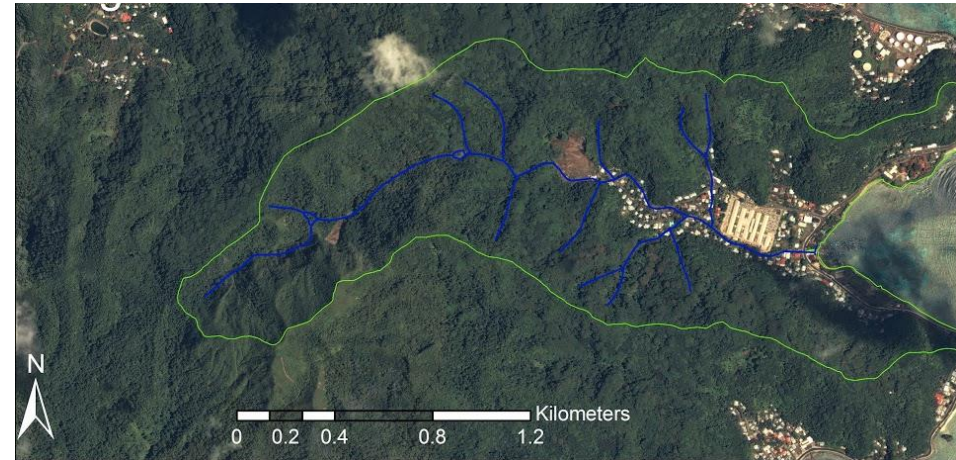
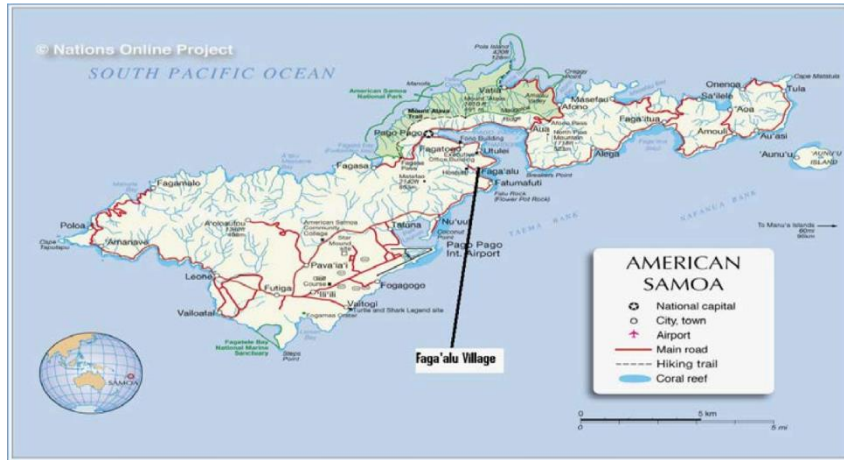


Management Efforts in Faga'alu Priority Watershed

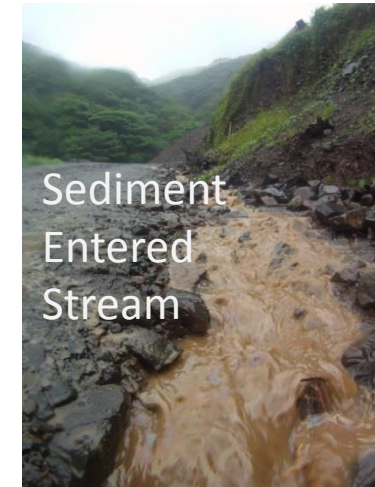
American Samoa

Jeremy Raynal
Coral Reef Advisory Group
American Samoa

Faga'alu: A Priority Watershed



Investigation Indicated:



Mitigation With Support from the Village and the Quarry

Prevention of Turbid Runoff



Baffled Sediment Basins



Directed Surface Runoff



Reduced Turbidity



Today's Report

- Management Plan
- Programmatic Checklist
- Monitoring and Ecosystem indicators
- Implementation Plan
- Sustainability Planning

Faga'alu Management Plan Implementation

- Trash:
 - Cleanups with data collection
 - Inspection team led by Mayor
 - Recycling program
- Stormwater Regulations:
 - Rain garden in place
- Stabilize banks:
 - Shoreline stabilization at school
 - Stream banks, Park?
- MPA:
 - Agreement in place but no action yet



Progress Using the Programmatic Checklist

- ✓ - We have appropriate federal partners
- ✗ - No current Watershed Coordinator (since end of last year)
- ✓ - We have a management plan including input from stakeholders, officiated only by the community
- ✗ - No official implementation agreement
- - Sporadic perceived run off issues from construction sites
- ✗ - All appropriate construction permits do not appear to be in place
- ✓ - ASEPA in charge of enforcement and has actively intervened at least once
- ✗ - NPDES MS-4 stormwater not currently active
- ✓ - Primary wastewater treatment is in place
- ✓ - There is limited local agriculture, monitored by ASEPA

Status of Recommended Implementation Actions

WMP Objective/ Project	Not viable	Funded	Project Initiated	% of Goal completed	Additional work needed
Three clean up committees- collect trash and report back from designated areas and inspection team established				Occurs monthly	No
50% of residents aware of trash and other environmental issues					Yes
Village recycling program established					No program on island
All developed areas compliant with storm water regulations		Quarry		50%	Engagement with ASEPA
Tree planting on unstable stream banks and coastal areas				10% (plans being reviewed)	Implementation
Process for stabilization of coastlines and stream banks identified			Planning begun		
Marine Protected Area established with enforcement and management by village collaborating with appropriate agencies				10% (agreement signed with CFMP)	Boundaries, regulations and deputies established

Status of Monitoring and Priority Ecosystem Indicators

- Data: before and after mitigation
- Programs in place for ongoing data collection
- **Data collection and reporting should consider local capacity.**
- Examples:
 - ASEPA – water quality
 - DMWR/CRAG – biological surveys

Implementation Plan

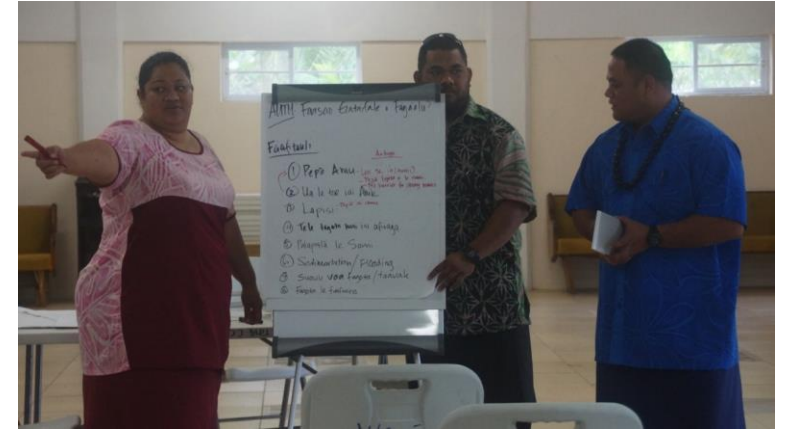
- 2013 Implementation supplement created to support the Management Plan.
- This should be revisited with a new Watershed Coordinator to specify priorities to be set for this individual, agencies and village.

Sustainability Planning

- Section 3C
 - a) Plan for funding Watershed Coordinator in place.
 - b) Position institutionalized in local government through CRAG
 - c) Monitoring ecosystem indicators:
 - Fish and benthos – DMWR/CRAG monitoring team
 - Water quality - ASEPA
 - d) Codification of government and leadership:
 - Officially - Village agreed to take charge, local government there to support and enforce.
 - In practice – Some agreements are just short of legal establishment.

Challenges and Solutions

- Watershed Coordinator – in progress
- Support in training new Watershed Coordinator.
- Need intensive outreach in village and improved dialogue between village and managers
- MPA needs to be a focus – needs extensive outreach efforts
- Eco-friendly erosion control at park.



FAGA'ALU - a village that is making a difference to their environment.

PLANNING

Watershed Management Project initiated

Watershed Management & Conservation Plan

Watershed Management & Conservation Implementation Plan

DATA COLLECTION

Coral reef surveys around Tutuila

Coral reef surveys of Faga'alu Bay

Household interviews

Coral and reef fish surveys in Tutuila

Coral and reef fish surveys in Tutuila

ACTION

Invasive tree removal & native tree planting

Storm water mitigation

Rain garden installation

RESULTS

Marine Protected Area designated

Sediment load downstream of quarry returns to natural conditions

Positive change takes a long time and depends on teamwork. Find out what you can do to help!

Faga'alu facts!

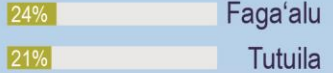
Faga'alu is located close to the beach park, has a high human population density and is downstream from a quarry that causes sediment runoff to the coral reefs.



92% of villagers think trash is a problem



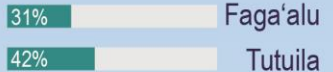
Coral cover in Faga'alu is similar to the rest of the island



66% of households fish on the reef at Faga'alu



Fish biomass is lower than the rest of the island



85% of villagers are concerned about water quality



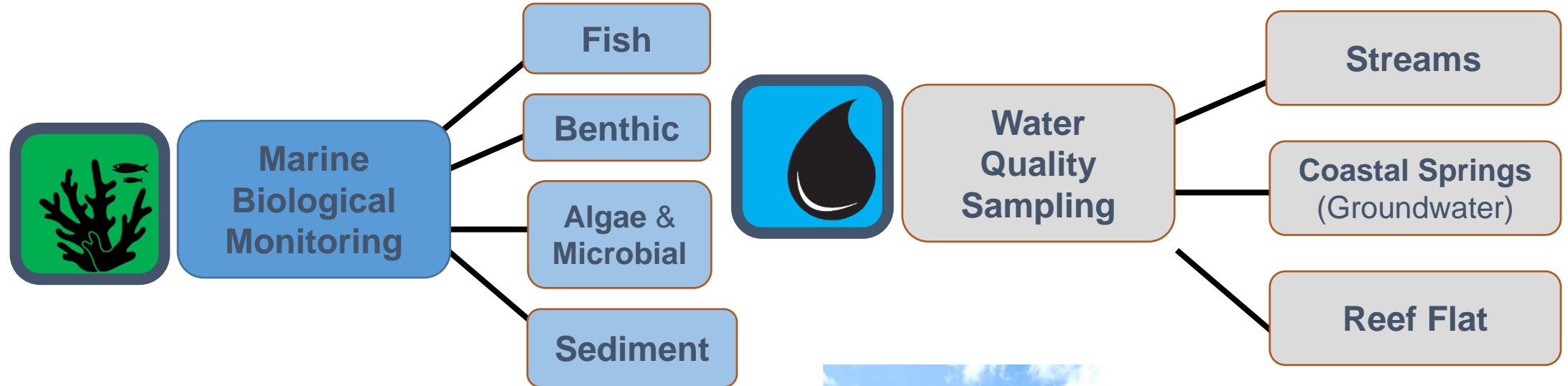
Before storm water mitigation, sediment load was 3-4 times higher than natural conditions

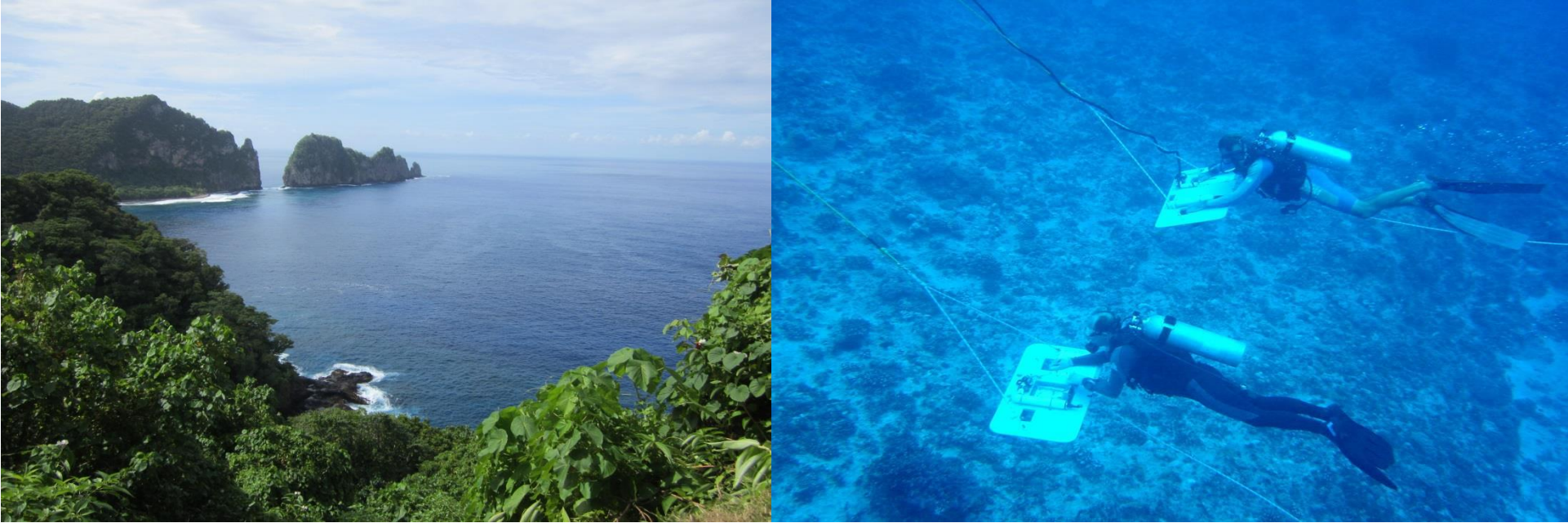
Pamphlet Created to Inform Community of Achievements and Goals:

Collaborative effort between Federal and local offices.

Credit: NOAA CREP: Adel Heenan et al.
Data from Arielle Levine

Ridge to Reef Integrated Management



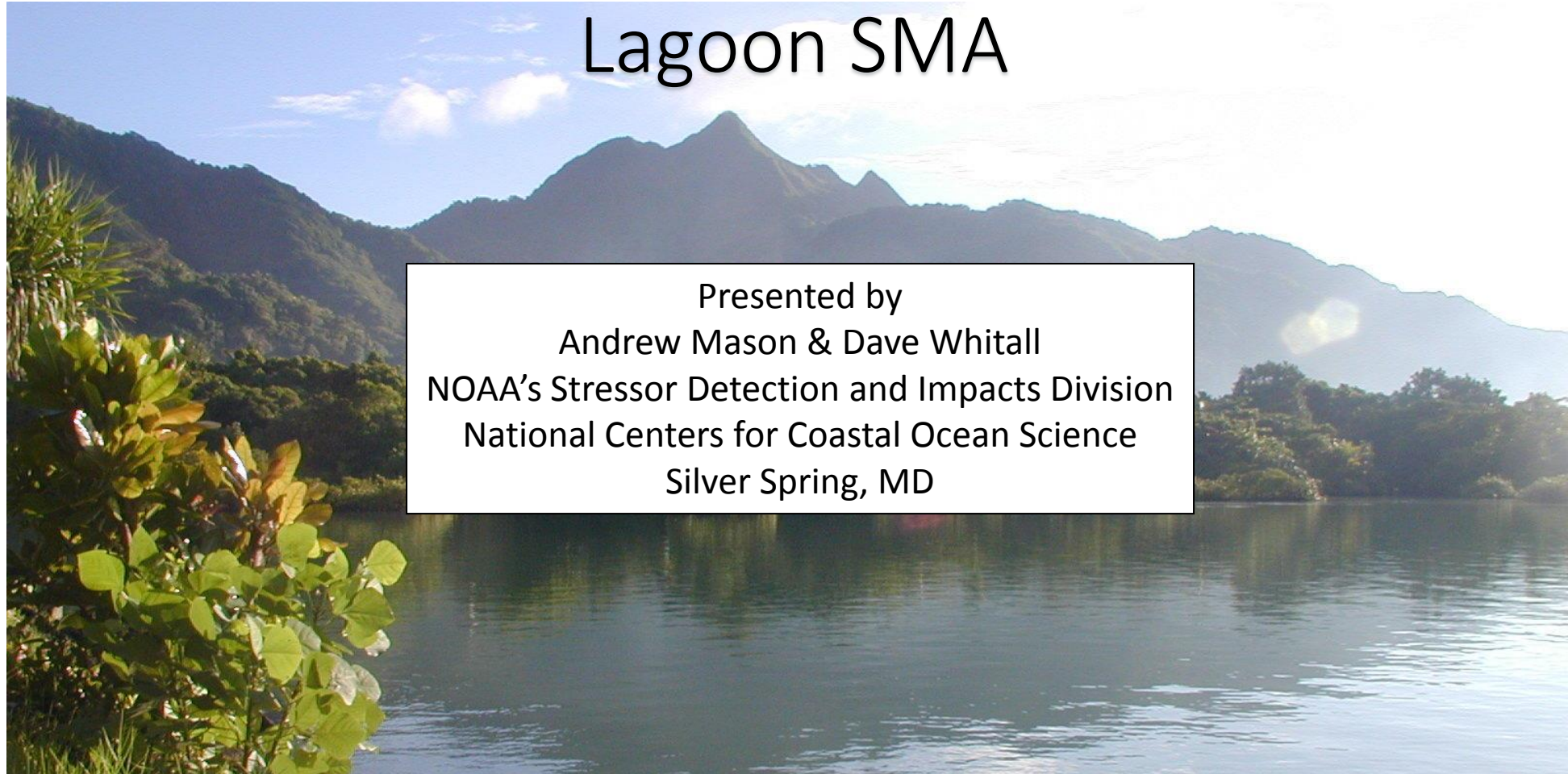


Project Update: Nutrient dynamics and benthic algae cover in Vatia Bay

Dave Whitall, Bernardo Vargas-Angel, Andrew Mason and Greg Piniak
NOAA

Meagan Curtis
American Samoa Coral Reef Advisory Group (now with ASCC)

A Baseline Chemical Contaminants Study in the Marine Sediments of the Nu'uuli Pala Lagoon SMA



Presented by
Andrew Mason & Dave Whitall
NOAA's Stressor Detection and Impacts Division
National Centers for Coastal Ocean Science
Silver Spring, MD

Nu'uuli Shipwreck:



Thank You!

Jeremy.raynal@crag.as

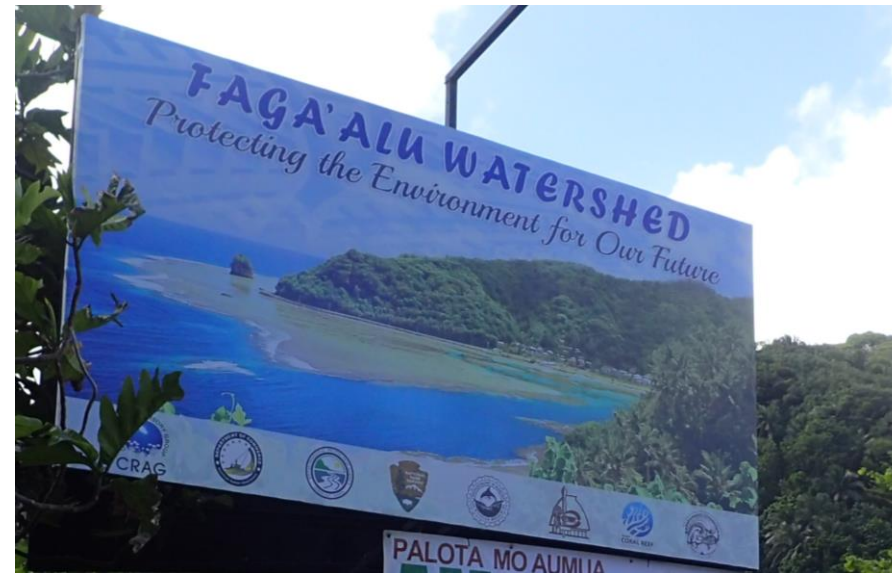


Photo Credit: Alex Messina (SDSU), Fatima Sauafea-Leau (NOAA PIRO), Trevor Kaitu'u (CRAG), Mia Comeros (ASEPA) Alice Lawrence (CRAG)