Rapid Assessment Teams and Testing of Resilience Principles in the face of Current Bleaching in the El Nino La Nina Cycle

rina   eberer –

What is lost when corals die?

PEOPLE LOSE

Managing for resilience – a strategy to

What resilience looks like for corals

high cover
high diversity
low disease
broad size range

strong recovery
good substrate
good water quality
good herbivores

Resilience Model

Representation and Replication

| Habitat Types Multiples | → → **→** | Risk Spreading |

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Critical Areas

| Refuges Spawning Aggregations | → → **→** | Secure Sources of Larvae |

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Connectivity

| Transport | → → **→** | Replenishment |

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Effective Management

| Threat Abatement Adaptive Strategies | → → **→** | Strong Recruitment Enhanced Recovery |

The Nature Conservancy
Protecting nature. Preserving life.™

Palau International Coral Reef Center

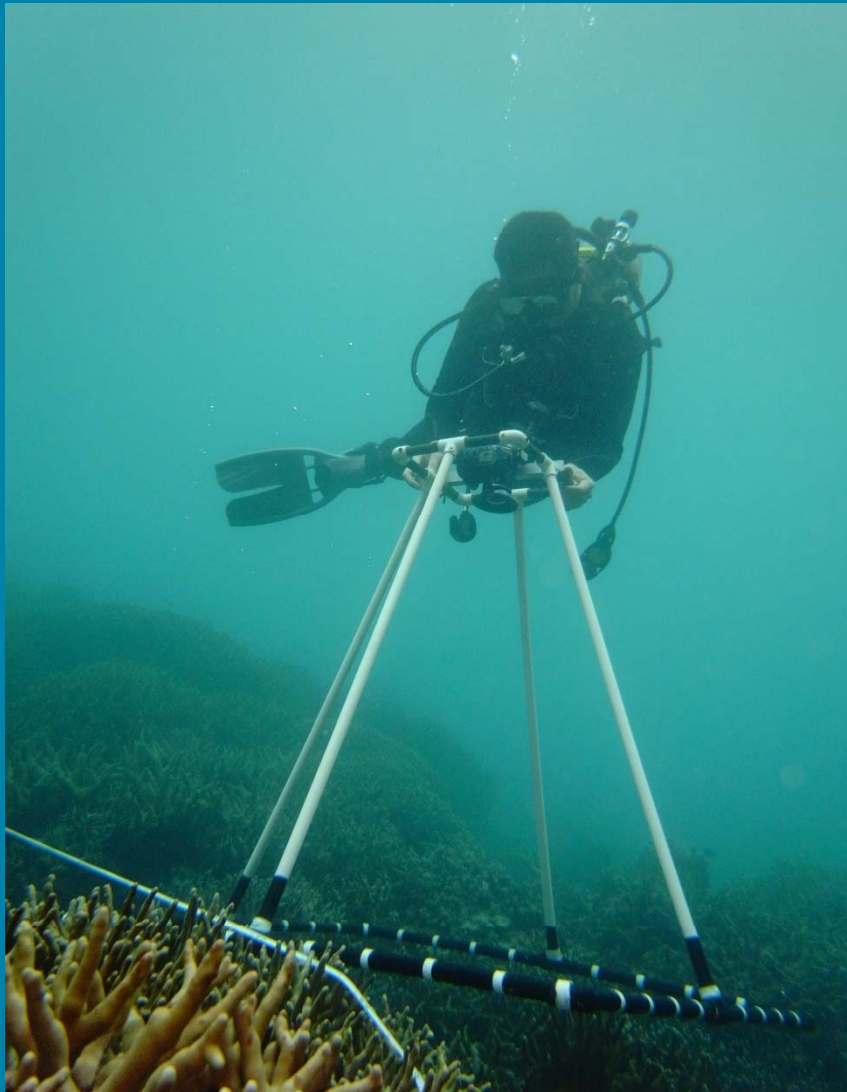# Current Situation

- Recent El Niño caused severe / extensive bleaching in parts of CT

- Current La Niña caused serious bleaching in Palau

- Similar pattern to El Niño/La Niña of 1997/1998

Surveys in Palau

- Currently conducting Phase 1

    - Survey 80 reef sites

    - Bays, patch reefs and outer reefs

    - Assess extent of coral bleaching, coral cover, effect of colony size and growth form on bleaching prevalence

Surveys in Palau

- Phase 2 – October 2010

  - Survey 22 permanent established monitoring sites throughout Palau

 - Document coral mortality and recovery (frequency to be determined following analysis of data from Phase 1)
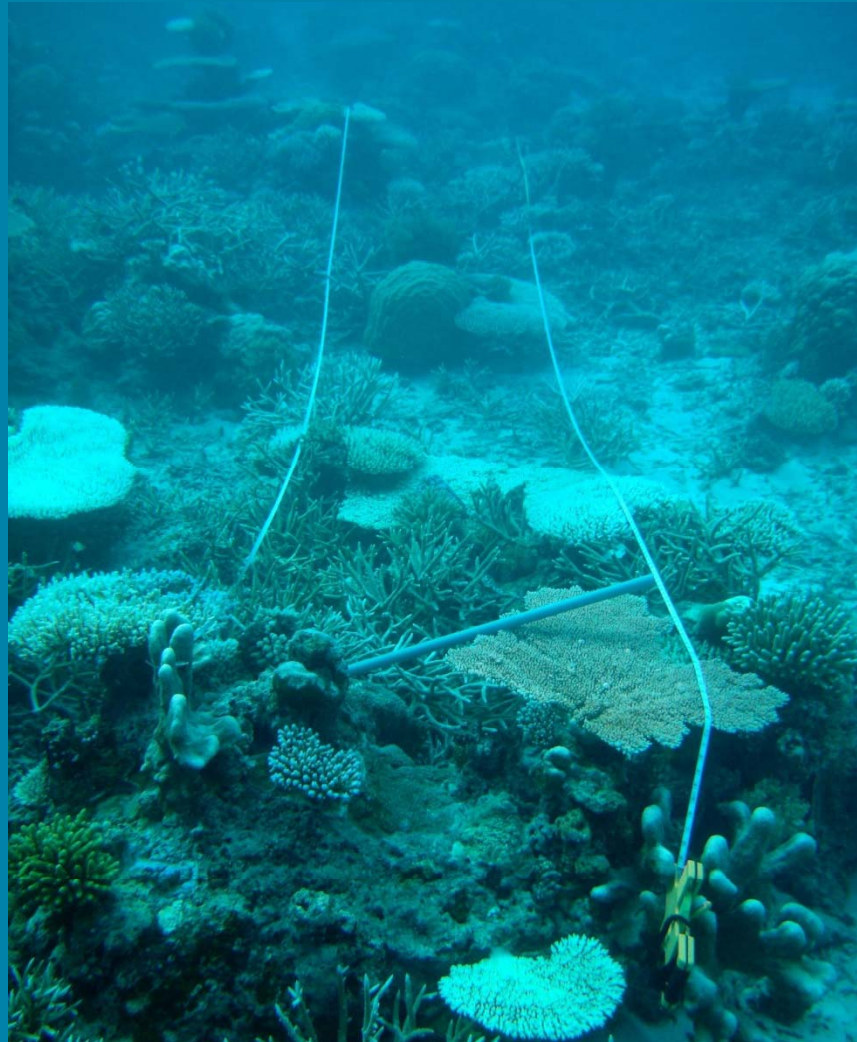
Analysis of the Data will include:

- Which corals most susceptible to bleaching

- Location of habitats resistant to temperature extremes (natural refuges)

- Location / effectiveness of island overhangs in protecting corals from bleaching (shading effect)

- Level of resistance of corals in turbid waters to thermal stress / bleaching (screening effect)

- Influence of depth on bleaching susceptibility

- Bleaching likelihood in small corals, juveniles, and recruits

- Bleaching likelihood in areas with high temperature variance (stress hardening effect)

Initial observations
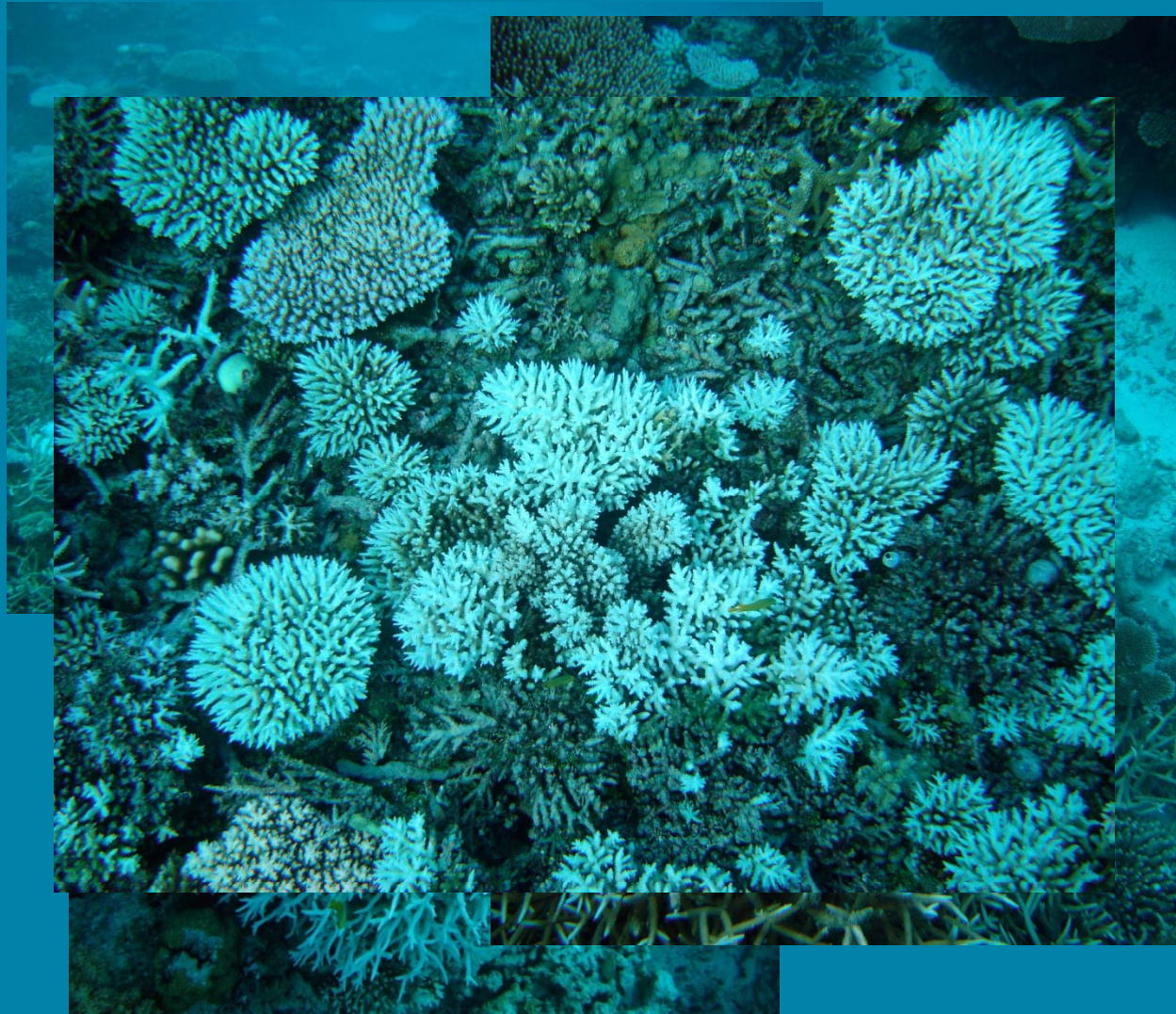
- Does not appear to be as bad as 1998,

- South is being hit harder than the north

- In the bays, west facing reefs are worse off than east facing reefs.

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Si Yu'us Ma'ase
Thank You