Resilient Islands Project: Nature-based Solutions for Coastal Resilience in Jamaica

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Resilient Islands

Integrating Ecosystem- and Community-based Approaches to Enhance Climate Change Adaptation in the Caribbean

Supported by:

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based on a decision of the German Bundestag

The International Climate Initiative (IKI) has been financing projects since 2008.
Selection of Target Community using Modified Vulnerability Ranking Index (Inclusion of Ecosystems)
Partnerships are critical for NbS Implementation
Patient Local Community and Institutional Engagement is critical
Partnerships are critical for NbS Implementation and People Centred Assessments.

Disaster Risk Reduction/Preparedness

- People, Partnerships, Awareness, Preparedness, and Resilience
- Knowledge of hazards and preparedness measures to mitigate the impact

Knowledge

- Awareness of hazards and preparedness measures
- Knowledge of disaster risk reduction measures

Practice

- What kinds of preparedness measures for disasters did you discuss with your household?
- Most common supplies stored for emergencies

Graphs and images illustrate the steps and efforts taken for disaster risk reduction and preparedness.
Partnerships are critical for implementing ecosystem/environmental centred assessments. Benthic, bathymetry & drone mapping.
Partnerships are critical for NbS Implementation

Rapid Ecological Assessment

Locate and map the major threats, vulnerabilities and pressures to the ecosystem and biodiversity by the anthropogenic and natural phenomena (including climate change)

This work aims to support decisions for sustainable and community-based approaches for ecosystem-based adaptation and management
Partnerships are critical for NbS Implementation

**OHB- REA Findings**

Healthy Corals = Identified as Best Fishing Grounds

Damaged Reefs = Identified as severe reduction in fish catch
Partnerships are critical for NbS Implementation

Some Results of Assessments

Types of Ecosystems present
- Mangroves
- Coral reefs
- Beaches
- Seagrass

Health of Ecosystems
- Richness
- Density
- Location

Threats to Ecosystems
- Anthropogenic
- Climate Change

Degraded Ecosystems = Vulnerability
1. Severe damage to Coral Reefs, especially near shore
2. Retreating mangrove stock
3. Erosion & Contamination of beaches
4. Damage to Salinas, sea grass beds
5. Low ecosystem knowledge
Assembled a NbS committee with persons from targeted organizations.

Presented the results of the different assessments undertaken.

Had a number of sessions where a variety of NbS solutions were proposed.

Shortlisted the proposed solutions.

Validated these solutions with the TAG and community members.
The Portfolio of Nature-based Solutions (NbS) presents seven projects in Old Harbour Bay (OHB) developed by merging the science-based tools with recommendations from government, community, NGOs and the private sector with the goal of increasing investments in the protection of key ecosystems and overall community resilience. The costs and benefits of each project have been estimated by measuring:

1. Directly or indirectly, all the OHB residents are beneficiaries of the projects.
2. Sea level rise and storm surge during storm/hurricane events could lead to flooding of 3m or more.
3. Costs and timeline for each project are estimated.

Number of beneficiaries:
- 45,674 people in Old Harbour Bay

Avoided damages to infrastructure:
- All homes within 3m floodplain
- US$105,451,402
- Critical facilities impacted:
  - 17 facilities with 3m floodplain

Special protection zone
- Install containment booms & require tertiary treatment for all new developments
Implementation of NbS - Testing
The work done by the RI Project creates a foundation for sustainability, which has already attracted commitments and attention from other projects and organizations to continue NbS efforts for resilience building in Old Harbour Bay.
"When we care for nature, we also care for humanity.

Anthony Douglas Williams – Inside the Divine Pattern

When we care for nature, we also care for humanity