Climate Change Adaptation: A Collective Approach

Marshall Islands Conservation Society
Mainstreaming Climate Change in the Republic of the Marshall Islands

in partnership with

RMI Coastal Management Advisory Committee
Namdrik Community
US Agency for International Development & US State Department
Introduction & General Background

- 29 low-lying atolls & 5 individual islands;
- 2 million km² in the central Pacific Ocean;
- 1225 small islands & islets making up the Ratak (sunrise) and the Ralik (sunset) chains;
- Pop. Over 60,000
RMI: 2 chains of atolls in the middle of the Pacific
1,225 individual islands and islets make up the Ratak (Sunrise) chain in the east, and the Ralik (Sunset) chain in the west.
To effectively conserve at least:

- 30% of the near shore marine resources
- and 20% of the terrestrial resources across Micronesia by 2020

[www.micronesiachallenge.org](http://www.micronesiachallenge.org)
Impacts to RMI

• Ocean acidification
• Increase in frequency of storm surges
• Longer frequency of droughts
• Negative effects to our marine resources
• Sea level rise
• Land degradation
• People, culture and our heritage
Community Based Process

- Designed as a technical tool to assist resource agencies facilitate resource management planning with local governments & traditional leaders through a consultation process;

- Identifies & recommends coarse, fine and species targets important for cultural purposes (turtles, mangroves), and for unique and special areas (spawning & aggregation sites);

- Created from lessons learnt from resource management planning in the RMI
Community Based Process

- Marshallese professionals working on conservation issues in RMI;
- Involved most relevant national government and non government agencies;
- Unique as it combines both Traditional & community management with science;
“this plan ... develops the principles, process and guidelines for the design, establishment and management of conservation areas that are fully owned, led and endorsed by local communities based on their needs, values and cultural heritage”
• The ecosystems on each atoll are important to the communities who live on the atoll
• Conservation of ecosystems plays a vital role in climate change because they provide natural carbon sinks. Healthy ecosystems also enhance the resilience of islands to the impacts of climate change.
• Recognize the role of Traditional Leaders as caretakers and protectors of their people and their natural resources and the intimate connection between people, culture and natural resources; and
• Realize that modern efforts to sustain the “Micronesian Way of Life” and to ensure the health, prosperity and diverse cultures of our island people are unlikely to succeed if the ecosystem services on which island and human rely continue to be degraded.
Community based process – Climate Lens

• 'climate proofing' of the Reimaanlok to provide guidance on ecosystem-based adaptation

• placing the most vulnerable people, communities and ecosystems at the heart of national climate change strategies
Local knowledge: mapping of threats, identifying trends; capacity to cope; calendar of events

Socio-Econ: baseline tool; Impacts to livelihoods & lifestyle; level of knowledge and concern; stakeholder differences

Add to Baseline Survey: Vulnerability Assessment
Namdrik Community Pilot Project
Namdrik Atoll
Quick Facts:

• Land area: 1.07 square miles
• Mean height above sea level: 3 feet
• Population: 500
• Main Income: Copra, traditional crafts, bananas

“the atoll of Namorik stands alone in my experience. I walked...with equal admiration and surprise, through a forest of huge breadfruits, eating bananas and stumbling among taro as I went.”

• Robert Louis Stevenson
Namdrik Community Project:

- Community Mapping with different groups;
- Seasonal calendar
- Problem-Solution Matrix and Analysis
- Vulnerability Assessment
Namdrik Assessment – issues/threats

Issues/threats
- Increased solid waste
- Increased erosion
- Shifts in seasons
- Increased flooding
- Appearance of invasive
- ↓ marine resources
- Degradation of crops
- Water lens
Threat Analysis – Increased Erosion (Namdrik)

● Existing stressors is likely related to current practices
  ● Sand mining on lagoon side for construction (dispensary, homes, cisterns, school)
  ● Past filling of wetland for the airport road altered shoreline near airport
  ● Climate change will make it worse: accelerated sea level rise and increased storm intensity

Assets: houses, beaches, trees, graves, cultural sites
What is the issue?

Erosion (20-30 feet since 1980s), is impacting houses, beaches, trees, graves, cultural sites in the downtown and airport areas. While erosion is likely worsened by community mining practices, future SLR and increased storm intensity may increase erosion.
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What is the issue?

Erosion (20-30 feet since 1980s), is impacting houses.

Strategy – Implement measures and best practices on sand management to slow the rate of erosion in the next 3 years.

Considering current practices, future SLR and increased storm intensity may increase erosion.
What is the issue?

Flooding occasionally occurs during king tide, or cyclones, and impacts houses, churches, taro patches. It is anticipated that impacts will worsen with increased storm intensity and future SLR.
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Flooding occasionally occurs during king tide, or cyclones, and impacts houses.

Strategy – Implement best practices and designs to lessen impacts floods, downtown over the next 3 years.
Adaptive Capacities – Hard vs soft solutions

Legend
- Deep lagoa
- Shallow lagoon
- Vegetation
- Reef flat
- Airport
- Hats

Relocation Potential

Limited materials

Sand source
“Hard” Solutions
“Soft” Solutions
Partnership is Critical to Success!!

- Equal Commitment from Govt. partners, NGOs and Community leaders;
- Additionally, technical and funding support to continue on to other communities;
- Lessons learned....
Sharing of experiences

- Micronesia Sub regional Micronesia Challenge/Climate Change meeting 2009, Majuro Marshall Islands
- Pacific Climate Change Roundtable, 2009
- Sharing of best practices within region and resources
- Completion of Sustainable Financing Plan for effective conservation
COLLEGE OF THE MARSHALL ISLANDS

MARINE SCIENCE CERTIFICATE PROGRAM

Training of Conservation Officers
This program emphasizes practical, hands-on skills, both on/in the water and in the classroom, and also provides an academic background essential for marine scientific support for coastal management.

- Coral Reef Ecology
- Coral Reef Threats
- Climate Change Adaptation
- Disaster Risk Assessment/Management
- Water Quality Testing Certificate
- Survey Techniques
- Integrated Coastal Management
- MPAs and Management
- Monitoring and Evaluation
Kommol tata!