# 4.3 Participatory forest management in the Caribbean

NICOLE LEOTAUD and CLAUS ECKELMANN

## Introduction

The islands of the Caribbean were originally settled by Amerindian and Carib tribes from South America and colonized by European settlers since the 15th century. These settlers imported slaves from Africa to work on sugar and other agricultural plantations. The traditional economic base of the islands was agriculture and the export of agricultural commodities; sugar and bananas were the main source of revenue. Today, tourism has replaced agriculture as the mainstay of the islands' economies. The importance of agriculture has severely declined and nowadays all Caribbean countries import between 70% and 90% of their food.

Most of the islands are densely populated, with 200–300 people per km$^2$. Because of this high population pressure most lands suitable for crop production have been cleared of their original forest cover. Forest remained only where lands were inaccessible or too steep to be cultivated. With the general decline of agriculture in the islands, former agricultural fields are being naturally recolonized by secondary forest, a process called "voluntary reforestation." Much of this natural reforestation happens with introduced species such as *Leucaena leucocephala*.[1] Forest cover in the Caribbean islands currently ranges from one-third to two-thirds of land area and is slowly increasing in many islands, despite the ongoing clearing of forested lands for housing, commercial and industrial development and for roads and other infrastructure.

A Participatory approach is a process, not a project.

In addition to their traditional role as a land reserve for agriculture, the Caribbean's forests provided timber, firewood and non-timber forest products (NTFPs) such as vines and grasses for basket weaving, and medicinal herbs. The most important commodity provided by the forest is water. In the volcanic islands of the Caribbean, all potable water is tapped from springs and streams in the mountainous forests in the interior of the islands.

**Nicole Leotaud** works for Caribbean Natural Resources Institute, Trinidad and Tobago; and **Claus Eckelmann** works for the FAO Sub-Regional Office, Hastings, Barbados.

## Participatory forest management

A landscape approach to forest management requires the full range of stakeholders to be involved in managing land areas and using forest and other resources. Participatory forest management approaches engage all stakeholders in making decisions about how forest resources are managed and are therefore fundamental to a landscape approach.

Most of the remaining forest is located in the upper watersheds. In the English-speaking Caribbean islands these forests are generally owned by the government and managed by the state forest administration. Administrators manage these resources by issuing licences for the removal of timber, NTFPs and hunting, and by policing the forest estate to ensure that resource users comply with regulations.

This does not always ensure the protection and conservation of the forest resources. There are many examples of forest degradation (due, for example, to illegal logging, fires, invasive species and fragmentation caused by roads) and deforestation (due, for example, to clearing for housing and other developments as well as illegal agriculture and settlements).

Several countries began to restore degraded forests through government-funded reforestation programmes, but the process was expensive and many governments did not consider it important enough to invest a large amount of money. These reforestation programmes did, however, engage local communities and trigger the development of joint initiatives between forest users and forest administrators (Box 1).

**Box 1. Examples of joint initiatives**

The Taungya system, practised in Trinidad in the first half of the 20th century, provided degraded forest areas to landless farmers for agricultural crops. The farmer was asked to plant and care for the seedlings of timber trees. Once the timber trees grew taller and the production of agricultural crops was no longer feasible, the farmer was given a new parcel of depleted forest land to reforest.

Another successful example of co-management was the Shelterwood system practised in Trinidad's Arena forest reserve. The reserve had been completely depleted of its useful timber resources by the 1930s. Forest administrators decided to restore the forest's productive capacity through clear felling (where most or all of the trees are cut down) and reforestation. Although clear felling and artificial reforestation were not successful, natural regeneration was observed in the shelter of the remaining trees. This observation was the key to a natural regeneration programme. People who burned charcoal were given the right to convert certain trees to charcoal; the trees would be removed in order to create a shelter of seed trees that naturally regenerated the forest with a diverse mix of tree species. This system was successfully practised in Trinidad until oil and gas replaced charcoal as the main household fuel for cooking.

The Taungya system and the Trinidad Shelterwood system are examples of forest restoration practices — at the landscape level — that involve co-management agreements. Both systems were based on the benefits received by the participants. Landless farmers were provided with access to land; charcoal burners had the right to fell trees and burn charcoal in order to make a living. The forest administrators benefitted from the planting and tending of timber seedlings and the establishment of a natural regeneration process to restore a degraded forest. Cooperation continued as long as both partners had a continued interest in the benefits offered.

In recent decades, forest administrators have realized that managing and protecting forests through user licences and policing alone is not feasible. This created opportunities for alternative practices. Based on experiences with selected initiatives across the islands,[2] the idea of co-management or participatory forest management (PFM) is now generally accepted. However, there is a gap between general acceptance and practice. PFM requires specific capacities for both forest user groups and forest administrations, which need to be developed over time.

## Capacities of resource users

Any user group interested in providing a forest product or service needs the technical capacity to do so. These services include the production of chainsaw lumber, the burning of charcoal, harvesting and processing of NTFPs, and guide services for ecotourism.

In addition to technical knowledge of production processes, group members need to be able to develop and manage their business and to meet the diverse expectations of individual members. Members are likely to support the group as a whole only if they feel that it reflects their individual interests. Successful self-governance is essential to the group's decision-making and sustainability. Unity within the group is necessary in order to articulate and communicate its interests. This is important when negotiating specific access rights to forest resources or advocating for participatory approaches to forest management in a policy formulation process.

People are more willing to invest time and resources in a co-management arrangement if they receive benefits from it. Although there are altruistic forest user groups such as conservation NGOs, who advocate for the conservation of forest resources, the majority of forest user groups have an interest in the forest as it directly supports their livelihoods. This includes income earned by community tour guides, charcoal burners and craft producers.

## Capacities of state forest administrators

State forest administrators need the technical capacity to guide and support the economic activities of forest user groups. To be able to issue wood-cutting licences forest administrations need to know where the trees are and how many can be sustainably harvested.

Forest administrators also need to have social skills. This requires a willingness to listen and to meaningfully consult and dialogue with forest user groups.

Another important area of capacity is the enabling policy and institutional structure. Very few forest policies explicitly include PFM. (The 2011 National Forest Policy of Trinidad and Tobago is an exception; it explicitly mentions participatory management as a guiding concept for decision-making in forest management.) There are even fewer forest laws and forest regulations on formal co-management arrangements, although the 1996 *Forest Act* of Jamaica provides for the creation of Local Forest Management Committees at the local level of municipalities or watersheds. Where policies and laws do enable PFM, forest administrators need to create structures and processes to implement policies.

More important than the legal foundation is the creation of trust among the various actors. Trust cannot be ordered by laws and regulations. It grows over time and is nourished by a culture of dialogue and joint reflection on the results achieved and the lessons learned.

Forestry authorities must continuously and actively engage with the people living in and around the forest to successfully facilitate PFM. This is often easier said than done. Many forest administrators believe that they are the sole custodians of the forest and that only they are responsible for managing the forest. Although well intended, most administrators lack the resources to singlehandedly manage the country's forest resources.

Increasingly, participatory approaches are reflected in the day-to-day work of forest administrations, even if they are not supported by a legal framework. For example, the Forestry Department of Jamaica employs two rural sociologists, and most forest administrations in the Caribbean have a community forestry unit or programme. In some cases informal arrangements with forest user groups have been useful even in the absence of an enabling policy environment. For example, the Fondes Amandes Reforestation Project in Trinidad reforested state lands for many years with the unstated approval of the government. The government recognized the value of the work being done to improve watershed services even before it finally granted formal permission to the project.

## Partnership to build capacities for participatory forest management

Despite the general acceptance and wide support for PFM much remains to be done. Over the last decade the Caribbean Natural Resources Institute (CANARI)[3] and the United Nations Food and Agricultural Organization (FAO) have successfully partnered to develop capacity for PFM across the English-speaking Caribbean. Capacity-building initiatives have addressed several needs:

- strengthening policy frameworks;
- building capacity in facilitating participatory processes;
- analyzing lessons from community forestry initiatives;
- developing and piloting tools to facilitate PFM;
- conducting awareness and engagement campaigns; and
- supporting the development of sustainable forest-based community enterprises.

### *Strengthening policy frameworks*

With financial assistance from FAO's National Forest Programme Facility, CANARI supported forest stakeholders (forest administrations, communities and civil society) in seven Caribbean countries to build their capacity to participate meaningfully in the national forest policy dialogue through a range of regional and national workshops and other initiatives.[4] CANARI also provided direct technical assistance to the Governments of Dominica[5] and Trinidad and Tobago[6] to develop new national forest policies.

### *Building capacity in facilitating participatory processes*

To facilitate PFM, forest administrators need the capacity to document and draw lessons from practical examples of co-management in their countries. Under the Forest Law Enforcement, Governance and Trade Support Programme for African, Caribbean and Pacific Countries (EU-ACP FLEGT), CANARI trained forestry officials to mentor community forestry groups. Mentoring provides support and guidance to community groups to help them identify and achieve their goals. Guidelines were developed on documenting participatory practices and mentoring community forest initiatives,[7] as was a regional synthesis of case studies of successful community forestry.[8]

### *Analyzing lessons from community forestry initiatives*

In 2010 the Caribbean Subgroup of the Latin American and Caribbean Forestry Commission recommended that a Caribbean knowledge exchange initiative on community forestry be conducted. FAO, with financial support from the National Forest Programme (NFP) facility, supported this through an initiative to document case studies from 14 Caribbean countries. The case studies summarized Caribbean experiences with community forestry, analyzed the factors contributing to the success and problems of community forestry initiatives and presented recommendations on how to design successful programmes. A regional synthesis report was prepared.[9] Additional work using social media and video to engage communities in documenting and evaluating their experiences continues.[10]

### *Tools for participatory forest management*

New planning tools were developed to analyze the needs of resource users and assess available resources. Participatory mapping and video were used for community forest management planning in Brasso Seco in Trinidad.[11] Participatory three-dimensional

modelling was used to assess climate change vulnerability for the island of Tobago.[12] CANARI is using these and other innovative tools to facilitate participatory natural resource management[13] in other PFM initiatives across the Caribbean.

### *Awareness and engagement*

To help forest user groups successfully articulate their interests, CANARI, together with the Forestry Department in St. Vincent, used a community caravan and developed a radio drama series and other communication products.[14] CANARI is expanding its use of communication tools such as video and social media to reach diverse target audiences.

### *Community enterprises*

Although forest user groups have business ideas, many of these never materialize because the groups lack the skills to prepare business plans. With support from FAO, CANARI selected three community forestry initiatives in Trinidad and Tobago, Jamaica and St. Vincent and assisted them in preparing business plans. The plans analyzed the feasibility of the proposed endeavour and detailed the resources and procedures needed to start the business.[15] This links to similar efforts across the Caribbean under CANARI's Rural Livelihoods programme.[16]

## Community forestry cases in the Caribbean

According to a 2012 regional analysis of cases,[17] and to other work by CANARI, there is a range of PFM initiatives in the Caribbean. In many cases the state forest administration is working with a single community organization. These initiatives aim for forest conservation as well as livelihood benefits for the local community. Activities include watershed rehabilitation, NTFP marketing, sustainable forest management for timber production, sustainable agriculture/agroforestry, ecotourism and plantation timber production.

A range of PFM structures, involving various types of community participation, is possible:

- Initiatives can be catalyzed and driven by a government agency. For example, local watershed rehabilitation groups in Trinidad and Tobago were formed and operate under a government programme that pays local community members to conduct reforestation, which is overseen by government personnel.
- The relationship can be collaborative, with community input on management decisions. In Jamaica, Local Forest Management Committees are set up by the government under national legislation and are supported by rural sociologists and forest officers. The community groups develop their own plans and projects for reforestation, education and sustainable livelihoods.
- In some cases the community drives the relationship. The Fondes Amandes Reforestation Project in Trinidad is an example of a community reforesting a

watershed on its own initiative. The community brought government and other partners into the initiative, but led the agenda and determined the actions.

PFM initiatives provide a range of livelihood benefits, including human (e.g., development of technical skills and knowledge), social (e.g., strengthened community organizations and networks), financial (e.g., increased community income, jobs), physical (e.g., building of community facilities), natural (e.g., watershed rehabilitation), and political (e.g., enhanced community voice, changed government policy and practice).

Five key factors contributed to the success of community forestry in the Caribbean:

- strong community organizations with committed leaders and social ties in the community;
- open communication and two-way dialogue between government and resource users with transparency and accountability, which generated trust of government and a sense of ownership on the part of communities;
- tangible shared livelihood benefits for communities;
- long-term secure support to allow governance arrangements to evolve as relationships are built; and
- supportive policies and flexible implementation to respond to evolving contexts.

## Ongoing efforts

Community forestry initiatives are taking place independently of each other in the Caribbean. Practice and policy are evolving as initiatives are implemented and lessons are learned. There is learning both within and across countries as state forest administrations and community organizations are brought together in regional processes, often convened by CANARI and FAO.[18] Forest administrators across the region share experiences and lessons on how community forestry can be effective and can deliver enhanced conservation and livelihood benefits. Gradually, national forestry programmes, policies and legislation are making provisions for PFM approaches. In Trinidad and Tobago, for example, after several years of collaboration on community-driven initiatives alongside government-driven programmes, the 2011 National Forest Policy[19] explicitly promotes participatory management with local communities and user groups.

## Conclusions

A participatory approach to forest management and landscape restoration cannot be achieved in a project; it is a process. It starts with consultation and evolves over time towards the delegation of management authority. The speed of the process is based on the willingness and capacity of the stakeholders and the ability of existing policy and institutions to evolve to facilitate participatory arrangements. Willingness depends largely on mutual trust between the stakeholders to share and accept management responsibilities and work together for mutual benefits. The capacity to practise participatory management needs to be built in

both government agencies and resource user groups. Informal and formal agreements can evolve over time as trust and capacity are built.

CANARI and FAO remain committed to support these processes in the Caribbean islands. Both organizations believe that the successful management of forest resources — using a landscape approach — is possible only through the effective and equitable participation of the various stakeholders. Participatory approaches bring together all stakeholders to negotiate consensus on how to sustainably use forest resources and how to minimize negative impacts on the forest from other activities in the landscape. The dialogue, negotiation, coordination and collaboration involved in participatory approaches are essential in landscape management to ensure that forest resources are conserved and that well-being, economic and livelihood benefits are optimized.

## Endnotes

1. *Leucaena leucocephala* is a small, fast-growing mimosoid tree. It is used for a variety of purposes, such as firewood, fibre and livestock fodder (http://en.wikipedia.org/wiki/Leucaena_leucocephala).
2. For example, see www.canari.org/forests.asp.
3. CANARI is a regional non-profit technical institute based in Trinidad. See www.canari.org.
4. See www.canari.org/forestmanagement.asp.
5. See www.canari.org/ta_rp4.asp.
6. See www.canari.org/fl_ta_2.asp.
7. See www.canari.org/documents/CMGuidelines7english.pdf.
8. See www.canari.org/documents/CaribCBFRegionalSynthesisfinal_2_.pdf.
9. See www.canari.org/documents/CaribCBFRegionalSynthesisfinal_2_.pdf.
10. For example, see www.canari.org/forest_cb.asp and www.canari.org/forestsustain.asp.
11. See www.canari.org/forestsustain.asp.
12. See www.canari.org/ccddr4.asp.
13. See www.canari.org/documents/CANARIPNRMTooklitFinalJan2012_003.pdf.
14. See www.canari.org/testingcommproducts.asp.
15. See www.canari.org/forest_fieldtest.asp.
16. See www.canari.org/rurallivelihood.asp.
17. See www.canari.org/documents/CaribCBFRegionalSynthesisfinal_2_.pdf.
18. For example, see www.canari.org/forestmanagement.asp.
19. See www.biodiversity.gov.tt/home/legislative-framework/policies/national-forest-policy-2011.html.