

# Building on local foundations: enhancing local community support for conservation

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*Examples from Sierra Leone suggest how traditional practices and by-laws relating to natural resource management could contribute to government conservation strategies and help them benefit from community participation.*



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***In Sierra Leone, local communities often contribute to conservation of natural resources through traditional practices***

Although reasons for deforestation and other natural resource depletions are well known, rampant deforestation in the tropics is often blamed on local forest-dependent communities. However when the degraded resources are in scarce supply or completely depleted, it is these same communities that suffer most owing to their heavy dependence on forests for food, shelter, medicines, well-being, etc.

Local community involvement is a prerequisite to successful natural resource management. Local people's use of and proximity to the resources puts them in a good position to provide useful information on past usage and the historical development of the resource. Where communities have been excluded from resource management, it has been less successful (Enters and Anderson, 1999).

Many traditional practices based on

local customs and beliefs are effective measures for conservation of natural resources. For example, some traditional beliefs such as food taboos and myths surrounding the use of some trees as fuelwood support the protection of certain plant and animal species. Sacred groves are often preserved from generation to generation and often harbour rare plant and animal species because of restrictions on entry and on most livelihood activities within their boundaries. The ideas underlying the protection and conservation of sacred groves could also be used for forest conservation.

Communities also often contribute to resource conservation or replenishment through by-laws for the conservation of the multiple resources of forests in par-

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tical and the environment in general. By-laws are rules established by local chiefs in consultation with their subjects and respected by all. Unlike natural resource management policies and legislation by governments, which are a top-down strategy, by-laws are based on traditional practices and are therefore often accepted and adhered to by the whole community. Their contribution to conservation, however, is frequently undocumented and underacknowledged.

This article draws on examples from Sierra Leone and elsewhere to suggest how policy-makers and their development partners could focus on the positive impacts of traditional conservation strategies and operational by-laws as building blocks for the formulation of policies and the promulgation of legislation for sound environmental management. The article is based on literature review and the author's three decades of experience in natural resource management.

#### **TRADITIONAL KNOWLEDGE SUPPORTING CONSERVATION**

##### **Shade tree management in cocoa and coffee plantations**

Cocoa and coffee plantations are traditionally established under the canopy of "mother trees" (shade trees) which protect the tender seedlings from the direct rays of the sun. The shade trees are then gradually removed through poisoning, after which they drop their dead branches bit by bit with little or no damage to the young seedlings. In this tree elimination exercise, timber trees are also saved to be used later for construction and general carpentry work. This method avoids the simultaneous clearing of large parcels of land which could stimulate the erosion and leaching of nutrients before the young cocoa or coffee plants close the canopy or ground vegetation protects the top soil effectively. The farmers thus inadvertently conserve soils, trees and soil nutrients in this age-old agronomic practice.

##### **Food and tree species avoidance**

Although the practice of avoiding the use or consumption of certain species is not intended as a conservation measure, it does protect some animal and plant species from overutilization. For example, the use of *Musanga cecropioides* as fuelwood in eastern Sierra Leone is avoided for fear of lightning striking the house. Some Sierra Leoneans believe that eating a chimpanzee or a monitor lizard could result in scabies. Other species avoided as food in one village included crocodile, duiker, black bush pig, red river hog, monkey and snake (Davies and Richards, 1991). Observation of these customs may diminish in situations of poverty or war (i.e. in the absence of alternative foods) or when people are exposed to Western education and philosophy, which may lead them to abandon superstitions and seek more scientific explanations for food-related illness, such as allergy,

##### **Retention of forest fringe vegetation along river banks and footpaths**

In upland rice crop cultivation, farmers leave fringe vegetation along footpaths and river banks. The vegetation ensures a relatively cool temperature for users of the footpaths. Tall forest patches in village peripheries often indicate locations of abandoned settlements. They largely comprise crops such as bananas, plantains, cola nut, breadfruit, mango and cotton trees (Fairhead and Leach, 1995). In addition to having conservation value, patches of vegetation often provide cool drinking water for the communities by the shading the streams and water catchment areas.

In Sierra Leone, this traditional practice was then legislated in the Forestry Regulations (1990), Section 38, which reads: "No land between the high and low water marks nor any land above the high water mark at the bank of both sides of waterways (rivers and streams) extending a distance of 100 feet shall be farmed or cleared of vegetation...."

Thus a new legislation was built on a local foundation and readily accepted by the community as an existing practice.

##### **Planting of a tree with the newborn's umbilical cord**

Cola nut (*Cola* spp.) is widely used as a stimulant in West Africa and also features in traditional sacrifices, welcoming important visitors and fortune telling (in which the nut is tossed and its fall interpreted). In most traditional homes in rural Sierra Leone, it is common to plant a cola nut to mark the site where a newborn baby's umbilical cord is buried and to know subsequently the age of the child. In the absence of birth certificates, which were very rare until about two decades ago, families protect such trees as their only record of the birth.

The national tree planting drive in Sierra Leone (see Box on p. 24) attempted to introduce other trees besides *Cola* spp. in this practice, but the effort was not very successful, probably because the exotic forest trees used were not believed to have the same economic and cultural importance. Indigenous trees of medicinal or other economic values might have better success.

#### **THE ROLE OF BY-LAWS IN NATURAL RESOURCE MANAGEMENT**

Most parts of Sierra Leone have a dual system of governance, involving both chiefs and elected government officials. Most land is under the jurisdiction of chiefdoms, meaning that the chiefs make most of the decisions regarding land use.

Community by-laws are generally well respected by all, and offenders often show remorse while complying with the penalties. The following examples from Sierra Leone may be applicable in other humid West African countries involved in subsistence farming.

##### **Harvesting of wild palm fruits**

In Sierra Leone, wild palm fruits for processing into palm oil are normally

### National Tree Planting Day efforts in Sierra Leone

Launched in 1985, National Tree Planting Day in Sierra Leone is commemorated on 5 June (World Environment Day) because World Forestry Day (21 March) is too dry for tree planting in Sierra Leone. The programme launches tree-planting activities which continue until 30 September, the official end of the tree planting season, giving the young trees two rainy months before the dry season ensues. Activities are carried out through provincial, district and chiefdom communities.

Over 40 million tree seedlings have been distributed to date. Through official tree planting activities at selected venues, cities such as Bo and Makeni, the provincial headquarters of the Southern and Northern Provinces, are now heavily wooded with *Acacia mangium*, *Gmelina arborea* and other species. Seedlings are also distributed to individuals; in this case exotic species are excluded because most people are not familiar with their value apart from the provision of shade (e.g. for medicines or food). Following two decades of sensitization, the demand for tree seedlings now heavily outweighs the supply, which is limited by government funding, although non-governmental organizations and development projects also support tree planting efforts to some extent.

harvested from March or April until July. The beginning of the harvest depends on the timing of the first rains of the year, which are believed to facilitate palm fruit ripening. To allow farmers to complete the ploughing of their rice fields, the community heads impose bans on palm fruit harvesting until most of the upland rice crop is established. This ban also supports food security objectives by giving food cultivation a priority. Equity considerations aside, palm oil yield is known to be higher when fully ripened fruits are used. Similar by-laws also apply to other communally owned resources that are of economic advantage in poor rural communities.

#### Wildfire control

Throughout rural Sierra Leone, by-laws govern the use of fires during the critical months of late November to late April, with slight variations. The rules often cover the following.

- Cooking time is restricted to before noon or after 18.00 to avoid times of peak fire hazard.
- Burning on farm sites must involve all neighbours with plots in the im-

mediate vicinity to ensure effective firefighting if necessary.

- Children are restrained from collecting embers to set fires on adjacent farms, lest they drop some along the way.
- Community members are obliged to report fire outbreaks promptly to ensure immediate containment and avert calamity.

Failure to comply with the by-laws incurs penalties whose severity is influenced by the degree of damage resulting from the negligence. For instance, an offender could be forced to replant a burnt-out crop, to reconstruct a burnt-out building or to feed people to assist in such work.

#### Protection of medicinal plants

In most of rural Sierra Leone, traditional folk medicine remains a main source of health care as modern medical services are not easily accessible, particularly during the rainy season when most rural roads are bad. Traditionally, most rural people rely on traditional medicines because modern medicines, when available, are often prohibitively expen-

sive and medical facilities are poorly equipped in terms of qualified personnel, storage facilities, etc. A study of a Kpaa Mende community in Moyamba District, for example, revealed that over 75 medicinal plants are used (Lebbie and Guries, 1995). Most of these plants are now relegated to sacred groves where shifting cultivation and tree cutting are prohibited. These sacred groves hold great potential for the conservation of rare or even endangered plant species (depending on their size, since smaller groves have less scope in this regard). The laws guiding the protection of sacred groves could apply to other protected areas once the communities agree to protect them.

#### COMMUNITY PARTICIPATION IN NATURAL RESOURCE MANAGEMENT

Community participation in natural resource management through projects and government programmes seems to be slowly gaining ground with time and experience. Government policies are now being inclusive out of necessity. Traditional management practices normally transcend generations through practical activities, i.e. learning by observing and doing or learning through trial and error. The introduction of improved management practices should preferably build on good practices that already exist, disseminated through effective awareness raising and sensitization activities.

Where conservation measures limit access to resources that communities depend on, alternatives must be offered – for example, compensation payments for the relocation of communities, or development of livestock (small ruminants, pig and poultry programmes and even fish farms) to provide alternative sources of animal protein in compensation for control of bushmeat hunting and trade. Where pressure on the resource from fuelwood harvesting intensifies, demand-side management – the introduction of energy-efficient stoves and



M.D. BOB

*To limit pressure from fuelwood harvesting, more energy-efficient fish-smoking bandas (right) could be introduced as a forest conservation measure*

fish-smoking ovens (bandas) – could be instituted as a forest conservation measure in addition to woodlot development. The incentive for adopting such new technology is the money or labour saved by using less fuelwood.

#### Who to target in the community

Opinion leaders such as heads of religious organizations and community elders have in the past sensitized communities on the wise use of resources, because their views are often well respected. Community heads often influence the activities of all community members, hence they provide an essential way to reach the community. At the local level, peer pressure and respect for elders ensures that potential offenders in the community comply without external intervention.

Politicians can have a positive impact if they support government policy and conservation goals, but can have a negative impact (becoming part of the problem) if they have a vested interest in using the resource or if they apply selective justice in the implementation of by-laws, which could split the community into compliant and non-compliant parties.

The division of household labour puts women directly in charge of trees, which provide food, fuelwood and pharmaceuticals. Since men are more actively implicated in rural-to-urban migration, the role of women in tree care is becoming critical to resource conservation (FAO,



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2001). However, in traditional settings, children, youth and women are often scared of voicing their opinions during meetings in the presence of elders. Thus, separate meetings with these groups can elicit their views for presentation through development partners in general meetings involving all.

#### EXAMPLES OF COMMUNITY INVOLVEMENT IN PROTECTED AREA MANAGEMENT IN SIERRA LEONE

Of the several protected areas established in Sierra Leone before independence, effective community participation in joint resource management has been recorded in the Tiwai Islands Game Sanctuary, Outamba-Kilimi National Park and the Western Area Chimpanzee Orphanage. Other protected areas such

as Mamuta Mayorsoh and the Kangari Hills in the Tonkolili District also receive some community support. However the following examples are more significant.

#### Management of the Tiwai Island Game Sanctuary

Since the declaration of the game sanctuary in 1987, the local community, in addition to being key partners on the management committee, has provided the following voluntary support:

- hosting annual management committee meetings and providing simple accommodation;
- providing labour and local materials for infrastructure development;
- providing tour-guide and interpretation services;
- providing transportation facilities for crossing on to the island;
- providing cooks, hot water and laundry services for visitors;
- reporting on anti-conservation activities.

Local artisans have benefited from the sale of their handicrafts at the visitor centre.

*Tiwai Island, declared as a wildlife sanctuary in 1987, is located on the Moe River in Sierra Leone's Southern Province*



L. COLTON





*Outamba-Kilimi National Park*

### **Management of Outamba-Kilimi National Park**

Traditional rulers of the Thambaka chiefdom of Bombali District aid conservation efforts in Outamba-Kilimi National Park by offering services such as assistance to visitors, reporting on poaching activities, wildfire reporting and containment, and tour-guide and interpretation services. Members of the community performing these services are compensated by tips.

When human-elephant conflict got out of control at Kilimi (an area of only 420 km<sup>2</sup>, where the co-existence of people and elephants was difficult), communities there were encouraged to resettle in Outamba, which has a larger area (1 000 km<sup>2</sup>). In 1995, the European Union provided US\$87 000 to compensate resettled citizens for the loss of their houses, cash crops and land, although the relocation process has been slow. The chiefs provided significant support in handling the human-elephant conflict prior to and even after the relocation of these communities. Following some post-war rehabilitation of the Visitor Centre, funds are now being sourced from the Global Environment Facility (GEF) for additional work at the park.

### **Western Area Tacugama Chimpanzee Project**

Launched in 1995 with initial funding from the European Union and later sup-

port from the Jane Goodall Foundation, this project covers 81 ha in the Western Area Peninsula Forests Reserve, located in a part of Sierra Leone that is under only governmental jurisdiction (the Western Area). Chimpanzees seized from illegal owners are rehabilitated here for eventual return to the wild. The cooperation of the local government authorities in protecting the animals is crucial. These authorities work closely with the Wildlife Section of the Forestry Division in the Ministry of Agriculture, Forestry and Food Security in endorsing licences issued by the ministry for various activities in the forest; recruiting honorary forest guards; reporting offences promptly; and apprehending lost chimpanzees and returning them to the sanctuary. Proceeds from visitors now constitute the main share of the project's financial support.

### **COMMUNITY PARTICIPATION IN RESOURCE MANAGEMENT IN WEST AFRICA AND BEYOND**

When local communities realize tangible direct benefits from the resources, they are often willing to protect and police them at little or no cost to management (FAO, 2001; Chhatre and Agrawal, 2009; Odera, 2004). Policy and legislation, solid institutional arrangements, democratic transformation and comprehensive definition of roles are essential

for successful stakeholder contributions (Odera, 2004). Constraints to successful community forestry development can include inadequate or insincere decentralization and devolution of functions and conflicting sectoral policies and overlapping mandates.

The following examples showcase community conservation efforts elsewhere in Africa.

A group of 116 volunteer women undertook the restoration of 100 km<sup>2</sup> of the Popenguine-Guéreo natural forest of Senegal in 1987, aiding in the reappearance of 195 species of birds, cerographic antelopes, duikers, striped jackals, monkeys and others (WRM, 2003).

In Côte d'Ivoire, the sacred forest of Zaipobly (12.5 ha), near Taï National Park, is properly managed for the realization of multiple benefits and as a permanent meeting venue. Access and management are governed by traditional powers (WRM, 2002).

The Ik ethnic group of the Karamajong region of Uganda practice traditional natural resource management, establishing guidelines for fire regimes, tree cutting and grass harvesting. They express their dependence on forests in terms of security, agricultural land, water, food security, health-care delivery and place of worship, and they recognize the need to mitigate against overcutting, overgrazing, uncontrolled bush fires and destructive honey collection methods (Rogers *et al.*, 2002).

Rural communities are at the centre of forest management in the Gambia, where forest committees are established at village level and take major decisions on forest management issues. A comprehensive management agreement between the communities and the Forestry Department legalizes the arrangement (WRM, 2006).

In Guinea-Bissau, Mali and Senegal, Skutsch and Ba (2010) found that community management of forests yielded carbon benefits and also observed that communities could easily be trained to



DISNEY WORLDWIDE CONSERVATION FUND

**The Tacugama Chimpanzee Sanctuary rehabilitates chimpanzees seized from illegal owners for eventual return to the wild**

do carbon assessment – repudiating the myth entertained in the past that lack of skills impedes community forestry development.

## CONCLUSIONS

Community participation in natural resource management is essential and inevitable. The marriage between policy-makers, funding bodies and the local communities in resource management will continue to be constrained by a variety of factors. However, addressing the concerns of all three parties amicably seems to be the only solution. By-laws governing traditional resource management could form the basis of modern resource management strategies. To ensure their legitimacy, by-laws should be legally recognized in the national legislative system (Lindsay, 1999).

Compensation for community relocation, livestock development projects for wildlife conservation and machinery to encourage lowland cultivation are essential if the negative impacts of poverty and shifting cultivation on

forests are to be reduced. Appreciation of local community conservation efforts could be an incentive to further positive efforts, and the provision of alternatives to resources to be conserved is essential. Central government support in legitimizing natural resource management by-laws could ensure sustainability and ensure compliance. ♦



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