

Status of Palau's Coral Reefs



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Importance of Coral Reefs



Erosion and Sedimentation



Seagrass

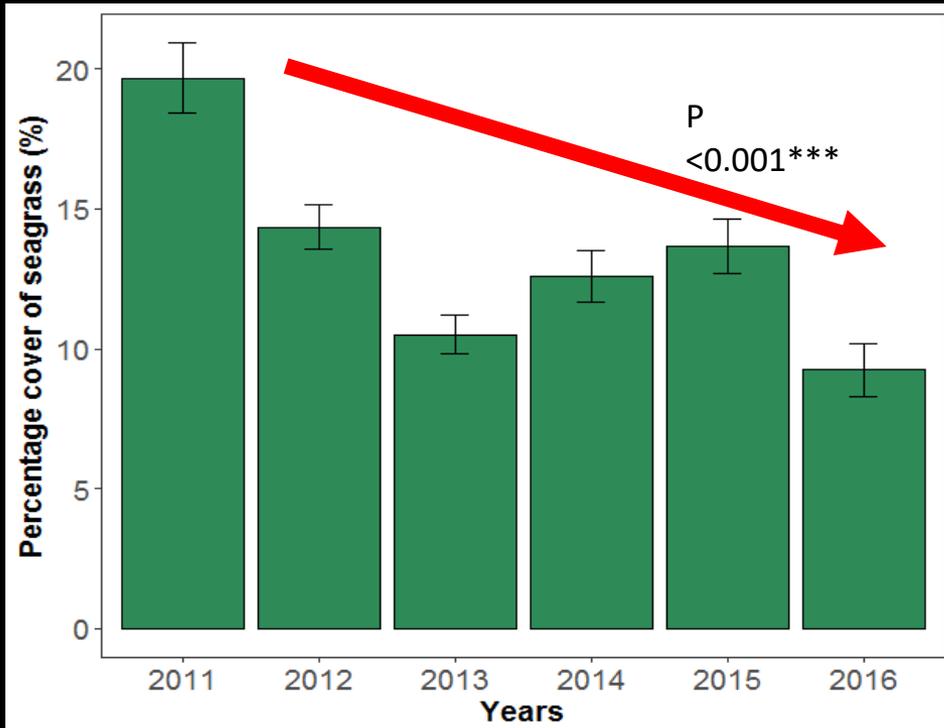
General decline in seagrass cover

Decline in fish and invertebrates

Decline in both MPAs and non-MPA sites



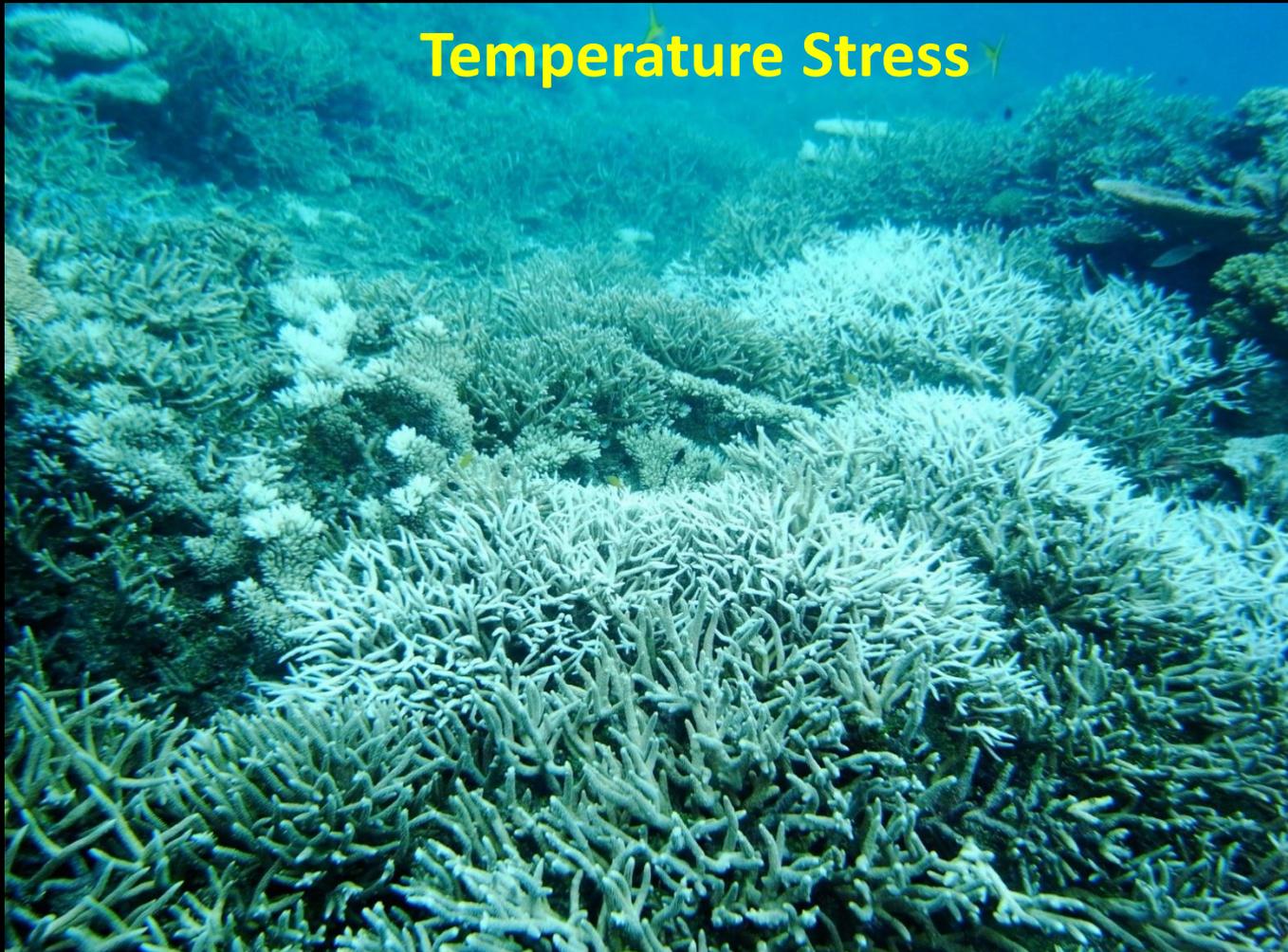
Long term monitoring - Seagrass Beds in Airai



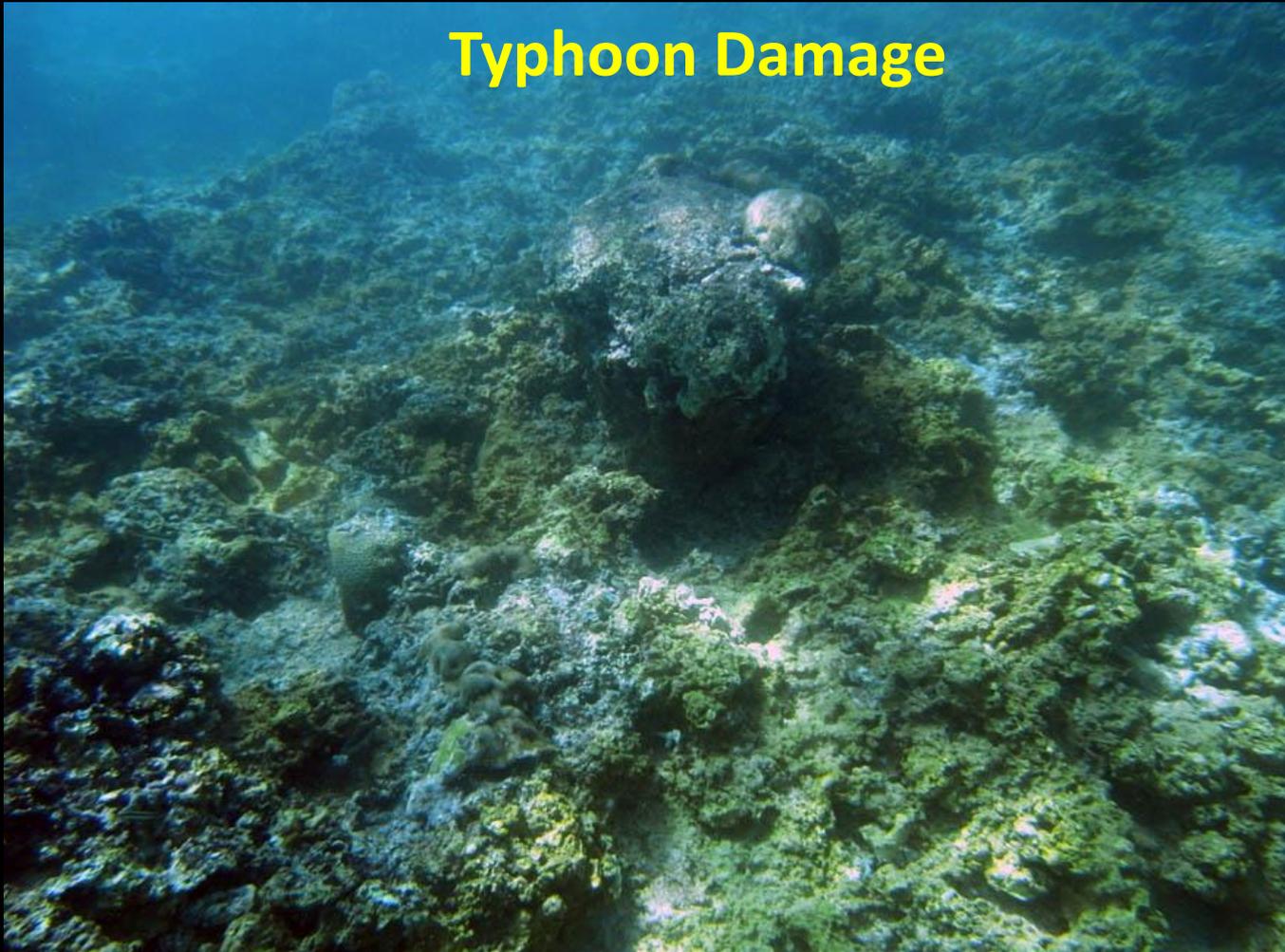
Since 2011

Whether it is inside
or outside MPA:
Seagrass cover has
decreased by half in 5 years

Temperature Stress



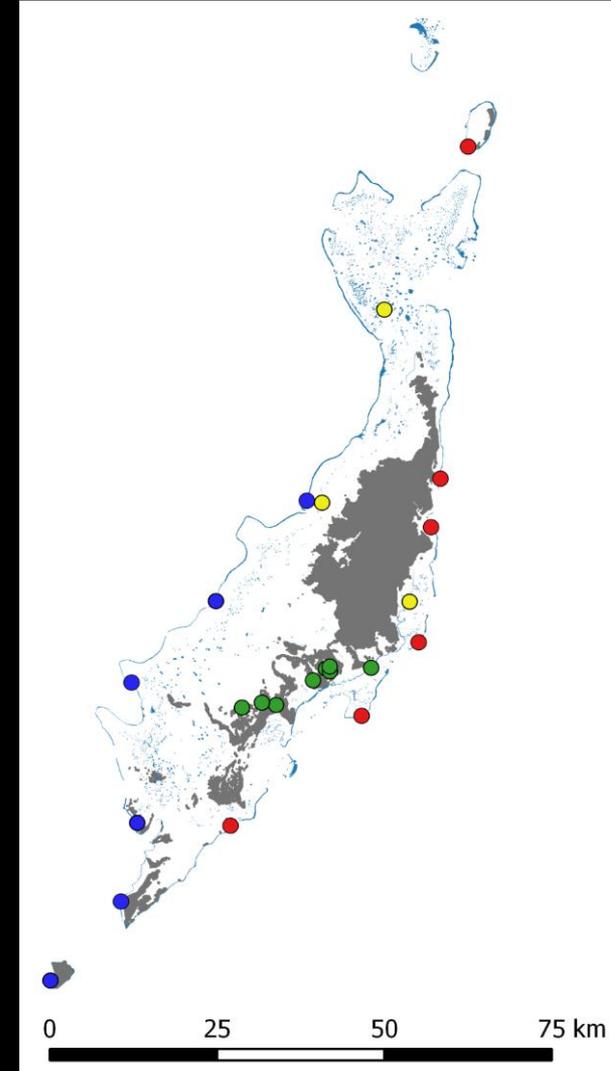
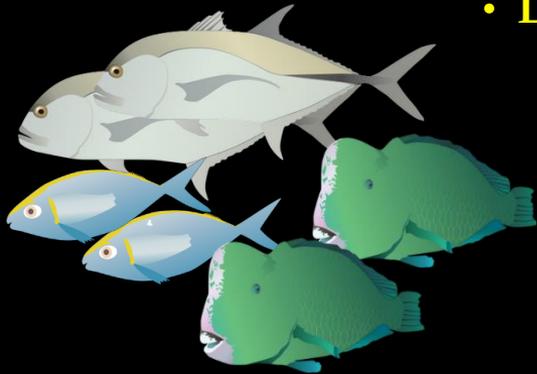
Typhoon Damage



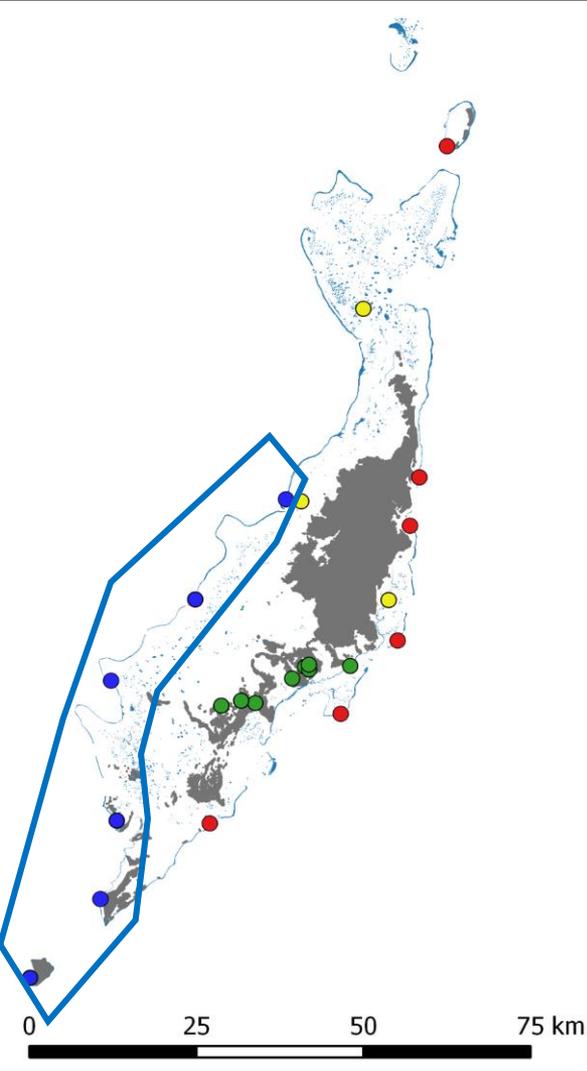
Coral Reef Monitoring

- **Long-term Coral Reef Monitoring (CRM)**

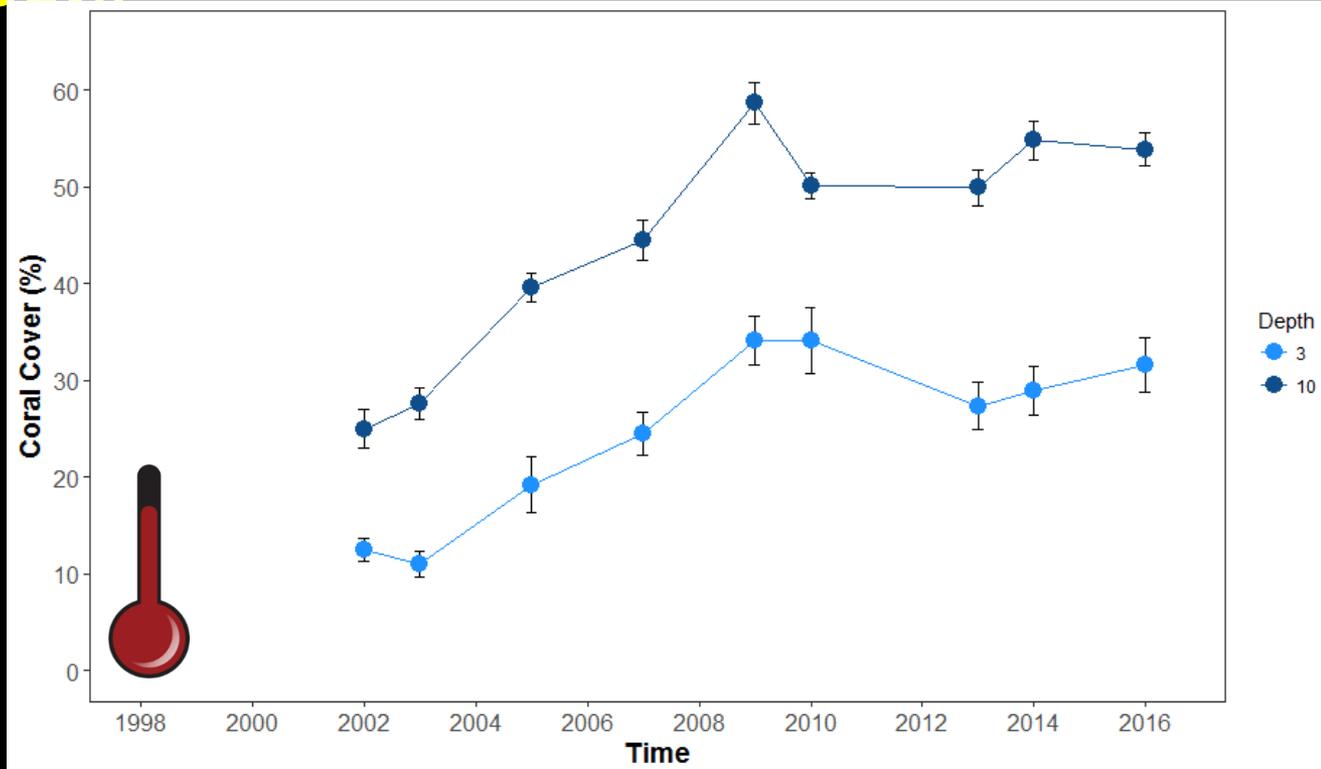
- Established in 2001
- 23 permanent sites in major habitats
- Every 2 years
- Ecological Indicators at 3m and 10m:



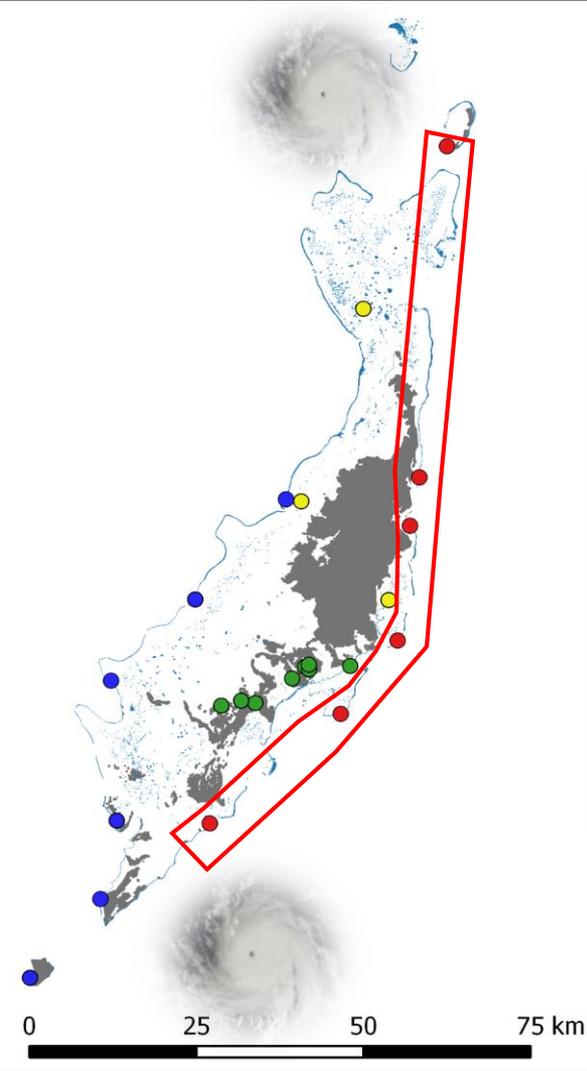
Western Outer Reef



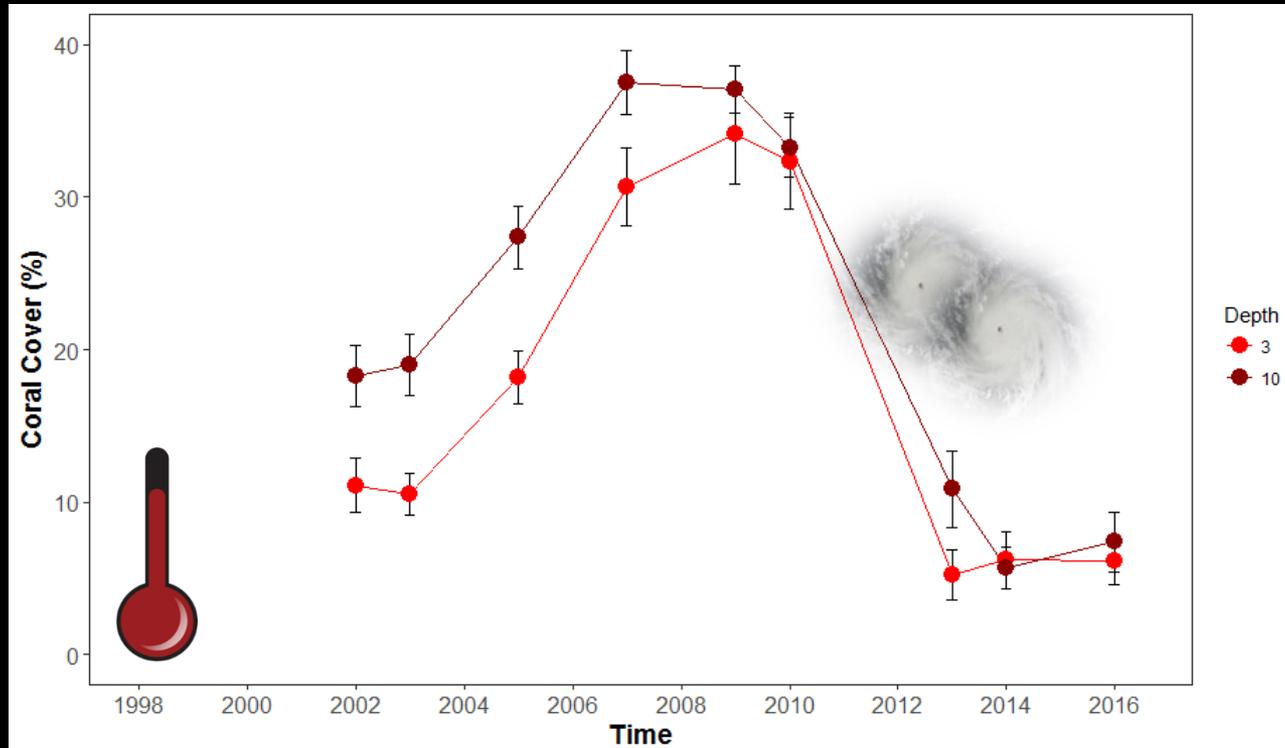
Coral-reefs on the western outer reefs



Eastern Outer Reef



Coral reefs in the eastern outer reefs



Before 1998



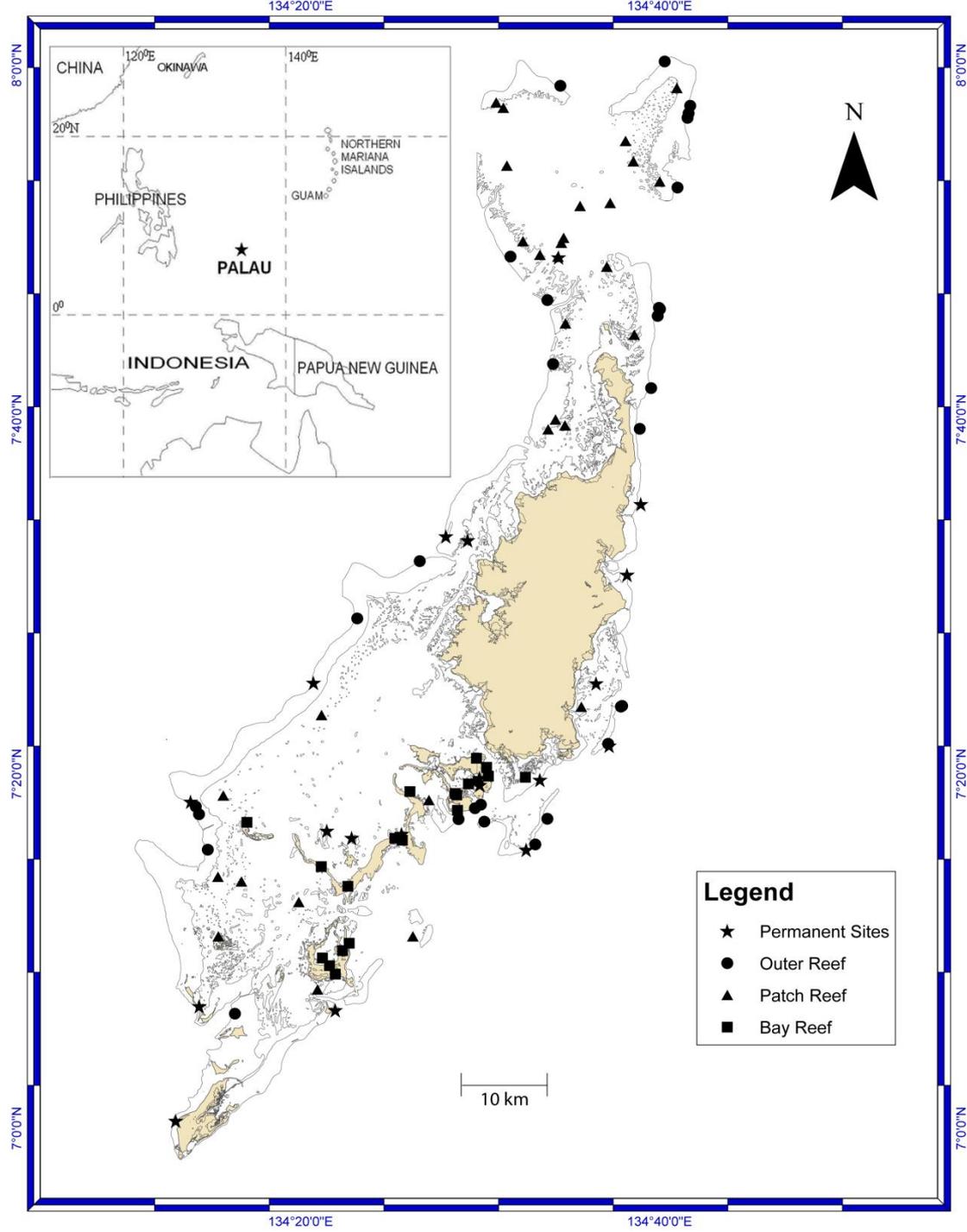
After 1998

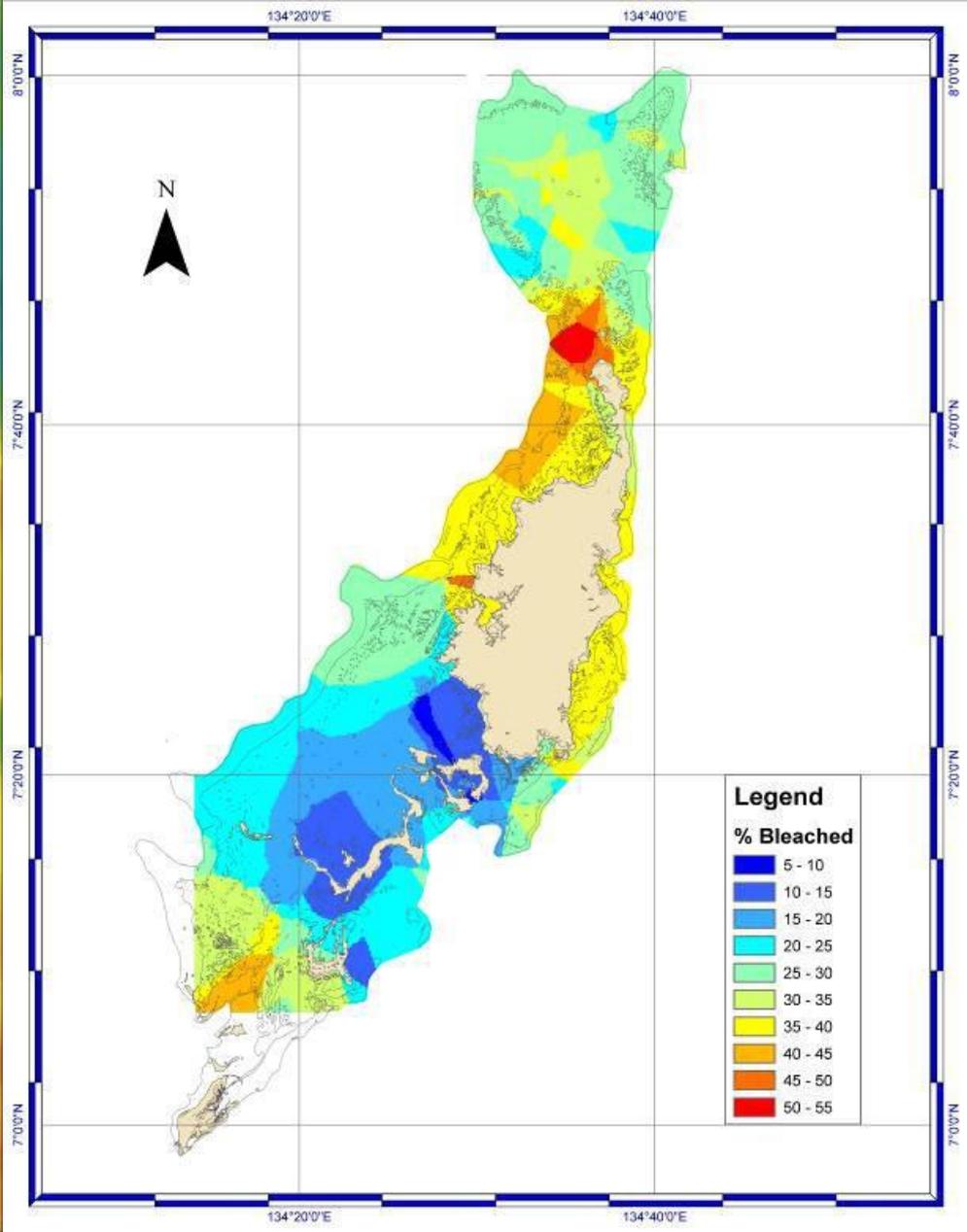
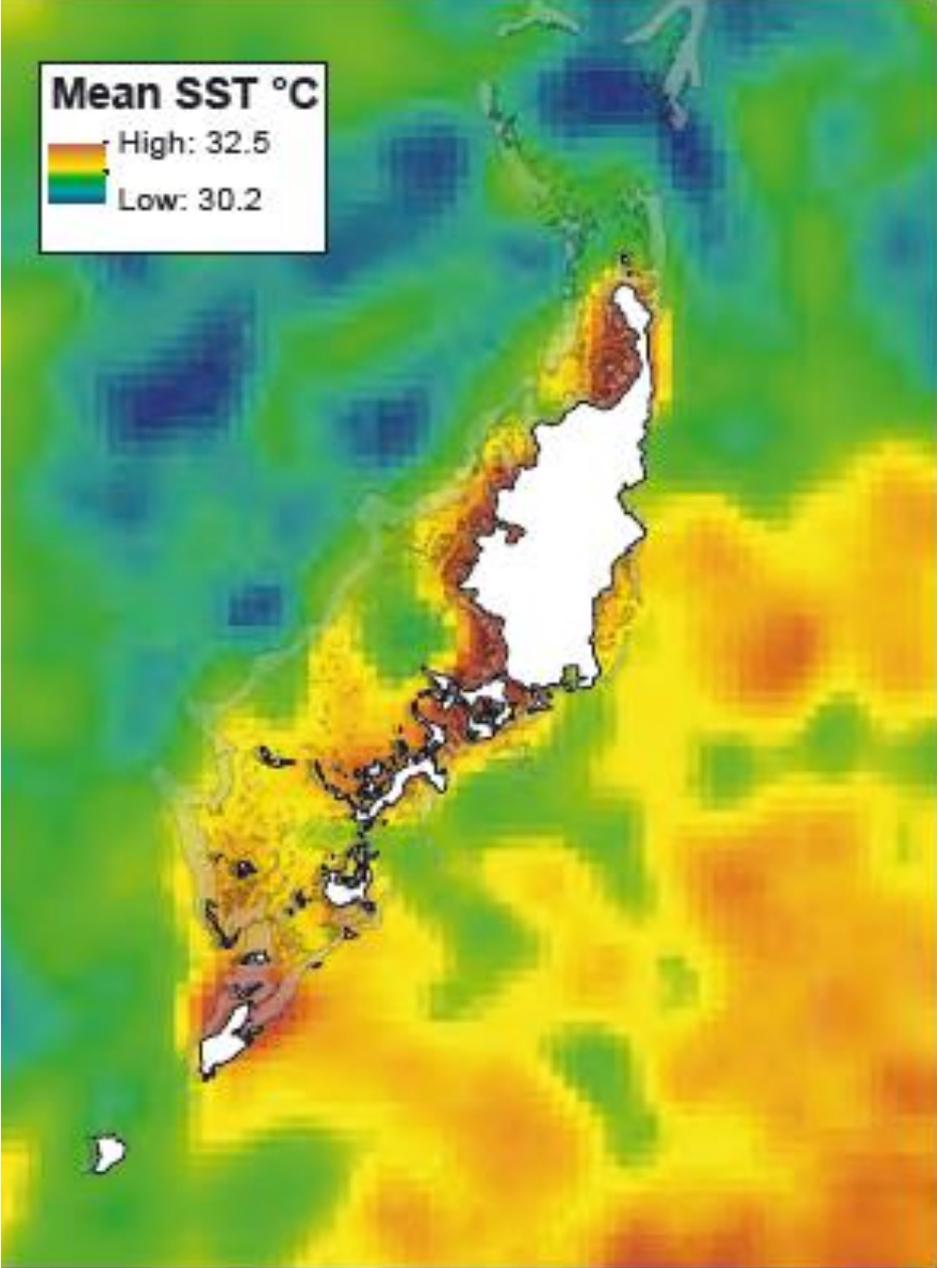


Today



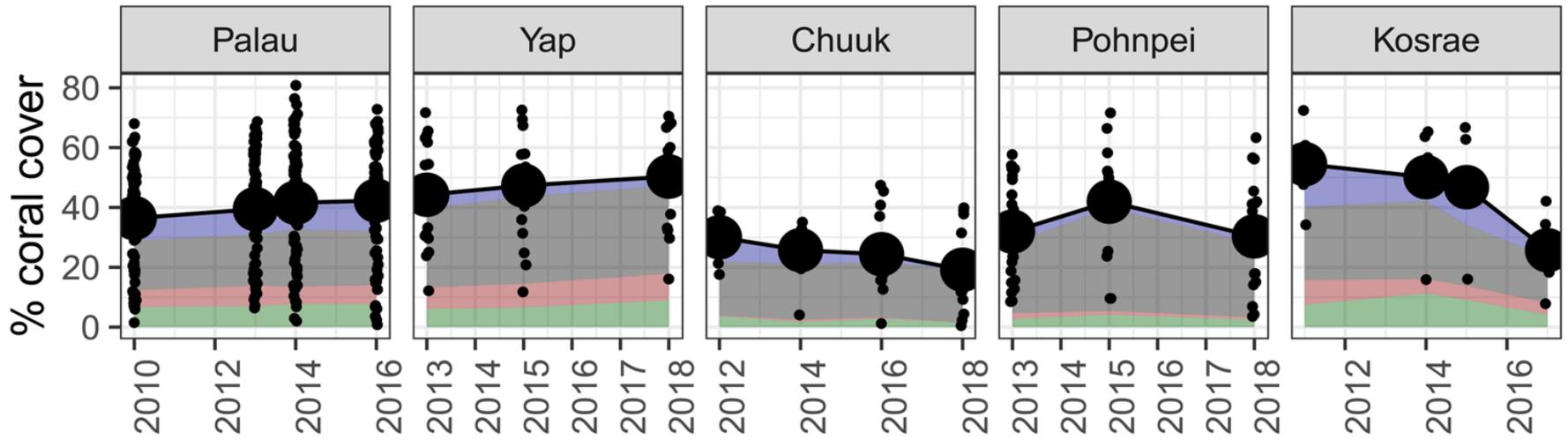
80 sites
240 transects
34,397 corals







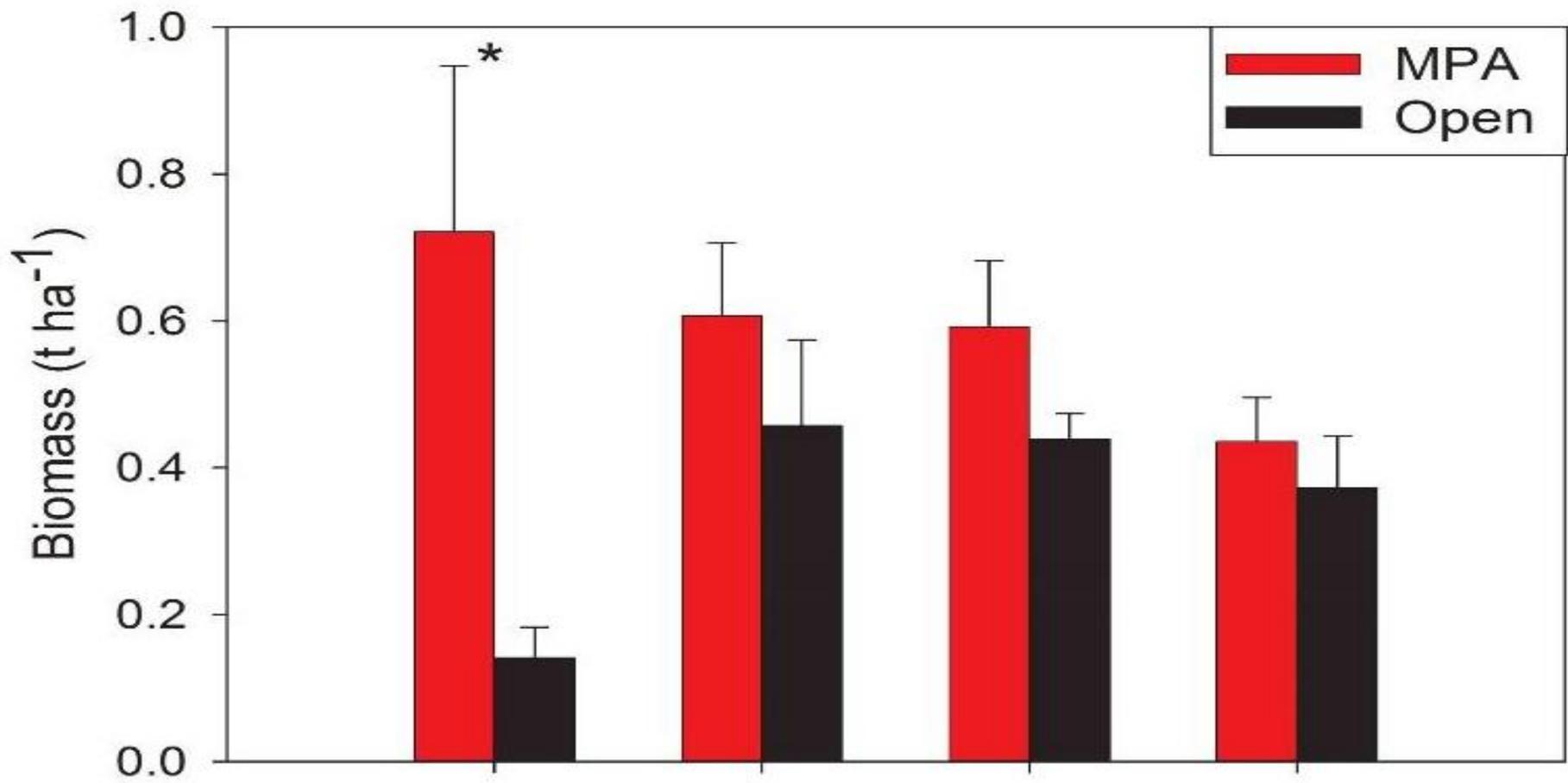
- Acroporidae
- Merulinidae
- other corals
- Poritidae



Overfishing of Reef Fishes



Biomass of top predators 5 x larger in MPAs

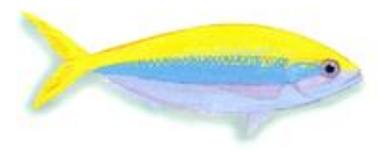
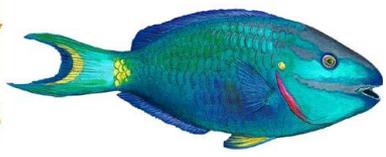
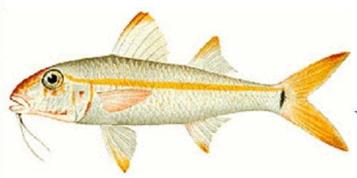


Predators

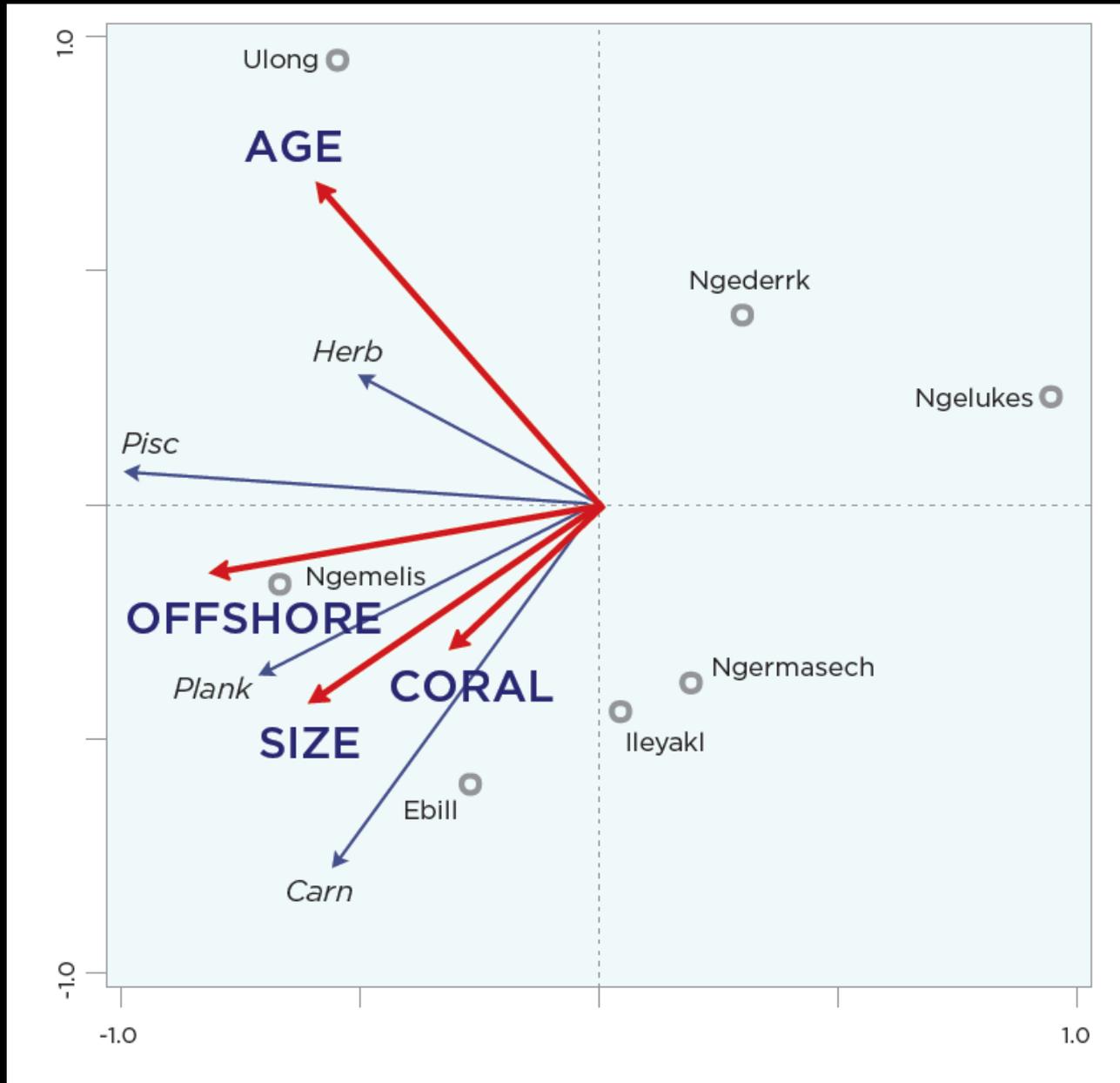
Inverts

Algae

Plankton

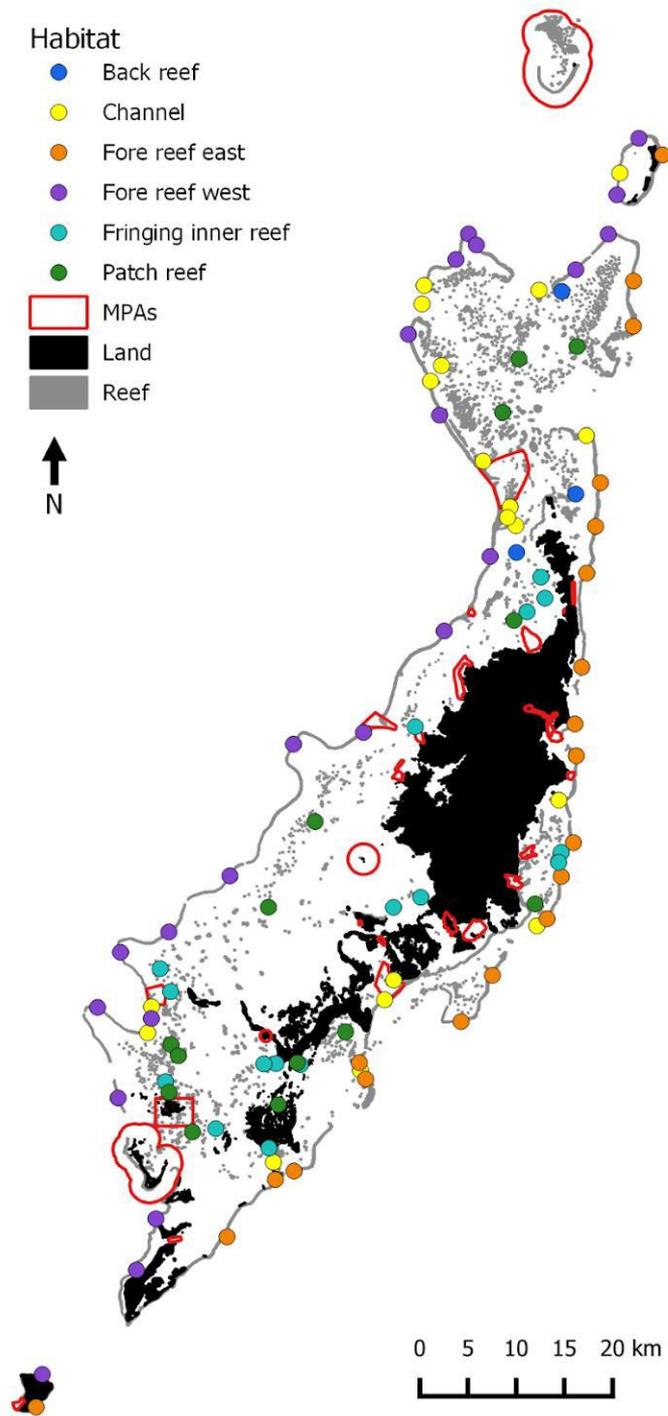


Factors affecting MPA success



Habitat

- Back reef
- Channel
- Fore reef east
- Fore reef west
- Fringing inner reef
- Patch reef
- MPAs
- Land
- Reef



A) Total fish biomass (g/m²)

