

**Caribbean Natural Resources Institute
(CANARI)**

FORESTS AND LIVELIHOODS PROGRAMME



**The Fondes Amandes Community Reforestation Project:
improving watershed management and community**

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Acronyms

BBC	British Broadcasting Corporation
CANARI	Caribbean Natural Resources Institute
CBO	Community-based organisation
CDF	Community Development Fund
EMA	Environmental Management Authority
FACRP	Fondes Amandes Community Reforestation Project
MP	Member of Parliament
NGO	Non-governmental organisation
NRWRP	National Reforestation and Watershed Rehabilitation Programme
TRF	Tropical Re-Leaf Foundation
UDECOTT	Urban Development Company of Trinidad & Tobago
UK	United Kingdom
USD	United States Dollar
WASA	Water and Sewage Authority

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 - John Stollmeyer, Board member
 - Phyllis Hoyte, Board member
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Executive Summary

This case study aims to capture what can be learned from the management of the Fondes Amandes watershed and its impacts on local livelihoods that might apply in other contexts across the Caribbean and beyond. It treats the FACRP as one element in the *institutional arrangement* -- or constellation of organisations, relationships, rules and procedures, both formal and informal -- that shapes the management of the forest and watershed.

This case study is one of a series under **CANARI's Forests and Livelihoods Programme** that seeks to analyse the relationship between institutional arrangements for forest management and the livelihood benefits derived by the rural poor. Specifically, the series is an output of a regional project entitled "***Practices and policies that improve forest management and the livelihoods of the rural poor in the insular Caribbean***" funded by the European Commission's Programme on Tropical Forests and other Forests in Developing Countries [2007-2010].¹

The central question the series examines is *how do institutional arrangements, including the degree and type of participation, influence the provision and distribution of benefits to the community?*

Project context

Fondes Amandes is a small hillside community situated in the upper portion of St. Ann's, a suburb of the capital of Trinidad, Port of Spain. It is located in the foothills of the western Northern Range and adjacent to an important reservoir serving the metropolitan area. The rapid degradation and loss of forest cover is having a negative impact on water supply and quality and exacerbating flooding in the rainy season. Traditional forest management approaches employed by state agencies have not been able to contain these threats.

Fondes Amandes was established by former agricultural estate workers and grew into a low-income, informal settlement. By the 1970s, forest clearance and fire frequency had increased to the point that much of the watershed had been converted to a fire-climax grass and shrub land that burnt annually.

The origins of the Fondes Amandes watershed protection and livelihood enhancement initiative date back to the late 1970s, when the late Tacuma Jaramogi began farming on state land held by the Water and Sewerage Authority. Since 1994, under the leadership of his wife, Akilah Jaramogi, the initiative has been transformed from a small, informal group of volunteers to the Fondes Amandes Community Reforestation Project (FACRP), an award-winning community-based organisation that has raised multiple grants for its pioneering work in ecological restoration linked to community development.

Project goals, activities and benefits

¹ Other case studies and project outputs can be found at <http://www.canari.org/forests.asp>

The goal of the FACRP is “to conserve the St. Ann’s watershed, using ecological restorative methods;” it “is committed to developing and uplifting the community through activities that enhance the environment.”

Project activities include:

- Tree planting
- Forest fire prevention
- Organic gardening /permaculture /animal husbandry
- The “Clean Tree Organic Nursery”
- Community eco-tourism
- Community recycling/composting
- Craft and cottage industry
- Music, culture and community empowerment
- Environmental education and outreach

Stakeholders in forest and watershed management in Fondes Amandes include:

- Fondes Amandes community members
- St. Ann’s community members
- FACRP Board, staff and workers
- National Reforestation and Watershed Rehabilitation Programme (NRWRP)
- Green Fund
- Forestry Division, and particularly the Community Forestry Unit
- Water and Sewerage Authority (WASA)
- Fire Service, Environmental Management Authority, other government agencies
- Tropical Re-leaf Foundation, CANARI, and other NGOs and CBOs
- Donors
- Schools, project visitors and those who use the river for recreation

Livelihood benefits for the Fondes Amandes community as a result of the watershed management initiative are analysed in terms of the accumulation of seven different types of “assets” that support well-being. The FACRP has contributed to:

- augmenting the natural assets of community (and downstream) residents by enhancing the health and diversity of the Fondes Amandes watershed, the ecosystem services it provides, and the security of local access to land and natural resources;
- building up the community’s physical assets in the form of project infrastructure and equipment as well as through successfully advocating for improvements in community infrastructure (e.g., electricity, water service).
- financial assets in the community by raising over US\$850,000 since 2000, much of which has been spent on employing over 20% of the local working-age population.
- developing human assets in the community by providing knowledge and skills through training workshops, on the job exposure and environmental education.
- building social and political assets by establishing social networks and using them to gain political voice and influence on behalf of the project and community. These assets have been primarily mediated through the FACRP, rather than accessed directly by community members.
- FACRP has enriched the cultural assets of the community by supporting the arts, environmental awareness, community pride and individual self-esteem.

Although most direct benefits go to FACRP employees in terms of financial and human assets, overall opportunities for participation and associated benefits are equitably distributed.

Conclusions and lessons learned:

- In the case of Fondes Amandes, there is a strong correlation between the **degree of participation** by a community-based organisation in the institutional arrangements for watershed management and the level of **benefits** received by the community.
- Effective and sustainable **co-management** requires open and frequent **communication** between, and the commitment of adequate **resources** by, each party.
- Effective and equitable **participation** is best achieved by **involving key stakeholders** from the project design stage onwards and requires systematic building and nurturing of mutual respect and **trust**.
- **Informal, trust-based sanctioning** can substitute for a formal management arrangement and provide a springboard for additional financial and other support. However, if trust is low or breaks down, **the absence of formal arrangements can weaken the community partner's position**.
- **Co-management** is impeded by the **absence** of an **institutionalised culture of participation in state agencies** and lack of coordination among them.
- Expectations in terms of **roles and responsibilities, performance, and monitoring and evaluation** should be clarified in writing from the outset, even in situations where a formal contract is not possible.
- While **leadership** is critical to community-based resource management initiatives and their capacity to deliver benefits, community **participation in decision-making** may not be essential.²
- **Community-based innovators**, such as FACRP, can **influence policy** formulation and shift partner agencies' perspectives and practices in a direction favourable to community participation and benefits.

Recommendations to Fondes Amandes watershed management partners:

General:

- Establish an improved **legal and policy framework for community-based resource management** in Trinidad.
- This framework, and all new land and natural resource management and use policies and projects, need to be designed with the involvement of, and ultimately **buy-in from, all key state agencies and their civil society partners**. Promote a **shift in**

² It is important to note that this last finding should not be assumed to apply in cases where, in contrast to Fondes Amandes, power and access to resources are more unevenly distributed within the community and/or the dependency of livelihoods on natural resources is higher.

mindset and bureaucratic orientation from traditional 'expert' forestry to co-management and approaches involving community participation. **Adequate financial and technical resources** should be dedicated to implementation.

- Develop an **annual fire protection** plan, with the involvement of all stakeholders concerned with fire protection in the Fondes Amandes and adjacent watersheds (and potentially the whole Northern Range), to ensure better coordination of the scarce resources available to respond to bush fires during the dry season.
- **Improve coordination and harmonisation of the activities of the Forestry Division and the NRWRP**, including:
 - development of a policy and procedures for the eventual '**handover**' of **reforestation projects** from NRWRP to Forestry, including the potential for continued co-management by qualified CBOs;
 - clearer identification of the respective **roles and responsibilities** and harmonising of **positions and salaries**.
- **Clarify the expectations of community-based reforestation groups** under NRWRP from the outset, preferably through a formal contract and a map outlining the area to be reforested.

Recommendations specific to Fondes Amandes:

- Initiate multi-stakeholder dialogue to explore the options for **more formalised co-management arrangements**, including the potential for FACRP to acquire **private land** within the watershed. Consideration could also be given to the establishment of a **multi-sectoral, multi-stakeholder management committee** that would meet on-site and conduct a field tour at least annually.
- **Improve the transparency and effective functioning of FACRP's governance structure** by reviewing and ratifying its constitution, formalising the election procedures and roles of Board members, and developing policies to govern human resource and financial management and conflicts of interest. The Board should also engage in periodic **strategic planning** and approve annual workplans.
- Investigate ways of **increasing participation in decision-making and management** within FACRP.
- Identify more **regular and systematic ways to involve and inform the wider community** and secure greater buy-in for FACRP activities.
- Develop a **plan for long-term monitoring and evaluating of the ecological and livelihood impacts** of FACRP.
- Collect additional baseline data, including an independent **ecological and silvicultural assessment**, to provide recommendations for soil and water conservation measures, reforestation strategies etc. Experiment with the best **balance between fire prevention, natural forest regeneration and increased biodiversity**.
- Upgrade **FACRP's data collection, management and record-keeping systems**.
- FACRP should continue to **celebrate its successes** and seek regular opportunities to **recognise and acknowledge its major donors and partners**, in order to

strengthen their commitment to co-management and build trust and mutual good will.

1 Introduction

1.1 Case study and series

The brown and fire-scarred hills above Port of Spain bear witness to Trinidad's intense and prolonged dry season of 2010. A minibus pulls out from a hotel in the St. Ann's hills, and after a short drive, crosses a bridge over a small river, passes a water treatment facility, proceeds alongside brightly painted, high garden walls until it leaves behind the row of prosperous homes at a fork in the road, and turns towards a less cultivated landscape. The bus parks where the road widens into an area bracketed by small football nets, a garbage bin and a light pole bearing a basketball hoop and a sign inscribed "No Trespassing – by order of Water and Sewage Authority (WASA)". Children splash in the pleasant pool formed by the river as it cascades down alongside the edge of their small community, a settlement with tidy homes in front and, further back, smaller houses with ramshackle walls and leaking roofs.

*The visitors arrive to the sound of drums. Two young men set up a rhythm from their perch next to a sign reading "Clean Trees Organic Nursery" on the green, leafy hillside in front of the village. The visitors file into the recently-finished thatched-roof 'welcome shelter,' built in the manner of the indigenous Karina (Carib) people. The visitors take a seat on the benches that run along the circular walls, facing one another. A regal woman enters, a striking presence in a brightly patterned African caftan, her long dreadlocks wrapped in a turban. She speaks, "Welcome to the **Fondes Amandes Community Reforestation Project**. I am the director, Akilah Jaramogi." She is joined by several staff members, looking proud and somewhat shy, their name-badges pinned to their green jerseys emblazoned "Eco-Tour Guide". Akilah proceeds to describe the goals and activities of the project to the visiting representatives of other community-based organisations from across the Caribbean. They have come to learn from the experience of the Fondes Amandes Community Reforestation Project over the nearly three decades since its inception as a self-help effort of a group of informal settlers to an internationally-recognised and highly-regarded initiative in forest restoration and community development.*

This case study also aims to capture what can be learned from the management of the Fondes Amandes watershed and its impacts on local livelihoods that might apply in other contexts across the Caribbean and beyond. It treats the community-based organisation known as the Fondes Amandes Community Reforestation Project (FACRP) as one element in the *institutional arrangement* - or constellation of organisations, relationships, rules and procedures, both formal and informal - that shapes the management of the Fondes Amandes forest and watershed.

This case study is one of a series under **CANARI's Forests and Livelihoods Programme** that seek to analyse the relationship between the type of institutional arrangement for forest management and the livelihood benefits derived by the rural poor. Specifically, the series is an output of a regional project entitled "**Practices and policies that improve forest management and the livelihoods of the rural poor in the insular Caribbean**" funded by the European Commission's Programme on Tropical

Forests and other Forests in Developing Countries [2007-2010].³ In this context, *livelihood* is understood to mean more than just earning money and encompasses all the other assets that contribute to overall human well-being (see Section 5 for a more detailed explanation).

The central question the case study series seeks to investigate is *how do institutional arrangements, including the degree and type of participation, influence the provision and distribution of benefits to the community?* An ancillary goal is to provide FACRP with an assessment of project impacts on community livelihoods to date and a baseline for 2010, as well as a set of participatory methods that it can use to continue monitoring livelihood impacts.

In order to address the research question, the case study begins by setting the historical and ecological stage, reviews the nature of the institutional arrangements, and identifies constraints and enabling factors. It then goes on to analyse: (a) the degree and type of participation by the FACRP in the institutional arrangement for watershed management; (b) the degree and type of participation of the Fondes Amandes community within the FACRP; and (c) the resulting distribution of livelihood benefits, in order (d) to derive lessons about what type of institutional arrangement for forest management optimises livelihood benefits to the rural poor. It concludes with some policy recommendations and specific suggestions for the Fondes Amandes project.

1.2 Methodology

This case study was developed using a combination of participatory and standard ethnographic methods. The latter included five months of participant observation, a desk review of documents, and extensive interviewing of stakeholders - Fondes Amandes community members and neighbours, FACRP staff and Board members, civil society partners, and government officials. It also used - and modelled for future application by FACRP - the following participatory data collection methods:

- focus group on indicators of well-being;
- focus group on project goals and objectives;
- community transect walk;
- project transect walk;
- community mapping.

³This project was implemented in Barbados, Commonwealth of Dominica, Grenada, Jamaica, Saint Christopher (St. Kitts) & Nevis, Saint Lucia, Saint Vincent & the Grenadines, and Trinidad & Tobago but it is anticipated that the lessons learned will be of relevance to other Caribbean islands. Other case studies and project outputs can be found at <http://www.canari.org/forests.asp>



Community and project transect walks

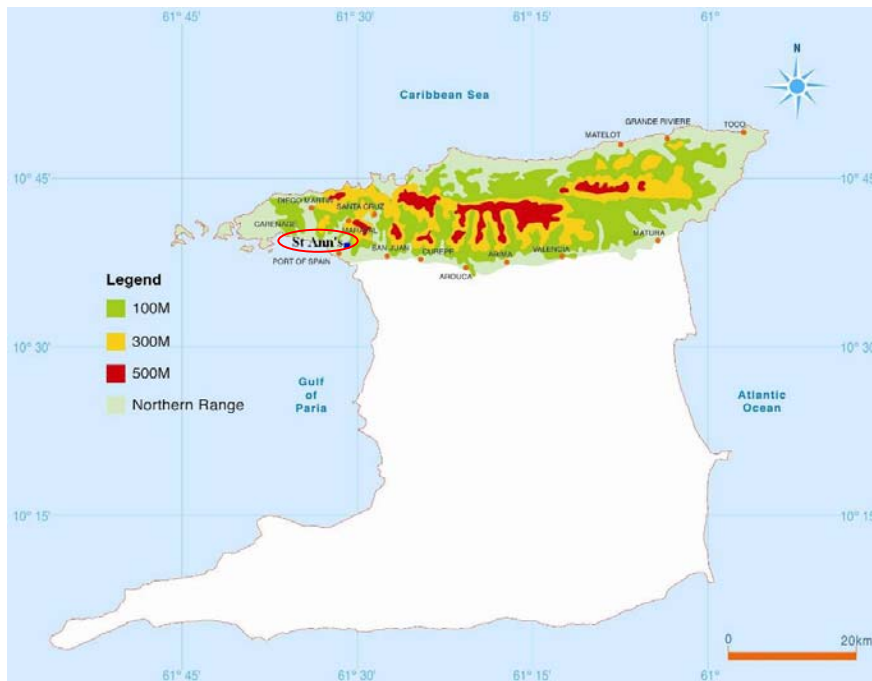


Community mapping

Separate reports have been presented to FACRP on the results of these participatory exercises. A PowerPoint presentation of the case study provided the opportunity for validation, correction and improvement by FACRP staff and workers.

1.3 Context of the Fondes Amandes Community Reforestation Project

Fondes Amandes is a small hillside community situated in the upper portion of St. Ann's, a mostly middle-class residential suburb of the capital of Trinidad, Port of Spain. It is located in the foothills of the western Northern Range and adjacent to an important reservoir serving the metropolitan area (See Map 1).



Map 1. Map of Trinidad highlighting the location of St. Ann's

(Source: www.mapscd.com/trindadytobago_illustrator.html.)

The Northern Range is the highest and most extensive of Trinidad's three mountain ranges and its most important water catchment area. Its watershed forests are rapidly being degraded, largely as a result of changing land use practices, in particular expansion of housing development into forest areas, including both high-income residences and squatter settlements; unsustainable agricultural practices; quarrying; and annual dry season fires (Pantin and Krishnarayan 2003). This degradation and loss of forest cover is having a negative impact on water supply and quality. Soil erosion and heavy runoff from denuded hills, compounded by inadequate drainage, have led to heavy siltation of the rivers and water works and a pattern of severe flooding in the rainy season⁴. Traditional forest management approaches employed by state agencies have not been able to contain these threats (Lum Lock and Geoghegan 2006).

Multiple and complex factors underlie this worsening trend. Economic and demographic forces driving urban expansion have put FACRP, the community of Fondes Amandes and adjacent watershed areas under pressure from planned and unplanned development. Trinidad's land tenure system, a colonial inheritance, contributes both to the causes of watershed degradation and the challenges facing the state in responding effectively. The state owns all land that is not individually held, including almost all the forests,⁵ the rivers and the sea. The remaining productive land area is predominantly held by a few large landowners, although many former estates have been abandoned and their owners, heirs and boundaries left unknown (McIntosh and Renard 2010). All these conditions, compounded by budget constraints and staff shortages, present major challenges to the Forestry Division, the agency in charge of watershed management.

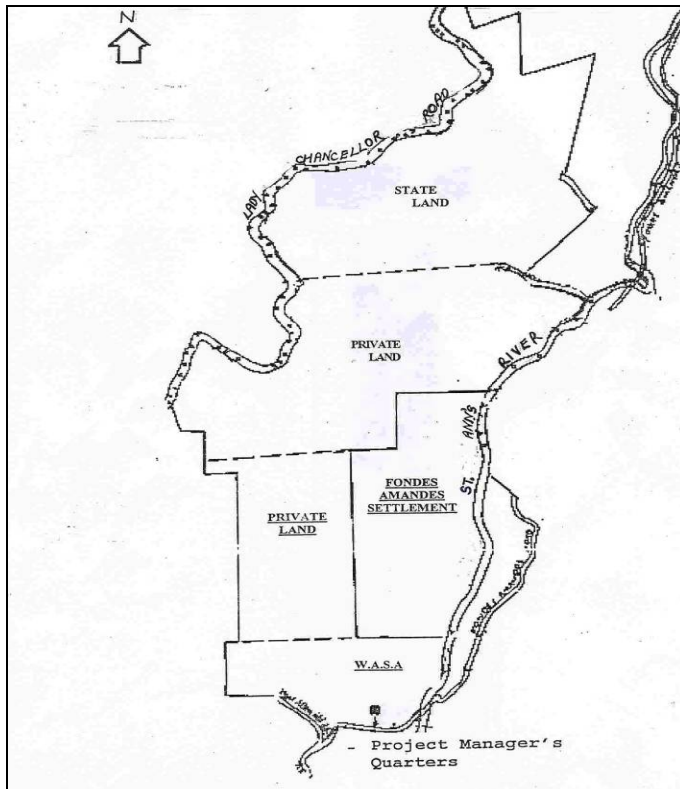
The native rainforest on the slopes of the Fondes Amandes valley was first partially

⁴ In 1993, the flooding of the St. Ann's River drowned four people and inundated large areas.

⁵ The state owns over 50% of the land area of Trinidad and Tobago, amounting to 91% of forested areas. A satellite-based analysis estimated 44% forest cover (including degraded forest) remained in 2004 (Draft Forest Policy, 2009; EMA 2004).

cleared for the establishment of agricultural estates that grew cocoa, nutmeg and other tree crops until they declined and were finally abandoned in the 1960s. Over time, some of the workers were granted small plots of land by the estate owners and others stayed on as well, tending their gardens and growing annual crops on the valley slopes. While some of the land remained privately titled, the Water and Sewerage Authority (WASA) acquired about 14 acres to protect its reservoir below the community. The rest was retained as state land, resulting in a mosaic of ownerships (see Map 2 overleaf).

While forest cover has been retained along the ravines traced by water courses, by the late colonial period (1940s) the bare upper ridges had become a fire zone. By the 1970s, forest clearance and fire frequency increased as informal settlers from the surrounding area began to expand cultivation, some building homes in Fondes Amandes. The annual occurrence of fires set during the dry season for farming, hunting, garbage-burning, bush-clearing, for mischief or by accident, began to further transform the landscape, establishing areas of fire climax grassland punctuated by bamboo, cocorite palm and other fire-tolerant species. By the 1980s, Fondes Amandes was identified as a fire 'hot spot', the frequent origin of fires that would then sweep up and pass over adjacent ridges.



Map 2: Ownership pattern of the Fondes Amandes Development (Source: Eden Shand)

Box 1

Definitions

Watershed management and **forest management** are terms that can refer to the same set of practices for maintaining forest services and extracting products. Watershed management is used in this study, since it emphasizes the watershed as the holistic unit of management for FACRP and as the geographic unit of analysis for this study.

Fondes Amandes watershed is the land area or basin (ridge to ridge) that drains into the St. Ann's River. Although the formal reforestation project area occupies the only its western portion, FACRP aims to protect the entire watershed from fire.

Fondes Amandes reforestation project area is the area, shown on Map 2, on the western slopes of the watershed that FACRP intends to rehabilitate by enrichment planting of trees and other means.

Fondes Amandes community (or just '**the community**') refers to the residents of the settlement/village (shown in Map 2) that is accessed by the Fondes Amandes River Road.

St. Ann's refers to the middle to upper-middle class neighbourhood adjacent to the Fondes Amandes community on the west.

Estimates of the population of Fondes Amandes over the past decade have ranged from 125 to 175 people living in 35-45 houses (typically including a few temporary dwellings with part-time residents). Four or five large extended families, descended from former estate workers, constitute the core of what remains a low-income community. Since 2006, mainly as a result of receiving a contract under the National Reforestation and Watershed Rehabilitation Programme (NRWRP), the FACRP has employed between 25 and 38 people, about half of whom are from the community. Almost all the other residents with steady jobs are employed outside the community, including in recent years a few salaried positions. Almost all adults follow a diverse livelihood strategy, making ends meet through part-time jobs, self-employment and (to a decreasing extent) subsistence and occasional market farming. Households in the middle- to-upper class adjacent neighbourhoods provide domestic and gardening work. There is one small variety shop at the entrance to the village and a few other residents sell food from small stands along the St. Ann's Road. Most households now have electricity and access (mostly by hose) to pipe-borne water. The standard of housing varies considerably from neat multi-room houses with inside bathrooms to single-room structures and dilapidated dwellings with additional rooms tacked on in various stages of completion.

1.4 A brief history of the Fondes Amandes Community Reforestation Project

The origins of the FACRP date back to the late 1970s (see project chronology in Appendix 1), when the late Tacuma Jaramogi began farming sorrel, pigeon peas and other annual crops on the WASA-owned lower hillside of Fondes Amandes. He was later joined by his wife, Akilah Jaramogi, and a few other Rastafarian families also began working the area. At that time, the Rastafarian lifestyle provided a strong community bond among the small group of settlers.

At first they were not resident on the site, juggling farming with their small businesses; their absences made their gardens all the more vulnerable to the bush fires that swept through the area annually. Akilah dates the start of the initiative to 1982, "that was when

we used the money we earned to start investing in trees". Initially, they planted primarily fruit trees, later intercropping hardwoods. By that time, Tacuma had begun working for the Forestry Division; he brought the skills and information he was acquiring into the community. He led the neighbours in clearing and maintaining firebreaks, initiating a practice of self-help and volunteerism. "We had no money in those years – only food and drink, drum and lime," Akilah recalls.

A vision for a community-based agro-forestry initiative began to emerge out of discussions at get-togethers and evening drumming sessions, a vision rooted in the conviction that the enterprise should strive to address conservation and livelihood objectives simultaneously. Those involved were particularly concerned with addressing the high levels of unemployment and lack of work opportunities locally. Their efforts were guided by the strong leadership of Tacuma Jaramogi and the Rastafarian values of social consciousness, empowerment and respect for the earth (McIntosh and Renard 2010).

These early agro-forestry efforts reduced, but failed to halt, the annual fire damage, particularly a devastating fire in 1987. In 1990, another threat emerged when WASA, in an effort to protect the water supply, served the Jaramogis and other residents on its land with eviction notices. Tacuma sought help from the Member of Parliament (MP) for the area, who was also a professional forester with a particular interest in watershed rehabilitation. With his encouragement and advice, the Jaramogis developed a proposal to WASA for informal permission to build on what they were already doing to restore the watershed through community reforestation. The MP was able to negotiate a verbal agreement with WASA allowing the community to stay on the land in return for being 'resident project managers'. The agreement was sealed when the Chairman of WASA planted a ceremonial tree on the land in 1991 (Lum Lock and Geoghegan 2006; McIntosh and Renard 2010).

The Jaramogis and supporters proceeded with added purpose. As Akilah noted, "though nothing was written, we understood we had a duty to perform – we'd better keep out fires if we wanted to stay". In addition, they could draw on new forms of assistance through the Tropical Re-Leaf Foundation (TRF), a non-profit organisation founded by the MP mentioned above. In 1994, Akilah, who was working in a Forestry Division nursery at the time, requested and received from the Fire Service fire prevention training for herself and others from neighbouring communities.

That same year, Tacuma Jaramogi passed away. Akilah stepped forward and since then has been an acknowledged community leader and the dynamic director of the project. In honour of Tacuma's memory, and to recruit help against the ever-present threat of fire, she instituted an annual *gayap*, a traditional self-help institution she defines as "working together for a common cause".



Gayap 2010



Gayap 2010

It started small but by 1997 had become a significant annual event, drawing government officials, school groups, community members and others to lend a hand with the cutting and clearing of fire traces. From that year until 2010, the project was declared “fire free.”

During these formative years, the TRF provided administrative support and brokered in-kind donations and training opportunities from the United States Embassy, the Rotary Club, Forestry Division and the nearby Cotton Tree Foundation. In 1999, the project was formally registered with the Ministry of Community Development under the name Fondes Amandes Community Reforestation Project. Registration was a precondition for obtaining its first grant from the Community Development Fund (CDF). Between 1999 and 2004, FACRP raised an average of USD27,500 per year from the CDF and a variety of corporations, embassies and foundations. In addition to supporting tree planting, training and fire protection, these funds were used for the construction of an access road, community shelter and an organic plant nursery, as well as the launch of the ecotourism programme. Income from grants was supplemented by the continuing tradition of volunteerism, as well as periodic inputs by Akilah on a personal basis from the profits of her thriving jewelry business. The business is based on creating jewelry from seeds and other non-timber forest products, harvested mainly in Fondes Amandes.

In 2006, at the urging of its donors and supporters, FACRP drafted a formal constitution (never finalised) and appointed a Board of Directors, which includes a number of members from outside the community to assure the range of skills required. That same year the FACRP received the most prestigious of the several awards it has garnered, the Hummingbird Medal (Gold), granted by the President for community service. This growing prominence was useful in FACRP’s successful lobbying to receive a contract under the National Reforestation and Watershed Rehabilitation Programme (NRWRP). The FACRP’s initial application in 2004 had been rejected, ostensibly because Fondes Amandes falls outside the designated zone for the programme, but possibly also because, unlike the majority of NRWRP contractors, it was not an overt supporter of the ruling political party. As a result of this new funding, average annual grant support over the 2006-2009 period jumped to just over USD170,000.

In 2010, FACRP became one of the first two community-based organisations to be awarded a grant from the Green Fund, receiving nearly USD317,000 for the first year of funding.

1.5 Fondes Amandes Community Reforestation Project goals, objectives and activities

The goal of the FACRP, as defined in its brochure, is “to conserve the St. Ann’s watershed, using ecological restorative methods”. It links this ecological goal to social ends in a mission statement that reads, “The Fondes Amandes Community Reforestation Project is committed to developing and uplifting the community through activities that enhance the environment”. FACRP breaks this down into the following project objectives:

- to encourage community development and create opportunities for employment for the Fondes Amandes community;
- to promote the development of sustainable, responsible eco-tourism in the St Ann’s watershed;
- to protect the biodiversity of flora and fauna in the St. Ann’s watershed; and
- to work with other communities and organisations throughout the region who share the same goals to conserve and protect the environment.

During the process of participatory data collection for this case study, the management of FACRP further defined its goals and objectives in terms of its desired impacts (see Appendix 2 for a complete list). These impacts are environmental (e.g. forest restoration, soil conservation and rehabilitation); economic (e.g. improved incomes through training in micro-entrepreneurship and ecotourism); social (e.g. social problems highlighted so people can address them) and cultural/attitudinal (e.g. community members learn to appreciate themselves and project benefits).

1.6 Activities

In line with its wide-ranging social and environmental objectives, the FACRP has adopted a holistic approach to project development, which extends beyond watershed reforestation and rehabilitation. It now operates eight ‘modules’, namely:

- *Tree planting:* FACRP plants seedlings of diverse fruit-bearing and native species, raised in its own nursery and or supplied by Forestry Division under NRWPR.
- *Forest fire prevention:* in addition to the on-site work, FACRP runs a Disaster Awareness Caravan that provides outreach and disseminates a DVD on fire protection that it has produced.
- *Organic gardening/permaculture:* only a small portion of the produce is sold, with the rest being used primarily for demonstration or consumed on the project. Penned sheep and goats, supplied with fodder from the project, provide manure for the compost as well as offspring to sell or give away as incentives.
- *Clean Tree Organic Nursery:* generates a modest source of income as well as employment and training opportunities for community members. It provides a reliable source of organic seedlings and compost for the FACRP’s reforestation

activities as well as for sale.

- *Community eco-tourism*: FACRP workers have been trained in tour guiding and tree identification, generating revenue through fees charged to school groups and other visitors. A network of trails and shelters has been constructed on the site.
- *Community recycling/composting*: while FACRP produces its own organic compost from leaf litter and manure from the goats and sheep it raises, the community composting and recycling effort did not catch on and has not been sustained.
- *Craft and cottage industry*: a number of staff and community members have participated in a leathercraft workshop and have been trained in jewelry making by Akilah but to date none have taken these up as revenue-generating activities.
- *Music, culture and community empowerment*: FACRP has long promoted a drumming group and its members are occasionally paid to perform. FACRP also organises 'know your country' field trips to different sites of national interest for community members and hosts summer vacation 'eco-culture' camp for schoolchildren.

In addition, FACRP offers environmental education and outreach to schools, community groups and visitors to the project from around the world. It also participates in regional exchanges and capacity building programmes with others engaged in similar activities elsewhere in the Caribbean.

2 Institutional arrangement

While FACRP is the key player in this study, it is not the only one. The project is embedded in a web of relationships to other organisations, structured by formal and informal rules, policies and processes. This institutional arrangement shapes watershed management practices and thereby the environment, the community and the benefits to the community. In sum, the institutional arrangement for management of the Fondes Amandes watershed is complex, involving three major state agencies (WASA, Forestry Division and NRWRP), a number of (mainly absentee or untraceable) private owners, the FACRP and other community members, some of whom have formal title to land and some of whom do not.

The sections below describe in more detail the current institutional arrangement at Fondes Amandes, first examining access and ownership rights in depth for FACRP and the local community, and then in summary for all stakeholders in Table 1, which presents a schematic stakeholder analysis.

2.1 Fondes Amandes watershed – access and ownership rights

Rights of ownership and other forms of legal and informal tenure condition how people gain access to resources. The land ownership and tenure situation at Fondes Amandes is very complex. A recent investigation by the Land Settlement Agency, the agency tasked with regularising the tenure of pre-1998 'squatters', found over 100 parcels, under a mosaic of public and private ownership, within the western portion of the watershed where the settlement and reforestation project are located. Many Fondes Amandes residents resent being called 'squatters' and insist that only a few of them are

in fact illegally occupying land. Two censuses⁶ conducted by FACRP in about 2000 found that 25-33% of residents are technically squatters. Despite the fact that regularisation was also recommended in the 2000 Draft Greater Port of Spain Local Area Plan (UDECOTT 2000), no further action has been taken. There are existing laws and procedures through which to pursue land ownership, such as establishing in court thirty years of uncontested occupancy of a parcel, although few have the money and persistence to complete this process.

Insecurity of land tenure appears to affect primarily residents on WASA land and possibly the newcomers on the outskirts of the settlement. Some families claim to have lived on their land since their grandparents and earlier generations worked on the estates, and others pay rent to absentee landlords. Most elect to pay the 'land tax', regardless of whether they formally own the land or not, a step that effectively asserts and dates rights to the land. In practice most 'squatting' in Trinidad is considered a *fait accompli*, because the relevant laws are not regularly enforced. Despite their informality, local tenurial arrangements are generally accepted and respected among Fondes Amandes residents. For example, areas on the hillside where one family has farmed in the past are not farmed by others without permission. Access to land does not appear to be a constraint to residents. However, newcomers who are not connected to members of the community are discouraged from settling or farming (though new shacks periodically appear round the 'back side' of the village).

The FACRP has effectively quelled the fear of eviction from WASA land, through its growing prominence, accomplishments, and social networks. When FACRP applied to the CDF in 2000, the CDF director requested, and received, a letter from the Chairman of WASA granting permission for the project to use its land. In 2009, the Green Fund project coordinator requested, and received, an update letter endorsing the 2000 letter, which he accepted as the basis of 'legal access'. He has requested that the relevant Ministry conduct a field survey, to locate the boundary markers demarcating the WASA parcel, since no one knows exactly where the boundaries are located.

FACRP has assumed stewardship of the privately-owned parcels within the watershed. With the exception of one family that resides locally, the identities of or heirs to the persons named on the cadastral map are not known. Although no landowner has come forward to object, the NRWRP has expressed concern about this situation, as well as the necessity of 'trespassing' across these lands to reach the reforestation area on state land higher up towards the ridge. The NRWRP has also pointed out that neither the community nor the project has legal access to the trees or produce (e.g. fruits, seeds, medicinal plants) from either private or state land, though nobody has sought to interfere with local access or harvesting to date.

The FACRP more or less controls access by community members to the core project area. For example, fruit gathering by individuals is restricted to non-commercial purposes (there are plans for FACRP eventually to market the produce itself). The upper reaches of the project area, which blend with the hinterland of the community, are considered common property. Some residents still farm sorrel, pigeon pea and vegetables on the hillside (outside the project area). A few graze their cattle or goats. A

⁶ The accuracy of these censuses is not known. The method used was not recorded, but Board members recall that it was likely done by recall rather than going door-to-door. It is also not clear if all residents know the legal status of their plots.

limited amount of foraging for fruits, wild yams and medicinal plants still goes on in the bush.

2.2 Stakeholder Analysis

All the individuals, groups or organisations that have a role in the management of the Fondes Amandes watershed or are affected by its outcomes are considered *stakeholders* in it and part of the institutional arrangement. The stakeholder analysis in Table 1 below describes stakeholders' ownership or access rights and management roles in the Fondes Amandes watershed, as well as their general responsibilities and the enabling legal framework.

Table 1: Stakeholders in Fondes Amandes watershed

Key Stakeholders	Ownership/access and management of resources in Fondes Amandes	General roles, responsibilities and <i>legal authority</i>
GOVERNMENT		
Ministry. of Agriculture, Land and Marine Resources, ⁷ Commissioner of State Lands	Controls but does not manage the state land on approximately half of the Fondes Amandes watershed	Responsible for administration and dispensation of state lands. <i>(State Lands Act and Regulation, ch.57:01 Laws of Trinidad and Tobago)</i>
Ministry of Public Utilities, Water and Sewerage Authority (WASA)	Controls but does not actively manage approximately 14 acres within the Fondes Amandes project area Occasionally patrols the area to keep people off reservoirs and river	Responsible for managing the state-owned and operated public water supply and sewerage system, including protecting the watersheds of reservoirs, for the delivery of a safe, reliable and efficient water supply. <i>(Established by an Act of Parliament in 1965)</i>
Ministry. of Agriculture, Land and Marine Resources, Forestry Division, Community Forestry Unit	Supplies technical assistance, seedlings and fire protection; paid local fire wardens 2003-2006 Assists FACRP with documenting of local knowledge and history and mapping project area.	Responsible for implementation of forest policy and the management of state forest as well as forest resources on other state lands. Supports and regulates forest management on private lands. <i>(Forests Act, Ch. 66:01 Laws of Trinidad and Tobago, 1915, last amended 1955 Trinidad and Tobago National Forest Policy, 1942; latest draft 2009)</i> Community Forestry Unit is responsible on state and private land to

⁷ The names of government ministries and the agencies under them have changed several times during the duration of the FACRP. The designations cited here were valid as at July 2010.

Key Stakeholders	Ownership/access and management of resources in Fondes Amandes	General roles, responsibilities and <i>legal authority</i>
		<ul style="list-style-type: none"> - facilitate management of forest resources outside protected areas - develop baseline data on forest uses and livelihoods - build capacity of and relationships with CBOs and NGOs - explore opportunities for collaborative management of forest landscapes
Min. of Agriculture, Land & Marine Resources, National Reforestation & Watershed Rehabilitation Programme (NRWRP)	<p>-“co-manages” approx. 100 acre reforestation project (exact area is contested) within FA watershed</p> <p>- supplies funding (almost \$150,000/yr), employs 25 workers; minor technical assistance</p> <p>- Programme rules dictate turnover of project area to Forestry Division in 2011. Implementation unclear, especially in FA, since the area incorporates private lands and state lands not previously under the Division.</p>	<p>Ten-year programme (2005-2015) designed to replant 33,030 acres of forests, throughout TT including 11,000 acres in watersheds, which have been denuded or destroyed. Programme objectives include:</p> <ul style="list-style-type: none"> - preservation of biodiversity, - enhanced watersheds, - increase in food production through agroforestry, - reduction in flooding, - community involvement in sustainable development - sustainable employment and poverty alleviation <p><i>(Established by Cabinet Minute 898 of April 16, 2003. Initial funding derived from Unemployment Levy under Cabinet Minute 2936 of November 20, 2003; NRWRP Strategic plan 2004-9)</i></p>
Ministry of Housing and Environment, Green Fund	1-year grant to FACRP (2009-2010 with potential for extension/renewal), of over \$300,000, which employs 13 people and provides technical assistance for reforestation and infrastructure.	<p>Responsible for managing national fund raised from a business levy to provide grants to registered civil society organisations and some statutory agencies engaged in activities related to remediation, reforestation and preservation of the environment.</p> <p><i>(Established by the Finance Act 2004)</i></p>
Ministry of National Security Fire Service	Provides training to FACRP staff and occasionally fights fires that reach near roads in Fondes Amandes.	<p>Responsible for fire protection of residences, commercial buildings and infrastructure (otherwise not responsible for state land).</p> <p><i>(Fire Service Act Chapter 35:50 of the Laws of Trinidad and Tobago)</i></p>

Key Stakeholders	Ownership/access and management of resources in Fondes Amandes	General roles, responsibilities and <i>legal authority</i>
Ministry of Housing and Environment, Environmental Management Authority	Provides literature and other support for annual <i>gayap</i> . Enhanced the standing and prominence of FACRP by conferring several awards.	Responsible for protecting and conserving the natural environment to enhance the quality of life by promoting: <ul style="list-style-type: none"> - environmentally responsible behaviour, - development and enforcement of environmental legislation - encouragement of voluntary compliance - the use of economic and other incentives. <i>(Environmental Management Act Chapter 35:05)</i> Promotes community involvement in protected areas management through the Environmentally Sensitive Areas Stakeholder Management Committees. <i>(Environmentally Sensitive Areas Rules, 2001)</i>
CIVIL SOCIETY		
Fondes Amandes Community Reforestation Project (FACRP)	'Co-manages' watershed reforestation, primarily with support from NRWRP & Green Fund grants. Operates plant nursery, plants tree seedlings, installs water control measures, protects from fire.	Responsible for the inspiration, planning and implementation of the watershed restoration, community development and environmental education initiative. <i>No legal authority but access to WASA land endorsed by a letter from WASA. Registered with Ministry of Community Development.</i>
Tropical Re-Leaf Foundation (TRF)	Played intermediary and capacity-building role for early FACRP initiatives: <ul style="list-style-type: none"> • intervened with WASA to help FACRP gain security of tenure on WASA lands. • assisted in proposal development and securing funding. 	Founded in 1991 by a forester and former MP and Minister. TRF promotes reforestation through 'community action'. <i>(Non-profit company registered under the 1995 Companies Act)</i>

Key Stakeholders	Ownership/access and management of resources in Fondes Amandes	General roles, responsibilities and <i>legal authority</i>
Other NGOs, Schools, CBOs. Donors	Support FACRP's management by supplying funds, information, networks.	(various)
FOREST USERS		
Fondes Amandes community	Access to project area informally regulated by FACRP.	May be offered and choose to accept roles in project by supplying labour, volunteer time, participation and/or approval; during dry season may fight (or light) fires in the surrounding hills.
Visitors to project, including students, CBOs, researchers	Access by invitation and tour project (usually for fee).	Support FACRP through encouragement, fees, networking, public relations.
Visitors to river	Open access for bathing and 'liming' on St. Ann's River	Youth from Port of Spain sometimes set fires by intent or accident.

3 Enabling factors and constraints

A number of factors, both external and internal, have contributed significantly to facilitating or hindering the development of the FACRP as a whole, and to the degree of community participation within the overall institutional arrangement.

3.1 External

Strong petroleum-based economy

In comparison with most of its Caribbean neighbours, Trinidad and Tobago's economy has boomed over the past decade, largely as a result of oil and gas revenue. This has enabled the government to provide the funding for the first six years of NRWRP through the Unemployment Fund to a tune of approximately USD 44 million per annum. High oil and gas revenues have also meant that contributions to the Green Fund, via a levy on all businesses (including, ironically, non-profit companies), have been high, with the Fund standing at USD1.6 billion by the time it was operationalised in September 2008. FACRP will have received approximately USD750,000 and USD320,000 by the end of 2010 from the NRWRP and the Green Fund respectively.

However, it is widely believed that the government anticipated that the Green Fund would be operationalised much earlier and would have provided funding for the NRWRP at a higher level than it has been able to sustain through annual budgetary contributions. In the case of Fondes Amandes, NRWRP funding cut-backs and unpredictable fund disbursements have meant that the staff has been cut back from a peak of 35 at the start of the reforestation project to 25 at present.

Moreover, the previous administration's focus on economic development through greater industrialisation and the heavy investment in flagship mega-projects and the expansion of public housing have had detrimental impacts on the environment, both directly (for example, through the expansion of quarrying and the conversion of prime agricultural land for housing and industry) and indirectly, through the diversion of funding that might otherwise have been used for more environmentally and socially sustainable development.

Policy and legislative framework for co-management of forested areas

Unless the draft new national forest and protected areas policies are implemented, the policy and legislative framework for community-based watershed management will remain weak. The mandates of a number of agencies overlap, laws are outdated or contradictory, and there is no sound legislative basis for formal co-management arrangements. The proposed policies suggest a thorough review of all legislation and agency mandates, with a view to making them more coherent, as well as the introduction of legislation that would facilitate formal co-management.

Although there have been examples of a participatory culture developing in government agencies in spite of the absence of enabling legislation (for example, the Wildlife Section's long-standing commitment to co-management of the main sea turtle beaches), it is not widespread. Within the three main state agencies involved with FACRP (WASA, Forestry Division and NRWPR), the commitment to participatory processes and co-management exists more at the level of certain individuals than as an institutionalised philosophy. Whilst many community-based organisations, including FACRP, have benefitted from the exceptional commitment of some of these individuals, they remain vulnerable to staffing changes and can find themselves overnight with an officer who holds no brief for community participation or co-management.

Although the NRWPR has social development as well as conservation objectives, the framework for co-management is particularly weak, both at the legislative and the operational level. In the absence of the enabling legislation, NRWPR has no written agreements with any of its 56 reforestation groups. In the case of Fondes Amandes, it has also recently emerged that there is no clear agreement on the map of the area to be reforested or on the methodology for collecting, processing and ground-truthing data relating to the numbers of trees planted (see also

Box 2).

Inter-agency cooperation in management of the Fondes Amandes watershed

The inherent complexity of the institutional arrangement for watershed management in Fondes Amandes is exacerbated by a public sector culture of weak inter-institutional collaboration, generally characterised as 'turfism'. In the case of the Forestry Division and NRWRP, the tensions are multiple and date back to the decision to house NRWRP outside of the Forestry Division (though within the same Ministry), to appoint an NRWRP Director who was not trained in forestry, and to offer higher salaries to its technical staff. This resulted in an initial exodus of Forest Officers to NRWRP, followed by a second wave back in the opposite direction when salaries became more attractive in the Forestry Division. This latter trend has left NRWRP with a weak technical team at a time when there are also budget cutbacks.

The frequent NRWRP staffing changes have also made it difficult for Fondes Amandes and other reforestation groups to develop the levels of trust that can be built up when working with the same person for many years. Finally, when the five-year period of funding for each community group is finished, the reforested area is supposed to be handed back to the Forestry Division. Yet, as the NRWRP's own 2004-2009 Strategy document points out, neither legal-administrative nor practical mechanisms for this transition are in place.

Lack of coordination and insufficient resources are also evident in the response of the various state agencies (and other reforestation teams) to fire fighting, with no agency having a dedicated and fully equipped forest fire fighting team. The dry season fire risk at Fondes Amandes is very high by virtue of its position amidst adjacent watersheds covered with fire climax vegetation that is set ablaze numerous times annually. For much of Trinidad, the fire season of 2010 was the worst in living memory and FACRP battled one fire for five days with no external assistance⁸. Even adequately resourced and trained units might have been taxed by the situation, but FACRP believes that if its proposals for a coordinated response system had been implemented, it could have made a real difference. Instead, FACRP seems to be a victim of its own competence in fire fighting, with the state agencies withdrawing and deploying their scarce resources elsewhere.

Land tenure

With the exception of the period when WASA threatened to evict settlers from its land, the issue of insecure land tenure has not been a practical constraint to the development of FACRP. Indeed, WASA's confirmation of its informal sanctioning of the arrangement has been a sufficient basis for both NRWRP and Green Fund to provide funds, whereas state agencies are normally extremely wary of funding groups who do not have title to or leases for the land.

However, most actors in the institutional arrangement would agree that greater security of tenure, and possibly protected area status, would be desirable, to ward off the threat of future private development, to improve people's access to credit and to alleviate the stigma felt by those who are characterised as 'squatters'. However, procedures for

⁸ The fires approached through adjacent reforestation areas, whose NRWRP contractors took no action. After four days a Forestry Division team did attempt to tackle the fire in an adjacent sub-watershed. Unfortunately, the back-fire they lit escaped control.

obtaining legal access to private holdings where the owner has not been identified or for regularising status on state land are perceived to be obscure, cumbersome, and protracted.

Geographic location

Although Fondes Amandes originated as a rural community and retains some rural characteristics, it has the advantage over most other CBOs involved in watershed management of being situated 15 minutes' drive from downtown Port of Spain. This gives it easy and low-cost access to government departments, donor offices, banks and other services and facilitates its involvement in national consultations, many of which are held in the capital.

Its location would support the proposed development of the eco-tourism component, as cruise ship visitors can easily reach the project site, even if they are only in Trinidad for half a day. Its central location also facilitates visits from the many schools in the city and its suburbs.

3.2 Internal (to FACRP or the Fondes Amandes community)

FACRP leadership and management

Although FACRP is grounded in a clear and holistic vision, which is shared and articulated by core staff and Board members, many would agree with the interviewee who stated, "the [greatest] strength of the project is in the leadership and dedication and energy of its leader." Akilah is widely known as a fount of ideas and a tireless and effective promoter of the project, locally, nationally and internationally. However, concerns were also expressed that her leadership style may need to be adapted as the project expands. Working from inspiration, she consults others on an as-needed basis, but takes the final decisions on project direction on her own. While quick to absorb new ideas and information, she is perceived by some as not readily accepting others' advice or critiques.

To some extent, Akilah herself has recognised the dangers of this over-reliance on a single powerful leader and is putting in place a succession plan. Her eldest daughter, who has helped out with FACRP since childhood, joined the management team before leaving to pursue a bachelor's degree in international development and NGO management in the United Kingdom. She is expected to share leadership responsibilities with her mother when she returns in 2012; her younger sister is also currently part of the management team. Akilah has also been promoting the leadership potential of a few long-time supervisors on the project and hopes to cultivate a new generation through the FACRP eco-culture camp.

This heavy reliance on her own family for management support may exacerbate the tendency, which Akilah herself noted, for villagers to think of FACRP as 'Akilah's project'. However, the main constraints to greater involvement by community members in FACRP management seem to lie in the lack of relevant skills, education or motivation. The pool of workers in Fondes Amandes and surrounding communities is small, poorly educated and entrenched in an informal work culture (through employment as casual labour or on state-run employment programmes) that has not prepared workers for the standards and expectations at FACRP, in terms of attendance and performance. This has resulted in adjustment pains and a number of new workers failing to make the grade or quitting. The expectations of management staff are also exacting, with long hours and relatively

low salaries. Akilah is therefore considered by some to be a tough employer, who can be difficult to approach; however, it is not clear whether and to what extent this may have deterred community members from becoming more involved in the project. Perennial features of community life - jealousy, long-running personal feuds and lack of information about or understanding of the project - contribute to a segment of the community feeling alienated from FACRP.

Strong networks and growing political influence

Akilah has also taken on leadership roles in other institutions, through which she has absorbed new ideas and developed political connections useful to the project and to influencing the wider national context for natural resource conservation and livelihoods. For example, she has served on the Board of the Environmental Management Authority and periodically chaired a national coalition of environmental groups, the Council of Presidents of the Environment. Through partners such as TRF and CANARI, Akilah has participated in capacity-building opportunities through which she further extended her networks. She has developed connections with prominent members of government across political party lines, as well as with universities, regional institutions and donors (individual, corporate, governmental, and international). This strong network of personal relationships provides FACRP with political, practical and financial support.

Growing support based on strong track record and high profile

The roots of FACRP date back more than 25 years, during which time it has consistently and effectively fought fires and planted trees. It has built its capacity in many areas, won a number of awards and been featured in the media, including on the BBC. Over time, this has resulted in more and more donors and supporters being willing to provide assistance to FACRP. This has enabled FACRP over the past decade to increase its range of activities and revenue-generating services as well as its infrastructure and equipment.

While its sources of funding have historically been quite diversified, it is now heavily dependent, particularly in terms of providing employment, on two major funders – NRWRP and Green Fund. This is an area of potential future concern, given that both are projects of finite duration and FACRP has not yet developed an alternative funding strategy to replace them.

4 Type and extent of participation

The degree and type of participation are important factors conditioning project outcomes and the flow of benefits to the community. There are two distinct aspects of participation to address in this case. The first concerns the relationship between the government authorities and the project implementer, FACRP. In other words, how participatory is the institutional arrangement? The second takes a look inside the workings of the FACRP to assess the degree and manner of participation in the project by the local community. In other words, how much does participation by *FACRP* in the institutional arrangement represent participation by *community members*? Understanding who participates is critical for understanding the ultimate distribution of benefits.

This section examines these two major aspects of participation, using two different complementary frameworks to categorise types of participation under each.

4.1 FACRP participation in the institutional arrangement for watershed management

Table 2 below provides a useful categorisation of the types of participation that are commonly found in natural resource management arrangements involving the state and other stakeholders. These categories fall along a continuum of increasing relative power, or decision-making authority, held by non-state actors.

Table 2 - Types of participation (Bass *et al.*, 1995).

Type	Characteristics
1. Manipulative participation	Participation is simply a pretence, with 'people's representatives on official boards ... who are unelected and have no power.
2. Passive participation	People participate by being told what has been decided or has already happened... The information being shared belongs only to external professionals.
3. Participation by consultation	People participate by being consulted or answering questions. External agents define problems and information gathering processes, and so control analysis. Such a consultative process does not concede any share in decision-making...
4. Participation for material incentives	People participate by contributing resources, for example labour, in return for food, cash or other material incentives. [People] ... are involved in neither experimentation nor the process of learning...
5. Functional participation	Participation is seen by external agencies as a means to achieve project goals, especially reduced costs. People may participate by forming groups to meet predetermined objectives related to the project. Such involvement may be interactive and involve shared decision-making, but tends to arise only after major decisions have already been made by external agents...
6. Interactive participation	People participate in joint analysis, development of action plans and formation or strengthening of local institutions. Participation is seen as a right, not just the means to achieve project goals... As groups take control over local decisions and determine how available resources are used, so they have a stake in maintaining structures and practices.
7. Self-mobilisation	People participate by taking initiatives independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used...

In its early days, the Fondes Amandes initiative could be characterised as *self-mobilisation*, although the community's ability to achieve its full objectives was constrained by the absence of buy-in or support from the state. Over time, FACRP has therefore sought active support from external institutions in order to move towards *interactive participation*, or what it would characterise as its long-term goal of 'co-management'. The current status, however, might more accurately be described as somewhere between *participation for material objectives* (NRWRP) or *functional participation* (Green Fund).

FACRP's success in influencing the institutional arrangements (for example in securing an NRWRP contract and determining the species planted) both reflect and contribute to its growing capacity to lobby and advocate and therefore to its increasing power to shape outcomes. FACRP has also increased the level of community participation in that community members indirectly participate in the institutional arrangement for watershed management through their roles in, or representation by, FACRP.

Although, as noted above, none of the state agencies has a fully internalised culture of participation, the overall trend, both nationally and within Fondes Amandes, has been towards increased community participation. The strength of the commitment to participation and the capacity to facilitate participatory processes still varies widely between agencies and between individuals within agencies. In the Fondes Amandes context, relationships of mutual respect and trust have been built up to some extent with Forestry Division, (particularly the Community Forestry Unit), but not with NRWRP.

The incident described in Box 2 below illustrates how easily conflict can arise in a so-called co-management arrangement in the absence of formal contracts, clearly defined roles and responsibilities, verifiable data and mutual trust.

Box 2

A sign at the entrance to Fondes Amandes reads (*emphasis added*):

National Reforestation and Watershed Rehabilitation Programme....
Protected Area
Rehabilitated, Protected and **Co-managed** with
Fondes Amandes Community Reforestation Project

When conducting a project tour in May 2010 Akilah stopped in front of this sign, pointed to the word 'co-managed' and remarked, "They say this place has co-management, but they are not acting as partners... we can't do it alone!" She described how FACRP had just come out of five continuous days of fighting a bush fire without assistance, relying on NRWPR project workers who had not been paid by NRWPR for the previous two months.

This hiatus in salaries and growing conflict between FACRP and NRWPR arose over FACRP's successful submission of a proposal to the Green Fund. FACRP had designed its Green Fund project to be complementary to its NRWPR activities, with the bulk of the funding going towards capital expenditure on facilities designed to support the expansion of the eco-tourism programme, and a small amount dedicated to planting trees on WASA land. The intention was to pay half the NRWPR workers to work a second shift, funded by the Green Fund, after they had completed their standard NRWPR 7am-noon shift. The rationale was that this would contribute to providing FACRP workers with a decent salary that could genuinely start to move them out of poverty.

Two top NRWPR managers attended the 2010 *gayap* at which Akilah announced the Green Fund award. While they had been aware that FACRP had applied, they had not been consulted or seen the proposal. Based on what they heard, they were concerned that there was double funding of salaries and shortly afterwards stopped disbursements to the FACRP in order to investigate. During a period of about 12 weeks, there was virtually no communication from NRWPR and no disbursement of funds to cover salaries. Akilah began to work her networks to try and break the impasse, eventually organising a protest, with media coverage, in front of the (then) Ministry of Housing, Planning and the Environment.

Eventually, on 9 June 2010, a face-to-face meeting was organised by the Green Fund with representatives of the Green Fund, FACRP, NRWPR, Forestry Division, Ministry of Agriculture, and the Land Commission participating. After what she subsequently described as a 'grilling', Akilah agreed to revise the Green Fund project and split FACRP workers into two entirely separate teams, with the result that neither group would receive pay for a full day's work. ("They're trying to keep us in poverty!" was the response of one staff member.)

But this was insufficient to allay NRWPR concerns, so the Green Fund brokered another meeting of all the parties, this time at Fondes Amandes, so they could all tour the project area together. The initial tone of the meeting was again antagonistic, with the NRWPR field coordinator declaring that its field survey (conducted using a Geographic Positioning System) had found both the entire project area and the reforested area to be drastically smaller than FACRP claimed. This was the first time since the start of its collaboration with FACRP that NRWPR had revealed the existence of a digital map that shows the extent of the entire reforestation project area and the area within it reforested to date, according to its field survey. However, the map was not shown to FACRP or the other people at the meeting.

After the tour, NRWPR agreed that back pay would be released and that its future funding should be used to finish planting the undisputed state lands. Meanwhile, with the assistance of the Green Fund, FACRP will work to gain legal access to the private parcels in the watershed. These lands will be the focus of Phase II of the Green Fund project, for which FACRP will apply at the end of 2010. The Green Fund has also offered to assist FACRP in pioneering a way for a community-based organisation to gain clear access to state lands in time for implementation of

the third and final phase of the project. At this point, FACRP would withdraw from NRWPR and put all its acreage under the Green Fund project.

This incident highlights many of the potential pitfalls and wasted opportunities that can arise from ill-conceived and poorly implemented participatory processes. Specifically, it offers scope for improvement in the following areas:

- *communication and setting of expectations* – between the government agencies and between each of them and FACRP. It is unlikely that this incident would have occurred if FACRP had fully engaged NRWPR in the conceptualisation of its Green Fund project. Similarly, areas of conflict could have been avoided or reduced if NRWPR had provided its map to FACRP from the outset and agreed with it on clear performance targets and indicators, and how these would be measured and monitored.
- *building and maintaining mutual respect and trust* – communication is critical to building trust, which NRWPR and FACRP had not developed to a level sufficient to work through challenging issues. Both parties therefore felt they were being treated with a lack of respect. As FACRP's major funder, NRWPR felt it had been insufficiently publicly acknowledged at the *gayap* and not consulted on the Green Fund application. FACRP felt insulted by the cut-off of funding and the questioning of its forest restoration accomplishments.

A Community Forestry (and former NRWPR) Officer, who was present at the second meeting, summed up lessons and opportunities for all parties, "Fires [and]... watershed protection don't stop at boundaries... These questions [about the project map] should have been asked at the beginning of National Reforestation, when all the groups were selected... The fact of the matter is we needed to do more work: locating boundaries and setting up a *monitoring* programme so that problems are identified *early*... There's a shared responsibility for the problems that have come up... National Reforestation doesn't have the staff or the outlook for the *social* side of the programme... In this respect, FACRP is *ahead* not only of the other groups, but of the programme... We are pushing the frontiers here today..."

4.2 Community participation in FACRP

Since a community is not a homogenous entity but a collection of individuals, households and groups with differing interests, capacities and perspectives, it cannot be assumed that a community-based organisation, even one that is successfully participating in a wider management institution, is 'representative' of community interests or provides benefits equitably to all members of the community. This section therefore examines the mechanisms for and extent to which members of the local community are participating in FACRP, and by extension, the wider institution.

To investigate mechanisms for *participation* it is useful to distinguish among the multiple types of activities the concept incorporates. Participation means *taking part in*:

- decision-making
- implementation
- access, and
- benefits

It is also important to specify *who* is doing the participating. As defined above, the 'local community' comprises the households living off the Fondes Amandes River Road. They are participating in the work of FACRP, which itself is a multi-layered organisation with differing degrees of internal participation by the following major actors:

- Akilah, acting as Chair and Executive Director;
- a small management team, including other Jaramogi family members;

- an appointed Board, which acts as advisor rather than as an oversight body;
- a core group of workers, with a strong commitment to the project vision, willing to volunteer;
- other workers, primarily motivated by the opportunity for paid work.

Table 3 below seeks to capture how each of these actors and the non-affiliated members of the community participate in the management of FACRP and the wider institution. The analysis of the benefits derived from these arrangements are described in more detail in Section 5 and are only alluded to briefly here.

Table 3

Actor or stake-holder group	FACRP decision-making	FACRP project implemen-tation	Access to FACRP-managed land, infrastructure and capacity building programmes	Involvement in the wider institutional arrangement for watershed management
Akilah	Main decision-maker	Leads the design of projects, in consultation with Board and some staff.	Access to all land and buildings. Sustainably harvests seeds, etc. for her private jewelry business	Main 'face' of FACRP in all external activities and negotiations.
Staff management team	Consulted by Akilah and input their own ideas on an <i>ad hoc</i> basis	Responsible with Akilah for the day-to-day implementation of projects, including record-keeping and donor reporting.	Access to all land and buildings as needed for project implementation. Regularly participate in training.	Frequently participate in meetings but generally let Akilah do the majority of the talking.
Board	Consulted by Akilah both individually and at regular Board meetings.	Provide technical inputs on an <i>ad hoc</i> basis	Access to all land and buildings as needed to assist in project implementation. Occasionally participate in training.	Participate in <i>gayap</i> and other events. Key members help with project proposals and meet with partners if issues arise.
Core group of paid FACRP workers	Consulted by Akilah and input their own ideas on an <i>ad hoc</i> basis. Some space for discretion and practical decisions in the work they do.	Provide paid and sometimes voluntary labour (e.g. for over-time fire fighting).	Access the infrastructure and equipment needed to do their jobs. Get training opportunities, both related to their jobs and to stimulate entrepreneurship. Get additional work/business opportunities (e.g. drumming)	Participate in events, community tours and other meetings as needed. Buy-in to and can articulate the vision, but tend to let Akilah do the talking
Other paid FACRP workers	Consulted by Akilah through day-to-day	Provide paid labour.	Access to work-related infrastructure,	Attend meetings as requested, though generally not very

Actor or stake-holder group	FACRP decision-making	FACRP project implemen-tation	Access to FACRP-managed land, infrastructure and capacity building programmes	Involvement in the wider institutional arrangement for watershed management
	interactions		equipment and training.	forthcoming.
Other community members	No formal or informal mechanisms exist for consulting members of the community		Have access to the 'welcome shed' but generally not to the 'project side' or its infrastructure and resources.	No direct participation in the Fondes Amandes management institution, although they derive some indirect benefits (see Section 5).

With respect to *decision-making* within FACRP, a working team dynamic has evolved that is collective, although not democratic. Nevertheless, most community members who are not affiliated to FACRP (and some who are) perceive that Akilah is the main decision-maker and that opportunities for community input are limited:

“Akilah and Tacuma... tried to interest the community in participation, but they maintained control, and in that sense it's not really a community project... there's nothing wrong with that, because it's very difficult... though there's no real community participation in decision-making.”

When it comes to decisions made at the level of the institutional arrangement, workers and community members are represented by the FACRP (generally in the person of Akilah) rather than being directly involved. This mediated form of community participation has shown its value in two respects. First, it has been effective, delivering results in the form of environmental and social benefit (see Section 5). Second, viable alternatives have proven hard to find. As the following example demonstrates, Akilah has attempted different approaches to increasing direct community participation in decision-making and found them often problematic.

In 2005, in an effort to catalyse the social development of the community, Akilah promoted the formation of the Fondes Amandes Action Committee, with a separate management structure from FACRP. Officers were elected and public consultations held to identify community needs and preferences, but little was implemented and the initiative did not last long, disintegrating amidst internal squabbling and rifts with FACRP.

Paradoxically, although the community benefits have increased significantly over time, opportunities for participation in decision-making may actually have decreased as the structure of FACRP has become more formalised. This is because in the early days, the implementation of the project was highly participatory, though also entirely unpaid. This remained the case, and the 'implementing' and 'deciding' remained more or less one process, until the 1993 threat of eviction prompted calls for outside help, and more definitively when the FACRP registered and applied for funding in 1999. The relationship to external actors (particularly funders) necessitated a responsible authority and the planning of activities, rather than the nearly spontaneous self-help that was the previous norm. The volunteer tradition within the community continues to some extent, but is now primarily focused on *gayap* time and other special events involving mostly

outsiders. The ethic has shifted from one of exclusively self-help, with FACRP committed to trying to compensate local people fairly for their work. However, the distinction between volunteer and paid work is not always clear. For example, when called upon, FACRP workers will do over-time, especially during fire season, without the assurance of fully commensurate pay.

Because of the geographic separation of the 'project side' from 'the local community', FACRP (through Akilah) has largely established control over access to the former, on occasion ejecting troublesome people, planting flowers where local cattle used to graze (due to concerns about erosion).

On the other hand, FACRP has provided the community with a resource to which it has open access in the form of the welcome shed, originally constructed in 2001 and recently replaced with an upgraded one. It acts as a community meeting place and 'bridge' between the project side and the community. In a deliberate attempt to get the community 'to feel ownership' of the shelter, Akilah has established a four-member Management Committee (comprising herself, an FACRP staff member and two "from the community" -- who are also FACRP workers), with each member holding a key. A team of local FACRP workers is responsible for the landscaping and maintenance.

It is difficult to determine to what extent wider participation in FACRP is constrained by the absence of opportunities and/or insufficient information about the project, as opposed to lack of interest or capacity to participate on the part of community members. Other contributory factors may include entrenched cultural patterns within the community. For example, the FACRP management team feel that many community members expect benefits without being prepared to contribute – "the more you give, the more they expect", reflecting a condition of "frozen needs". On the other side, some old-time residents continue to resent the fact that the Jaramogis came from "outside" (even though Tacuma was from the adjacent valley), moved into this small community with a close-knit, kin-centred core and got access to public (WASA) land that was not open to others. Others from the 'old-time' families, typically the younger generation, including this worker, are more positive:

"A lot of people will be kinda... jealous. They say, 'She come from nowhere. She want to feel like she rule de place...' I don't see it that way or I wouldn't be here... At the end of the day I don't mind them because Akilah is helping and they not doing anything. Akilah is getting jobs for people."

5 Livelihood benefits and costs

This case study series relies on the concept of livelihood assets to provide a framework for a comprehensive understanding of livelihood benefits and their sustainability (see DFID, 1999; Chambers and Conway, 1992). The framework is based on the idea that human well-being is determined by the extent to which individuals, households and communities have access to a range of assets: natural, physical, financial, human,

social, physical and cultural⁹. While the whole is greater than the sum of the parts and these categories in fact overlap, they provide a useful basis for analysing the impacts of FACRP on local livelihoods.

In the absence of baseline data and consistent monitoring, it is impossible to attribute directly to FACRP all the livelihood benefits listed below. However, in the view of some community members, it has played a significant contributory role, as evidenced by comments such as,

“Fire used to burn up de place”.

“It’s changed a lot. Used to be bushy. Now it’s civilisation. That’s the word for it -- civilisation.”

5.1 Natural assets

FACRP has contributed to enhanced biodiversity and ecosystem services, including improved water flow and quality and reduced siltation and flooding in the Fondes Amandes watershed and downstream. A protected and flourishing watershed forest is an asset to the community because it supports quality of life as well as economic livelihoods, through agriculture, forest product extraction, tourism and the protection of physical assets. FACRP has facilitated undisturbed, though not formally sanctioned, access to land and natural resources. It has also fostered a shift in attitude that has recruited residents to protect and appreciate their growing natural assets.

Natural assets have been built in three ways:

- *Fire prevention:*

FACRP has kept the core area of the project fire-free since 1997 (although several acres on the upper slopes burnt in 2010, the worst fire season in decades). This achievement protects all the rest and allows the processes of natural regeneration to heal the environment more effectively and rapidly than any project intervention.

- *Soil retention and water run-off control:*

The installation of terraces, check dams, and drainage channels has helped rebuild the foundational assets of soil and water.

- *Replanting:*

Not content to accept the narrow range of tree species supplied by NRWPR (which include exotics such as fire-prone pines), FACRP has instead raised and planted a diverse array of species. The selection of species, which includes herbs, fruit trees and trees bearing nuts and seeds that can be used for crafts, also reflects livelihood considerations.

FACRP estimates that it has planted over 35,000 seedlings up to 2009 and replanted 75% of the NRWPR project area, which the FACRP base map shows to be 110 acres in total. However, NRWPR currently only credits FACRP with reforestation 14.4 acres out of

⁹ The original livelihoods framework was comprised of only five types of assets. However, participants in CANARI Forests and Livelihoods Action Learning Group felt that in the context of the Caribbean it was essential to distinguish ‘political’ and ‘cultural’ assets from other types of social capital (Leotaud and McIntosh 2009).

a total of 41 acres under its project funding, estimates that FACRP hotly contests. They argue that not only did the surveyor miss large areas in the upper reaches of the project, but that NRWRP has fundamentally misconstrued its work. Rather than establishing plantations, FACRP is restoring the forest ecosystem through enrichment (spot) planting amidst natural regeneration of trees and shrubs.

Although a proper forest inventory is needed, local observers report that over the course of the last two decades, the fire climax system of grass, bamboo and cocorite palm that once dominated the Fondes Amandes watershed has been replaced by a diverse and flourishing agro-ecosystem. It is managed using permaculture techniques that avoid the use of chemicals and integrate livestock. The transformation is most evident in the roughly 40 acres at the core of the project area; as the distance from the nursery and water sources increases, vegetation becomes sparser and soil and water conditions deteriorate.

5.2 Physical assets

FACRP has contributed to the improvement of the community's physical assets through:

- development of infrastructure and acquisition of equipment that serves FACRP directly and the community indirectly (e.g. the nursery, the Resource Centre, nature trails, computers, projector, Global Positioning System (GPS) units, pickup truck, weed whackers, shovels and other tools).
- development of infrastructure for shared FACRP and community use (e.g. the welcome shed and proposed homework club) ; and
- supporting the call for infrastructure and services for the whole community (e.g. electricity, phone, cable and internet service and standpipes). While FACRP's relationships with one Minister in particular were instrumental in getting these services, Akilah does not take sole credit, acknowledging the lobbying efforts of the community and its supporters and indicating that the project's contribution is more subtle "I think more and more as the project grew, people began to pay attention to us... before the village didn't have a voice".

5.3 Financial Assets

Over the 2000-2010 period, FACRP secured grant funding of just over USD 850,000 and in 2010 secured a Green Fund grant of nearly USD 320,000. A large proportion of these funds is spent locally, primarily on wages. Currently about 20% of the working-age population in Fondes Amandes is employed by FACRP. Most other employees are from neighboring communities or are related to Fondes Amandes residents. NRWRP workers receive USD 14 a day for a five-hour shift and supervisors receive USD 18. This puts them at 40% above the official family poverty level, but 14% below what labour leaders have argued would be a "living wage". Wages on the Green Fund project are slightly higher.

It is assumed that there is a small multiplier effect from FACRP employment, in terms of employee spending on local goods and services. Additionally, visitors to FACRP make purchases from the local shop and pay for local catering. Although the benefits have again not been quantified, FACRP is also committed to enhancing community income by

encouraging entrepreneurship and identifying other revenue-generating opportunities, including:

- hiring FACRP workers for additional jobs whenever the opportunity arises, e.g., for leading tours, drumming, and catering for workshops and groups of visitors;
- securing occasional work for the drummers and a crew that does landscaping, putting in firebreaks, etc.; and
- providing training in skills that could lead to small business development.

FACRP has consistently emphasised to community members the importance of saving and investment for personal financial management and enterprise development. It has sponsored the organisation of *sou-sous* (collective savings clubs), at least one of which is still functioning. However, as is the norm in poor communities, the rate of savings appears to be very low. Nevertheless, some individuals have managed to save and invest in their own small enterprises, which is important since credit is difficult to come by for those without land tenure, power or connections. By contrast, it took just a phone call to a local bank branch manager by a patron in St. Ann's to get a home improvement loan for a Fondes Amandes community member.

By far the most successful small business in Fondes Amandes is Akilah's own jewelry business, which periodically employs a few community members and has contributed financially to FACRP.

FACRP has also long been committed to raising its own revenue to supplement (and potentially replace) grant income (James 2003). However, with the recent large increase in grant income, the percentage of self-generated revenue has dropped. Consequently, FACRP included in its Green Fund Phase I proposal "a feasibility study and business plan [to be] done by a consultant to further the development of the microenterprises existing within the project".

Actual or potential revenue generating activities include:

- *Ecotourism*, - which generates the highest revenue (e.g. USD 2,500 gross in 2009) but little net profit as the receipts are mainly used to pay the guides;
- *Clean Trees Organic Nursery* - with revenue from 2009 sales of seedlings, ornamental plants and herb kits grossing USD 720 in 2009;
- *Animal husbandry* - contributes mainly to project inputs, but adds the potential for sale of offspring and excess compost and potting soil;
- *Workshops* - when FACRP has hosted workshops to date, only a small net profit has been retained after workers and caterers have been paid. There may be the opportunity to charge more commercial rates in future.

5.4 Human Assets

FACRP has provided formal and informal opportunities for capacity building both to support project implementation and to develop individual skills and knowledge that can be applied more widely, notably skills in leadership, human resource management and various aspects of managing a non-profit organisation. Akilah points to some of the long-time FACRP supervisors as rising community leaders:

“Another kind of leadership is growing – without the input of FACRP besides asking for a letter or to use the computer ... look at the sports league, and how they are able to get support from ‘owning class’ side, like for the Christmas party. Somebody’s emulating, somebody’s taking charge”.

Other areas of capacity building have included:

- nursery and reforestation skills;
- carpentry and equipment repair;
- fire prevention/ fire fighting;
- tour guiding;
- organic gardening;
- soil conservation;
- animal husbandry;
- nursery and propagation skills;
- community recycling/ composting;
- community-based tourism;
- craft and cottage industries;
- anger management;
- financial management;
- computer literacy; and
- music and cultural arts.

The FACRP management team had hoped that some of the training would catalyse microenterprises, but this has not materialised:

“We want to help people *out* of poverty, that’s why we have all the trainings... for example, the leathercraft, so they could make key chains and sell to visitors... but it hasn’t taken off as yet.”

5.5 Social Assets

Social assets can be thought of as relationships that people can draw on for support, access to resources, as a safety net and for more indefinable aspects of well-being. These relationships exist across multiple levels: family, community, and wider social networks.

FACRP’s major contribution to social assets has probably been in the promotion of ‘youth empowerment’ through school visits, summer camp, drumming circles and youth employment. Over the past two decades, most of the local youth have worked and/or volunteered for the FACRP at some stage. One worker commented that this has resulted in “more unity, since all the youths come up together”.

However, as noted above, the community is somewhat divided in its attitude to FACRP and it is possible that this may have been a factor in the recent theft of the FACRP's chainsaw and computers. Neighbours have said that there are a few "known thieves" in the community, who apparently target outsiders. But most community members insist "Any stupidity happen, it's not by people from here". Serious crimes such as murders and rapes have occurred, in most cases with both victims and perpetrators coming from outside.

As noted earlier, Akilah's personal networks, both in her FACRP and individual business capacity, have also clearly contributed to the overall social assets of the community.

5.6 Political Assets

Political assets help individuals and organisations to gain access to decision-making processes and to influence them. FACRP has achieved this primarily through its connections with influential people and a wider public that has become aware of FACRP due to its outreach efforts, awards and promotion by partners. FACRP is now able to influence politicians who previously "didn't know this place exists", with the following results:

- reduced risk of eviction and loss of access to land and resources;
- increased opportunities to express political voice;
- better government service;
- increased success in overcoming bureaucratic obstacles encountered by FACRP in its projects.

However, it is difficult to determine which networks and political assets community members would be able to access in the absence of FACRP, or to quantify the extent to which enhanced political assets have offset the persistent and fundamental imbalances in power that underlie and perpetuate the position of low-income settlers in the wider society.

5.7 Cultural Assets

For the purpose of this case study, the analysis is focused primarily on aspects of culture that support livelihoods (e.g. performing arts and craft), including those that give them meaning (e.g. attitudes, identity, knowledge, belief, and values). Drumming, singing, and craft have been essential components of FACRP from the outset. They are emphasised in the summer vacation 'eco-culture' camp for children and campers and staff perform every year at the national Emancipation Day celebrations. The link between cultural knowledge and environmental awareness is also made through learning, documenting and teaching about local knowledge of traditional plant names and uses.

FACRP workers volunteered during interviews that their environmental consciousness had been sensitised by their involvement with FACRP, resulting in changed behaviour in terms of fire prevention and tending of fires, not burning plastic and not killing snakes. Some expressed the opinion that other community members had been convinced not to set fires and were "more conscious now".

Residents express pride in their community and the improvements to it in recent years. While it is difficult to assess the extent to which this can be attributed to FACRP, Akilah ventured:

“I do think that FACRP has helped bring some pride and joy to the village... They can see Fondes Amandes on TV, all the visitors that come to *gayap*... It's changing the dynamics of the community... the sense that we have something, that we *doing* something. At least we keeping the fires out... and it's not just the workers doing it...”

6 Distribution of benefits

Benefits at the individual and household level are intimately linked to the degree of participation in FACRP. In general, it would be fair to say that direct benefits have been the greatest for the decision-makers - starting with Akilah and members of her family – but so too have been the creative input, finances invested, sacrifices made and risks borne. For the most part, opportunities to participate in and benefit from the project seem equitable (though possibly influenced on an individual level by personal alignments with Akilah)¹⁰. There is no apparent gender bias in hiring as men and women are equally represented among workers and supervisors. The poorest members of the community may not find employment with FACRP, since they typically are newcomers, old-timers or others who are unable to hold down steady work. The newcomers who were observed during the research were part-time residents, tended not to stay long, and apparently lacked information and concern about community affairs.

Among community members, FACRP employees gain the most direct benefit. Although this case study has focused primarily on community-level livelihood benefits, it is important to note that project impacts register at larger scales as well. Fire protection and ecological restoration benefit not only the residents of the St. Ann's watershed but also adjacent and downstream residents. FACRP is supplying services normally provided by the state, reducing its expenditure on, for example, water treatment, fire fighting and environmental education. Its social impacts range from positively affecting relationships with wealthy neighbours to educating school children from around Port of Spain.

By contributing to policy dialogues, influencing line agencies, and providing an alternative, community-based model, FACRP is helping shape the evolution of natural resource policy and implementation at the national, and possibly regional, level.

7 Conclusions and lessons learned

This case study series examines the question ‘*how do institutional arrangements, including the degree and type of participation, influence the provision and distribution of benefits to the community?*’ While the lessons learned from investigating this single case

¹⁰ Despite its small size, Fondes Amandes is a complex community, and further research is needed to understand internal community differentiation, power relations and their effect on the distribution of project benefits.

cannot establish a general rule, they provide useful grounds for comparison and indicate what to expect under similar conditions.

The lessons learned correspond to the two levels of participation the study identified:

1. participation of a community-based organisation (CBO) in a co-management or other institutional arrangement for watershed management, and
2. participation of local community members in the CBO.

Lessons about CBO participation in co-management

In the case of Fondes Amandes, there is a strong correlation between the degree of participation by a community-based organisation in the institutional arrangements for watershed management and the level of benefits received by the community.

Community benefits from watershed management have increased over the past two decades during which FACRP has developed the capacity to demand and execute interactive participation, or co-management, with state agencies. When the level of participation went down, as when the NRWRP cut off communication and funding during the conflict over the Green Fund project, local benefits (in the form of wages) also immediately dropped, indicating that:

- *effective and sustainable co-management requires open and frequent communication and the commitment of adequate resources by each party;*
- *effective and equitable participation is best achieved by involving key stakeholders from the project design stage onwards and requires systematic building and nurturing of mutual respect and trust.*

These things did not occur in the case of NRWRP, resulting in FACRP having to drive the selection of appropriate tree species, and the escalation of conflict when it received funding from the Green Fund. Other lessons that can therefore be derived from this experience are:

- *informal, trust-based sanctioning can substitute for a formal management arrangement and provide a springboard for additional financial and other support, However, if trust is low or breaks down, the absence of formal arrangements can weaken the community partner's position;*
- *co-management is impeded by the absence of an institutionalised culture of participation in state agencies and lack of coordination among them;*
- *expectations in terms of roles and responsibilities, performance, and monitoring and evaluation should be clarified in writing from the outset, even in situations where a formal contract is not possible. Much of the conflict between FACRP and NRWRP could have been avoided if this were the case; and*
- *community-based innovators, such as FACRP, can influence policy formulation and shift partner agencies' perspectives and practices in a direction favourable to community participation and benefits.*

As an award-winning model for the integration of environmental restoration with community development, FACRP has been the subject of several case studies by authors with influence among policymakers (Lum Lock and Geoghegan 2006; McIntosh

and Renard 2010; James 2003), and has been cited in the draft National Forest Policy of Trinidad and Tobago (2009). FACRP was one of the first CBOs nationally to navigate its way through securing a grant from the Green Fund. Together, they are exploring new mechanisms for establishing community access to both state and abandoned private lands. NRWPR officers have learned about CBO participation in co-management through the example set and the demands made by FACRP, referring to it as a “pioneer,” and “a beacon showing the way.”

Lessons about community participation in community-based organisations

This study has demonstrated a high level of community participation in the benefits of FACRP’s work, with important, although lesser levels of participation in project implementation and access. Community participation in *decision-making*, however, was found to be relatively low. Rather than promote direct participation by community members, FACRP exerts strong leadership that mediates the community role in the institutional arrangement for watershed management to accomplish practical results while building political assets and deploying them for community benefit. The case of FACRP illustrates that:

- *while **leadership** is critical to community-based resource management initiatives and their capacity to deliver benefits, community **participation in decision-making** may not be essential.*

It is important to note that this finding should not be assumed to apply in cases where, in contrast to Fondes Amandes, power and access to resources are more unevenly distributed within the community and/or the dependency of livelihoods on natural resources is higher.

8 Recommendations

General recommendations

- Develop a **legal and policy framework for community-based resource management** in Trinidad and Tobago, which would provide the basis for co-management arrangements in which the community partner has a decision-making role and security of land and resource access. This should be **designed with the involvement of, and ultimately buy-in from, all key stakeholders** (state, civil society and private sector), which in the case of some agencies would mean a significant shift away from the prevalent culture of traditional ‘expert’ forestry to co-management and community-based approaches. **Adequate financial and technical resources** should be dedicated to implementing the policy and building the necessary capacity at all levels to facilitate and contribute to participatory approaches.
- Develop an **annual fire protection plan**, with the involvement of all stakeholders concerned with fire protection in the Fondes Amandes and adjacent watersheds (and potentially the whole Northern Range) to ensure better coordination of the scarce resources available to respond to bush fires during the dry season. FACRP has

already developed a proposal for this, which would include central coordination, fire towers, and the use of 'Bambi buckets'.¹¹

- **Improve coordination and harmonisation of the activities of the Forestry Division and the NRWPR**, including
 - development of a policy and procedures for the eventual '**handover**' of **reforestation projects** from NRWPR to Forestry, including the potential for continued co-management by qualified and interested local CBOs, including access to the reforested area and sustainable use of its products;
 - clearer identification of the respective **roles and responsibilities** and **harmonising of positions and salaries**.
- **Clarify the expectations of community-based reforestation groups under NRWPR** from the outset, preferably through a formal contract and a map outlining the area to be reforested. Issues such as land ownership and access and the physical location of the boundaries should be resolved before the contract starts. Ensure that NRWPR's **digital maps showing baseline and newly reforested areas** are shared with FACRP, all reforestation contractors, and other key institutional partners.
- **Review the Green Fund reporting requirements** to ensure that they provide the necessary accountability without overburdening grant recipients with procedures that add little to their own monitoring needs. As this and other case studies in the series indicate, building trust and open lines of communication often produces as good or better results than formal monitoring systems.

Recommendations specific to Fondes Amandes

- Initiate **multi-stakeholder dialogue to explore the options for more formalised co-management arrangements**, including the potential for FACRP to acquire private land within the watershed. At a minimum, consensus should be built on the **roles, responsibilities and rights** of the stakeholders in the management of the watershed. Consideration could also be given to the **establishment of a multi-sectoral, multi-stakeholder management committee** that would meet *on-site* and conduct a *field tour* at least annually in order to assure a holistic and coherent approach to, and support for, the watershed management initiatives. Such a committee could include representatives of FACRP, NRWPR, Forestry Division, WASA, EMA, Land Settlement Agency, land owners, civil society partners, and the communities of Fondes Amandes and St. Ann's.
- Collect additional baseline data, including an independent **ecological and silvicultural assessment** to provide recommendations for soil and water conservation measures, reforestation strategies etc. Provided staff are properly trained, the newly-acquired GPS units should facilitate the completion by FACRP and Community Forestry of baseline maps of the entire project area, demarcating the areas already planted with trees, and harmonising these with the NRWPR maps.
- **develop a plan for long-term monitoring and evaluation of the ecological and livelihood impacts of FACRP**, building on the participatory approaches used in this case study and Community Forestry's documentation of local knowledge and mapping of the project area. This could serve as a pilot project for field-testing

¹¹ A **Bambi bucket** is a specialised bucket suspended on a cable carried by a helicopter to deliver water for aerial firefighting.

methods that Community Forestry could then bring to other CBOs around the country.

- review the **fire prevention practices** and experiment with the best **balance between fire prevention, natural forest regeneration and increased biodiversity**. Some visitors to Fondes Amandes have expressed concern over the amount of bare soil exposed in the lower portion of the project, as well as fire prevention practices that involve repeatedly raking the area clear of leaf litter and maintaining wide fire traces. Natural forest regeneration requires a layer of leaf litter and humus to be built up while sufficiently slowing the flow of water to allow for maximum infiltration. One commentator observed “It’s become more of a farm than a natural area”, pointing out that FACRP could do a better job of increasing biodiversity and wildlife habitat were it to plant native pioneer species and aim to re-establish a natural succession.
- improve the **transparency and effective functioning of FACRP’s governance structure** by reviewing and ratifying its constitution, formalising the election procedures and roles and responsibilities of Board members, and developing policies to govern human resource and financial management and conflicts of interest. The Board should also engage in periodic **strategic planning** and ratify the annual workplans. Policies and procedures should regularly be reviewed to ensure that decision-making is transparent and accountable.
- investigate ways of **increasing participation in decision-making and management** within FACRP. Expected benefits include access to wider pool of ideas and experience, greater staff and Board buy-in and support for decisions, and a reduction in the vulnerability associated with heavy dependence on a single individual.
- identify more **regular and systematic ways to involve and inform the wider community** and secure greater buy-in for FACRP activities, for example through regular (though not necessarily frequent or formal) community meetings or newsletters (which could be in audio or audiovisual rather than written format). Continue to build the community’s capacity to participate in FACRP, even if the benefits are not felt immediately.
- upgrade **FACRP’s data collection, management and record-keeping systems**, sourcing external expertise when necessary, in order to facilitate monitoring and evaluation and reporting to donors. This would both support FACRP’s fundraising efforts and avoid situations such as the unresolved conflict with NRWFP over the exact area of land that has been reforested.
- FACRP should continue to **celebrate its successes** and seek regular opportunities to **recognise and acknowledge its major donors and partners**, in order to strengthen their commitment to co-management and build trust and mutual good will.

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Appendix 1 – Project Chronology

Fondes Amandes Community Re-Forestation Project History

- Late 1970s: Tacuma Jaramogi and friends clear area within WASA lands above filter bed to plant garden.
- 1982: Tacuma took the initiative to start planting fruit trees and maintaining fire traces.
- 1991: In response to the threat of eviction, Eden Shand, MP for the area, a forester and director of Tropical Re-Leaf Foundation, intervened with WASA. The Chairman, Mr. Errol Grimes, planted a ceremonial acacia to signify his approval for the Fondes Amandes reservoir lands to be used for an organic agro-forestry project.
- 1993, 4th October: St. Ann's flood, 4 people drown, Caribbean Forest Conservation Association (CFCA) visits the watershed. John Stollmeyer is a member.
- 1994: Tacuma passes
- 1996: John Stollmeyer joins the project, 1st Memorial Gayap in March.
- 1997 - present: Project area fire-free. What had been a fire climax zone has now been planted with a variety of fruit, ornamental and hardwood trees interspersed with short crops; wildlife has been returning.
- 1999: With the help of Mary Schorse of the Tropical Re-Leaf Foundation, the FACRP was registered as a Community Based Organization and a proposal was submitted for government assistance for the Community Development Fund.
- 2000: The application was successful. The grant was used to improve access to the project area, to acquire equipment and to build a toolshed.
- 2001: The community shelter was built, with support from the Guardian Life Wildlife Trust.
- 2001: Fire Guardian Training Programme
- 2001: The community based organized tree nursery, Clean Trees Organic Nursery (CTON), was launched with the support of BPTT
The success of the FACRP model caught the attention of the United Nations Development Programme (UNDP) Global Environment Facility-Small Grants Programme (GEF-SGP); Support was given to the Tropical Re-Leaf Foundation to develop projects that will take the FACRP model to other communities in degraded portions of the northern range.
- 2001 FACRP received the Green Leaf award from the Environmental Management Agency.
- 2003 FACRP was again awarded with the Green Leaf.
- 2003: The Fondes Amandes Community Eco-Tours (FACET) module was initiated with the assistance of the Embassy of the Federal Republic of Germany.
- 2003: FACRP entered the Rotary Club's Tidy T&T competition and won first prize in the Wildlife Protection category as well as sharing first prize overall.
- 2003-2008: British Gas Trinidad and Tobago (BGTT) sponsored FACRP.
- 2006: The Resource Centre was launched with the Honourable Penelope Beckles, Minister for Public Utilities and the Environment.
- 2006: FACRP became part of the National Reforestation and Watershed Management Programme.
- 2006: FACRP adopted a formal constitution and formed a Board of Directors.

- 2007: FACRP presented with a prestigious **national award - The Humming Bird Medal**, in recognition of national service and environmental conservation.
- 2007-2008: Ministry of Social Development- and EU-sponsored Poverty Reduction Programme: Part I - Organic Green Thumbs
- 2008-2009: Part II – Animal Husbandry
- 2009: FACRP partnered with the UNDP Small Grant Programme on a Green Wave tree planting activity
- 2009-2010: Fondes Amandes Community Eco-Tourism Site (FACES) sponsored by FAO/CANARI
- 2010 – Sustainable Community Forestry Initiative sponsored by the Green Fund

Appendix 2 - FACRP goals/ desired impacts

ENVIRONMENTAL (& PHYSICAL) ASSETS

Conserve and restore the St. Ann's watershed (through):

- Forest restoration – tree planting and protection
- Flood reduction; improved drainage; improved water quality
- Fire prevention
- Recycling; improved garbage disposal
- Soil conservation and rehabilitation (e.g., though use of animal manure produced in project pens); erosion control
- Wildlife recovery; protect biodiversity
- Demonstration of organic gardening and permaculture practices to encourage their adoption

SOCIAL & ECONOMIC (& PHYSICAL) ASSETS

- Improve our lives
- Bring in funding for the community, for the poor
- Employment creation on the project & through eco-tourism
- Livelihood improvement through training in micro-entrepreneurship, crafts, ecotourism (guiding), vocational skills
- Advocate for and supplement government services: proper roads
Plumbing, sewage disposal (including composting), water supply
- Build, improve and maintain project infrastructure: buildings, trails, terracing, check dams
- Produce organic seedlings for project use and for sale to earn project income
- Highlight social problems so people can address them e.g, houses breaking down, outdoor latrines, incest
- Community and youth development and empowerment [capacity-building]
- For local people to [take ownership] of the project
- Build community through outings, music and cultural activities
- Get more local participation in project, including beyond River Road

CULTURE, ATTITUDE & KNOWLEDGE (HUMAN ASSETS)

- Change the outlook (“culture”) of, and relationships among the people
- Community members learn to “appreciate themselves”
- Facilitate social cohesion
- Improve the attitude of the wider St. Ann's community to Fondes Amandes
- Local people appreciate their benefits, including those that flow from the project
- Environmental education: community, youth and residents of other watersheds educated on sustainable environmental management and its benefits
- Improve the prevention capabilities, response and readiness of vulnerable communities to natural disasters, focusing primarily on bush and forest fire prevention

