



# CANARI POLICY BRIEF No.15

## Using traditional knowledge for decision-making on climate change in the Caribbean

2013

### Climate Change and Disaster Risk Reduction

#### Summary

Tools, such as participatory three-dimensional modeling (P3DM), participatory video and the facilitated development of photo journals and civil society plans for action on climate change, can be used across the Caribbean islands to facilitate effective participation by local communities and other stakeholders. These tools are needed by people in the Caribbean to facilitate the identification of general policy priorities, as well as specific policies and actions needed on-the-ground and at the landscape and site level to address the impacts of climate change and extreme climatic events. These tools bring relevant knowledge - both traditional and indigenous knowledge - into consideration when decisions are being made about climate change. This approach to decision-making also contributes to increasing capacity of community groups, facilitates coordination and collaboration across sectors, and builds buy-in for plans for action on climate change.

#### Key messages

- **Traditional and indigenous knowledge is relevant in decision-making on climate change.**
- **Local community groups should be included in decision-making on climate change at the local level.**
- **On-the-ground action is needed to protect natural resource based livelihoods from the impacts of climate change.**
- **Natural resource managers need to build their capacity to facilitate participatory processes using a variety of tools to reap the value of traditional knowledge for decision-making on climate change.**

Responses in the Caribbean to the impacts of climate change have largely been at the general policy level, with few specific policies or plans developed to address priorities at the landscape or site level. Sectoral considerations or traditional knowledge have not been

adequately considered, stakeholders are not effectively engaged, and there has been little on-the-ground action to build resilience or to “climate proof” key sectors such as tourism and agriculture. Further, the development and implementation of policy to address the impacts of climate change and extreme climatic events has been largely without the effective engagement of local communities, where useful traditional knowledge exists and much of the action will need to be taken.

#### Why use traditional and local knowledge for decision-making on climate change

Traditional and local knowledge are based on extensive periods of observation (often in one locality) and interaction with the environment and include practices that have been tested. They are viewed as a "vast reservoir of information regarding plant and animal behaviour"<sup>1</sup> and include strategies for sustaining natural resource based livelihoods.

In the Caribbean region, where there is often an absence of location-specific scientific data, traditional and local knowledge can provide a sound source of

<sup>1</sup> Johnson, M. (1992). Lore: capturing traditional environmental knowledge Ottawa: IRDC.

This policy brief was produced by the Caribbean Natural Resources Institute (CANARI) with financial support from Technical Centre for Agricultural and Rural Cooperation ACP - EU (CTA), the John D. and Catherine T. MacArthur Foundation and the United Nations Food and Agriculture Organization under its Forest Law Enforcement, Governance and Trade Support Programme for African, Caribbean and Pacific Countries (ACP-FLEGT Programme).



information to advise on-the-ground action on climate change. In many instances, these actions often provide simple and effective solutions to specific local problems which may be applied or adapted for application at other locations throughout the region.

### **Tools to facilitate harnessing and packaging of traditional knowledge for decision making**

**Facilitation** is a process of helping groups or individuals come to a common objective without imposing, dictating or manipulating an outcome. Facilitation empowers individuals or groups to find their own answers to problems or plan approaches to address identified issues. It involves using a range of tools and methods to draw out information or ideas from the participants and it guides discussion towards some predetermined objective<sup>2</sup>.

#### **Participatory three-dimensional modeling (P3DM)**

This method integrates indigenous spatial knowledge (local peoples' knowledge of where things are located) with elevation data (height of the land and depth of the sea) to produce stand-alone, scaled and geo-referenced relief models. When P3DM is put in action, people bring their indigenous knowledge of land use and cover and other features and depict this on a scaled model of the land (and sea) using pushpins (points), yarn (lines) and paint (polygons). On completion, a scaled and geo-referenced grid is applied to facilitate data extraction or importation. Data depicted on the model are extracted, digitised and plotted. On completion of the exercise, the model remains with the community<sup>3</sup>.



*Participatory 3D model development in Tobago enabled community members to contribute mental maps of climate change impacts to assist in brainstorming on resilience building measures.*



*CANARI has facilitated the development of skills in participatory video to provide opportunities for people to present issues in their own voice.*

#### **Participatory video**

Participatory video (PV) is a tool that stakeholders can use to tell their story. PV is not traditional documentary film-making, as stakeholders are fully involved in all stages of the production of the video. PV gives control to those who are affected by specific concerns to decide what the issues and questions are, who should be part of the process, who needs to hear the messages and how those messages should be crafted and possible solutions. The final product may take the format of a documentary, a skit or a music video<sup>4</sup>.

#### **Facilitated development of a photo journal**

Similar to PV, stakeholders capture images to tell their story. A photojournal helps stakeholders to illustrate their opinions, concerns and recommendations on issues through photographs presented in a particular sequence. The process involves the participatory development of a story board, capturing still shots and drafting captions that contribute to the images and convey messages about a specific circumstance and the desired actions. The emphasis here is not to create a professional portfolio but rather to let the 'photostory' be the voice of the stakeholder. The final product can be an electronic presentation or printed hard copy.

#### **Benefits**

##### **Increased awareness on climate change among members of the local community and policy makers**

Introductory activities for all initiatives on climate change often include a formal presentation and discussion of scientific information on climate change and its related impacts. These tools described above,

<sup>2</sup> CANARI 2011. Facilitating participatory natural resource management: A toolkit for Caribbean managers. Laventille: CANARI

<sup>3</sup> Rambaldi G. and Callosa-Tarr J. (2002) Participatory 3-Dimensional Modelling: Guiding Principles and Applications. ASEAN Regional Centre for Biodiversity Conservation (ARCBC), Los Baños, Philippines.

<sup>4</sup> CANARI 2011. Facilitating participatory natural resource management: A toolkit for Caribbean managers. Laventille: CANARI

provide opportunities for extended analysis, exchange of experiences and learning on the issue among stakeholders which may not occur in traditional, formal presentations of technical reports.

**A large amount of information is related, collected, documented and stored in a format that is easily understood in a relatively short period of time**

The Caribbean Natural Resources Institute (CANARI), the University of the West Indies (UWI), the Tobago House of Assembly, Division of Agriculture, Marine Affairs, Marketing and the Environment (DAME) and the Partners with Melanesians (PwM) facilitated the development of a three-dimensional model of Tobago - ten times smaller than the actual size of Tobago<sup>5</sup> - to assist with the development of plans to deal with the impacts of climate change.

The model, built over a period of two weeks, with the input of 106 residents of the island of Tobago, captured 83 layers of information about the island. These included updated locations of topographic features as well as spatial information on landslide prone areas, hunting grounds for specific species of animals and zones where coastal erosion is taking place. It is suggested that it would have taken years to collect this amount of information if customary methods of data collection were used. Residents of Tobago related anecdotes about the island, exchanged observations about the effects of climate change on their livelihoods and shared lessons on adaptation practices which help buffer the impact of climate change on natural resources.

**Rural vulnerable communities are able to make their voices heard**

Participatory video was used as an advocacy tool in a project<sup>6</sup> to help fishers in Blanchisseuse, a rural community on the northern coast of Trinidad, to communicate challenges they faced to partners who can assist in addressing these problems. The project was led by CANARI in partnership with the University of the West Indies (UWI) mFisheries team and included the use of smartphones by fishers to capture videoclips to tell their story.

Many community members are intimidated when they directly address decision-makers but they are more comfortable expressing their opinions to their peers. The video produced by the fishers featured fishers interviewing each other and talking about problems such as the unavailability of ice and fuel for fishers from a central location in their community. The fishers used the video as a tool to present the problems, discuss ways to address the challenges, potential short and long-term solutions, and next steps. CANARI facilitated a discussion between fishers and key stakeholders after they all viewed the video together. These stakeholders committed to work with the Blanchisseuse residents in moving forward. The fishers planned to follow-up with each partner to implement solutions and reported that the video gave them a voice to better communicate their problems and seek support from key partners in addressing these problems.

**Local communities are more empowered to assume their role in decision making and exercise participatory visioning to influence policies and actions**

CANARI engaged members of a rural and vulnerable community, Caura Valley in Trinidad and Tobago, in a pilot project<sup>7</sup> to increase knowledge about climate change and contribute to resilience building to address the impacts of climate change. CANARI facilitated the development of a photo journal with the residents of the Valley to advocate for conserving natural resources in the Valley which they believe is a strategy to build resilience of their livelihoods to climate change. The photo journal incorporated the residents' view of the Valley, the value they attached to maintaining its natural cover, highlighted the issue of low water quality and quantity and presented the residents' recommendations to address the problems identified.

The photo journal was presented and discussed at a meeting of key stakeholders and residents. Key stakeholders complimented the residents for the presentation of the issues and their recommendations. Key stakeholders committed to support initiatives proposed by the residents. Two representatives of key organizations committed to return to the Valley to address water quality issues and minimizing mosquito

**5** Promoting participatory information communication technologies (ICTs) for adding value to traditional knowledge in climate change adaptation, advocacy and policy processes in the Caribbean. A project funded by the Technical Centre for Agricultural and Rural Cooperation ACP - EU (CTA) and the United Nations Development Programme and the Global Environment Facility (GEF) Small Grants Programme (SGP). <http://www.canari.org/ccddr6.asp>

**6** Participatory video: An advocacy tool to help the Blanchisseuse fishing community to communicate their challenges and develop partnerships to solve them. The project was funded by the International Development Research Centre (IDRC). The Motorola Defy smartphones used by the participants were provided courtesy British Gas Trinidad and Tobago (BGTT) as part of the mFisheries project. <http://www.canari.org/cm1.asp>

**7** Community action to build climate change resilience in Trinidad and Tobago. Global Environment Facility Small Grants Programme, administered by the United Nations Development Programme (UNDP) <http://www.canari.org/ccddr4.asp>

breeding sites. Residents of Caura Valley welcomed the opportunity for action and initiated plans to engage with other key stakeholders to address other issues identified in their photo journal. The residents also accessed training to learn about the benefits and techniques of rainwater harvesting, and installed a rainwater harvesting system to address the issue of low water quality and quantity in the Valley.

**Local communities and decision-makers have increased understanding, capacity and motivation to take joint action to build resilience to climate change and extreme climatic events**

CANARI partnered with the Saint Lucia National Trust to implement a project<sup>8</sup> to build the capacity of civil society to participate in decision-making and action to address the negative impacts of climate change through facilitating the drafting of a civil society agenda for action on climate change in Saint Lucia. The agenda identified six priority areas for immediate action, described the impact of climate change on natural resources and listed commitments of civil society to deal with the identified impacts. Through drafting the agenda, civil society organizations participating in the project expressed their desire to form a coalition for action on climate change and some of these groups contributed to the redrafting of the National Climate Change Policy and Adaptation Plan for Saint Lucia, and assumed a greater role in action on climate change in that island.

**Challenges**

*Climate change is a scientific concept with a complex mixture of human and natural causes.* Conveying information on climate change to communities in a format that is clear and enables them to relate their observations and experiences, and then analyze these observations to put forward action, requires careful preparation and facilitation. Poorly facilitated sessions could result in mere transfer of information which cannot be used to guide action and therefore is a waste of time and resources.

**Effective mobilization of project participants.** Many well-intentioned initiatives do not achieve their goals because the organisers do not adequately consider how to engage participants. Mobilization of participants for an exercise should involve identifying and conveying anticipated benefits as well as selecting how, when and where to engage participants.

<sup>8</sup> Developing a civil society agenda for climate change in Saint Lucia. Embassy of the Federal Republic of Germany, Port-of-Spain. <http://www.canari.org/ccdr3.asp>

**Investment of time needed by all stakeholders.** Participatory processes require identification and mobilisation of stakeholders, communication among them, and often debate and negotiation (and sometimes conflict management) before a decision can be reached by consensus. This is an iterative process and demands adequate time to facilitate stakeholder engagement and to enable adaptation to the changing situation. Limited time can correspondingly limit the effectiveness or depth of participation.

**Key actions for policy makers**

- Use traditional and indigenous knowledge in decision-making on climate change.
- Support on-the-ground action on climate change.
- Promote the inclusion of local communities in gathering information on and understanding of local impacts and the consequent decision-making on climate change.
- Support initiatives to build the capacity of natural resource managers to facilitate participatory processes to incorporate valuable traditional knowledge for decision-making on climate change.

**Caribbean Natural Resources Institute**

The Caribbean Natural Resources Institute (CANARI) is a regional technical non-profit organisation which has been working in the islands of the Caribbean for over 20 years.

Our mission is to promote and facilitate equitable participation and effective collaboration in the management of natural resources critical to development in the Caribbean islands, so that people will have a better quality of life and natural resources will be conserved, through action learning and research, capacity building and fostering partnerships.

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