

Policy Perspectives

Perspectives on resource management and environmental policy from the Centre for Resource Management and Environmental Studies (CERMES), Faculty of Pure and Applied Sciences, University of the West Indies, Cave Hill Campus, Barbados

The Centre for Resource Management and Environmental Studies (CERMES) initiated this occasional publication, **Policy Perspectives**, primarily in order to share some of the lessons learnt from ongoing research. The interdisciplinary applied research at CERMES emphasizes learning-by-doing through the collaboration of researchers, beneficiaries and other interested parties. The information in these policy briefs may be used by policy-makers and their advisers to strengthen the linkages between research outputs and policy-making in the Caribbean. This connection is often weak in marine resource governance, but is especially important to develop in complex adaptive social-ecological systems.

How the CERMES MarGov Project may inform the Western Central Atlantic Fisheries Commission ... lessons learned from complex adaptive systems

CERMES MarGov Project

People in the Caribbean depend on good governance of marine resources for their livelihoods and for development to be sustainable. There is an urgent need to build capacity, and network connections for adaptation and resilience, into present and planned marine resource governance in the eastern Caribbean. To assist in addressing this need, CERMES undertook applied research through a project on Marine Resource Governance in the Eastern Caribbean (MarGov) from March 2007 to February 2012. MarGov was funded mainly by the International Development Research Centre (IDRC) of Canada. Its geographic scope was the members of the Organisation of Eastern Caribbean States (OECS) and Barbados plus Trinidad and Tobago for a few activities. The grant value approached CAD\$600,000.

Using concepts from complex adaptive systems (CAS) social-ecological systems (SES) and network analysis, the research focused on understanding governance related to small-scale fisheries and coastal management. It applied its findings to the examination of how present and planned marine resource governance initiatives can become more adaptive and resilient at various levels to benefit diverse stakeholders. Learning relevant to the WECAFC region is shared here by answering the project's research questions.

Can a research framework for marine resource governance in the eastern Caribbean, using small-scale fisheries as the complex adaptive social-ecological system, be constructed from the current literature?

Resilience thinking is still a new and rapidly evolving field of

interdisciplinary research. There are, however, several conceptual frameworks for investigating matters of interest to small scale fisheries in the Wider Caribbean Region.

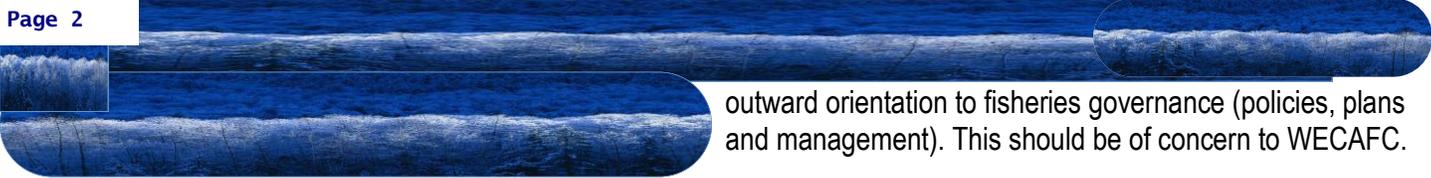
Most conspicuously absent from this literature are well-researched case studies of Caribbean fisheries using these frameworks. Some progress has been made under the MarGov project with the PhD and faculty research done for example in Barbados, Grenada and Saint Lucia as well as the less academic small grant investigations in Barbados, Grenada, the Grenadines, St Kitts and Nevis, Saint Lucia, and Trinidad and Tobago.

WECAFC may wish to take advantage of these findings and the available research frameworks in its undertakings. Of particular relevance are regional and sub-regional arrangements for fisheries management arrangements.

At levels ranging from transboundary to local, what characteristics of networks determine resilience and adaptability of marine resource governance in the eastern Caribbean?

Social network analysis (SNA) played an important role in the project. SNA was used by researchers, and project partners in all OECS countries received capacity building workshops and resources to promote resilience thinking in fisheries governance that incorporated SNA.

Network concepts were used in the design of the Caribbean Network of Fisherfolk Organisations (CNFO) and its multi-cluster structure was compared to the highly centralized star structure of the Caribbean Regional Fisheries Mechanism (CRFM). They can be applied to WECAFC.



Research suggests that well-designed network structures may prove very useful for marine resource governance in the geographically dispersed and diverse Wider Caribbean Region. This includes, for example, the ad hoc working groups for lobster, flyingfish, shrimp and groundfish. The insights from MarGov provide guidance on their design and operation in the form of multi-level policy cycles. This line of research has mainly been used to inform the CLME project.

The MarGov project has uncovered evidence of networks facilitating resilience through adaptability. As WECAFC is paying more attention to ecosystem-based management (EBM) and the Ecosystem approach to fisheries (EAF) it will find network concepts and analysis more relevant to its programme. Many EBM tools are based upon resilience thinking and networks. Stakeholder selection is an example

At national level, what kinds of interventions and governance structures are effective for enhancing adaptive capacity and enabling self-organisation that contributes to resilience?

Stakeholder analysis is especially critical at the national level as WECAFC member states introduce EBM and EAF. MarGov has examined governance structures ranging from fisheries advisory committees to informal fisher groups. It appears that the centralized governance arrangements so typical of the region do not enhance adaptive capacity and self-organisation, thereby not contributing to resilience.

The experience with the CNFO, undertaken to assist the CRFM, demonstrated that national fisheries authorities should provide fisher groups with more support and help to build adaptive capacity without increasing dependency. It is still uncommon to find an enabling policy environment.

The national level is also the locus of initiatives to network agencies and interest groups for the implementation of fisheries management plans. With more attention to climate change and disaster risk reduction as facets of adaptation it is important that the stakeholders understand how networks function. The national workshops on SNA revealed keen interest in adding this tool to the fisheries management kit.

A major issue observed was the persistence of insularity. It was uncommon for fisheries authorities to demonstrate an

outward orientation to fisheries governance (policies, plans and management). This should be of concern to WECAFC.

At local level, what are the formal and informal processes and conditions for establishing and sustaining the adaptive co-management of small-scale fisheries?

The focus on the local level has mainly been through PhD research on sea urchin fisheries and faculty research on marine protected areas (MPAs). The former is in the final stages of analysis. Preliminary findings reinforce the well documented importance of trust in such adaptive networks.

Trust among fisher groups, and between them and the fishery authority, is vital. Such trust encompasses belief in the competence of the other parties and, in the case of the national authority, it extends to belief that responsibilities will be discharged. An example would be the ability to effectively enforce regulations that form the backbone of co-management measures and prevent free-riding. If the intersessional activities of WECAFC can be used to build such trust and the leadership that goes with it, this would be a valuable contribution for scaling up to regional level.

Another area of interest to WECAFC may be participation of fisher groups in fisheries management such as research, coastal management, or promotion of the Code of Conduct for Responsible Fisheries (CCRF). If the Commission is sensitive to resilience thinking, complex adaptive systems, social-ecological systems and networks then it can play an important role in improving local level fisheries governance.

Conclusion

The lessons learned from the MarGov project have much relevance to WECAFC, as a regional institution of fisheries governance, integrating policy from the regional to local level. For more information visit the MarGov web site at... http://cermes.cavehill.uwi.edu/margov_profile.html

This policy brief is an output of the CERMES project on *Marine resource governance in the eastern Caribbean* (the *MarGov project*). Its preparation was carried out with the aid of a grant from the International Development Research Centre (IDRC), Ottawa, Canada. The views expressed are those of the author(s) and do not necessarily represent those of the IDRC. The material in this publication may be freely reproduced for non-commercial use provided suitable credit is given. Additional information on MarGov and related initiatives is on the CERMES web site.