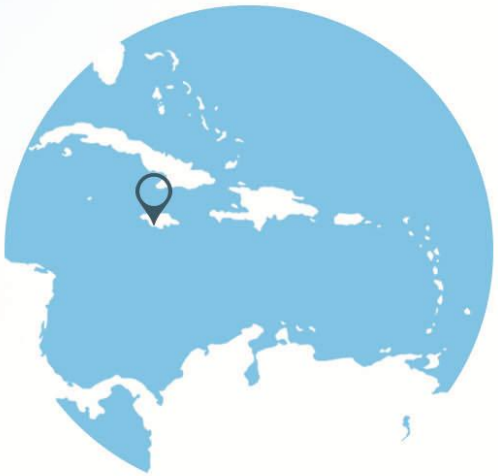
GIVRAPD

Global Islands' Vulnerability Research Adaptation Policy and Development

POLICY BRIEF

LESSONS FROM JAMAICA: PROMOTING RESILIENCE THROUGH INSTITUTIONAL ARRANGEMENTS, SOCIAL NETWORKS AND COMMUNITY EMPOWERMENT



#8: SEPTEMBER 2015

POLICY HIGHLIGHTS

- Jamaica's coastal-marine systems are highly susceptible to climate change impacts particularly its marine biodiversity and coral reefs, coastal tourism and fisheries sectors, food production, and the social wellbeing of its coastal populations.
- Recognising these concerns, the GIVRAPD project focused on promoting local adaptive capacity through social networks and institutional mechanisms to address cross-scale linkages and livelihood security, and identifying enabling conditions for stewardship and community resilience.
- National level government agencies are key actors in climate change adaptation planning in Jamaica. However, much can be achieved through the collaboration of non-state actors especially NGOs and community associations who act as bridging organizations through social networks and policy entrepreneurship in forming new governance arrangements and multi-level partnerships.

COUNTRY PROFILE

Jamaica is the third largest island in the Greater Antilles region in the Caribbean Sea and highly vulnerable to the adverse impact of climate change. With a mountainous backdrop alongside a narrow coastline, several biophysical landforms and coastal marine habitats can be found including coral reefs, mangroves, protected bays, rocky shoreline, and sandy beaches. With increasing frequency of hurricanes and tropical storms, the vibrant reef dependent fishery and coastal eco-tourism activities will be affected as well as other major economic sectors including agriculture, forestry and commercial services. Seafood production and coastal tourism provides major livelihoods for coastal communities with the latter amounting to a quarter of the GDP. In fact, loss and damage from extreme events in mid to late 2000 amounted to more than a billion dollars. The importance of the coastal zone have inspired several regional Caribbean activities, such as the Special Fishery Conservation Areas (SFCAs), a national development plan Vision 2030, and a proposed National Climate Change Policy and Action Plan. Several national government agencies have been instrumental in dealing with climate change through development planning as well as cross-sectoral integration and stakeholder networks.

The GIVRAPD project focused on a number of thematic clusters, including participatory planning of adaptation interventions by mapping stakeholder values, community empowerment through vulnerability assessment and adaptive capacity, social networks amongst institutions, and governance arrangements that close the gap between multi-scale jurisdictional challenges. Methodological approaches included mapping tools such as community-based vulnerability assessments, Net-Map and social network analysis, field visits, interviews and surveys (see Policy Brief 1).

Whitehouse is used as a case study region to understand local adaptive capacity in dealing with climate change in Jamaica as well as to identify barriers and entry points for adaptation interventions and replication. Whitehouse Development Area is a small region located in the southeast corner of Westmoreland parish (Fig 1), with jurisdiction boundaries comprising of Whitehouse town and adjacent communities of Bluefields and Beeston Springs.

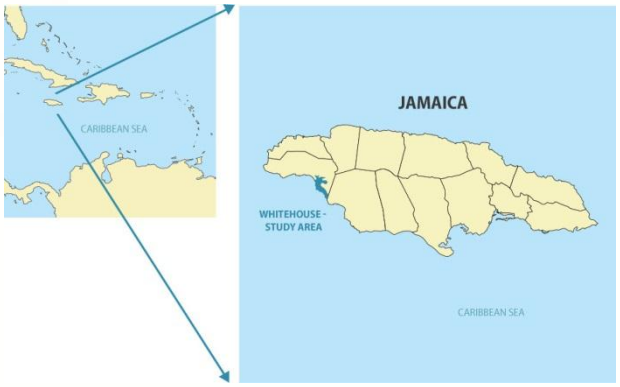


Figure1: Jamaica, part of the Greater Antilles, in the Caribbean Seas with Whitehouse study region

The main livelihood activities include fisheries, farming and to some extent tourism. Despite these activities, unemployment is high, local resources are limited and insurance is lacking to deal with climate risks and loss and damage (Fig 2). In addition, the unavailability of public funds towards adaptation planning thwarts the performance of local public institutions that are crucial in promoting local resilience. This is compounded by high level of increasing national debt with limited resources for adaptation planning and local implementation.

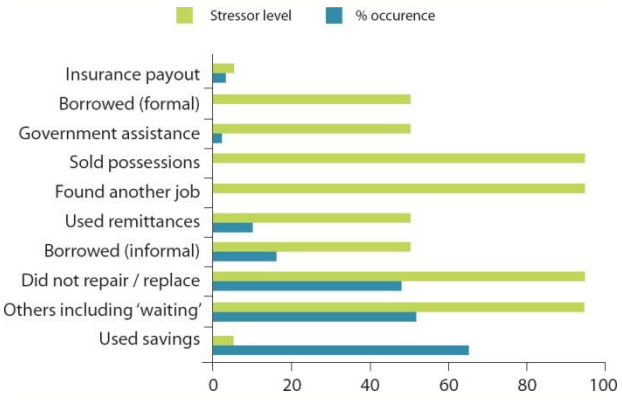


Figure2: Weather related risk management and insurance options in Jamaica (Stressor levels are estimated at low 5%, medium 50%, and high 95%) as reported in S. Yearwood (2014).

SEEKING ADAPTATION STRATEGIES FOR VULNERABLE COASTAL ECONOMIES

It is been recognised that Small Island Developing States such as Jamaica are constrained by adaptation barriers, which reduces the prospect of nurturing coping strategies and institutional mechanisms for social-ecological resilience. Identifying these limits to adaptation best practices offer tools for collective decision-making. Through stakeholder workshops and network mapping approaches, participants across three major economic sectors, i.e. fisheries, tourism, and agriculture identified institutional linkages relevant for science policy advice, funding, and centrality in terms of power for implementing local interventions. Results indicate government departments and agencies play a central role in the design and implementation of adaptation interventions. Science and policy advice and information flow are necessary for local planning and this occurs through top-down structures to local governors and the private sector. For instance the Ministry of Agriculture and Fisheries in collaboration with other departments such as the Rural Agricultural Development Authority, and the National Environment and Planning Agency work together to deliver climate smart advise for resource management, conservation and protection of critical infrastructure. These activities and measures are locally implemented with community associations and local government entities such as the local planning authorities (e.g. Negril Green Island Area Planning Authorities) and the Organic Farmers Cooperative of Bluefields.

Similarly in the fisheries sector, in addition to the local governors, the Caribbean Coastal Area Management Foundation and the Gillings Gully Fishermen Coop work together in implementing adaptation interventions. Whilst most government agencies have high influence, community groups seem well connected but less powerful, whilst the labor unions and associations have limited influence and connection. Within the tourism sector, the cabinet plays a greater influence in addition to the Ministries of Tourism and Finance as they work with international partners in developing investment plans and risk management strategies. different scales in dealing with the 'problem of fit' of decision-making with regards to ecological boundaries and socio-economic activities (see Policy Brief 2).

Funding is mostly provided nationally or through donors targeting government planning agencies. Less resource is available for local level institutions and towards implementation. Moreover, whilst fishers and farmers received information from multiple sources for adaptation planning, information sharing is limited in the tourism sectors and often inaccessible.

Creating opportunities for local leadership could lead to higher adaptive capacity as well as legitimacy for championing these challenges. Most of the barriers identified are policy-oriented although some are embedded within historical practices of development thinking that ignores environmental stewardship and local champions. Addressing these challenges require long-time strategic vision and integrated policies that are cross-cutting and involving multiple stakeholders.

NUTURING SOCIAL NETWORKS AND INSTITUTIONAL ARRANGEMENTS

Given that climate change is a cross cutting issue and spans multiple scales and involving several institutions and stakeholder groups, governance mechanisms are necessary to foster collaboration and multi-level linkages within coastal-marine systems in Jamaica. Research has shown that social networks and institutional partnerships are emerging as conceptual tools to address scale mis-match and to identify bridging organizations in knowledge mobilization and collective action. Such governance perspectives promote enabling conditions for multi-level governance arrangements amongst local and national decision makers as well as community members and civil society groups.

Concerns about ocean acidification and coral bleaching (Fig 3), habitat loss, damage to critical coastal infrastructure, livelihood security, and loss in tourism revenues have prompted institutional entrepreneurs and governance arrangements amongst both government and non-governmental actors. Findings on multi-level adaptation mechanisms in the Whitehouse region specifically the communities of Bluefields revealed both formal and informal networks that have been instrumental as adaptive co-governance models. As the third largest small scale fishing community, and highly supplemented by smallholder farming and community-based tourism, the impact of climate change will affect the social and economic fabric of the society.

Figure3: Creating artificial reefs has been an adaptation option in Bluefields

The evolution of co-management structure and processes between the Department of Fisheries and community groups such as fishermen cooperatives (e.g. Bluefields Bay) for adaptive management through marine protected areas has been spurred by relational ties and social networks that unite stakeholders (managers, fishers, conservationist, etc.) in addressing emerging global change issues (see Fig 4).

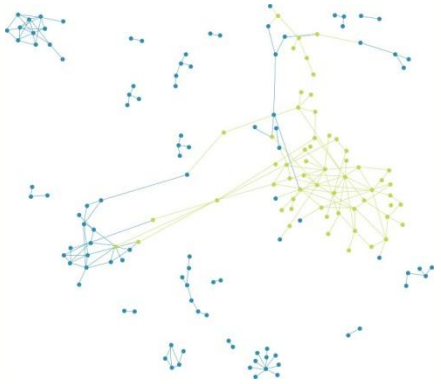


Figure 4: Social network maps to denote relational ties (nodes) between actors and wardens in the Bluefields Bay Special Fishery Conservation Area (see Alexander et al. 2015 for details).

Key attributes such as interaction, trust, and reciprocity as well as bridging and bonding ties have promoted stewardship through institutional mechanisms and cross-sectoral partnerships in fostering initiatives such as the Climate Change Focal Point Network, the SFCAs, and inter-agency committees on resource management and adaptation governance. Moreover, new public and private partnerships have supported community adaptation initiatives and strengthened organizational resources for livelihood security and conservation across jurisdictional scales as seen in the Whitehouse Sandals SFCA initiative (see Brief 2). The conceptual framework of governing networks across state and non-state actors buttress the ramification of social capital in coastal community setting, learning by doing both collectively and individually, and fostering communities of practice and knowledge mobilization for change through collaborative practices.

BUILDING LOCAL ADAPTIVE CAPACITY

Similar to the research design in Saint Lucia, a community-based vulnerability assessment was undertaken in Whitehouse in Jamaica employing semi-structure and key stakeholder interviews with local and national actors in coastal socioeconomic sectors. Using the Local Adaptive Capacity (LAC) as an analytical framework (see Hogarth et al. 2014), community resilience was characterised based on five key attributes: asset base, institutions and entitlements, knowledge and information, innovation, and flexible forward-looking decision-making. Additionally, the LAC framework was used to determine its efficacy in capturing important elements of adaptive capacity across different geographical contexts.

The adaptive capacity in Whitehouse is highly influenced by the lack and inadequacy of capital assets including financial, social, natural, human and physical assets. Knowing that coastal livelihoods revolve around vulnerable sectors including fisheries and farming, the lack of financial capital to invest in technology for fish aggregation devises, early warning signals, greenhouses and drip irrigation limits the adaptive capacity of coastal communities to adapt and be resilient. In addition, the lack of personal insurance and public funds to deal with weather related risks leave little room for innovative adaptation interventions. Poor employment opportunities and high illiteracy rates affect human capacity and knowledge economy to participate and compete in a global economy. In this light, public private partnership between Ministry of Education and Sandals Whitehouse to establish a HEART Trust Vocational Training Centre has helped with employment opportunities and to avoid out-migration and brain drain..

Stewardship is central to maintaining the natural capital assets as they provide ecosystem services towards coastal economies such as seafood, reef fisheries, eco-tourism, land use planning, farming systems and related spill over services along various commodity chains. The high level of exposure and susceptibility to hurricanes and tropical storms in coastal regions especially the windward side of Westmorland Parish requires investment in critical infrastructure and early warning signals. This could take the form of various adaptation measures that consider the security and access to domestic water (see Fig 5), health facilities, coastal transportation networks and other utilities including electricity and power lines.

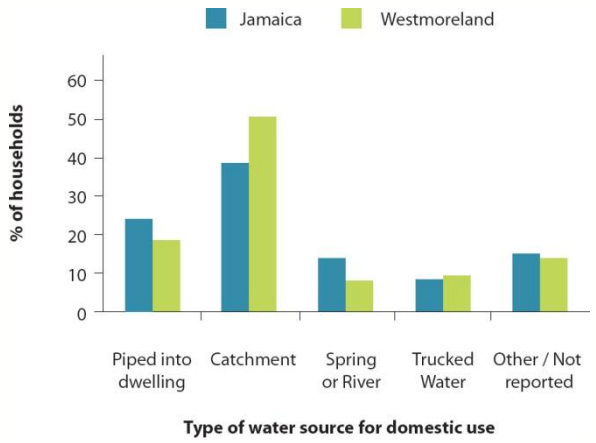


Figure5: Adaptation measures are needed to address water security for domestic use (source: Hogarth et al. 2014)

Institutional innovation through policy reforms such as for species at risk and critical habitats have been highlighted (see Alexander et al. 2014, 2015). Moreover, structural adjustment programs towards international trade, land use and marine spatial planning, and flexible governance arrangements for entrepreneurship and development could help make communities more adaptive and resilient. The LAC framework is very useful towards a holistic social-ecological perspective for adaptation but its practical relevance in terms of implementation is however hampered by historical factors, path dependencies as well as scale and agency that needs to be considered and negotiated collectively.

Figure 6: Residents overlooking dock

Figure7: Nesting turtle (Bluefields Bay)

FURTHER READING

- Alexander S. et al. 2015. Social networks and transitions to co-management in Jamaican marine reserves and small scale fisheries. Global Environmental Change, 35, 213-225.
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ABOUT THIS BRIEF

This policy brief is a product of research undertaken by the GIVRAPD project, a two year interdisciplinary research project funded by the Climate & Development Knowledge Network (CDKN) in collaboration with government agencies, community stakeholders and universities. The participating universities include University of Cape Town, University of Waterloo, University of Mauritius and University of Oxford. The project was led by INTASAVE/CARIBSAVE in partnership with the African Climate and Development Initiative (ACDI), Global Climate Adaptation Partnerships, in addition to the Governments of Saint Lucia, Jamaica, Mauritius and Seychelles. The project seeks to understand the multi-scale socio-economic, governance and environmental conditions that shape vulnerability and capacity to adapt to climate change in four learning sites. Brief 4 identify and assess enabling conditions to reconcile barriers and limitations associated with participatory planning, cross-sectoral partnerships, and governance fit at the local level.

GIVRAPD. 2015H. Lessons from Jamaica: Promoting Resilience through Institutional Arrangements, Social Networks and Community Empowerment. Policy Brief no. 8. Global Islands Vulnerability Research Adaptation Policy and Development (GIVRAPD) Project. The INTASAVE-CARIBSAVE Group. Christ Church, Barbados.

Figure 8: Fishers check on their aquaponics system (Bluefields Bay)

Figure 9: Boats docked at Belmont Beach

ACKNOWLEDGEMENTS

This document is commissioned by the Climate and Development Knowledge Network (CDKN) and managed by Caribsave through the GIVRAPD Project. CDKN is a programme funded by the UK Department for International Development (DFID) and the Netherlands Directorate-General for International Cooperation (DGIS). The views expressed and information contained is not necessarily those endorsed by DFID, DGIS or Caribsave. The GIVRAPD project team are grateful to all collaborating partners and individuals who provided invaluable inputs and resources during the course of the research. The photos and charts are courtesies of the research team except where noted.

CDKN Climate & Development Knowledge Network

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