

# ***RURAL DEVELOPMENT FORESTRY NETWORK***

FROM THE FIELD

SUMMARIES OF SOME RECENT PROJECT APPROACHES TO  
CONSERVATION AND DEVELOPMENT

*Andrew Dunn*

BIODIVERSITY CONSERVATION THROUGH COMMUNITY FORESTRY,  
IN THE MONTANE FORESTS OF CAMEROON

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THE RESPONSIBILITY OF LOCAL PEOPLE FOR THE MANAGEMENT OF FOREST  
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GASHAKA GUMTI, NIGERIA – FROM GAME RESERVE TO NATIONAL PARK

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## SUMMARIES OF SOME RECENT PROJECT APPROACHES TO CONSERVATION AND DEVELOPMENT

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### Arfak Mountains Nature Reserve, Indonesia

Rainforest still covers 80% of Irian Jaya and more than 20% of the province has been proposed for nature reserves. One such is located in the Arfak Mountains, home to ten thousand people of the Hatam tribe. Certain endemic species of butterflies and birds of paradise flourish on the steep mountain slopes.

Previously Hatam lived scattered throughout the forest in tiny enclaves, practising long fallow agriculture. However, they have begun to congregate in larger groups more recently. To facilitate regional administration, the Indonesian government ordered the Hatam to move down towards airstrips which had been opened by missionaries. Proximity to these airstrips had its advantages, since planes could be used to transport Hatam produce to the expanding coastal markets, or sick villagers to hospital.

It was evident after stubborn Hatam involvement in the guerilla war that they and other Irianese mounted against the 1969 Indonesian takeover of their land, that a coercive approach to nature conservation would not succeed in the Arfak mountains. Instead, a participatory approach to conservation of the region was adopted. Based upon a recognition of ancestral Hatam land rights, originally denied by Indonesian law, the project negotiated with Hatam an equitable division between land for farming and land for the proposed reserve. This process led to the formation of a network of village committees to work with WWF and Indonesian government officials. Hatam supported the creation of the reserve as a means of protecting their land from claims by outsiders, despite the fact that certain limitations were imposed on their hunting activities, and they could not live in the reserve. Nevertheless, they vigorously participated in boundary-marking activities and have shown great respect for markers.

With the reserve boundary assured, the project initiated a butterfly ranching scheme to replenish wild stocks, provide economic benefits to local people linked to forest conservation, and supply a growing international butterfly market. According to national and international laws, butterflies can be sold legally only if they have been farmed. WWF works with local farmers to plant butterfly gardens created by enriching forest areas outside of reserve with larval foodplants. Soil conservation programs, as well as small-scale chicken and fish-raising activities are also being introduced. (Colchester, 1992; Craven, 1990; Pimbert and Pretty, 1994; Stone, 1991; WWF, 1992.)

### Comments

With local government approval the project gives the Hatam access to the reserve, although in a 'strict nature reserve' such activities are theoretically illegal. They now actively protect the forest reserve, the butterfly ranching scheme merely adapting existing activities to make them more sustainable and profitable. Protected forests support healthy populations of butterflies which produce a regular yield of cocoons for the butterfly trade. The explicit link between forest conservation and economic benefit is recognised by local people.

### Nyika National Park, Malawi

The highland Phoka people of northern Malawi were evicted from their ancestral lands in the 1970s during the establishment of Nyika National Park. Originally they practised beekeeping – a livelihood disrupted when the creation of the park denied them access to forest resources. Honey is an important commodity in Malawi, and exports once provided much – needed foreign exchange. However, production of both honey and beeswax has declined in the country as farmland has spread at the expense of woodland.

The Malawi-German Beekeeping Development Project was initiated in 1989 and aims to develop beekeeping as an alternative source of income for local people living adjacent to Vwaza Wildlife Reserve and Nyika National Park. The project also hopes to make honey more affordable for the average Malawian. The project is financially supported by the German government and WWF, and implemented by the Department of National Parks and Wildlife, Malawi.

The project offers financial and administrative support for the creation of bee-keeping clubs who are provided with low-interest loans to purchase equipment. Members are taught methods of beekeeping which produce both higher yields and better-quality honey than do traditional methods. Universal adoption of the Malawi Standard Hive has reduced the need to strip tree-bark to construct traditional hives, and harvesting of honey no longer entails fire-lighting, which not only kills some of the bees, but also destroys surrounding vegetation.

Local people are now allowed to use conservation areas on a controlled basis, although required to abide by the laws and regulations governing protected areas which prohibit hunting and collecting firewood. The project has helped improve the relationship between local people and conservation authorities, and club members have become involved in safeguarding their hive sites situated inside the protected areas and in actively excluding outsiders. Poaching within the park has declined as a result of local co-operation. The project plans to transfer responsibility for management to an independent Beekeepers' Association of Malawi in 1997. (IIED, 1994; Banda and Boer, 1993)

### Annapurna Conservation Area, Nepal

The Annapurna Conservation Area is arguably the most geographically and culturally diverse conservation area in the world. About 40,000 people live within its boundaries, in a region where agriculture and trade have flourished for centuries in the steep-sided Himalayan valleys. The region attracts more than 30,000 foreign tourists each year. Although revenues from tourism are significant and vital for the local economy, the increasing demand for fuelwood and dairy products to supply the trekking industry has been severely damaging the environment. The effect upon the local culture and economy is profound.

In response to these threats, the government of Nepal together with the King Mahendra Trust for Nature Conservation (KMNTC) developed a plan in 1986 for a multipurpose protected area that would be managed for recreation, tourism, forestry, agriculture, and the needs of local people. KMNTC acted as a coordinating link between government and local communities in establishing management plans for different use zones in the conservation area. The Nepalese government owns the area, but local communities have been made stewards, with responsibility for equitable

and sustainable natural resource planning and management. Forest management committees have been formed to facilitate active participation by local people.

The Annapurna Area is divided into zones, ranging from those for complete protection and scientific study, through those for the subsistence needs of local people (the Protected Forest and Seasonal Grazing Zones) to the Intensive Use Zone for tourism, where kerosene is promoted as an alternative to wood.

The project seeks to strike a balance between local people's short-term needs, and the sustainable exploitation of the natural environment, with the region managed not for but by the community. The goals, designed and implemented by resident villagers are to consolidate local control over resources, establish alternative energy sources with less wasteful technologies, and increase local financial benefits from resources used by outsiders. Community forestry and the establishment of locally operated nurseries within the protected forest represent an important source of fuelwood and fodder. A change in government policy now allows all revenues from trekking permits to be used directly by the project, unlike other protected areas in Nepal. (Wells, Brandon and Hannah, 1992; Brown and Wycoff-Baird, 1992; Adams, 1991).

#### Comment

The project appears to be popular with local communities who believe that the approach will result in the improved management of natural resources. It attempts to meet the needs of local people, and activities are not restricted to perceived conservation problems. Unfortunately, it is impossible to predict what will be the long-term project impact upon biodiversity in the conservation area. High priority is given to reducing the environmental effects of visiting trekkers and increasing local benefits from tourism. However, the significant profits from tourism have not so far been widely distributed among subsistence farmers. The specific interest of the monarchy, local political support and the contribution of NGOs have all been important factors in the success of the project; but, because it was implemented from outside and did not build upon existing resource use patterns or institutions, there are many uncertainties about its long term sustainability.

#### Kuna Yala, Panama

The 322,000 hectare Indian reserve known as Kuna Yala was first recognised by the Panamanian government in 1953 as an autonomous, self-governing region. Conservation of the reserve, created as a result of grassroots mobilisation, functions to benefit local people. The remoteness of the area acted to protect forests from exploitation. Kuna farm in plots along a narrow coastal strip and live offshore on a variety of tiny coral islands, from which they fish in rich waters along the coral reef. However, recent road developments have made the region more accessible which has in turn attracted cattle ranchers and landless poor into the area.

Aware that the government was encouraging development of 'unused' areas of forest which threatened the forested watershed upon which traditional Kuna livelihoods depend, the Kuna set up an agricultural project managed by the Association of Kuna Employees (AKE) along the threatened boundary of their territory in order to protect their land. Unfortunately, their attempts to secure a permanent presence along the mountain ridge failed.

Instead, a new initiative called the Management Project for the Forested Areas of Kuna Yala (PEMASKY) was established in 1983, headed by the AKE with funding and technical support from a variety of international organisations and institutes. A programme of research and management planning for the forested areas of Kuna Yala was completed by a group of Kuna technical experts. On the basis of their recommendations the area is now managed as a zoned biosphere reserve, which aims to protect natural resources and ecosystems whilst ensuring that resources are used sustainably for the benefit of Kuna people. The development of eco-tourism, traditional Kuna crafts, environmental education and scientific research is also encouraged.

The management plan for Kuna Yala defines five separate management zones: a Nature Zone where only the gathering of medicinal plants is allowed; a Recovery Zone where degraded natural resources are left to regenerate; a Land and Marine Cultivation Zone where the Kuna live, fish, and farm; and a special zone set aside for public use, administration of the biosphere reserve and sustainable use of natural resources. There is also a Buffer Zone outside the reserve boundaries in an area administered by the state government. An early project priority was the demarcation of a 120 km boundary along the ridge of the San Blas mountains which took several years to complete.

The project now suffers from a lack of funds. Tourism is largely uncontrolled, placing increasing pressure on local resources and creating new sources of pollution. Local population growth is also exerting increasing strains on once-abundant natural resources. But the greatest threat to the PEMASKY project remains the many Panamanian officials and politicians who wish to rescind the protected status of Kuna Yala and open it up for development. (Archibald and Davey, 1993)

#### The Cuyabeno Wildlife Production Reserve

During the 1970s, Napo Province in northeastern Ecuador became the centre of the oil industry in the Amazon region. Road developments prompted massive colonization by settlers from elsewhere in the country and displaced native groups from their ancestral lands. Land speculation, logging and the growth of illegal activities including the drug trade soon followed. Many conservation areas succumbed to these development pressures.

The Cuyabeno Wildlife Production Reserve was created in 1979 in response to the region's rapid rate of deforestation. The area supports a high diversity of plants and animals including the freshwater dolphin, manatee, ten species of primates, tapirs, caimans and the giant armadillo, and is considered to form part of a Pleistocene refuge. The reserve aims to offer multiple alternatives for wise and sustainable resource use to benefit indigenous groups (inside and outside the reserve) and communities of colonists (in surrounding areas). Colonists were given legal title to their land after they assisted in physically delineating the reserve's boundaries, and signed a contract by which they agreed to help protect the boundaries in the future from further encroachment.

However, in the case of indigenous groups, a number of whom inhabit the area and depend upon subsistence hunting and fishing, only the Siona-Secoya group is allowed within the reserve. Traditional hunting methods are allowed (but not rifles, poisons or dynamite) and hunting is not permitted from within those areas primarily used by tourists. Siona-Secoya hunters have independently decided to protect rare species and report illegal poaching within the reserve. Assisted by local knowledge and labour, a program has been established to provide alternative

sources of meat from semi-captive populations of river turtles, peccary, capybaras, agoutis and pacas. Scientific research and tourism provide opportunities for local employment and generate funds for reinvestment in the reserve. (Hinojosa, 1992; Nationas and Hinojosa, 1989)

#### Comments

A traditional conservation project, imposed upon local people, which claims to be for their benefit but where conservation interests are paramount. Since only the Siona-Secoya among the indigenous groups have been allowed to hunt within the reserve, ethnic conflict is likely to follow. If wildlife is abundant within the reserve there is no incentive to participate in the captive breeding scheme. The success of captive breeding schemes has not yet been demonstrated and they are notoriously difficult to implement.

#### Bwindi Impenetrable National Park

In the past, the management of Bwindi Impenetrable National Park was based upon prohibiting community use of forest resources. However, the neglect of the needs of the local community gradually led to open conflict between local people and park guards. During a recent drought large areas of the forest were deliberately burned, and threats were made against resident gorilla populations, a priority species.

An alternative management approach was recently developed to allow for the multiple-use of BINP. Parish workshops were held to ensure genuine participation, and to rebuild trust between local people and the national park. After a period of negotiation, 20% of the park was allocated for multiple-use, based upon maps produced during the parish workshops. Research and tourism zones accounted for a further 40%, and the remainder formed the 'core' zone.

A multiple-use zone allows for the sustainable exploitation of resources according to agreed rules and restrictions. The decision whether or not to use a particular resource was based on its availability; priority was given to finding alternatives for prohibited species, and products which were available outside the forest were not to be taken from within it. No mature or potential canopy species were to be felled. Multiple use areas would be closed whenever gorillas were found to be present.

Within each parish a 'Forest Society' was created to co-ordinate existing associations and organisations. The Forest Society is responsible for controlling the actions of its own members, and representatives from each officiate on an umbrella Resource Users' Society and on the Park Management Advisory Committee.

The management decision has been for the authorities and the local community together to monitor developments and progress and make adjustments accordingly. Although it was acknowledged that permitting resource utilisation inevitably results in alteration of the ecosystem, some modification of the environment is acceptable. Further, the impact of resource utilisation proposed at Bwindi was expected to be insignificant compared to past levels of illegal and uncontrolled use.

#### Comments

Conservation of protected areas based upon a programme of law enforcement alone heightens

conflict and is unsustainable. Parks policed in this way are vulnerable to periods of political instability when whole protected areas have been taken over by people. The principle behind multiple-use zones is that the local community helps protect the area in return for being allowed use of resources as a privilege. Development of such a plan demands detailed local knowledge of the resource, and a working relationship with the local community. Such an approach requires significant initial inputs but fewer resources once installed. It is important that community benefits from permitted activities exceed the opportunity cost of prohibited activities. For significant levels of biodiversity to be protected in the long term many ecosystems must become more productive to meet the needs of a growing population. It is preferable to plan for this modification and productivity increase than to let it happen by crisis management. (Wilde, 1994)

#### Conservation and a Himba Community in Western Kaokoland, Namibia

The Himba and Herero people of western Kaokoland were hit by a severe drought in the early 1980s. Pastoralists lost an estimated 80-90% of their livestock and survived only with government aid. A return to their seminomadic lifestyle now conflicted with the tending of vegetable gardens, an activity introduced by a project promoted during the drought. Riverine pastures which once provided vital dry season fodder, are now subject to grazing throughout the year from livestock belonging to these new permanent settlements. Many of the settled people have come to rely upon handouts which are offered by increasing numbers of tourists to the region. Drought and large-scale poaching had acted together to decimate populations of large mammals in the region by 1980. However an anti-poaching campaign based upon a system of game guards appointed by local community leaders, succeeded in reducing illegal hunting. Wildlife returned and a game park was proposed, to be jointly managed by Kaokoland community leaders and government staff. The park would not act to exclude local people or their livestock from the area.

A project was established in 1987 to counter some of the negative effects of tourism and to promote wildlife conservation in such a way that local people derived direct benefits. It was agreed that each visiting tourist must pay a levy direct to the local community for use of natural resources that de facto belong to local residents. A craft market was established which has proved to be a lucrative means by which local people can benefit from increasing demand for traditional goods. Households are secure in the realisation that they will still receive their monthly tourist levy even if they are away in the bush when the tourists arrive. The structured relationship that the project has created between community and tourists encourages a more dignified form of tourism. Local people have come to view wildlife in a more positive manner and actively participate in conservation efforts in order to safeguard the local tourist industry. The project has acted to restore local interest in wildlife, traditional knowledge and experience has been revitalised and there is renewed respect for the elders. (Jacobsohn, M. 1993).

#### Comments

Conservation has brought significant financial benefits to local people, but even more impressive in this case is the restructuring of the relationship between tourists and local people.

#### Upper Orinoco-Casiquiare Biosphere Reserve, Venezuela

In Latin America nearly 85% of all protected areas are inhabited by indigenous people. The

Yanomami live in widely dispersed communities in the headwaters of the Orinoco and Rio Branco rivers. Their mobile way of life is based upon hunting, fishing, foraging and farming. Population density is low and widely distributed, and environmental impact is minimal. For the past century the Yanomami have suffered devastating losses from the effects of introduced diseases. Their principal needs are to prohibit access by outside miners and settlers and protection against introduced diseases.

The Upper Orinoco-Casiquiare Biosphere Reserve (83,000 km<sup>2</sup>), which is the largest rainforest park in the world, was created in 1991 to guarantee the security and livelihood of the Yanomami in response to repeated invasions of the Upper Orinoco by Brazilian miners. Together with the adjacent Yanomami Reserve in Brazil the total area of rainforest protected is 177,000 km<sup>2</sup>. Creation of the biosphere reserve indirectly acknowledges Indian rights over their own lands without establishing a legal precedent by titling indigenous land.

The express purpose of the Biosphere Reserve is to secure and develop Yanomami society as well as ensuring conservation of the region's rich natural resources. However, the very fluid and informal nature of Yanomami decision making poses problems to outsiders attempting joint management of the region. Not only do Yanomami leaders exercise very limited authority, but Yanomami communities are often internally divided and sections of the communities have allegiances to widely dispersed kin. As a result there are no readily identifiable individuals or institutions with which conservation officials can negotiate and share decision-making even at the community level. Yanomami communities do not assert exclusive rights to identifiable territories and there is even less cohesion at the regional or ethnic level. Resources are not traditionally 'managed' by regulating access or use. The Yanomami have made it quite clear that until their critical health situation is improved, their territorial security assured and their political authority recognised, ecotourism is not welcome. Efforts by outside conservation interests to offset the current costs of management by the sale of non-timber forest products have been resisted. (Centeno and Elliot, 1993; Colchester, 1994)

#### Solomon Islands Community Resource Conservation and Development Project

Communities within the Solomon Islands still largely depend on a subsistence economy based upon local natural resources. In excess of 85% of all land and marine resources in the Solomon Islands are still held under communal control. In the past, customary tenure provided a successful means of regulating resource use by controlling individual and communal rights, limiting access and allocating management responsibility. However, community control has been eroded under the combined pressures of rapid social and economic change, and the perceived benefits of profits from large-scale natural resource extraction.

Government policy has encouraged development of the logging industry to provide foreign earnings. Current rates of extraction are unsustainable and have resulted in significant environmental damage such as soil erosion and silting of rivers, fouling of water supplies and degradation of fringing reefs. Fisheries are dominated by commercial tuna fleets at the expense of subsistence fishermen. A high proportion of the country's coastal forests have been converted to copra, coconut oil and palm oil production despite low economic returns.

Many communities are becoming aware of the problems associated with poor management of

natural resources, but lack the technical expertise to deal with them. In 1991, in response to requests by local land-holders from the community of Marovo, WWF established a project to provide technical and financial support to the local Marovo Lagoon Resource Management Group. Individual land holding communities or associations have been the central actors, engaging in resource planning and management activities on their own terms. WWF facilitated the process, assisting participant communities with resource stock assessments, documentation of resource bases and their uses, and institutional support to enable local groups to liaise with local government.

The success of the planning process depends upon clusters of land-holding groups coming together to make decisions about the management of their own resources. Rules designated by local people have blended both traditional methods – such as controlling land rights – with more modern approaches – such as setting aside nature reserves, and defining size limits for species harvesting. Implementation of community management plans is carried out mainly by resource owners and households. A community development fund has been provided for local people, with the aim of achieving ecologically sustainable development based upon a diversity of local natural resources. The pilot project has attracted interest from other communities and is currently expanding to meet these demands.

#### Comments

The Marovo approach is characterised by a refusal to give up autonomous decision-making power in resource management issues, by an insistence that introduced resource management initiatives must be closely adapted to local-level needs and aspirations, and by a conviction that traditional political mechanisms and environmental knowledge in most cases form a sufficiently solid basis for reaching informed decisions.

Marovo people are now successfully addressing the challenge of accommodating commercial development within a customary framework. They are actively involved in the negotiation of rules governing not only their own resources, but have also proved capable of influencing and restricting resource exploitation by outsiders. The project's focus on local participation has ensured that resource plans, and conservation and development initiatives are community-owned and driven. Community resource planning is promoted as a process, to be monitored and adapted over time, not a blueprint. Respect for traditional decision-making structures and customary authority is an important principle of this project. The project further acts to strengthen communally owned knowledge by supporting local resource documentation and inventory exercises. Government support for the project, in addition to the involvement of local institutions and a number of NGOs was considered crucial for success. (Hviding and Baines, 1992; WWF South Pacific Program, 1994)

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