

Coral reef monitoring in AS by local agencies



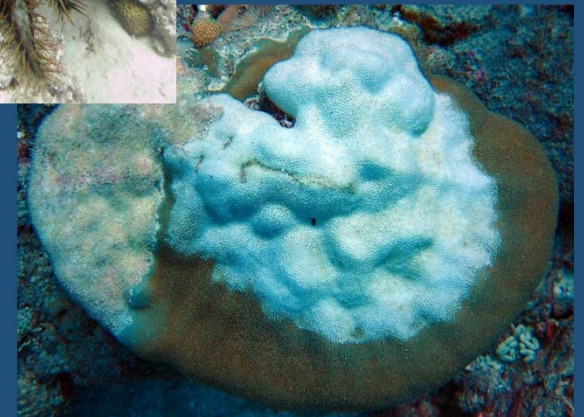
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Coral reef monitoring in AS

Main threats in the Territory:

- Construction
- Nutrient runoff
- Sedimentation
- Fishing
- Crown-of-thorns starfish
- Coral bleaching
- Coral disease
- Cyclones
- Tsunamis



Management needs/priorities



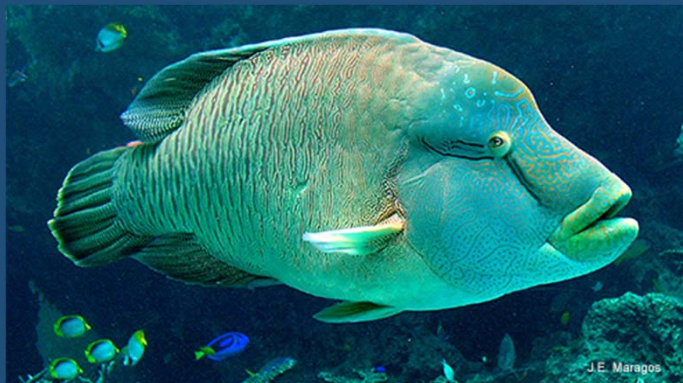
- Assessing the health of coral reefs in American Samoa on a long-term basis
- Providing data for an informed decision making for long-term management of coral reefs
- Understanding the effect/impact of increasing human pressure
- Understanding the effect/impact of climate change

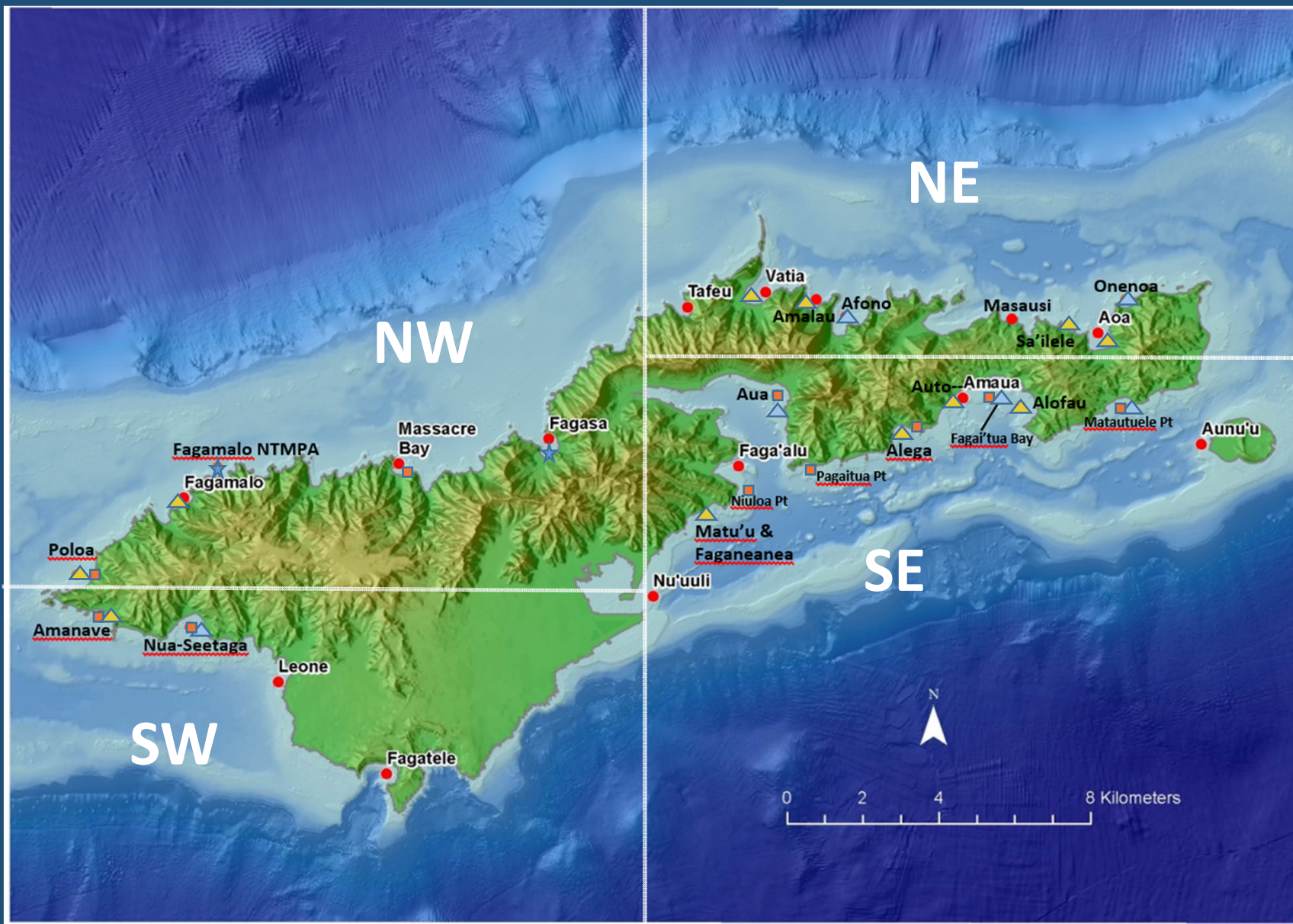
Coral reef monitoring in AS by local agencies – *DMWR/CRAG*



- NOAA CRCP American Samoa Coral Reef Monitoring Program (**CRMP**)
- Key Reef Species Program (**KRSP**)
- Community-based Fisheries Management Program (**CFMP**)

➡ permanent monitoring sites (total of 35 sites)





● CRMP
 ■ KRSP
 ▲ CFMP
 ▲ CFMP control
 ★ NTMPA

Coral reef monitoring in AS by local agencies – *DMWR/CRAG*

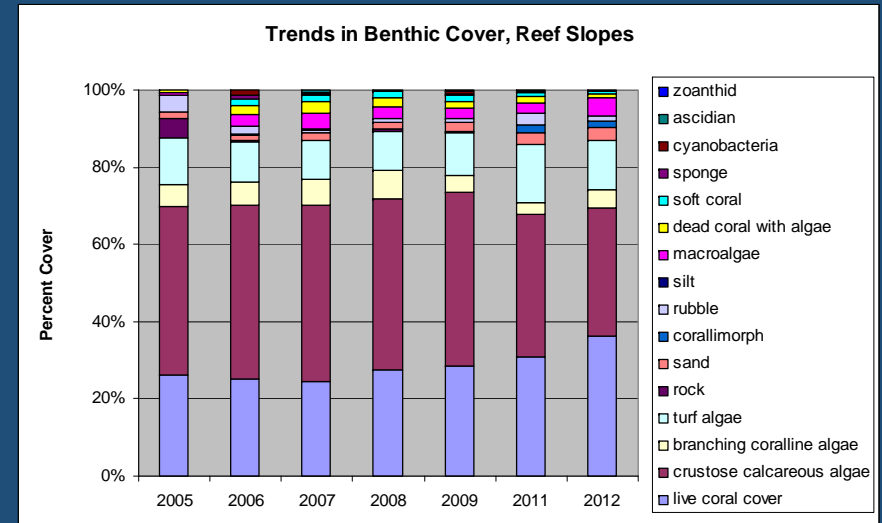
2005 – 2015

Annual monitoring:

- Fish counts/biomass
- Coral cover/species diversity

Future - CRMP Climate sites:

- Coral demographics/recruitment
- Disease/bleaching
- Temperature Loggers
- WQ parameters (Ammonium, Nitrate, Dissolved Oxygen, salinity, pH – YSI)

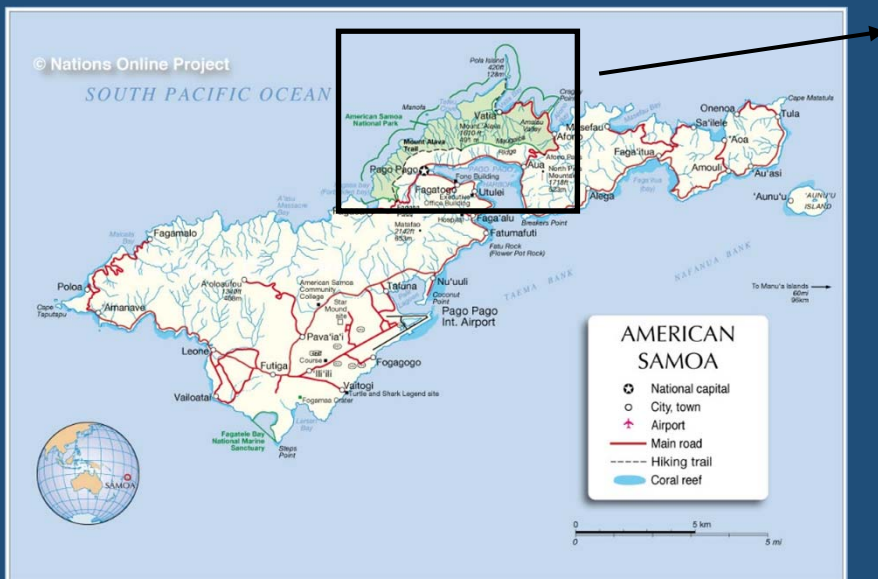


Coral reef monitoring in AS by local agencies – *NPSA*

2007-2015

Annual monitoring from Fagasa to Amalau (North side of Tutuila)

- 15 fixed transects (map) and 15 random transects
- Fish counts/biomass
- Coral cover/species diversity



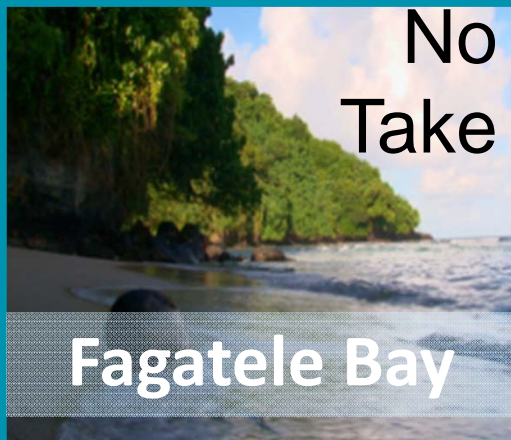
Sanctuary



Swains Island

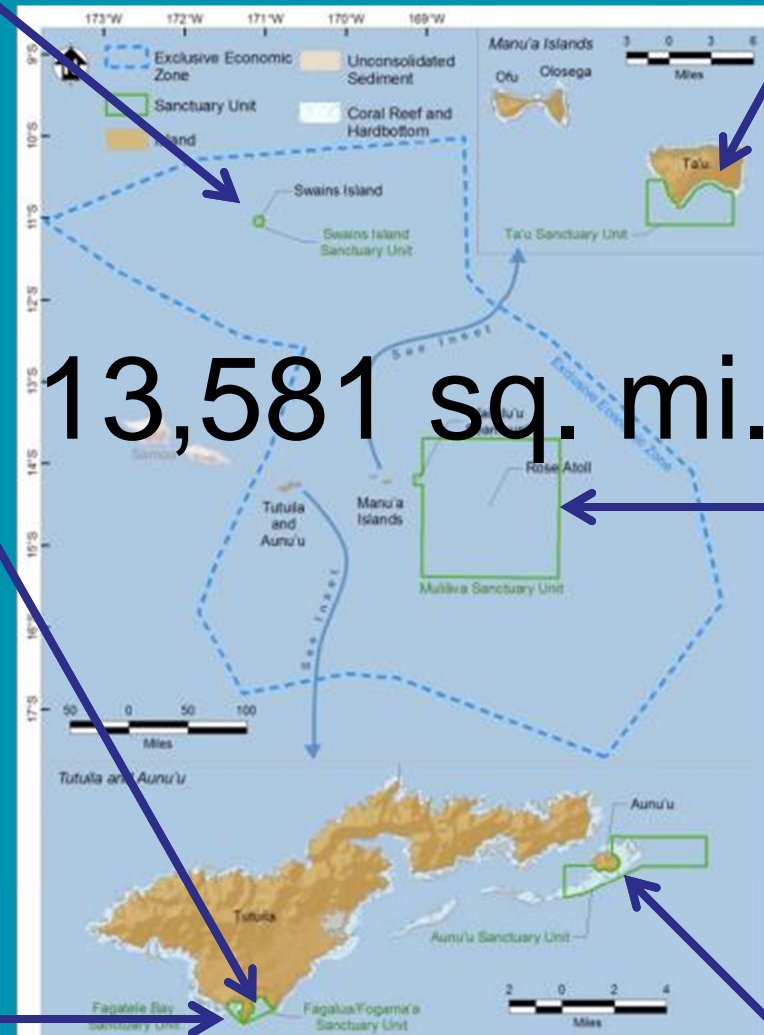


Fagaluva/
Fogama'a



Fagatele Bay

No
Take

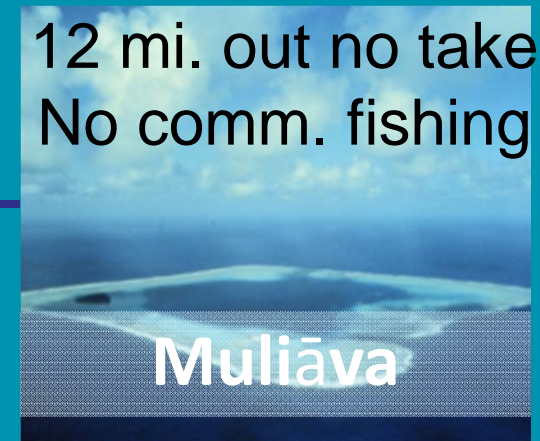


NATIONAL MARINE
SANCTUARIES

Units



Ta'u



Muliāva

12 mi. out no take
No comm. fishing



Aunu'u Island

NE zone:
trolling only



Sanctuary Reef Monitoring



1. Intensive monitoring of fish and benthos in sanctuary units via CRED partnership.

2. Monitoring for threats.

Opportunistic: Bleaching, COTS, disease, invasives. Want to expand.



3. Long-term surveys in Fagatele Bay. Birkeland et al. 1985-2002. Want to reinstate.



Collaborations and research needs/gaps

- Impact of climate change on reefs
- Identification of high resiliency areas
- Connectivity (larval dispersal, fish, etc)
- Impact of nutrients/land-based pollution
- Habitat mapping
- ESA species distribution
- Wide-scale disease surveys