Papahanaumokuakea
11th Pacific Science Intercongress
Papeete, Tahiti

March 2009
A few Monumental facts

**Biological and Biogeographic Significance**

- Largest fully protected marine protected area on Earth
  ~140,000 square miles;

- Larger than 46 of the 50 U.S. States, and larger than all U.S. National Parks combined;

- Home to over 7,000 marine species and nesting area for over 14 million seabirds;

- The most extensive and healthy coral reefs in the U.S.;

- Nesting area for 90% of all threatened Hawaiian green sea turtles;

- A vast, predator dominated coral reef ecosystem unique in all the world.
A few Monumental facts

Cultural and Historic Significance

• Over 140 Native Hawaiian cultural sites on Mokumanamana and Nihoa. Both islands are on the State and National Registers of Historic Places;

• Historically and currently a training ground for celestial navigation;

• Home to some of the best preserved shallow water shipwrecks, many from the 1800’s. An estimated total of sixty ship losses and sixty-seven aircraft losses are within Monument boundaries; most have yet to be found.

• Battle of Midway National Memorial on Midway Atoll commemorating a battle widely believed to be the turning point in the war for the Pacific.
Traditional “Ecological” Knowledge?:
Ancestral Memory & Indigenous Knowledge

“He ali`i ka `aina, He kaua ke kanaka.”
Land is the chief, Man is the servant

- `olelo no `eau
Papahānaumokuākea
Marine National Monument
Why Traditional Knowledge?

- Equally valid knowledge system (cosmology & epistemology)
- Inherently utilitarian & “management-driven”
- Inclusive of “social” and “physical” sciences
- Inherently dynamic and adaptive
- Knowledge is place-based/ values transcend
- Western scientific approaches alone aren’t enough
Workshop Goals

• Bridge knowledge systems: Indigenous, local and western/scientific
• Increase understanding of impacts of climate change on reefs
• Develop approaches for building resilience into management Pacific
• Begin to build local strategies for response
• Provide experiential forum for learning
Workshop Outcomes

- Tools to merge western and indigenous knowledge
- Experiential, hands on learning to practice indigenous knowledge methodologies for data collection
- Outline of key subject areas needed for response planning
- New, long term relationships formed
- Real life comparisons of the effects of climate change on Pacific Island Nations—commonalities drawn
- Strengthened Pacific Identity
Cultural Health Index

Location  Date  Time  Tide (ft.)

Moon  Wave Height (ft.)  Water Clarity (ft.)  Cloud Cover (%)

Parameters Rank (0-10)

Coral Cover  Coral
Diversity  Silt  Sand  Rubble  G. salicornia  Kappaphycus spp.  Acanthophora  Halophila  Padina  He'e Manini  Kala  O'io  Ama'ama  Pu'alu

Suzanne Canja
James Wilt
Next Steps

• Expand support and training on traditional management practices and continue to incorporate traditional knowledge into future workshops.
• Assemble and coordinate a global network of managers, scientists, and community members to monitor coral reef resiliency and climate-change induced impacts upon coral reef ecosystems.
• As requested by several participants, Monument staff will follow-up with participants to evaluate the progress of designing a network of bleaching response plans throughout the Pacific and build awareness of climate change effects.
Acknowledgements