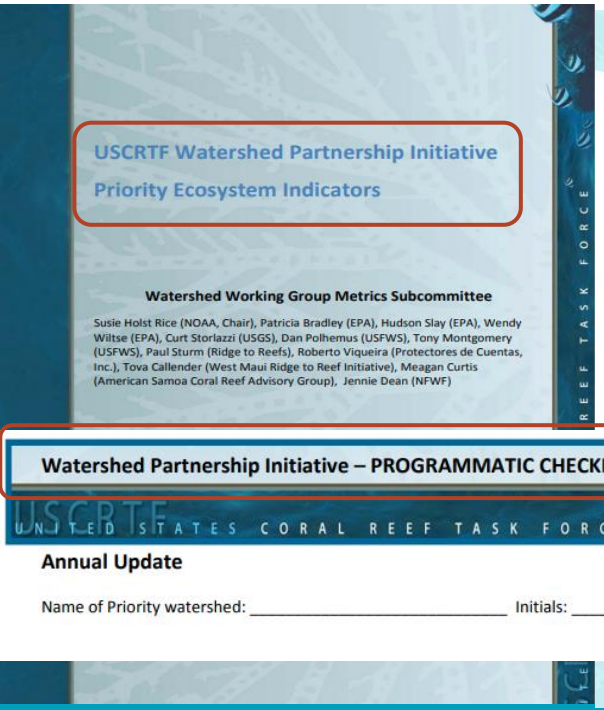
Principals vote to endorse during annual Business Meeting

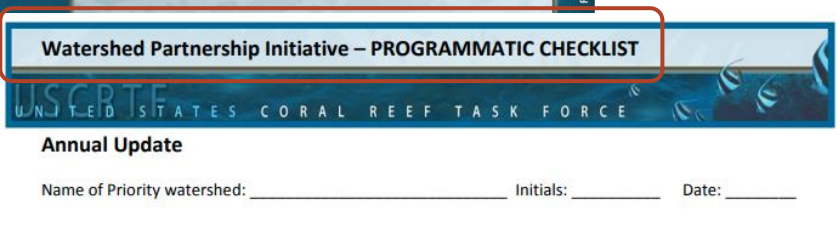
We have a new WPI Site!

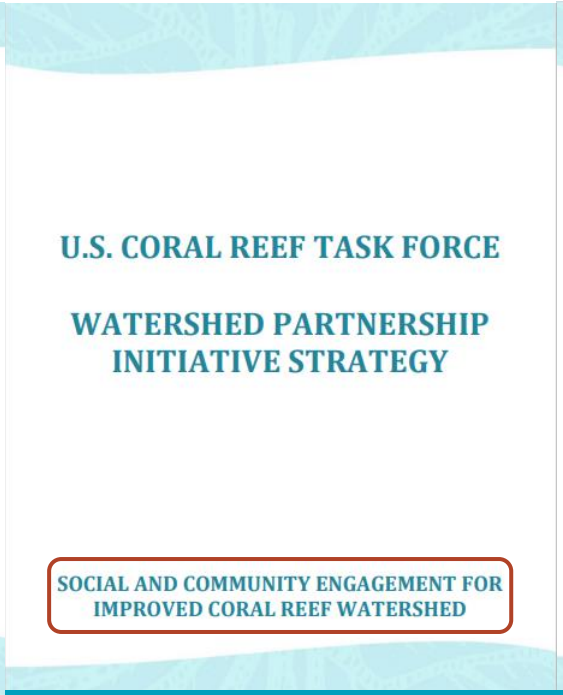
*As outlined in the Jurisdictional Guidance for Nominating New WPI Sites

Key Documents

The WWG started with no framework for choosing, nominating, and “graduating” sites, nor site goals or objectives, or assessment protocols. Now, these documents exist and can be used for any interested jurisdictional watershed.







“Matured” Site: Faga’alu, Am. Samoa

Threats

Sedimentation runoff from nearby quarry

Decline in fisheries

Debris and refuse

Plan of Attack

Engage with the community to create structural projects, conduct biological assessments, and educate the public via outreach events

Successes

- Established a Marine Protected Area to promote community ownership
- Improved juvenile coral density and reduced macroalgal cover; reef was more resistant to a bleaching event
- Served as a vital resource and example for other watersheds across the island

At a glance

- 2.47 km² area
- 910 residents
- 3 monitoring stations
- First WPI graduation

2011 — Faga’alu Village Watershed Management & Conservation Plan developed

2012 — Plan adopted!

2012 — Faga’alu is made a WPI priority watershed

2012-2014 — Implementation of plans for sediment & nutrient reduction

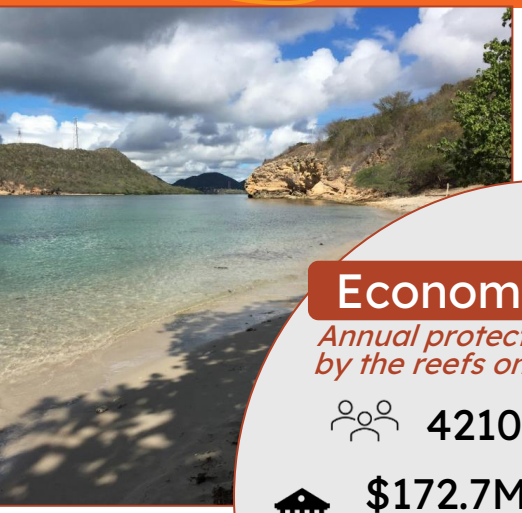
2015 — Bleaching event and benthic assessment

2020 — Benthic and sediment effectiveness assessments

2022 — Graduation! Faga’alu is a mature site

2010 2015 2020 2025

Active Site: Guánica Bay, Puerto Rico



Economic Benefits

Annual protection value provided by the reefs on the island of Maui [1]*

4210 people

$172.7M of economic activity

$97M worth of buildings

*adjusted to 2025 USD

[1]https://doi.org/10.3133/ofr20191027

Threats

Pressure from tourism

Soil wash-out from areas affected by forest fires

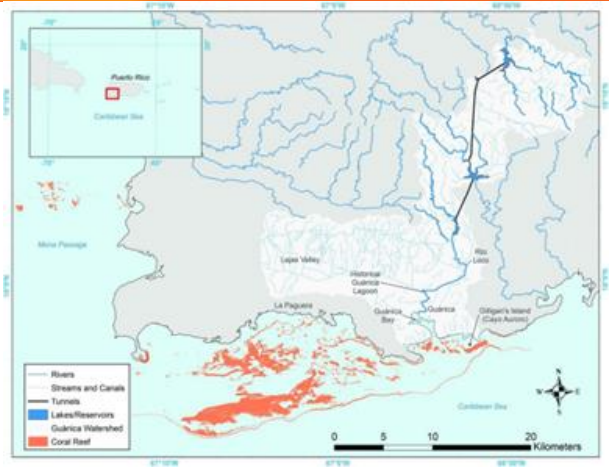
Marine debris

At a glance

97.1 km² area

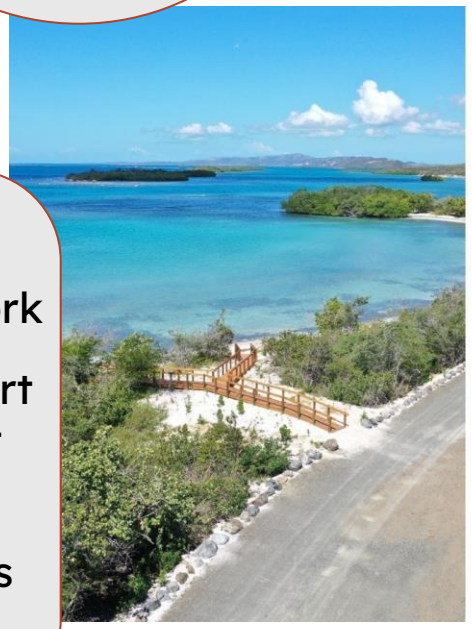
5 watersheds managed together

Est. in 2012



Successes

- All initial projects were funded, with more identified and recommended for continued work
- Stabilization of farmland and dirt road closures reduced sediment and nutrient loads
- Implementation of Puerto Rico's first artificial wetland sewage treatment plan



Active Site: West Maui, Hawai'i

At a glance

- 97.1 km² area
- 5 watersheds managed together
- Est. in 2012

Economic Benefits

Annual protection value provided by the reefs on the island of Maui [1]*

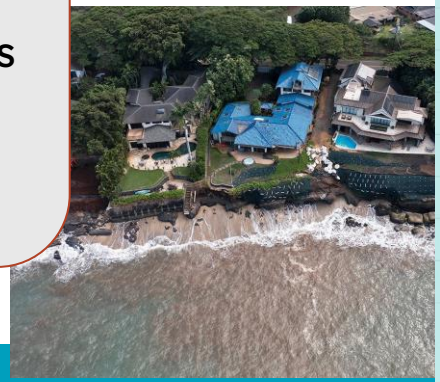
- 3,381 people
- $387M of economic activity
- $165M worth of buildings

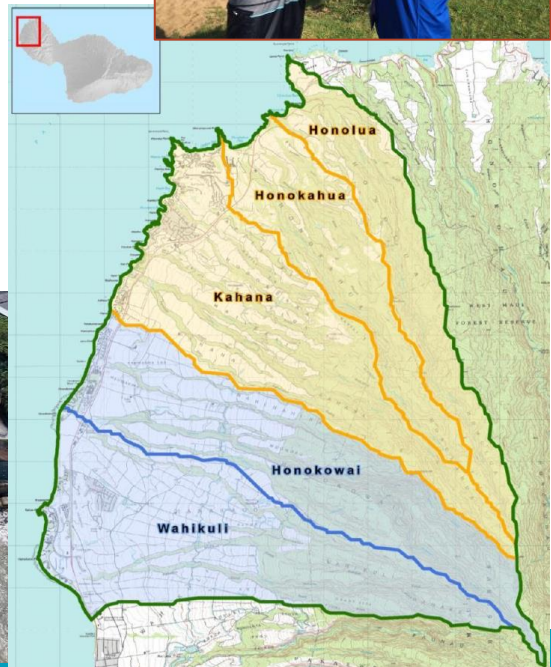
*adjusted to 2025 USD
[1]Storlazzi et al., 2019

Threats		Opportunities
Failing coastal infrastructure	→	Managed retreat
Fallow field conversion	→	Improved stormwater management
Coral bleaching & ocean acidification	→	Global action
Legacy agricultural nutrients & sediment runoff	→	Reduction projects

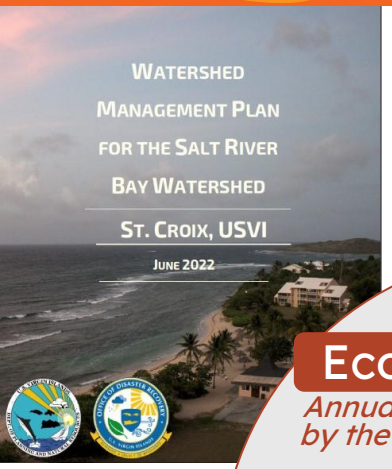
Successes

- ✓ Worked to establish sustained, local ownership of sediment reduction efforts
- ✓ Increased stakeholder engagement, community education, & sampling efforts through citizen scientists
- ✓ Served as a vital resource and example for other watersheds across the island





Active Site: Salt River Bay, USVI (STX)



At a glance

- 16.8 km² area
- 11 water quality monitoring stations
- Est. in 2012

Economic Benefits

Annual protection value provided by the reefs on the island of Maui [1]*

- 278 people
- $31.4M of economic activity
- $26.5M worth of buildings

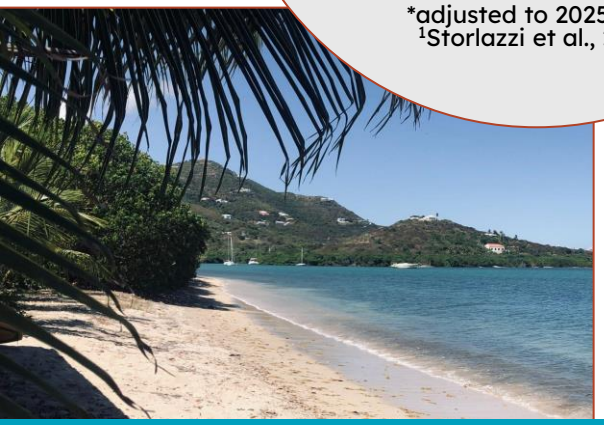
*adjusted to 2025 USD
[1]Storlazzi et al., 2019

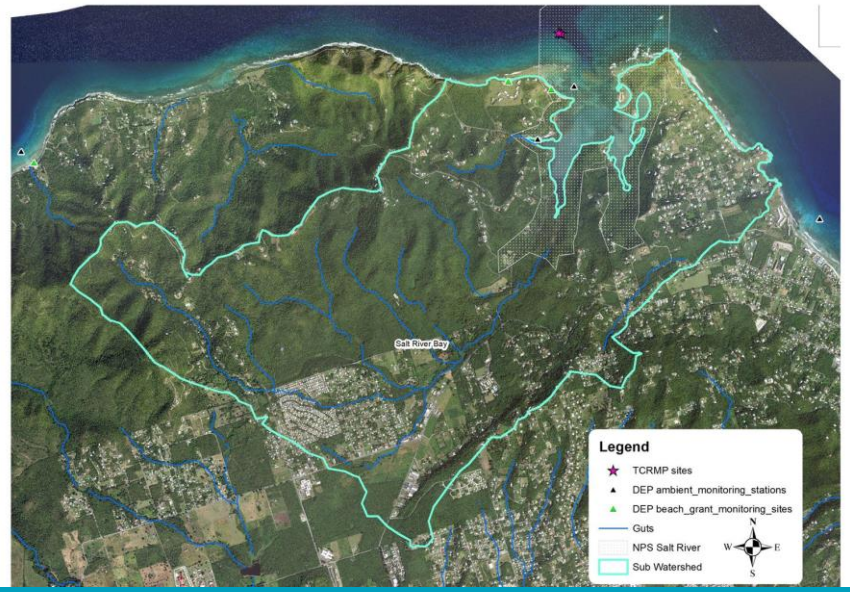
Needs

- Sediment transport studies
- Green infrastructure demonstration projects
- Environmental literacy baseline surveys
- Stream restoration plans
- Coral reef water quality impacts report
- Current coral reef reproductive health and functional diversity report

Threats

- Impaired waterbodies
- Point source pollution
- Solid waste/wastewater management
- Stormwater runoff





Upcoming Site: Achugao, CNMI

At a glance

- 6.5 km² area
- 4 major stream systems
- Watershed est. in 2004

Threats

- Wildfires
- Shoreline Erosion
- Land-based pollution
- Invasive Species

Vision

- Controlled development in keeping with the current sense of place (focused on small-scale tourism and redevelopment)
- Sustainability and climate resilience (flood and fire resistance)
- Healthy natural resources (fishing, water quality, corals, etc.)

Goals

- Reduce urban pollutant loads to Tanapag Lagoon
- Use 2050 environmental predictions for development and infrastructure planning
- Protect or restore 30% of terrestrial and wetland habitats
- Empower community-based stewardship by hosting >30 outreach activities

(Top) Looking across the grassed slopes of the Achugao watershed. (Bottom Left) Chalan Pale Arnold Rd. in North Achugao. (Bottom Right) outlet of one of four major stream systems.

Priority Site: Coral Bay, USVI (STJ)

At a glance

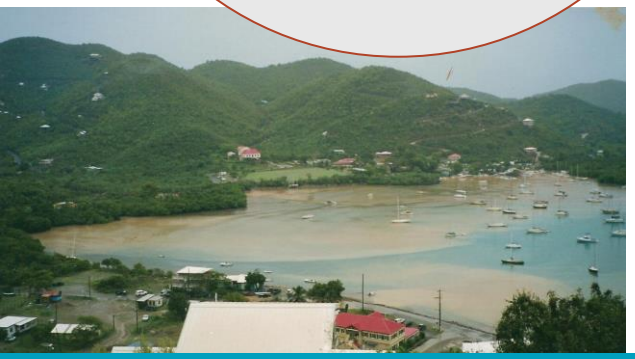
- 12.2 km² area
- 12k+ acres of protected underwater habitat
- WMP est. 2008

Economic Benefits

Annual protection value provided by the reefs on the island of Maui [1]*

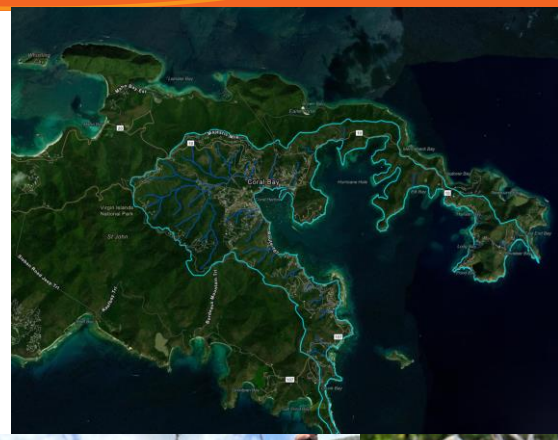
- 3 people
- $5.3M of economic activity
- $777K worth of buildings

*adjusted to 2025 USD
[1]Storlazzi et al., 2019



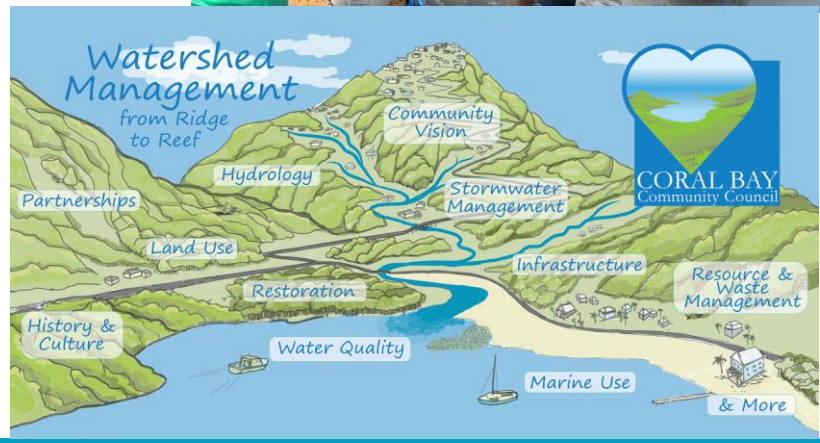
Threats

- Sedimentation (turbidity)
- Biocontanimants & failing septic systems
- Solid waste management and floatable debris
- Hurricanes, which create harmful discharge
- Slope stabilization and erosion



Goals

- ✓ Improve water quality to preserve threatened ecosystems and infrastructure
- ✓ Reduce sources of sediment loading and discharge to improve water quality
- ✓ Create cooperative relations between local entities, community, USCRTF, and gov. partners
- ✓ Improve residents' access to safe freshwater and ocean water



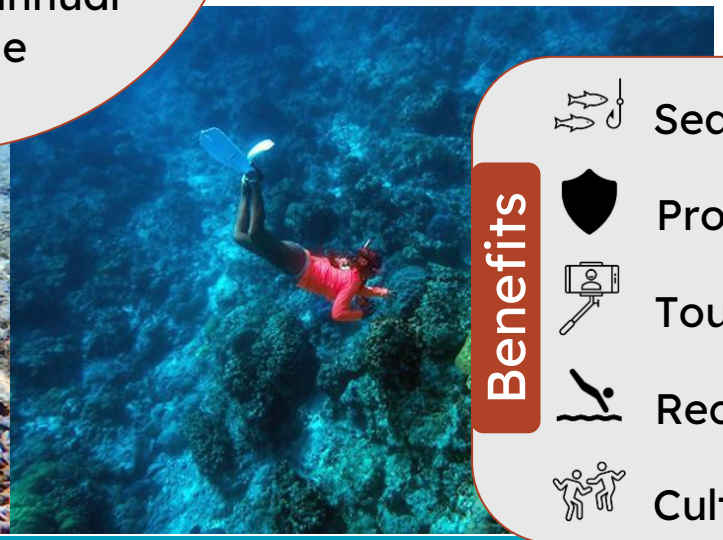
Upcoming WPI Site: Guam

Reef Stats

- 400+ coral species
- 42 mi² of reef
- 11.6% coral cover
- $63.4M annual value

Threats

- Land-based pollution, including soil erosion & nutrient discharge
- Overfishing, particularly of herbivores
- Tourism pressure, from vandalism, wildlife interactions, & non-reef-safe sunscreen
- Nuisance species, such as crown-of-thorns sea stars & *Terpios* sponges



Benefits

Seafood	68% of residents eat local seafood
Protection	$14M annual property damage savings
Tourism	12,400 jobs and $332M in economic output
Recreation	50% of residents enjoy waters yearly
Culture	CHamoru and Refaluwasch origins in reefs