Heritage, poverty and landscape-scale biodiversity conservation: an alternate perspective from the Amazonian frontier

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Abstract. Rights-based initiatives offer governments, donors and NGOs a new path forward, giving new meaning to old words like poverty, heritage, and landscape-scale conservation. The conventional conservation perspective holds that people in high biodiversity areas are impoverished and therefore destroy biodiversity to meet their needs. Under this view, people are seen as a threat to be removed, restricted, or to be given “alternative livelihoods” means that do not depend on their traditional natural resources. The poverty-alleviation-based approach to conservation, which is politically acceptable to the status quo, persists within policy and project implementation even if it has often been discredited as unsustainable. Aware of the large investments made in rural development and conservation projects without positive results, rural people have become increasingly anti-conservation and suspicious of NGOs that make their living off communities with development and conservation projects that are not effective. The rights-based approach holds that the root causes of poverty and resource degradation can be addressed only by addressing political relationships that govern access to resources and equitable justice.

We offer a perspective gained by valuing the strengthening of the rights-based approach to incorporate the cultural concept of dynamic heritage as a means for “balancing the scale” when collaborating with communities for achieving conservation objectives in the landscape. In 2003, we initiated a regional heritage mobilization process in an anti-conservation atmosphere in the Amazonian frontier of Pando, Bolivia—a high biodiversity region the size of Costa Rica, which remains 90 percent forested. As a result, in 2004, the people of western Pando chose to declare their two municipios (1.5 million hectares) as a protected area under local government control, united under the motto “Conservation with Development– Our Decision.” This success arose from a strategy that used an assessment vehicle to engage the political actor groups into engagement around shared interests, leveraged local energies through group reflection on key issues, and promoted public deliberation at various levels leading to landscape scale decisions. This paper describes the details of the process, the design principles, and its results.

Resumen. Se considera que los derechos basados en las iniciativas de la población y las autoridades de un determinada área, ofrecen a los gobiernos centrales, a los donantes y a las organizaciones no-gubernamentales, una nueva senda para transitar, dando un nuevo significado a las viejas palabras pobreza, patrimonio y conservación a escala territorial. Las perspectivas convencionales de la conservación, sostienen que las personas que viven en sitios de alta biodiversidad son pobres y en consecuencia destruyen la biodiversidad. Desde este punto de vista, la población es vista como una amenaza que debe ser expulsada, a la que se le deben fijar restricciones y a las que se le deben dar alternativas de vida que no dependan del uso tradicional de los recursos naturales. El alivio de la pobreza sobre la base de criterios...
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The intertwined roots of poverty, wealth and environmental degradation

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The traditional conservation perspective holds that people in high biodiversity areas are impoverished and therefore destroy biodiversity. Under this view, people are seen as a threat to be removed from high biodiversity areas, or restricted in their access to it, or to be given alternative livelihood means, which do not depend on traditional uses of natural resources. Removing people from biodiversity has even
been hailed as a form of eco-fascism, yet the phenomenon is well alive. The poverty alleviation based approach to conservation also persists within policy and project implementation, because it is politically convenient, although often discredited as simplistic and unsustainable.

Similarly, landscape-scale conservation has largely been an expert driven exercise, criticized for lack of concrete application. Even the community-based conservation advocates acknowledge that effective conservation needs to be implemented at a scale larger than a single village.

Rights-based approaches to conservation and natural resource management have risen as a possible alternative. The rights-based approach holds that the root causes of poverty and resource degradation can be addressed only by affecting the political relationships that govern access to natural resources and justice. The rights-based approach promotes conservation and development through civil rights, human rights, and cultural rights.

Concerns for transparent and accountable governance flow naturally from the rights-based approach. It seeks mechanisms by which government agencies are held accountable to rural communities, and by which local community leaders are held accountable to community members. And it anticipates that rights-based approaches will build resilience for sustaining conservation throughout expected political turbulence during the consolidation of democracy. It privileges rights and politics over more traditional strategies for incorporating attention to social assets in community-based conservation projects.

Some have subsumed the rights-based approach within a more general orientation termed the “assets-based approach to poverty reduction” using a definition of poverty that includes low income, lack of assets, lack of access to social services, and lack of voice in government. The assets-based approach assists the poor to build physical capital, financial assets, community organizations and institutions, social capital, access to natural resources and the ability to influence policies. It acknowledges the great value that social assets play in providing resilience to the poor. A rights-based approach, however, differs in that it involves moving beyond providing venues for participation by the poor to giving over leadership and decision-making roles to the poor.

In this paper, we offer an example illustrating the value of amplifying the rights-based approach to incorporate the cultural concept of heritage as a concrete means for “balancing the scale” when collaborating with communities to achieve conservation objectives at landscape scale. We will suggest that a focus on heritage makes it possible to realize rights-based ideas.
Heritage and its conservation value

What is heritage? Although there is no formally recognized “heritage-based approach” to conservation, heritage is a concept frequently applied in traditional conservation discourse. World Heritage, biodiversity heritage, global heritage and cultural heritage, for example, are common labels used to promote and raise funds for conservation. The use of the term heritage does not necessarily, however, imply a linkage with rights-based approaches. To the contrary, these terms are often used in ways that deny the dynamic heritage of local people. Hence it is important to clarify the meaning of heritage used in this paper.

As thoughtfully analyzed by Erve Chambers (2005), heritage can be defined in two ways – one associated with history and brokered by professionals into a representational public heritage de-linked from private lives, and the other associated with culture and linked to the past, the present and the future of the communities and persons who are the holders of a private heritage. The latter is linked to obligations, responsibilities, and personal responsibilities to the past and the present. The people linked to private heritage have the power to modify that heritage; private heritage is vulnerable to alienation by being transformed into public heritage over which the communities no longer have control. “[We] might begin to view heritage not as lessons taught us by duly recognized keepers of the past but as heritable obligations, responsibilities, and privileges that are experienced and repeated in the culture of everyday life.”

How can incorporation of heritage “balance the scale” for collaboration in conservation? We propose that a focus on heritage can take the rights-based approaches from their sometimes abstract and legal realm into a self-sustaining implementation on the ground. We suggest flipping the conservation heritage lever on its head – spurring a flowering of local heritage that improves conservation as well as the livelihoods, resilience and dignity of the rural poor, instead of spurring the ossification of local heritage into “global heritage” for national and international consumption.

To illustrate this approach, we offer the example of an asset assessment used in Amazonian Bolivia that enabled local leaders to step forth and rely on their own heritage to create a new protected area and construct a new institution that has the potential to democratize local government as well as manage the area. In the process, a strong Pandino Amazonian heritage has become visible and activated in what was previously viewed by outsiders and policy makers as an impoverished frontier without social cohesion.

Poverty and biodiversity in the Bolivian Amazon – case setting

Pando (Bolivia) is known as one of the poorest regions of one of the poorest countries in Latin America. Over eighty percent of the population is classified as living in poverty. Pando has a relatively small population of indigenous peoples. A small group of voluntarily isolated Pacahuara people is rumored to persist in the most remote area of Santos Mercado in an area being considered for national park status.
Poverty, wealth and conservation

in Federico Roman province in eastern Pando. A small population of Yaminahua and Machineri peoples shares one recognized territory (TCO) in the northwest corner of Pando, and Esse Ejja, Tacana and Cavineño peoples in south central Pando share another “multi-ethnic” territory.\(^{13}\) The total resident population of Pando is approximately 52,500 people;\(^{14}\) some municipios (counties\(^{15}\)) have less than 400 people.

Pando, with an area larger than the country of Costa Rica (63,000 km\(^2\)) and a population density of less than one person per km\(^2\), is one of the last bastions of intact tropical lowland forest in the Upper Amazon basin. The dark green block of Pando (Figure 1), stands out in sharp contrast to the deforested patchworks across the borders in Madre de Dios, Peru, and in Acre and Rondonia, Brazil where road and colonization projects have brought deforestation and cattle ranching. Besides being 90 percent forested, Western Pando harbors the highest freshwater diversity known in the Amazon basin, and is home to 14 species of primates, over 700 bird species and a very high diversity of amphibians, reptiles and plants.\(^{16}\) Pando forests produce 80 percent of the world’s Brazil nuts.

Poor roads, lack of labour and dependence on the Brazil nut economy has restricted capital-intensive exploitation of the area, but uncontrolled development is now threatening it. Road improvements, spontaneous colonization, deforestation, resource extraction without government or community controls, and border encroachments from Peru, are among the threats to this fragile area. Local institutions are weak, yet are essential to control these threats in the immediate and long-term.

Over the past decade, rural residents soundly rejected initiatives to establish more national protected areas. Powerful holders of inactive timber concessions overlain over community and individual lands rejected a conservation concession deal offered by northern NGOs. The leaders of the Yaminahua-Machineri indigenous territory refused a biodiversity inventory offer in 1999. In 2000, the campesino federation of rural residents (FSUTCP) won a political victory demanding that communities be granted title to 500 hectares per family instead of the 50 hectares specified in the land reform law,\(^{17}\) thus giving campesinos political control over vast areas in Pando. Powerful individuals who had claimed vast extensions of forest (up to 100,000 hectares), some of whom had been courted for conservation agreements, were offered legal title to only 50 hectares. Meanwhile, Brazilian capital financed commercial over-fishing and gold mining in Pando. Peruvian capital financed illegal logging...
and sending a small stream of “mules” carrying coca paste across western Pando into Brazil.

Yet in 2003, a coalition of local, national and international organizations were willing to gamble that, beneath the public image of Pando as a backward impoverished frontier for the taking, lay a different reality. They believed that the people living in the forest of Pando would take the initiative to act together to manage their Amazonian ecosystem if given the opportunity, despite the anti-conservation atmosphere.

The policy framework was in place to support such an initiative. Unlike its neighbor Peru, Bolivia has laws and policies that provide the territorial basis for a vision of active citizen engagement both in local government and in biodiversity management at landscape scale. Proactive national land reform offers communal tenure as well as individual titles. Decentralization policies encourage local government to assert its rights to manage local affairs and implement Bolivian environmental policies, which are among the world’s most advanced.

A rights-based approach to landscape-scale conservation in Western Pando

Our collaborative, rights-based effort was implemented in two municipios (counties) in far west Pando. These municipios function as an important intact element in the large scale biodiversity corridor arc joining the Upper Amazon to the Gran Chaco. Bolpebra and Filadelphia municipios are home to a population of some 5,500 people living at a density of less that one person per square kilometer in an area of 1.5 million hectares (3.4 million acres). Approximately one quarter of the area is a national wildlife reserve—Manuripi—which was officially reduced to half its original size after deforestation on its eastern side in the Puerto Rico municipio. Manuripi was already occupied by communities and Brazil nut barracas at the time of its establishment in 1973. The experience of these people with inequitably applied restrictions served to stimulate strong local anti-conservation attitudes.

In April 2003, Zarzycki and Alcorn initiated a new approach by interviewing a range of rich and poor players and institutions to ascertain attitudes and opportunities for applying a rights-based approach that would nurture existing strengths to build collaboration among all parties. The Field Museum of Chicago was still prepared to support an as-
set-mapping exercise²³ although it had previously been rejected by local organizations, because it was seen as “just another study” in a region suspicious of NGOs, which are seen as parasites earning money by carrying out studies that benefit no rural people at all. During the rapid assessment, discussions with the campesino federation, local government, local university and local NGOs resulted in an agreement to accept the Field Museum offer with modifications. Basically, local people wanted a process under participant control that would lead towards democratic deliberation on an option to create a grassroots-established and managed protected area or ANMI (Area Natural de Manejo Integral, Natural Area under Integrated Management).

Box 1. Principles to Facilitate a Rights-based Approach to Landscape Conservation
(A rights-based approach assumes leadership by local people and organizations, not by the project managers. For a more detailed discussion of these principles and their application see Alcorn et al., 2006.)

1. Nurture natural cross-scale links.
2. Be transparent.
3. Celebrate values.
4. Integrate planning.
5. Be inclusive.
6. Commit to clear roles and responsibilities.
7. Maintain and nurture resilience.

The modified asset-mapping tool was named RIPUI (Relevamiento de Información sobre Potencialidades y Usos Integrales), an acronym that in Quechua means, “Go!” The RIPUI-ANMI initiative used the asset-mapping assessment vehicle to bring the political actor groups into an engagement around shared interests. It also leveraged local energies through group reflection on key issues, and promoted public deliberation among various constituencies up to landscape scale decisions. The municipio governments of Bolpebra and Filadelfia sponsored the activity, and a core project management team was installed at the University of the Amazon of Pando through a collaborative relationship with Fundación Yangareko and The Field Museum of Chicago. The opportunity for participation was offered to all 36 communities, out of whom 29 chose to participate. Each participating community elected a “facilitator” who was responsible for managing the process in his/her community.

The RIPUI included focus groups, land use mapping and planning, interviews, community-wide discussions and sub-regional discussions, and was guided by a key set of rights-based approach principles (See Box 1).²⁴ Community deliberations were private in the sense that project staff was not present and was only provided with the information that communities decided to give to the project team. The facilitators were assisted by monitors (seguidores, see Figure 3) from the campesino federation. During the training, the facilitators and seguidores were uncertain about assuming responsibility as they had never been involved in anything like this before, but the trainer encouraged them: “This is a shared adventure where you will make decisions as you collaborate.” To include the 169 private landowners in the process, the RIPUI team also hired five interviewers who traveled to remote areas to interview barraqueros.
Livelihoods and conservation

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At the end of the RIPUI, the participating communities asserted their interests and defended the proposal for the ANMI against opposing elements so that municipio ordinances declaring the ANMI were approved by community vote in August 2004. This is the first case of ANMIs covering the entire territory of municipios being declared unilaterally (outside national processes). The county executives distributed the resulting land use maps and reports for each community at a large public ceremony after the ANMI had been declared, satisfying communities’ desire for transparency and concrete results, and maintaining public momentum for the new ANMI partnership.

Heritage assets revealed

What did the RIPUI reveal? The RIPUI revealed that Pandinos are not so impoverished. Their low levels of income do not directly correspond to their level of wellbeing. They rely on their abundant natural resources (see Figure 4), which includes 82 species of fish, 31 species of animals, 80 species of plants, 6 species of commercially high value timber, in addition to brazil nuts, and deeply appreciate their natural environment for its clean water, clean air, medicines, food, and recreational opportunities. Their collective vision for the future emphasized the need for planned management of their natural resources for improving their lives while conserving their resources and cultural identities. Two thirds of the communities voluntarily participated in land use planning as part of the RIPUI. Their main development concerns were centered on improved access to health care and post-primary education services, followed by a desire for improved roads for marketing their products.

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The 29 communities who participated in the RIPUI were connected by “monitors” from the campesino federation, who created a living communication network and assisted facilitators in each community. They were recognizable by their right yellow backpacks, RIPUI caps, and credentials from the municipio government, and served as a visible symbol of the discussions in which community members were engaged beyond the community level. (Courtesy Alejo Zarzycki, Fundación Yangareko)

The RIPUI revealed that Pandinos are not so impoverished. Their low levels of income do not directly correspond to their level of wellbeing...

Picture 3. The 29 communities who participated in the RIPUI were connected by “monitors” from the campesino federation, who created a living communication network and assisted facilitators in each community. They were recognizable by their right yellow backpacks, RIPUI caps, and credentials from the municipio government, and served as a visible symbol of the discussions in which community members were engaged beyond the community level. (Courtesy Alejo Zarzycki, Fundación Yangareko)

Picture 4. Fish are abundant in Pando’s many rivers. Pandinos depend on their natural environment for food, medicine, materials, and recreation. (Courtesy Gonzalo Calderon, CIPA, University of the Amazon of Pando)
Their heritage assets were revealed to be impressive. While the terms heritage and community might imply timeless, abstract local societies bound to their lands and local relations, the RIPUI revealed the rural residents as mobile and adaptable. They are independent, self-reliant, and politically active people whose social links are primarily regional rather than communal. Sixty-two percent of communities were founded between 1956 and 1983, by ex-indentured workers for rubber tapping and Brazil nut barracas who had settled in a dispersed settlement pattern. Many of the remaining communities were recently formalized by dispersed rural families and families living in Pando’s capital city Cobija, in order to claim land. In Bolpebra, 20 percent claim local indigenous heritage, and in both municipios the majority claims to originate from the Amazon tri-national area of Peru, Brazil and Bolivia – with less than ten percent having roots in the Andes. This goes against the grain of the popular impressions of the frontier as being overrun by Andean people who lack ecological knowledge to manage the lowland tropical environment. While generally having been categorized as “Brazil nut gatherers,” the local people dedicate only 1/3 of their year to Brazil nut gathering (December to March), spending 1/3 as migrant labor in the tri-national area, and 1/3 on agricultural activities. Between March and September, only one or two families may remain on a community’s lands as the others engage in migrant labor before the agricultural season begins and families return home to work their land.

Communities were awarded title to a quarter of the land area of Bolpebra and Filadelfia in 2003; few have developed common property rules for managing their newly awarded lands collectively, and most have not yet established any internal rules and regulations for governing themselves. The strongest community level organization (outside of kinship networks) is the OTB or Sindicato (the political associations that legally represent a community to government).

Virtually all adults in communities belong to the Pando-wide campesino federation, which fought for their land rights. Seventy percent of communities boast a soccer club, which serves as a link to other communities, and a parent-teacher association which links the community to outside services in general. Half of the individual landowners belong to their regional Brazil nut producers’ association.

Land use in communities and by individual landowners is forest-based with very small areas for agricultural production (generally less than four percent of the land area), although a few communities and individuals have cleared extensive areas for cattle-raising along the main road (including inside the Manuripi Reserve...
Policy that matters!

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where a previous reserve manager made a deal to promote cattle ranching inside the reserve). Individual landowners, who have title to 4 percent of the area but have control and historic claims to 70 percent of the lands, produced sketch maps demonstrating their mental plans for managing their resources, and included forest reserves as did the communities. They are creating their own museum to put on display objects from the rubber tapping and Brazil nut boom eras.

Western Pandinos are using their private heritage as self-reliant individuals knowledgeable of their environment to invent community and regional public identities. The RIPUI nurtured this strengthening of collective identity through encouraging each community to draw its own shield (Figure 5), in a region where the municipio’s governments don’t even have shields. All the shields celebrate the natural resources on which the people depend – fish, wildlife, forest, rivers, and Brazil nuts. These are people who have lived and thrived in the forest without external services. They have a high level of local knowledge necessary for sustainable management of natural resources and ecological monitoring. They also have a desire to patrol and protect their forests from new colonists and outsiders who would gladly exploit their forests and waters illegally. And they want to apply their knowledge and heritage to the future. This illustrates the fact that rural residents who do not claim indigenous identity, like indigenous people, can feel an obligation to care for their resource base according to principles gained while depending on their resources for generations. Just as indigenous peoples in the Canadian North seek to maintain their heritage through ecotourism and nontraditional commercial forestry, these Amazonian rural residents (indigenous and non-indigenous) seek to understand ways to use the market in ecotourism, environmental services and conservation concessions to maintain their cultural and natural heritage.

...rural residents who do not claim indigenous identity can feel an obligation to care for their resource base according to principles gained while depending on their resources for generations.

Picture 5. Each community created its own shield as a symbol of its identity as part of the RIPUI process. Bolpebra’s shield is typical as it celebrates life on the river with fish, birds, rubber, and Brazil nuts with a motto “progress on the frontier.” Bolpebra was founded by people from Tarija in extreme southern Bolivia, and celebrates its frontier heritage with a name created by putting together the first few letters of each country Bolivia, Peru, and Brazil, as it is located at the trinational corner of Pando. (Courtesy Pedro Sarmiento, Fundación Yangareko)
The results— heritage mobilization

What happened post-RIPUI? The rights-based initiative has taken on its own life. In August 2004, after much debate and efforts by illegal loggers to undermine passage of the ordinances which they recognized would threaten to curtail their activities, community representatives (OTBs) voted to declare both municipios as ANMI under the management of a new *mancomunidad* (Union Amazônica Filadelfia-Bolpebra – UAFB). The objectives of the ANMI and UAFB include, among others:

- zoning to include landscape level conservation within land use planning;
- improved management of natural resources based on local knowledge;
- protection of water;
- encouragement of scientific study to provide improved information for monitoring the environment;
- local management regulations in accord with national norms; and
- the strengthening of local enforcement against environmental crimes.

The UAFB *mancomunidad* board consists of the elected municipio executive and council members of both municipios, laying the basis for democratic participation and the application of local heritage in future development decisions. Communities watch over the *mancomunidad* through a separate UAFB oversight committee that demands accountability from the local governments. In February 2005, the UAFB and ANMIs survived the first complete turnover of municipio governments, when the OTBs again unanimously voted their confidence in continuing the path they had chosen, demonstrating their commitment to “conservation with development – our decision.”

At this early stage, in 2006, the UAFB is fragile, linking communities by fragile threads. Communities are beginning the process of consolidating their own internal regulations for managing their resources while the *mancomunidad* is seeking to zone the ANMI and establish regulations and decision-making criteria for future projects. Much work remains to be done. The *mancomunidad* faces many challenges as it competes with powerful outside interests for the control of decisions about the future, as many converge upon Pando to capitalize upon the frontier resources or to take advantage of the existence of UAFB as a vehicle for externally driven conservation projects.

Conclusion

Why did the RIPUI lead to declaration of a protected area from a grassroots that was previously opposed to protected areas? The RIPUI was effective because it was designed to mobilize heritage obligations by depending on voluntary networking among individuals and by strengthening their links to decision-making in municipio and Pando state government, rather than by manipulating individuals to implement conservation activities according to project plans. RIPUI nurtured the energy of regional human relations, and thereby avoided a common conservation mistake of designing work with communities as though they existed in isolation from one another and larger society – a mistake which undermines rural residents’ initiative. We were committed to the idea that this was not going to be another backroom deal.
made between a conservation organization and a national government. To mobilize regional energies, we embedded the application of the RIPUI tool in a communication strategy\(^{35}\) that generated and shared clear information as a means for uniting people into discussions;\(^{36}\) built strategic alliances among disparate actors; promoted public deliberation among constituencies; and moved toward a common decision. Activities included a local art competition, the results of which were used to promote awareness of the ANMI’s purpose, and a video documentary, which was made midstream in the process to promote broad participation in the debate and decisions yet to be made as the process proceeded.\(^{37}\)

Given existing power relations, long-term landscape-scale conservation

[Rather than an other backroom deal made between a conservation organization and a national government... RIPUI mobilized local heritage obligations... a new path... giving new meaning to old words...]

projects, regional governments and private businesses can set aside their own individual interests, and collaborate together to follow a rights-based approach to sustainable conservation that relies on the cross-scale strengths and energy of living heritage. Rights-based initiatives are occurring in various forms around the world, in accord with local policy and cultural conditions. They show governments, donors, and NGOs a new path forward giving new meaning to the old words – poverty, heritage, and landscape-scale conservation.

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**Notes**

2. e.g., Molnar, Scherr and Khare, 2004.
4. Rights-based approaches have sometimes been short-circuited to avoid human and environmental rights issues by narrowing to focus on property rights – as for example in rights-based approaches to marine fisheries management and genetic resource management.
5. Alcorn et al., 2003.
8. A case in point would be the recent situation in Guatemala where local Mayan communities who are sustainably managing their forests are resisting efforts by a World Heritage foundation to cast them as environmental villains and force changes in national policy to cancel their legal rights to the forests. According to the public heritage symbols, Mayans are extinct peoples, not modern poor peasants sustainably logging the forests around the ancient ruins of their ancestors. Modern Mayans’ rights are threatened because tourism promoters fear that incorporating this modern Mayan image would damage tourist markets in the Peten.
12. The indigenous population of Pando is estimated at less than 1000 people.
13. In addition, a few, small indigenous communities opted to be recognized as campesino communities instead of taking the more difficult route of claim-
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15 A municipio is a subunit of territory under municipio government control, similar to a county level in USA, or a district or taluka in other countries. The municipio is the local government unit that has been strongly empowered under Bolivia’s de-centralization policies. Municipios together form a “department” (in this case Pando), which functions similarly to a province or state level government in other countries, although Bolivia’s departments function primarily as administrative units for central government and have very limited authority of their own.

16 The Field Museum, 1999.


18 The core institutions that have been involved in this effort include the University of the Amazon of Pando, the Fundación Yangareko, the municipio governments of Filadelfia and Bolpebra, and The Field Museum of Chicago. A wider circle of collaborators has included SERNAP (Bolivian National Protected Areas Agency), Fundación Pando, the federation of campesinos (FSUTCP), local associations of Brazil nut producers, and other civil society and government actors that comprise the trinational MAP (Madre de Dios-Acre-Pando) initiative.

19 Alcorn et al., 2006.

20 Land titling in Bolivia is the responsibility of the National Institute of Agrarian Reform (INRA), which functions according to the Law of National Service of Agrarian Reform. The INRA Law categorizes rural properties into several categories one of which is community property, which is inalienable, indivisible, and collectively owned. Community property is governed by an assembly of heads of household. This Assembly creates and enforces statutes and regulations. Within a given community, individual property is recognized. Titles for Tierras Comunitarias de Origen (TCO) are awarded to indigenous territories. Three other title categories cover “individual landowners” under which title which is awarded to an individual or a company.


22 Barraca estates (barraqueros) historically exploited labor by locking local communities into a patron-client relationship – “comunidades cautivas” - for ensuring labor on the remote barraca for Brazil nut collecting, rubber tapping and cattle care.

23 The Field Museum (FM) was interested in conservation of Pando’s biodiversity because it had carried out several rapid biological inventories in Pando in the 1990s, and wanted to secure the long term future of biodiversity in Pando with funds from the Gordon and Betty Moore Foundation. FM first modified the sociological tool “social asset mapping” to celebrate cultural diversity and identify local organizational strengths for conservation activities in the Calument area of Chicago, Illinois, USA. Subsequently, Alcorn, Macedo and Wali modified the tool to be more participatory for application in the buffer zone of Cordillera Azul National Park, Peru, in 2002. This version of the tool was christened MUF (Mapeo de Usos y Fortalezas – mapping of natural resource uses and strengths). These prior FM modifications of the social asset mapping tool were designed for use by project teams in alliance with government agencies. Further discussion of social asset mapping is available at http://www.fieldmuseum.org/calument/assetmap.html

24 Alcorn et al., 2006.

25 Other ANMIs, declared by the national government in Bolivia, have generally been nonfunctional buffer zones with “paper” status.


27 Discussion of poverty measures is beyond the scope of this paper. Definitions of poverty often use measures related to consumption of items for sale, and cast poverty alleviation as increasing income for purchases (e.g., World Bank 1996) and devalue direct production of necessities. When linked to protected areas management, the poverty alleviation approach has been popularly criticized in Bolivia as being tantamount to a globalization strategy to force rural people off their lands so they add their numbers to the population of consumers/buyers and serve as low paid labor for production of consumer goods.

28 This RIPUI finding confirms the level of dependence on biodiversity described in Zapata et al. (2003) study of a single Filadelfia community inside Manuripi Wildlife Reserve.

29 The remainder of the communities did not participate in land use planning (POP-COM) because they were disputing the borders granted in their initial titles and wanted to wait until they had resolved their title issues.

30 The land of communities ranges in size from several thousand hectares to over twenty thousand hectares. As part of the RIPUI, most communities took advantage of the RIPUI initiative’s offer to assist communities to carry out their POP-COM land use mapping and planning required by the Superintendencia de Agriculture for consolidating the title. Once the POP-COM is in place, the community has consolidated its rights to its forest and can expel state-sponsored logging concessions from its territory should they attempt to activate their earlier rights. Some communities also established “private reserves” on their lands – biodiversity reserves which belong to them and are registered with the state as their property, enabling them to call upon the state to defend their reserves against outsiders if it were to become necessary and eventually to be eligible to apply for assistance for managing their reserves, to possibly participate in payments for environmental services agreements, etc.

31 Chapeskie et al, 2005; Also see http://www.whitefeatherforest.com/

32 A mancomunidad under Bolivian law joins two or more municipio governments into a parastatal that can receive external funding in addition to government funding to achieve particular objectives.

33 The motto “Conservation with development – Our Decision” was chosen for the UAFB mancomunidad and ANMI appears on their logo— a form of
public heritage created from private heritage. It emphasizes their understanding that sustainable conservation is the priority as the basis of sustainable development appropriate to the region and its culture.

34 In late 2005, UAFB negotiated with WWF to begin ANMI zoning, as part of a trinational project with Dutch government support. At the same time, Fundación Yangareko, with MacArthur Foundation support, initiated project COSAMA with UAFB, to consolidate UAFB as an institution and jointly work with communities and SERNAP to improve conservation of the Manuripi Wildlife Reserve.

35 Alcorn et al., 2006.

36 The use of satellite imagery and maps from geographic information system (GIS) were key for creating shared information as a basis for discussion and planning.

37 The Spanish language video is available upon request from the lead author or from Alonzo Zarzycki, alonzozarzycki@yahoo.com.mx

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Securing indigenous rights and biodiversity conservation through partnerships in Sibuyan Island, Romblon, Philippines

Edgardo Tongson and Thomas McShane

Abstract. In the Philippines many large intact forests designated as protected areas coincide with the ancestral claims of indigenous peoples. There, security of tenure is essential to issues of conservation, development and fulfilling indigenous peoples’ rights. This paper highlights the experience of non-government organizations that collaborated with government agencies and assisted the indigenous group Sibuyan Magyan Tagabukid of Sibuyan Island to secure tenure to their ancestral domain. We discuss the challenges we encountered and the emerging opportunities for co-management in the overlap areas between ancestral domain and protected areas. The paper highlights the importance of inter-organizational cooperation as demonstrated by the various actors—i.e., government, indigenous groups, non-government organizations and academia—which resulted in synergies instrumental in fulfilling the provisions of a progressive law. Securing land tenure lays the foundation where local support for biodiversity conservation can be institutionalized and sustained.

Philippine’s Forestry Policy

The forest cover of the Philippines declined from 70 percent of the country’s total land area of 30 million hectares in 1900 to about 18.3 percent in 1999,1 which represent just over 5 million ha of residual and old-growth natural forests. Continuing upland migration, due to scarce economic opportunities in the lowlands and high natural population growth rates, exacerbate forest denudation and degradation. The lack of operational and effective on-site management in many forest areas led to open access to the forest commons. Only 19 percent of the country’s 15.5 million classified forest lands are covered by some kind of on-site management system.2 The intensity of degradation suggests that de facto management systems are inadequate to stem forest loss, especially in open access areas.

Social forestry evolved out of the failure of state forest governance. Previous policies promoted centralized management and logging concessions, which ended up also engendering ineffectual governance, corruption and illegal logging, contributing to the twin problems of forest degradation and upland poverty.3 With the dismantling of timber concessions, forest communities asserted their rights to access forest resources and manage the same under a Community-based Forest Management (CBFM) framework. The new forestry policy responded to clamors by civil society groups for greater participation, equity, empowerment, ecological sustainability, cultural integrity and gender equity in the management of the forest resources. The state conferred tenure to forest communities through 25-year Community-Based Forestry Management Agreements.
Indigenous Peoples

Indigenous peoples, whose number has been reported in various official documents as 12 million or about 18% of the total population in the Philippines, are found in various forest, lowland and coastal areas, and are divided into 110 self-defined ethno-linguistic groups. These are among the poorest and most disadvantaged social groups in the country. The indigenous peoples have long suffered from economic marginalization, socio-cultural displacement, and political disenfranchisement. A variety of factors are called to explain this, including the lack of a vision about development for and by indigenous peoples; the absence of mechanisms on procedures of consultation with the peoples concerned; pressure on ancestral lands by economic and political development; and lack of consensus among indigenous peoples themselves about their development priorities, strategies and alliances.

Today, the ancestral land claims cover some 2.5 million hectares or 8% of the total land area in the Philippines, the majority of which overlap with intact forests widely recognized for their biodiversity. Not surprisingly, most protected areas prioritized for protection overlap with ancestral claims.

The National Integrated Protected Areas System

In 1992, the Republic Act 7586 sought the establishment and management of the National Integrated Protected Areas System (NIPAS). The NIPAS law creates a network of protected areas in the country. Multi-stakeholder structures such as Protected Area Management Boards provide roles for civil society organizations and indigenous groups. The law recognizes the claims and rights of indigenous communities over ancestral areas found within protected areas and promotes partnership in formulating and implementing plans and policies. Tenured migrants living within protected areas are provided usufruct rights for sustainable livelihoods.

The Indigenous Peoples Rights Act

The Indigenous Peoples Rights Act (Republic Act 8371) was enacted to recognize, promote and protect the rights of the indigenous peoples including their right to ancestral domain and lands, their right to self-governance and empowerment, their social justice and human rights and their right to cultural integrity. The IPRA establishes procedures for recognition of individual and communal ownership of “ancestral domains” and “ancestral lands”. The IPRA law (Sec 3 h.) defines indigenous peoples as:

“a group of people or homogenous societies identified by self-ascription and ascription by others, who have continuously lived as organized community on communally bounded and defined territory, and who have...”
under claim of ownership since time immemorial, occupied, possessed and utilized such territories, sharing common bonds of language, customs, traditions and other distinctive cultural traits, or who have, through resistance to political, social and cultural inroads of colonization, non-indigenous religions and cultures, became historically differentiated from the majority of Filipinos.”

In other words, the IPRA grants indigenous people the ownership and possession of their ancestral lands and domains, and defines their extent.

**National Commission on Indigenous Peoples**

To carryout the IPRA Act, the National Commission on Indigenous Peoples (NCIP) was created (Sec 59, IPRA) merging the Office of Northern Cultural Communities and Office of Southern Cultural Communities:

“To carry out the policies herein set forth, there shall be created the National Commission on Indigenous Peoples (NCIP), which shall be the primary government agency responsible for the formulation and implementation of policies, plans and programs to promote and protect the rights and well-being of the indigenous people and the recognition of their ancestral domains as well as their rights thereto”.

The NCIP is tasked to process ancestral land claims into private collective titles called Certificate of Ancestral Domain Title (CADT). In processing these claims, the NCIP strictly applies the requirements under IPRA including geodetic surveys, gathering of anthropological records, proofs and testimonies and facilitation of community meetings to resolve conflicts. The NCIP is staffed with 1,200 personnel and is headed by a Chairman with six Commissioners. The forerunner of the NCIP dates as far back as the American period in the early 1900s. The pre-NCIP organizations were “integrationists” in their approaches, whose main goal was to assimilate these groups into mainstream society and alleviate their poverty conditions. The office dispensed medicines, scholarships, relief goods and other material benefits to tribal members. Client groups were viewed as passive beneficiaries of assistance.

**Role of NGOs**

NGOs, on the other hand, serve as counterweight to traditional development thinking of their governments. From the standpoint of development NGOs, the indigenous peoples are not merely passive beneficiaries of development but means and ends of the development process. As human rights advocates, most NGOs view “development” from an alternative view of recognizing, attaining and fulfilling the rights of indigenous people.

The role of NGOs in development work was expanded during the Aquino presidency in 1986. The restoration of democratic space resulted in the rise of environmental NGOs responding to forest degradation and poverty. The strength of NGOs lies in working with communities and ensuring that government programs conform to local conditions. NGOs facilitate the delivery of services for rural development; developing communities as stakeholders, rather than mere recipients, initiating new approaches for project development at the community level and di-
rectly contributing to capacity building.7 NGOs working for indigenous rights promote an alternative development paradigm, based on indigenous territorial autonomy, self-determination and “self-development” or “ethno-development”. For indigenous people, the first condition for effective ethno-development is security of land tenure and local jurisdiction over natural resources within their territory. One of the most significant developments in the past thirty years has been pro-active initiatives undertaken by indigenous peoples and supportive NGOs to map and demarcate their own lands.8 In the Philippines, these independent surveys, verified by government surveyors, are accepted as a basis for land claims and the registration of land titles.

In 1996, the WWF adopted a statement of Principles on Indigenous Peoples and Conservation, which endorses the UN draft Declaration on the Rights of Indigenous Peoples. The statement accepts that constructive engagement with indigenous people must start with a recognition of their rights, upholds the rights of indigenous peoples to own, manage, and control their lands and territories and to benefit from the application of their knowledge. The premises contained in the WWF international statement of Principles helped develop the partnership framework entered into by WWF-Philippines with the indigenous groups of Sibuyan Island and assisted by indigenous advocate NGOs to secure tenure rights over their ancestral lands in Sibuyan Island.

For indigenous people, the first condition for effective ethno-development is security of land tenure and local jurisdiction over natural resources within their territory.

Site description

Situated 350 kilometers south of Manila, Sibuyan is the second largest of among the seven islands that comprise Romblon Province in the Philippines and is known as one of the few remaining centers of biodiversity and endemism in the country. It has a land area of approximately 45,600 hectares, about seventy percent of which is covered with forest. At the heart of Sibuyan Island is the Mt. Guiting-Guiting Natural Park (MGGNP)—the only remaining mountain in the Philippines with relatively intact habitats along its entire elevation gradient. Mt. Guiting-Guiting’s plant and mammal biodiversity is amongst the richest in the world.9 In the midst of this natural lushness, however, live some 50,000 people, more than half of whom live well below the government-defined poverty level. In terms of the Human Development Index, Romblon province which includes Sibuyan Island is ranked 64th out of the 77 provinces in the Philippines. The majority of the Sibuyan population engages in subsistence farming and fishing. Decades of unregulated and unsustainable use have taken a toll on the island’s natural resource base.
Sibuyan Mangyan Tagabukid
Residing in and around the interiors and upland areas of the Mount Guiting-Guiting Natural Park (MGGNP) are the Sibuyan Mangyan Tagabukid (SMT), who managed to retain a culture and tradition distinct from the lowland Sibuyan culture. While there are no existing pre-historic data on Sibuyan and Mangyan Tagabukid, early Spanish accounts in the 1700s reported a considerable population of mountain dwellers along the mountain ranges of the Sibuyan Island to which present indigenous populations trace their ancestral origins.10

The SMT are primarily engaged in subsistence agriculture – making their living through slash and burn farming (a land preparation method used in tropical countries that involves clearing land by burning the vegetation before the rain season begins), charcoal making, gathering of minor forest products such as rattans, resins, vines and honey, and fishing for freshwater fish and shrimps in the numerous water channels and tributaries on the mountain.11 They practice rituals such as paminhi (pre-planting ritual) and tugna (pre-harvest ritual) denoting respect to the spirits that play an important role in Sibuyan Mangyan culture. Several generations of kin identified to have previously inhabited the area and improvements introduced by their ancestors attest to the longevity of the indigenous peoples in the area. The ancestral domain of the SMT occupies an area of 7,900 hectares and straddles the mountain ranges of Sibuyan and the Mt. Guiting-Guiting Natural Park.

Park establishment and related ICDP
In 1996, through the efforts of local government executives and a handful of NGOs, Mt Guiting-Guiting Natural Park was proclaimed under the National Integrated Protected Areas System Act. The Park covers some 16,000 hectares of strict protected area and an additional 10,000 hectares of buffer zone. It straddles the island’s three municipalities of Magdiwang, San Fernando and Cajidiocan. In the same year, Mt Guiting-Guiting Natural Park was included in the European Union-funded National Integrated Protected Areas Programme (NIPAP), a five-year programme that aimed to establish protected areas in eight parks around the country. In 1997, with funding support from the Netherlands Government, WWF-Philippines implemented an integrated conservation and development project (ICDP) on the island to complement park establishment and the protection efforts of the NIPAP project.

The overall goal of the ICDP was to protect the biodiversity of Mt. Guiting-Guiting Natural Park through the development of sustainable livelihoods. A major objective within this goal was to improve the tenure security of the indigenous Sibuyan Mangyan Tagabukid people. Activities included strengthen-
ing their social organization, culture and customary laws as well as assisting them to become responsible stakeholders in the management of environmentally sensitive areas in which they live. The key premise of the project’s approach was that land tenure security coupled with development and natural resource management interventions that are identified, designed and implemented by the indigenous community-based organization, will ensure sustainability and responsible management of resources. WWF-Philippines, in partnership with indigenous peoples advocate NGOs such as Anthropological Watch (AnthroWatch), Legal Assistance Center for Indigenous Filipinos (PANLIPI) and the Philippine Association for Intercultural Development (PAFID), implemented a project to assist indigenous communities affected by the establishment of the Mt. Guiting-Guiting Natural Park in Sibuyan Island in 1996.

Field activities
Field interventions consisted of anthropological research and documentation, participatory mapping and planning, capacity building, legal assistance, farm support and joint ventures. The procedures and steps in identifying and delineating the ancestral domain and applying for a community title are outlined in 13 steps under the IPRA law, namely: 1) filing for petition for delineation, 2) delineation proper, 3) submission of proofs, 4) inspection by NCIP representative, 5) evaluation and appreciation of proofs, 6) survey and preparation of survey plans, 7) identification of boundary conflicts, 8) submission of NCIP investigation report, 9) map validation, 10) public notification, 11) endorsement of claim to NCIP Ancestral Domains Office, 12) review and endorsement by Ancestral Domains Office to NCIP board; and 13) approval by NCIP board of the Certificate of Ancestral Domain Title (CADT) application.

Delineation and demarcation of ancestral domain
In 1998, WWF facilitated the delineation of the ancestral domain as prescribed under the IPRA. WWF entered into partnerships with support NGOs for indigenous peoples. PANLIPI—an NGO with legal orientation and skills—had the responsibility of providing legal resources and assistance to the SMT in the delineation of their ancestral land and liaison work. AnthroWatch—an NGO comprised of anthropologists—was tasked to do the census of the indigenous people, conduct genealogy research, map indigenous territories and assist in establishing and collecting proofs to substantiate the petition for delineation of ancestral domains of the SMT. PAFID provided training in the use of Global Positioning System (GPS) and in the preparation of 3-D maps and facilitated the delineation activities. To hasten the processing of the ancestral claim, WWF, AnthroWatch and PANLIPI entered into a Memorandum of Agreement (MOA) with the NCIP. The MOA authorized the NGOs to delineate the ancestral lands of the SMT for and in behalf of the NCIP. For the NCIP, the collaboration created an opportunity to pilot test NGO partnerships in processing ancestral land claims.

The members of the indigenous community who participated in the delineation activity were identified and authenticated. A population census was conducted using genealogical mapping...
which put the number of legitimate claimants at 315 households or 1,687 individuals. The population census was followed by the gathering of proofs and other documents to support the claim. Various testimonials, written/historical accounts of SMT customs and traditions, anthropological data and historical accounts proving the existence of the SMT in Sibuyan Island, pictures and descriptive histories of traditional landmarks, write-up of names and places derived from the native dialect of the community, genealogy of elders, photocopies of Spanish and other historical documents taken from the National Archives and its English translation were gathered. These proofs were later submitted to NCIP Provincial Office for validation.

The indigenous members prepared indicative maps per cluster village that were then assembled and transposed into technical maps. The maps depicted the extent of their domain areas. WWF and its partner NGOs assisted the SMTs in preparing the survey plans, conducting the perimeter walk and preparing flat maps with the necessary technical descriptions. The resulting maps were consequently validated with the indigenous communities. Boundaries, markings and the names of places were re-checked and appropriate corrections made.

The delineation of the ancestral claim started in September 1998. The indigenous peoples played an important role in facilitating the formation of delineation teams that were tasked to properly manage the delineation of the ancestral domain. The teams came up with a strategy and detailed plans for the actual survey of the ancestral domain. Members of the communities, as well as government agencies, were invited to participate in the survey. Two teams were formed for the field delineation and demarcation activity. The teams marked trees and used natural features such as stones and streams to demarcate the domain.12

The council of elders convened to identify the landmarks indicating the boundaries of their ancestral domains on a topographic 3-dimensional map. Sacred sites, burial areas, hunting, gathering, collecting and fishing grounds, swidden farms and residential areas were mapped. The process of 3-D mapping involved community gatherings and trainings that provided community members an opportunity to chronicle their culture, economy, history and struggle as a distinct community. The map used local dialect and traditional place names which demonstrated the communities’ knowledge and predominant role as steward of the area.

The 3-D map was assembled and displayed in their tribal hall for use by the members. A community resolution attesting to the veracity of delineation and the content of the map of the ancestral domain was likewise drafted. The ancestral domain maps were published in the provincial newspaper. These maps were posted in prominent
places within the locality such as municipal halls, barangay halls, and indigenous community centers. The proofs together with the maps with the technical descriptions and notices of publications were submitted to the NCIP Provincial Office for validation. In validating the claim, the NCIP Provincial Office conducted an inspection with the SMT, adjoining communities and other affected entities to verify the landmarks of the ancestral domain and the physical proofs supporting the claim.

After validation, the NCIP Provincial Office endorsed the Ancestral Domain Claim to the NCIP Regional Office for verification. After further review of the proofs and evidence, the claim was finally endorsed to the Ancestral Domain Office (ADO) of the NCIP. After establishing and acknowledging the veracity of the claim, the ADO endorsed the application to the NCIP Board for its favorable action.

**Preparing a management plan**

The results of the delineation and research activities were fed into village workshops that led to the formulation of a comprehensive management plan, also known as the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP). The preparation of the ADSDPP was formulated through a series of community consultations at local community clusters and an island-wide workshop. After its formulation, the ADSDPP was presented and explained in a community assembly.

Under the ADSDPP, the indigenous peoples agreed to ban logging (except for subsistence use), the cutting of trees within 25 meters from river banks and streams, and the use of poison and/or explosives in catching freshwater wildlife— including but not limited to shrimps, eels and fish.

A community coordinator carried out organizational and institution-building activities to revive non-functional tribal councils and federate them into a CADT-wide organization that would implement the ADSDPP. WWF and PAN-LIPI organized paralegal training activities and orientation seminars on existing laws. The project sponsored study tours, cross visits and made it possible for SMT leaders to participate in meetings, conferences and dialogues on indigenous issues. SMT cultural practices were documented and customary laws codified. The project initiated small-scale plantations (i.e. abaca, coffee, tree seedlings) through joint venture arrangements with some of the members. The SMT presented their plans and concerns during consultation meetings with local government officials.

**Picture 5. Proposed weir site for a future 1 MW mini-hydroelectric project.**
*(Courtesy Edgardo Tongson)*
Results
Socio-economic monitoring of sampled indigenous members show positive improvements in the social, economic and political conditions of the indigenous community. Results from focus-group discussions show perceived reductions in interpersonal conflicts, gambling, wife-beating and alcohol drinking. Male members are now more involved in planting root crops, i.e. *gabi, camote, bondo*, and other productive ventures such as *abaca* (Manila hemp fiber) farming supported by the project. The female members participated in enforcement actions and proved effective in dissuading mostly male poachers from entering their territories.

In 2001, the NCIP approved the application for a Certificate of Ancestral Domain Title covering some 7,905 hectares that would benefit some 335 indigenous households. With the awarding of their ancestral domain, the indigenous people of Sibuyan emerged into a very powerful position being able to confront and negotiate with other traditional power wielders, e.g. loggers, parks, politicians, mining, hydroelectric power company and other interests.

These new found rights have encouraged the Sibuyan Mangyan Tagabukid to become more vigilant over their domain and to regulate access by outsiders. Illegal logging in the forest overlap has been significantly reduced as a result.

Conflicts between the indigenous people and the park authorities had their beginnings in 1996 where initial efforts in park establishment led to the loss of access by indigenous people to non-timber forest resources. The overlapping area consisting of old-growth forests had been the traditional source for non-timber forest products—rattan, honey, almaciga resins—for the indigenous community. The restrictions resulted in denial of their rights and created hostilities toward the park authorities. Fortunately, the premises behind the recognition of ancestral lands under both the NIPAS and IPRA laws are similar if not identical. Both plans prepared by the park and the indigenous community highlight the importance of protecting the forests found in the overlap area. However, the difference lies in the SMT’s desire to retain the rights of the indigenous people to access non-timber forest products which have been their traditional source of livelihoods. These convergences provided an opportunity for the indigenous people and the park authority to develop a collaborative or co-management framework where complementation instead of conflicts could prevail.

Discussion
The IPRA law is considered a revolutionary law as it goes against existing power structures. The process involves
the awarding of ancestral domain titles to *bona fide* indigenous communities; developing their capabilities and empowering them to manage their ecosystems and resources for self-sustenance and self-governance, preserving their indigenous knowledge systems and traditions, and protecting their rights and their culture.

Already, there have been violent incidents and deaths among indigenous communities who have crossed powerful interests. The law seeks to tilt the power structures traditionally biased toward mining, hydro-electric power, agro-industrial and environmental interests. Fulfilling the provisions of the IPRA would mean observing the operating principles of participation, equity and empowerment. Several provisions in the IPRA implicitly embody these principles. First, the act promotes self-delineation, i.e. delineation of ancestral boundaries by the indigenous people without outside interference. Here, the domain boundaries extended to the foraging areas, burial grounds, sacred places and swidden farms. This new definition of ancestral territory covered larger areas unlike older tenure instruments which only covered their houses and farms. And, second, the IPRA guaranteed the right of indigenous people to give their free and prior informed consent to any development project initiated by outsiders within their ancestral land.

The institutional fit between NCIP and IPRA are still far from desirable. Under their new IPRA mandate, the NCIP bureaucracy has to deal with its prevailing mindset in order to shift from “integrationist” approaches to empowerment as the ends of development. Notwithstanding the mindset change, funding constraints hampered NCIP capacities to implement the law. The NCIP targets 56 more CADTs covering some 1.7 million hectares for which it says it can provide some funding and can implement or complete the titling process. For 2004, the budget allocation of the NCIP amounts to PhP 28 million. At a surveying cost of PhP 1,000 per hectare, the NCIP can only survey 28,000 hectares or 1.6% of their target. Clearly, the resources of the NCIP are not enough to meet their targets.

Realizing the fruits from this initial collaboration in Sibuyan Island, the NCIP now considers the Sibuyan experience as a template to guide processing of future land claims and engendered working relationships with civil society organizations and other “non-formal” sectors. The IPRA provides the platform upon which both government and NGOs can share the mandate and pool their resources to implement the law. In its seven years of existence, the NCIP has granted 24 ancestral domain titles representing 543,000 hectares, of which titling for 106,000 hectares or one-fifth of this area was supported by NGOs.

**Conclusion**

The Sibuyan experience shows that partnerships between government and non-government organizations (and among NGOs) based on mutual cooperation, respect and shared aspirations can indeed achieve objectives beyond the means and capacities of any single organization. The support shown by
Poverty, wealth and conservation

...recognizing, fulfilling and protecting the traditional rights of indigenous peoples over their resources and unlocking their capacities to manage them...

To conservationists and development planners worldwide, it has been postulated that the conservation of biological diversity in the developing world will not succeed in the long term unless local people perceive those efforts as beneficial to their economic and cultural well-being. By securing their tenure rights, the foundation has been laid for the long-term management of the forest resources and its biodiversity. The example presented in this paper highlights many of the issues and challenges that link indigenous peoples and protected areas. By recognizing, fulfilling and protecting the traditional rights of indigenous peoples over their resources and unlocking their capacities to manage them, indigenous peoples can indeed become powerful allies in the fight to protect biodiversity.

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Notes
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Tigers, people and participation—where conservation and livelihoods go hand in hand

Ashish Kothari and Neema Pathak

“We are sharing power with the communities, and becoming stronger in the process.” These words of a forest official kept ringing in our heads as we headed out of Periyar Tiger Reserve in Kerala, after a brief but eye-opening visit. Over the four days we were there, we had seen living proof of the success that a participatory approach could bring, and the transformation that can be achieved by a small dedicated group of people.

Till about five years back, Periyar was faced with the same conflicts that plague most other wildlife protected areas in India. Relations between the Reserve officials and local rural communities were tense, to say the least. At least a hundred cases of illegal activities were registered every year against the villagers, large scale smuggling of sandalwood and poaching of wild animals was a common occurrence. As one of India’s premier tiger reserves, it had a substantial budget, and a much larger staff than many less privileged protected areas. Yet these were not adequate to stop the illegal activities. Conversely, people who had lived in the area for decades and had a customary claim to its resources for their livelihoods, faced a constant battle to get access to such resources because of wildlife and forest laws. Their alienation from the forest was undoubtedly partly responsible...
for their participation in poaching and wood theft.

That was five years back. Today, forest officials are greeted with smiles and warmth in many of the villages, cases of poaching have dwindled to a trickle, the communities seem to have much more secure livelihoods, and one does not get the sense of tension that is so palpable in many other protected areas. What explains this transformation? And is it here to stay, or is the change short-lived?

Eco-development and ecotourism

In the late 1990s, using the opportunity provided to them by a GEF-funded Eco-development Project, a set of officials set about on a series of unique steps. They held dialogues with the villages, and offered to help in solving some of their pressing problems. One of these was the severe indebtedness that the villagers had got into, with traders and moneylenders. This was partly a result of poor returns from their main agricultural crop, pepper. A major part of the profits from the sale of pepper, which was being sold at exorbitant prices in the markets outside, was being cornered by middlemen. Small landholdings and small returns were forcing farmers to convert most of their land to pepper with little or no land left for growing food, increasing the dependence on the market for food. Starting with villages like Mannakkudy and Paliyakkudy, the department helped to pay off the debts, and eliminate the middlemen. Villagers were then encouraged to channel some of the increased remuneration to a Community Development Fund, through the formation of Eco-development Committees (EDCs). This Fund could then be used to pay off further outstanding debts, and to provide loans to poorer households to invest in seeds or other agricultural inputs. This also reduced dependence on illegal extraction of forest produce for income generation among the villagers.

To the eco-development staff it was clear, however, that income from such measures would not be adequate. In particular, officials realised that to off-set the income from “illegal” activities such as fuel wood sale, poaching, and so on, there was a need for some viable alternatives. In discussion with the villagers, the idea of using some of the revenues from Periyar tourists, was hit upon. As one of India’s most visited tiger reserves, Periyar gets about 400,000 tourists per year, and till the late 1990s all the resulting income was being cornered by private or state tourism agencies, resorts, and shops in the nearby town...
The intertwined roots of poverty, wealth and environmental degradation

Conservation can end up enhancing poverty... …but conservation can also provide livelihood benefits…... if initiatives embrace rights, secure access to resources and real participation of Kumili.

The eco-development team identified different groups of villagers dependent on the Reserve’s resources: a group dependent on extraction and sale of cinnamon bark, another group engaged in sandalwood and animal poaching, groups relying on the forests for grazing, others dependent on forests for firewood. In addition there were daily wage forest watchers for whom the government no longer had enough money to pay salaries. For a start, officials offered to drop legal cases filed against those who agreed to participate in the eco-development activities. This broke down the smuggling and poaching network. Those who were earlier involved in illegal trade, knew the trade routes and people involved, hence their expertise proved extremely useful in anti-poaching activities.

After many deliberations with these groups, user group based eco-development committees were established. Specific zones were identified from where fuelwood could be collected and cattle could be grazed. A shop was established in Kumili town, where fresh chemical-free milk from these villages could be sold.

Prior to the eco-development programme the tourists would mainly come for a boat ride in the Periyar Lake. Detailed community based tourism programmes were worked out, the staff contacted the hotels in Kumili, and requested them to include forest treks in the tourist itinerary. Aware of the negative impacts of large-scale tourism, it was decided to strictly monitor and control the number of tourists entering the PA. Also tourist activities are deliberately kept to the tourism zone. The forest treks include a one night and two days programme for those interested in wildlife, handled by the ex-poachers eco-development committee. Also taken out are morning and evening walks for a small group of people through a part of the forests. These treks are managed by the ex-cinnamon bark collectors and tribal trekkers. The members of the eco-development committee take turns for night patrolling of forests. The EDCs also handle a small shop near the Tiger Reserve gate, where they sell T-shirts and material produced by villagers, and hire out binoculars.

The income generated through the above activities, goes into the accounts of the respective eco-development committees, from where each member of the committee receives a monthly salary as well as maintenance and other costs. For the daily wage forest watchers, the state government is able to provide only 12 days salary; the rest of the salary comes from the eco-development committee’s account. This way the Department has been able to retain a few dozen staff that would otherwise have had to be laid off.

Interestingly the areas where treks are taken to or where the tourist activities are concentrated are also areas which are amongst those most prone to smuggling and poaching. According to the Reserve officials, involvement of local villagers in the protection activities has freed some staff to move towards the Tamil Nadu border, which remains a threatened and open boundary.

Our discussions with the villagers revealed that the overall income of the villagers after the initiation of the eco-development was less than from smuggling and other illegal activities before. Yet the standard of living today seemed better, where women felt dignified, men were not forever on the
run from the police, and middlemen and moneylenders ceased to dominate. Life, they said, was now more secure and respectful.

Another interesting body was called the Swamy Ayyappan Poonkavana Punarudharana or EDC (the name Lord Ayyappan Forest Regeneration Committee is after a local deity—Ayyappan—for whose worship large numbers of pilgrims come to Sabarimala temple located within the Tiger Reserve every year).

This EDC was created to handle two of the pilgrimage routes through Periyar to the intensely visited holy spot at Sabarimala. This EDC provides alternative fuel source, waste management, and other conservation-oriented facilities to the pilgrims, who were earlier rather destructive in their use of the forest they were walking through.

The people respond

Three-four years into the initiative, forest officials got a pleasant surprise when, on 24th November 2002, a group of women from nearby villages started patrolling the forests. They formed a “Vasant Sena” (which literally means the “Spring Army” but here signifies the army of women), with 6 women volunteering to go on patrol every day, on rotation. They also began to maintain records of the flora and fauna they came across along with any illegal activities, if any. A year later, when the 100-plus women of the Vasant Sena met on 24th November 2003, they had kept up the vigil every day for 365 days. At this celebration of the first anniversary of this unique initiative, they discussed how to continue the patrolling, how they would sustain themselves, what sort of relations they wanted with the Forest Department. When asked what motivated the effort, the simple response was: “we do this for our children...if the forest does not survive how we will?” Officials, who were wondering if the initiative was taken to garner some funds from the government, are now convinced that it has nothing to do with the monetary or material considerations. When asked what they expected from the Forest Department the women said “only that you remain the friends that you have been”. The past history of tension and frequent harassment was probably still fresh in their memory, and it was the end of this that seemed to matter more than money. Nevertheless, to honour...
and encourage the initiative, the department has provided a raincoat, cap, and backpack to each woman, for use during the patrolling.

The quiet transformation in Periyar is manifest not only in the better relations amongst officials and villagers, and enhanced livelihood opportunities, but also in the social arena. Reportedly, indebtedness to money lenders and heavy alcohol consumption among men had in the past led many women to turn to prostitution in the tourist town of Kumili, and the men to various ‘criminal’ actions. The availability of more dignified opportunities in the last few years had allowed people to move away from such demeaning activities.

Another powerful example of how the initiative has helped create a stake in conservation, was recounted to us by two people from the adivasi (original settlers or Tribals) settlements. They spoke of how some social activists had come to them in the recent past, trying to incite them into encroaching into the Tiger Reserve as a legitimate adivasi claim on land. In both cases the villagers had refused, saying that they would continue to demand more land from the government, but would not grab forest land for the purpose.

How has this initiative affected the ecosystem and the wildlife therein? Our conversation with the members of the eco-development committees indicated that there has been substantial increase in the wild animal populations. As one trekker mentioned “when we were poaching it took us days to find one gaur, now that we are taking the tourist around we find them everywhere!” The Reserve officials also assert that wildlife has significantly benefited.

Can the initiative last?
So what has made this transformation take place, when in many other parts of India, eco-development initiatives have been either dismal failures or at best inconsequential? It is not possible to provide simple answers to this, and perhaps there are many intangible factors that will never be discernible. One factor may be the generally high level of social mobilisation in Kerala compared to most other states of India... and maybe also the higher level of literacy. The successful recipe of the Vasant Sena certainly seems to include such ingredients. But one of the biggest reasons seems to have been a set of highly motivated, innovative, and democratically-inclined forest officials... a team... with constant discussions and deliberations, regular experimentation, improvement through feedback... open... sensitive... not afraid to try bold ways of achieving local support...
people around them. In their relations with the villagers, we found them more like social activist NGO representa-
tives than government officials... or rather, like what government officials should be! They had the interests of
wildlife conservation squarely in their sights, and often engaged themselves in lengthy discussions on impacts of
people’s participation on wildlife, yet they were not afraid to try bold ways of achieving local support and of putting
people’s needs also as a central focus. One example stuck in our minds. Aware that the adivasis were dependent on
fish from the Periyar Lake within the reserve, but also that such fishing may be considered to be ‘illegal’, they con-
tinued to permit fishing. They simply stated that the Tribals catch the exotic fish species that had entered the res-
ervoir from an adjacent private estate. The argument could then be made that this activity was good for the indigene-
ous species threatened by exotics (the wildlife law permits activities that are for the benefit of wildlife)! Indeed, the
argument is doubly valid, for not only does this help to reduce exotic populations, but it also provides a continuing stake amongst the villagers to protect the reserve.

But, we asked, is access to livelihood resources are not established as rights, not only non-detrimen-
tial to conservation objectives, but actually supportive since it helps to check illegal activities by outsiders...

...no need to relocate the one village inside the Periyar Sanctuary, as its presence is not only non-detrimen-
tial to conservation objectives, but actually supportive since it helps to check illegal activities by outsiders...

Picture 3. Community based tourism at Periyar has helped generate livelihoods for local tribal people, and created a greater stake for conserv-

(tially faulty.... An equally, if not more, important focus should be on promot-
ging the positive relations of these people with the forest, including their traditional knowledge and practices of sus-
tainability. Finally, they expressed a clear preference for involving local communities in the management of the Reserve, going beyond the current eco-development model of pro-
viding biomass and livelihood needs. Interestingly, they felt that there was no need to relocate the one village that was inside the Periyar Sanctuary, asserting that its presence was not only non-detrimen-
tial to conservation objectives, but actually supportive since it helped to check illegal activities by out-
siders. All this flies in the face of conventional thinking on protected areas, which has advocated a clear exclusion of local communities from any involve-
ment with protected areas.

(Courtesy Ashish Kothari)
Our next concern was: how would this initiative be sustained? The GEF project was drawing to a close in early 2004, what would happen after that? What if resources dry up, but even more than this, what if the current set of officials is transferred? This was a concern also voiced by villagers, and by officials, who did not want to see five years of hard effort coming to naught if the Reserve came under an insensitive set of officials. And so the Periyar team embarked on another innovative step, the formation of a Periyar Foundation (see Box 1 for details). This autonomous agency was set up in late 2004 by the state government, and has both government officials and community members in decision-making positions. This is an interesting and important experiment to watch, for other protected areas in India to learn from. It follows an earlier important step towards greater sustainability, the formation of a Confederation of Eco-development Committees, in early 2002. This Confederation enables greater collective power, exchange of experience, and conflict resolution.

Box 1. Achievements of participatory approach at Periyar Tiger Reserve and creation of the Periyar Foundation
Source: Promod Krishnan, Field Director, Periyar Tiger Reserve, Kerala, India, July 2005.

*The India Eco Development Project*, funded by the World Bank and the Global Environment Facility was implemented in the Tiger Reserve from 1996 onwards. The basic objective of the project was to reduce the impact of local people on forests by providing alternate and sustainable employment and involves them in forest protection activities. The project ended on 30.06.2004, after a period of seven years. Some of the achievements of this project in Periyar Tiger Reserve were:

a. the protection of forests in Periyar Tiger Reserve improved significantly with substantial reduction in illegal cutting of trees, poaching, firewood collection, etc.;

b. employment opportunities created to the tune of around 1,00,000 man days, benefiting mostly the Tribals;

c. community based ecotourism programmes generating around Rs 60,00,000 annually and providing direct employment to more than 500 tribal families;

d. more than 2000 families participating in Sabarimala pilgrim season business and earning a decent livelihood;

e. the state Government saving around 10 million rupees annually for the management of Periyar Tiger Reserve through the voluntary involvement of local people in forest protection.

In order to sustain these achievements beyond the life of the existing project, a public Trust named Periyar Foundation was established in 2004. The main objective of the Foundation is to support Periyar Tiger Reserve management in biodiversity conservation and community development activities with a landscape perspective. Being an autonomous organisation, the Foundation has the operational flexibility of a good Non Governmental Organization while getting the support from the Government.

Some important features of the Foundation are:

- it is a Government owned public Trust;
- the foundation works through a Governing Body (Chaired by Forest Minister, Kerala and Field Director, Project Tiger is the Executive Director) and an Executive committee;
- the Foundation also has public representation, as it includes members such as a local Member of Parliament, the Presidents of District Panchayats (local political body), members of the EDC, scientists and others;
- the Foundation has hired professionals in the field of ecology, sociology, economics, education and
We recommend that this remarkable effort is followed up with other measures, such as:

- finding diverse livelihood opportunities (there is currently too much dependence on pepper and ecotourism) including through the re-orientation of rural development programmes;
- facilitating greater community take-over of tourism which is currently in the hands of private or government tour operators;
- providing additional land to adivasis as close to the current settlements as possible;
- involving communities in the management of the Tiger Reserve;
- establishing clear rights to essential resources;
- respecting and utilising traditional knowledge in conservation; and
- addressing inequalities in the distribution of benefits amongst different EDCs and village groups, some of which have been pointed out by NGOs like Equations.

Eventually, the process needs to enter even more fundamental issues, which help re-establish community-based and controlled natural resource management, and reverse the historical alienation that has taken place between adivasis and forests. There is also a need to search for alternative models of education, health, and employment that build on the skills and traditions of the communities themselves, and that help reconnect them to nature rather than alienate them further. There is already thinking towards many of these issues in the team at Periyar. The current initiative is a very good start, and it needs such vision and courage to tread further down the path of transformation.

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Livelihoods, poverty and the Namibian community-based natural resources management (CBNRM) programme: what way forward?

Christopher Vaughan

Abstract. Recent studies of conservation and development programmes recommend tackling poverty through devolution of authority, improved local governance and activities that “fit” livelihood priorities of local communities. The Namibian Community Based Natural Resources Management (CBNRM) Programme is one such example - credited with delivering rural development, poverty eradication and improved wildlife management. The achievements of the Programme are laudable but variable and complex. CBNRM has resulted in differential household and livelihood impacts with winners and losers. Changes in wildlife utilisation practices and subsequent increases in wildlife populations have primarily been achieved by increased localized control of wildlife management rather than benefit distribution. Those closely involved with the Programme have gained employment and other opportunities, but a secondary impact has been increased conflict and restricted access to wildlife for some people. In some cases this has diminished household food security and promoted unsustainable forms of wildlife hunting e.g. by snaring. The CBNRM Programme has promoted new institutional arrangements for community wildlife management, tourism and NRM decision-making in the form of community “conservancies”, leading to new social and political landscapes. Communities are however still constrained by the only partial devolution of rights and the complexity of overlapping authority and responsibility for different resources. Achieving good governance remains challenging, with a need to increase transparency and accountability for decision-making. The Programme could better address equity between rich and poor and recognise the poor as the least likely to benefit. In the short-term, people face pressing livelihood security needs, which cannot be met through existing CBNRM benefits alone. There is no single way to provide opportunities for livelihood diversification and poverty reduction. Rather a suite of interventions and a programmatic focus on livelihood priorities is needed to achieve conservation and poverty reduction targets.

Recent studies of community wildlife management (CWM) and Community Based Natural Resource Management (CBNRM) indicate the need to deliver not only conservation targets and economic incentives, but to address poverty and most importantly, the complex and multifaceted livelihood priorities of target populations. Recommendations support people-centred approaches based on good governance, with new institutional arrangements; institutionalised participation and rights based policy and legislation. Whilst people-orientated approaches have been developed and widely promoted by conservation agencies since the 1980s examples of successful community driven and owned projects, that address poverty and deliver tangible livelihood benefits are few.

The Namibian Community Based Natural Resources Management (CBNRM) Programme is heralded as people-centred and propoor and is credited with providing devolution of community rights to new local institutions and institutions, thus supporting rural devel-
Poverty, wealth and conservation

Poverty, wealth and conservation. The Programme has reportedly resulted in the empowerment of local communities, the promotion of rural development and sustainable livelihoods, good governance and improved community natural resources management (NRM). Central to the success and sustainability of the CBNRM programme is its capacity to identify and deliver programme activities that support the livelihood priorities of the rural poor in Namibia’s communal areas, thus addressing the dual goals of conservation and poverty reduction.

This paper draws on research findings from the Wildlife Integration for Livelihood Diversification (WILD) Project. It summarises a number of critical issues relating to the Namibian CBNRM programme and the poverty and livelihood concerns of communal area residents. The programme’s history, institutional arrangements, activities and current outcomes are described and its capacity to meet conservation and development agendas debated. The discussion presents suggestions for the programme to better address the livelihood needs of target populations and to deliver on the combined goals of rural development, poverty reduction and resource conservation. Whilst case study material focuses on the Namibia programme, programme and policy issues of relevance to the global conservation and development community are highlighted.

The Namibian Community-based Natural Resources Management (CBNRM) Programme

In Namibia, the government has explicitly recognised CBNRM as a rural development strategy in its national development plans and 2030 vision. The Namibian CBNRM Programme has two roots: the "community game guards” initiative developed in response to heavy poaching (particularly of rhinos) in the Kunene region (formerly Kaokoland) in Namibia’s North-west, and more recently the 1996 wildlife legislation, which provides legal conditional rights to rural communities to manage and benefit from wildlife through the establishment of registered community conservancies.

Since the Programme was established and the first conservancies registered in 1998, there are now 31 registered conservancies and a further 30 or so

Registered and Emerging Conservancies

![Picture](image.png)

Picture 1. Registered and emerging conservancies. (Courtesy Namibia Nature Foundation 2004)
more evolving (Figure 1). The total area of communal land that currently falls under conservancy management amounts to 28 % of all communal land in Namibia, totalling 71,394 km². This is just under 9 % of all the land in Namibia. The number of registered members of conservancies is approximately 37,000 individuals—just under 15% of the close to a quarter of a million population in these areas. The Government estimates that within the next five years almost the entire communal area of Namibia will be under conservancies.

CBNRM in Namibia has reportedly contributed to wildlife protection and improved wildlife management, promoting wildlife species increases in communal areas, including desert-dwelling black rhino (Diceros Bicornis) and desert elephant (Loxodonta Africana). It has provided new community organisational and institutional structures for conservation and development planning and provided employment, training and rights restoration to previously disenfranchised post-apartheid communities. Establishment of new conservancy organisations has substantially altered institutional arrangements for community and household wildlife management, tourism and broader NRM decision-making. Social, economic relations and power relations have changed with new rights for resources falling under the conservancy remit. An important factor for change has undoubtedly been the development of a rights-based legislative and policy framework and new institutional arrangements at the local level.

Measurements of Programme success have focussed on increases in wildlife numbers, macro-financial revenues generated and the numbers of conservancies established. However, as highlighted in the discussion below, these coarse indications of programme success inadequately explore the complexity of CBNRM programme effects on livelihoods. There is currently no comprehensive monitoring and evaluation system (ME) and as this article demonstrates, the livelihood impacts of the programme, and opportunities for livelihood diversification and poverty reduction are complex and variable. As a result, the Government has expressed concerns over the extent to which CBNRM is able to directly support the livelihoods of rural communities and in so doing contribute directly to the national development targets of poverty reduction and rural economic growth. Whilst the conservancy programme continues to expand, key questions are being raised about the extent to which CBNRM has been able to address issues of governance, support sustainable livelihoods and reduce poverty.

### Actors, organisations and new institutional arrangements for CBNRM

The programme is primarily promoted by national and international NGOs and donors (among them USAID and...
Poverty, wealth and conservation

WWF), which provide support for the establishment and maintenance of the initiative.

Local communal area conservancy institutions are made up of a mixture of elected community representatives and employed community staff. Main activities include defining new geographical and political boundaries, drafting constitutions, defining membership, developing management plans, accessing funding and developing joint venture activities with tourism partners and the management (utilization and protection) of wildlife resources. Conservancy organisations are also involved in decisions relating to accessing employment and training opportunities, developing and distributing benefits and employing and deploying community game guards and environmental shepherds. The latter monitor wildlife numbers and illegal use and other NRM issues, e.g. drought and fire. Local residents have to register themselves as members of the conservancy organisation to receive benefits and to be able to vote at Conservancy annual general meetings.

The Namibian Government, especially the Ministry of Environment and Tourism (MET) undertake a legislative and monitoring role with support for conservancy registration. Support is provided from regional offices and headquarters in Windhoek and through the recently developed CBNRM Support Division (CSD). However, overall, the CBNRM Programme is primarily promoted by NGOs, since government lacks the resources and flexibility of the NGOs, to respond to the demands of these new institutions. Government ministries, however, play a pivotal role in supporting and regulating community activities and developing and implementing policy and legislation.

Livelihoods, poverty and the CBNRM Programme

In general terms, the livelihood priorities of communal area residents focus on securing incomes, maintaining their food security and reducing vulnerability. Livelihood strategies include livestock and cropping, a reliance on pensions and remittances, and access to informal employment. Residents of communal areas are constrained by a lack of alternative employment opportunities, with households critically dependent on access to a variety of natural resources including fuel wood, grazing and wildlife (for direct consumption, income and socio cultural purposes). Households utilise natural resources to different degrees, with some more dependent on specific resources than others.

Indicators of household wealth include livestock numbers, cropping area, income levels and the extent to which households are more or less reliant on natural resources. Geographical location, the nature and extent of social
networks and institutional linkages are also critical factors in determining a household’s relative wealth and/or vulnerability profiles. The CBNRM Programme has a variety of impacts on the different members of the conservancies. Targeting the “poor and needy” is already a specific objective of some conservancies’ benefit distribution plans. The poor maybe hard to define and access for development purposes, yet according to WILD research they were often likely to be living on wildlife frontlines (i.e. in geographically marginal areas) and dependant on wildlife utilisation for household food security. Conversely, they are the people most unlikely to be involved in conservancy planning and development activities. As a result, Programme interventions may inadvertently favour the comparatively rich over the poorest of the poor.

Access to cash income is critical for livelihood security—providing for food, education, health care and farming. Incomes to conservancies from consumptive and non-consumptive tourism (from wildlife sales to trophy hunters and joint venture lodges) provide financial resources for local communities to develop their own wildlife management institutions and to distribute to members as incentives for ongoing resource conservation and management.

Aggregate conservancy incomes generated through consumptive and non-consumptive tourism have been significant. In 2000 the estimated total income for conservancies was just under N$3.5 million (1N$ = 6.76 US $). In 2003, the income quadrupled to approximately N$14.5 million. Much of this income has, however, been retained centrally within conservancies in order to cover their ongoing running costs, with few households yet to receive substantial benefits. Since 1998, the distribution of collective conservancy income has taken place only in six conservancies. In Kunene, the Torra conservancy payout of N$630 to registered members in 2003 amounted to 8% of the average annual household incomes for the region. The income was predominantly used to pay school costs. In Caprivi, funds were used for development-related infrastructure projects or for celebrations amongst villages.

Generated revenues can often remain in the hands of committees or other decision-making bodies and are utilised to pay running costs, whilst distribution at household level remains little more than symbolic. This, however, also relates to the long and short-term capacity for conservancies to generate sufficient income, and to the extent by which sufficient income generating opportunities exist for conservancies. Whilst benefit sharing through distributing collective revenues is potentially an attractive option (people always need and welcome cash), it often fails to meet the direct and recurrent liveli-
Poverty, wealth and conservation

The lack of a participatory process for decision-making over collective revenue distribution is also problematic. Conservancy membership lists are often outdated with decisions over the amount to be paid out made without broad consultation. In the case of Torra Conservancy payout, both members and non-members received pay-outs. This caused conflict with no transparent or agreed processes for resolution or broader community involvement in decision-making.\(^\text{17}\)

Linking wildlife, tourism development and income generation are becoming more feasible, but not for all conservancies and in the short-term people face pressing livelihood security needs, which cannot be met through existing CBNRM benefits alone. Conservancy development planning and decision-making for improved livelihood security and diversification opportunities needs to build on existing livelihoods strategies. Official support and political will at local, regional and national levels are needed to support this approach for conservancies. CBNRM could better address equity differences between rich and poor and recognise the poor as being the least likely to gain employment and to benefit equitably from distribution of meat, revenue, employment or training opportunities.

Options to target the poor and support cash and other forms of benefit distribution include:

1. the development and adoption of a pro-poor approach that identifies and supports vulnerable and poor peoples’ priorities;
2. maximising livelihood security by securing CBNRM benefits and promoting rural development through education, healthcare and employment to reduce reliance on wildlife utilisation;
3. adoption of livelihoods approaches that focus on support strategies building directly on people’s current activities;
4. acknowledgment of socio-economic differentiation specific targeting of pre-identified groups (e.g. poor and vulnerable etc);
5. full community participation in benefit distribution decision-making;
6. further research to review how individual versus collective cash payments act as incentives to change wildlife management behaviour.

Tourism and livelihoods
Tourism in communal areas currently benefits the livelihoods of a limited number of people by delivering income, employment, capacity building and career path development. In surveys car-
Carried out for the WILD project only 3.6% of respondents in the Kunene region, and less than 1% in Caprivi region, listed CBNRM and tourism-related employment as their main occupations. In Caprivi, average incomes from tourism employment in 2003 amounted to N $6,000 per annum—slightly less than the average household incomes from livestock, cropping, and natural resource sales (N$6,500 per annum). However, those who gain tourism-related employment benefit from more stable incomes and a subsequent ability to support larger social networks. Tourism jobs do, however, tend to go to individuals who are already at the higher end of the wealth spectrum, are better educated, with a higher number of household members contributing to household incomes. Again this brings into question the benefits of tourism for the poorest of the poor.

Tourism jobs tend to go to richer, better educated individuals... communities traditionally have few rights to control unregulated tourism and to negotiate benefits from existing concessions. Communities traditionally have few rights to control unregulated tourism and to negotiate benefits from existing concessions. Conservancies have limited rights over wildlife and de jure land rights remain in the hands of the government. This creates uncertainty in the negotiation process between communities and private enterprises. There is insufficient guidance from government with regard to tourism development with confusion over tourism policy and legislation. There are site-specific costs in terms of restricting access to resources resulting from changes in land use e.g. restricting grazing mobility seasonally and geographically. Community-based tourism enterprises, have failed where there has been weak local governance and lack of clear service provider support. Whilst the CBNRM programme has supported a foundation for communities to develop new tourism enterprises and seek joint ventures with the private sector, this has brought new associated costs of conflict and restriction of access. In several cases this has resulted in increased community conflict and court cases.

Opportunities to support livelihoods and tourism development include:

- better clarity on government policy relating to the position of communities in regard to existing and proposed tourism concessions and leaseholds;
- the establishment of an appropriate National Tourism Concession Framework to devolve rights and assist in the long-term financial viability of conservancies;
- government could adopt, develop and operationalise a pro-poor tourism policy, focusing on tourism developments that have positive impacts contributing directly to poverty reduction, enhanced livelihood security and social empowerment;
• good local governance could be better encouraged to deal with tourism enterprises and address conflict;
• conservancies support to develop inclusive stakeholder integrated land-use planning processes that mitigate site-specific livelihood costs;
• rights provision to communities for tourism related activities.

Wildlife management
Understanding social relations is a critical aspect of understanding the processes involved in achieving community wildlife management objectives, which is as much about conservation as it is about wider processes of social change and attempts to redistribute social and political power. In Namibia new forms of management, combined with existing institutional norms and accepted practices have led to new social and political landscapes and power configurations at the local level. Changes in wildlife utilisation practices and increases in species numbers have primarily been achieved by increased localized control of wildlife management rather than the distribution of benefits. The deployment of community game guards has discouraged poaching. This change in local wildlife management and shift in community attitudes to wildlife management has been supported by the provision of community hunts and the deployment of community game guards, who have restricted “illegal” hunting by households, through increased monitoring and the enforcement of externally-derived government wildlife laws.

Legal wildlife utilisation (e.g., game hunting and meat distribution) has provided direct livelihood benefits and acted as an incentive for collective management as well as mitigating some of the costs associated with human-wildlife conflict. This in turn has led to changes in perception by local communities, who are increasingly able to see the link between their own community conservancy management and the wildlife they are surrounded by. However, meat distribution alone contributes little to overall livelihood security, although timing of hunts and species are desirable by local people. Creating links between managing and benefiting from wildlife is important. Even in areas where meat distribution takes place, some people continue to hunt illegally for the pot – and worryingly there is some evidence of an increase in more covert forms of hunting such as snaring and trapping.23

While the use of community game guards has discouraged poaching, illegal wildlife use continues to play a critical role in people’s livelihoods and is governed by complex local social arrangements within which there is locally considered “good and bad practice”.

While the use of community game guards has discouraged poaching, illegal wildlife use continues to play a critical role in people’s livelihoods and is governed by complex local social arrangements within which there is locally considered “good and bad practice”. Approximately one quarter of households surveyed by WILD use wildlife and it is important particularly for poorer households. Wildlife use, even if “illegal”, allows least secure households to meet immediate food requirements and to reserve more secure resources, such as livestock or crops, for future use. Currently there is a gap in the knowledge and capacity of the programme to understand the extent and practices of local wildlife utilisation, and a lack of programme focus on the importance of traditional, historical and cultural practices that shape, and con-
Policy that matters!

Livelihoods and conservation—arguments shaping the debate

The intertwined roots of poverty, wealth and environmental degradation

Conservation can end up enhancing poverty... …but conservation can also provide livelihood benefits... …if initiatives embrace rights, secure access to resources and real participation

Options to support improved wildlife management include:

• conservancy and CBNRM Programme activities explicitly recognise the links between livelihood security and wildlife use for some households and build existing wild food uses into its planning processes;

• a specific initiative focuses on locally valued species rather than the current focus on charismatic high value mega fauna;

• increased awareness of the factors influencing wildlife management behaviour and the costs and benefits of control and incentives approaches;

• local norms and sanctions are developed for managing and regulating wildlife use;

• analysis of options for minimising and mitigating the negative effects of restricting wildlife access, particularly for poorer groups;

• better understanding of both the significance of wildlife use to different household types and the impact of harvesting upon the wildlife resource base;

• improved communication and broader participation in decision-making processes;

• improved understanding of the implications of devolving local hunting beyond the conservancy level;

• review of the extent by which control mechanisms support changes in wildlife management behaviour and subsequent effects on the sustainability of that behaviour e.g., moves towards indiscriminate snaring to selective hunting with dogs and spears;

• support and acknowledgement to the traditional and cultural practices associated with wildlife management and use.

Human-wildlife conflicts

Rural people, government and NGO staff all report an increase in wildlife numbers as a result of the CBNRM Programme but also, and as a consequence, an increase in human-wildlife conflict (HWC). This affects the extent to which people will continue to support conservancy initiatives. HWC is a complex problem with no single and easy solution. It results in a variety of impacts on livelihoods with poorer groups tending to suffer the most.

In Caprivi estimates of average financial loss from wildlife damage to crops, amounted to approximately 20% of average annual incomes. This does not reflect the severity of impact on those who earn considerably less or for those who lose their entire crop. Impacts to livelihoods result from income losses from crop or livestock sales, but also loss of access to valuable food sources, labour and financial investment. WILD research revealed that existing HWC data isn’t systematically collated and analysed and that there is little integration between stakeholders, including MET, other government departments, NGOs and communities.

Conservancies are increasingly seen as the responsible institutions, yet have no direct authority to deal directly with conflicts between humans and wildlife...
To mitigate the costs of HWC, the CB-NRM Programme and conservancies are striving to improve HWC monitoring and reporting systems, protect water points, introducing electric fences to protect gardens, lobbying government to simplify procedures for problem animal control, and piloting a Human Animal Conflict Compensation Scheme (HACCS).

Options to reduce HWC and support livelihoods include:

- developing participatory processes to agree locations of dams, fences and accept responsibility for their maintenance;
- offsetting HWC costs in tangible ways with support for community derived solutions with clear and transparent compensation schemes;
- supporting further development of the HACCS scheme based on community derived priorities;
- developing integrated multi-stakeholder strategy for HWC specific to regions, involving conservancies, traditional authorities and conservancy membership;
- developing a MET policy document clarifying the roles and responsibilities of government staff in managing HWC and devolving problem animal control to regions;
- supporting the systematic collection of HWC incidence data and processes for collaborative institutional and community collective action for incident reporting and prevention.

**Way forward for CBNRM while addressing Poverty and Livelihood priorities**

The above discussion illustrates how the introduction of new forms of wildlife management in Namibia has led to the emergence of new social and political landscapes and configurations of power at the local level. This has differential livelihood impacts and promotes variable options for livelihood diversification. CBNRM is a fast expanding and growing programme but still in its infancy. It is very important to assess progress as early as possible and to use research findings to dynamically adjust programme activities.

If the conservancy programme is to become sustainable and deliver positive livelihood impacts and reduce poverty it critically requires a better understanding of people’s livelihood practices and priorities. This would support processes of institutionalisation participation at conservancy and programme levels, improve planning and decision-making and the identification of appropriate conservancy-level livelihood support strategies. The poor constitute the majority, yet they face the highest costs of adopting wildlife and tourism activities by losing access to important wild resources and suffering from HWC. Current and future interventions and support activities must address differences between rich and poor. In addition the poor are the least likely to gain employment and achieve benefit equity from distribution of meat, revenue, or training opportunities. There is no single way to improve and provide livelihood support; rather a suite of small-scale interventions is needed to provide optimum strategies together with a process of institutionalised participation.

Each conservancy could develop support activities based on a participatory learning and action research processes. This would identify options towards supporting the priorities of particular groups of people, such as the rich and poor, the young and the old, wildlife users and non users, the urban and the rural, etc. Conservancies could
pilot various interventions and monitor effectiveness. CBNRM strategies to support existing and future opportunities for livelihoods diversification need to address increasing income from wildlife. Numerous social and institutional, policy and legislation issues also need to be addressed to support livelihoods and poverty reduction, as well as enabling communities to exercise rights to fully manage and benefit from wildlife.

For the majority of conservancies’ residents, the contribution that conservancy wildlife and tourism activities make was not seen as a priority or of central importance to livelihoods. CBNRM needs to further integrate programmatic activities with livelihood priorities and create links between the activities and practices of rural producers and income from wildlife and tourism. This requires an increased understanding of livelihoods, sufficient skills and resources amongst CBNRM support organisations, and the prerequisite will to deliver programme activities that “fit” the livelihood priorities of local communities.

The Namibian CBNRM Programme has supported poverty alleviation in some cases whilst also restricting some people’s access to illegal wildlife use and potentially increasing household food insecurity in others. The Programme’s development has supported improvements in localised forms of wildlife management and conservation and developed opportunities for tourism but has in some cases increased conflict. In order to better deliver on its dual objectives, the CBNRM Programme needs to integrate its activities with locally defined livelihood priorities to balance its current conservation agenda. The Programme’s achievements have provided a foundation for future development activities and are highly laudable, but are more complex than at first glance. As in any development interventions there are winners and losers and positive and negative outcomes for all parties. While CBNRM has the capacity to sustainably meet more of the livelihood needs of marginalized peoples, reduce poverty and meet conservation targets, it remains to be seen as to whether it will find the prerequisite will and resources to do so.

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Notes
2 Jeanrenaud op cit, Huime et al., op cit.
3 Jones, 1999; 2002.
4 WILD was a Ministry of Environment and Tourism, Government of Namibia research project, funded by the UK Government’s Department for International Development (DFID). The WILD project researched the implications of changing natural resource use and management arising from CBNRM programme interventions and their effects upon household livelihoods.
5 A Conservancy is the name given by the government to the legally recognized institutions established to manage new rights over wildlife. A conservancy consists of a group of commercial farms or areas of communal land on which neighbouring land owners or members have pooled resources for the purpose of conserving and using wildlife sustainably. Members practice normal farming activities and operations in combination with wildlife use on a sustainable basis. The main objective is to promote greater sustainable use through co-operation and improved management. Conservancies are operated and managed by members through a Conservancy Committee. (Ref. www.dea.met.gov.na, accessed 17/02/05)
8 Long, 2004; Vaughan et al., 2003a and 2003b.
Poverty, wealth and conservation

9 Vaughan, in progress.
12 Suich, 2003; Long et al., op cit; Vaughan et al., 2003c.
13 Vaughan et al., 2003c.
15 Vaughan in progress.
16 Vaughan et al., 2003c.
17 Vaughan et al., 2003c.
18 Long, 2004; Suich op cit. This work was part of a quantitative survey covering 1192 households in total and 573 specifically in Caprivi and 619 in Kunene region. Respondents were randomly sampled and included employees of lodges and conservancy organisations.
19 Suich, op cit.
22 Long, 2004; Murphy et al., 2003; Vaughan in progress.
23 Long, 2004; Vaughan et al., 2003a ; Vaughan et al., 2003b.
24 Vaughan et al., 2003a.
25 Murphy et al., 2003.
26 Suich,op cit.
27 WILD was a three-year applied socio-economic research project, supported by the Department for International Development (DFID) UK Government and the Namibian Governments Ministry of Environment and Tourism Directorate of Environmental Affairs (DEA). The WILD project researched the implications of changing natural resource use and management arising from CBNRM programme interventions and the effects upon household livelihoods. In addition to the final technical report WILD produced 28 working papers, 10 research discussion papers, several databases, consultants’ reports, fact sheets and posters and held numerous workshops. All of this information is available from the DEA library in Windhoek or from Wild’s website: http://www.dea.met.gov.na/met/programmes/Wild/wild.htm. Information used for this paper is derived from data generated under the project. Some figures may have changed since collection. Research topics ranged from tourism, community enterprises, meat distribution, and local wildlife use and conservancy wildlife utilisation and in depth household livelihoods research.

References
Vaughan C., Constructing conservation: wildlife, livelihoods and change in Namibia’s Northwest, Department for International and rural development, University of Reading, Reading (UK), Ph.D. Thesis (in progress).
Joint development in protected area buffer zones: three case studies in Brazil

Elke Mannigel

Abstract. Participatory conservation and development initiatives in the buffer zone of protected areas are an approach to minimize impacts on the areas and promote sustainable development in the adjacent region. Some such initiatives were analyzed in three different protected area sites in Brazil, all belonging to IUCN Category II (“national park”) and situated in the Mata Atlântica Region. The sites, however, were under the governance of different institutions acting at different levels (a national conservation body, a state forestry institute and a non-governmental organisation). Since 1995, the three governance institutions collaborated in a project supported by the German Technical Cooperation. Although the areas had different surroundings, histories and management approaches, some general conclusions can be drawn from the case studies. Functioning of participatory conservation and development projects in the buffer zones was found to be influenced by interacting factors, such as personal interest, institutional support and social organisation. On one hand, some negative factors reinforced each other and diminished participation and project success. On the other, some positive factors seemed able to contribute to the development of active and constructive partnerships. Two main participatory approaches can concern buffer zone initiatives: participation in conservation and development projects in the buffer zones and participation in the management of the protected area, for example through management contracts or committees. Focus here is on the first approach and the analysis shows that the three initiatives do not appear to have made major contributions to poverty alleviation. More positive results, however, were achieved when local actors were stimulated to promote their own development or strong institutional partnerships could be built. The institutions managing protected areas do not seem well suited to take sole responsibility for the promotion of development in the buffer zones.

Protected areas, poverty alleviation and participation

Over the past decade the perception of the role of protected areas changed from a sole conservation oriented focus to an inclusion of social and economic issues. People-oriented approaches to biodiversity conservation are now widely accepted and the linkage of protected areas to sustainable development is receiving more and more attention.¹ Many social conflicts become apparent during establishment as well as implementation of protected areas (especially for the more restrictive IUCN management categories,² which in this paper will be referred to as “parks”) and public participation and involvement of local stakeholders is seen as a possible solution.³ Two different approaches of participation for parks can be distinguished: participation through promotion of integrated conservation and development projects in the buffer zones and direct participation of local stakeholders in the management of protected areas, for example through management contracts or committees. Focus here is on the first approach concerning sustainable development in the buffer zones and its contribution to poverty alleviation. Subject of this study were three different Brazilian protected areas belonging to the IUCN Category II, for which both public participation and contribution to poverty alleviation are still controversial features. The three areas are governed
by different institutions, allowing for differentiated analyses of the processes in question.4

Integrated conservation and development in the buffer zone

Integrated conservation and development initiatives in buffer zones of protected areas are designed to minimize impact on these areas and promote local development in the surrounding region. Projects aim at the compensation of local stakeholders affected by resource use restrictions and loss in income or other hardships caused by the establishment of the protected area. Participation of local stakeholders in planning and implementing such activities is seen as essential for their long term success. Methods used for this approach are often adapted from rural development. Joint learning, multiple perspectives, flexibility and support for local innovations are seen as basic conditions to promote rural development. Along with the local realities, it is important to acknowledge policy context, organizational culture, management structures, professional norms and field practice in all these approaches, to achieve long term positive outcomes not only on local level.

However, there is still little consistent evidence that these efforts increase sustainability of conservation and rural development at the same time. An increasing number of authors questions these integrated approaches for being based on false assumptions and being implemented without taking the local social and political reality into account.5

Often perceived as conservation projects, managers fail to realize that they are in fact promoting large scale social interventions where rural development activities have to fulfill conservation objectives.

Challenges for participatory conservation and development initiatives in buffer zones are similar to those for participatory approaches in general. Most projects criticized do not consider lessons already learned in regards to local involvement and participation in rural development projects. Therefore not the approach of integrated conservation and development itself, but rather the actual implementation in the field is still full of flaws. Participation of local stakeholders certainly is no warrant for long-term conservation, but failure to involve local stakeholders may guarantee a projects' failure. The aim of this contribution is to analyze the factors influencing participation in these integrated approaches and their contribution to poverty alleviation.

How can participation be analyzed?

The participatory approaches studied are dynamic processes, changing and adapting over time. The research methodology had to be able to capture these changes. An open approach was therefore chosen, where only broad thematic outlines are defined in the beginning and questions are developed and adapted throughout the research and analyses periods. Validity, reliability and objectivity of the information were verified through the multiple sources and iterations. Data and trends observed were crosschecked from different sources. Repetition of the same observations with different actors or at different times allowed eliminating biases occurring in qualitative research. Before presenting the actual case studies a theoretical outline of participation...
is given here.

As most definitions of participation are very broad and yet often fail to capture all meanings of the term as used, a specific framework was developed for this analysis. Two different criteria are used to distinguish participatory approaches. They are elaborated and presented in the following, discussing the different understandings of participation. Figure 1 gives an overview of the framework as a whole.

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There are two distinct perspectives for participatory approaches that influence their implementation greatly. Participation can in fact be understood as:

- a mean to improve efficiency of certain interventions, resulting in a change that is sustainable and approved by a larger number of people.
- an end, necessary for equity and empowerment of underprivileged groups.

Although both perspectives are often mixed and their distinction is not always straightforward, it is important to have these different perspectives in mind when analyzing participatory approaches. In addition, there are different levels of participation along a continuum, from simple sharing of information to transfer of power and responsibilities. Normally more than one party is involved, each perceiving the process from different points of view. In most cases, one is an institution (government or non-governmental organization) promoting a development project, a change process, or a field study. The group affected by the measure in question, often referred to as local stakeholders, is the other party. Although there are often more groups involved, for example other NGOs or scientists, only the perspectives of the first two groups will be considered for the development of the framework, as their differences are more pronounced. Some different “levels of participation” are shown in Figure 1.

From the first to the last level, contributions and interventions from the local stakeholders increase and the control of the managing institution lessens. Control is partially transferred to local stakeholders and expectations increase on their part. Although different authors argue over one level over another, the order of levels does not imply here a ranking of importance or
Poverty, wealth and conservation

preference. Understanding participation as a mean to achieve effectiveness allows choosing a level of participation in order to maximize a positive outcome. Institutions then are reluctant to pass decision-making authority to local stakeholders, and levels E, F, and G are seldom used. Seeing participation on the other hand as an end to empower local stakeholders, these latter levels become preferable. It is important to emphasize that the different levels are not distinct, but rather a continuum.

It is acknowledged here that understanding participation in the literary sense of “taking part” or “acting together”, neither levels A, B nor level G can be considered participatory. In those cases, the local stakeholders or the institution are only very distantly involved in management and decision-making activities. Yet, activities on all such levels are commonly referred to as “participatory” (for example stakeholders “participation” in lectures given by the institution or community-based management of natural resources) and because of that they are included in this study.

Participatory approaches are increasingly applied to protected area management, although with different aims, objectives and methods, which result in different social impact as well as intended and unintended outcomes. Participation has been studied by various authors in different settings, but most studies focus on methodological questions or stakeholder analyses. Documentation of successful approaches is rare and urgently needed. Which kind of participation is the most adequate and what are practical methods of achieving this in already established areas with often conflicting surroundings are aspects addressed here.

Context of the studies

Participation in Brazilian protected area management is mandated through recent legislation. The SNUC, a law that established the National System of Protected Areas in 2000, foresees social participation in the establishment and management of protected areas through public consultations, establishment of committees and co-management with non-governmental organizations. Although these legal changes are quite advanced in the international context, implementation is slow, as protected area institutions have to adapt to the new requirements.

However, there are a few initiatives in Brazil that introduced participation in protected area management and started already prior to these changes. One of them is the Doces Matas Project. It was initiated in 1995 to contribute to the conservation of the remaining forest fragments of the Mata Atlântica through new and innovative approaches. Its objective was to establish participatory management systems for protected areas, focusing on interactive processes between different institutions and local residents.

The Mata Atlântica, also called the Brazilian Costal Forest, once extended along the Brazilian east coast and covered the mountain ranges with a diverse forest, including many endemic species. Today it is considered one of the 25 most important hotspots for biodiversity conservation worldwide, but human settlements, agriculture and industry only left about 8% of the original vegetation cover.

The Brazilian institutions involved in the Doces Matas Project are two Brazilian government institutions from different administration levels: the federal Brazilian Institute for Environment and Renewable Natural Resources
Policy that matters!

Livelihoods and conservation—arguments shaping the debate

The intertwined roots of poverty, wealth and environmental degradation

Conservation can end up enhancing poverty... …but conservation can also provide livelihood benefits… if initiatives embrace rights, secure access to resources and real participation.

Focus of the Doces Matas Project are three protected areas situated in the watershed of the Doce River (see Figure 2), each managed by one of the institutions just mentioned:

<table>
<thead>
<tr>
<th>protected area</th>
<th>managing institution</th>
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<tr>
<td>Caparaó National Park</td>
<td>IBAMA</td>
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<tr>
<td>Rio Doce State Park</td>
<td>IEF</td>
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<tr>
<td>Mata do Sossego Private Reserve</td>
<td>Fundação Biodiversitas</td>
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The national park and the private reserve are characterized by their location on the higher mountain ranges, providing water for the surrounding region, while the state park is dominated by a lowland lake system. All three areas have a protection status, which allows only for indirect use through visitation and scientific research following the criteria for IUCN Category II.

The areas are isolated forest patches suffering human pressure from the adjacent area. Coffee monoculture, with frequent use of pesticides and high erosion, is expanding in the two mountain regions (national park and private reserve), while the region surrounding the state park is characterized by a very heterogeneous surrounding area including farmland, eucalyptus plantations and a nearby urban and industrial center.

Figure 2. Study areas in the Mata Atlântica region in the Brazilian state of Minas Gerais.

Caparaó National Park
The National Park is a national tourism attraction, located in two different states within a region dominated by coffee monoculture. It attracts tourists not only from the surrounding region, but also from the urban centers in the coastal region. Park management objectives and priorities changed in the last few years from a concentration on the...

Picture 1. View of Caparaó National Park. (Courtesy Elke Mannigel)
Poverty, wealth and conservation

park, to an opening towards the buffer zone, following international and national policies chances concerning protected area management. Nevertheless, conflicts still exist, enhanced by centralized actions from the headquarters of the federal institution managing the park. Expropriations, necessary after the recent establishment of park boundaries, were the most widely discussed topic. Absence of information and consultation of the local land users generated conflicts and mistrust. Another difficulty was the differences in tourism benefits obtained by the two states, and an increasing competition between institutions.

Promotion of development and conservation in the buffer zone was initiated by the park administration and the Doces Matas Project. It includes two main initiatives: alternative agricultural practices and planning of ecological tourism. The first initiative is promoted by a partnership of organizations from the buffer zone, comprising the local offices of the state rural extension services, the forest institutes, local farmers associations and the park management. Difficulties in the beginning of the initiative were their very different institutional objectives and the reluctance of the local staff of all institutions to increase their work load and take responsibility for the partnership. Through workshops, joint field work and excursions, they realized the common goal of promoting a sustainable development through changes in agricultural practices and the advantages of joining forces. The second initiative concerning sustainable tourism development was initiated by participants of the Doces Matas Project in the state capital of Minas Gerais, far away from local realities and without the participation of local groups. Involvement of local actors started in a second step. Missing knowledge of the coordinating group concerning local interests and conflicts further complicated the process. Discussions were tiresome and joint implementation of ecological tourism projects is slow as of today.

Analysis of the participatory approaches employed in the above described initiatives showed that participation occurred at an institutional level, integrating different organized stakeholders working in the buffer zone. Different levels of participation could be identified, from shared authority (level F in Figure 1) for the implementation of environmental sound agricultural practices, to minimal participation (level A) concerning the establishment of new limits and the ongoing expropriations. Advantages of institutional cooperation for the promotion of integrated development and conservation projects were evident. Through joint institutional activities of buffer zone organizations, actions can be more easily adapted to local realities and carried out more effectively. Cooperation among local actors was more successful than among non-local groups. Due to these and other activities promoted by the park, the articulation of institutions in the buffer zone is increasing. The most prominent changes can be observed in park staff. Not only, are they working with more enthusiasm in the buffer zone, they also apply learned social skills in their day to day activities,
promoting a better image of the park in the surrounding area.

**Rio Doce State Park**

The State Park is a lowland park, managed by the State Forestry Institute. The region surrounding the park is heterogeneous, with a variety of different stakeholders and interests. Park objectives focus on conservation. Economic development of the buffer zone to minimize pressure on the park is another goal defined in the management plan. Perceptions of the relationship between the park and the surrounding area vary according to perspective. While the residents of the adjacent region find the park distant from their daily activities, park staff describes the relationship as good and see the park as a promoter of local development.

Several projects have been initiated in the buffer zone by the park administration and the Doces Matas Project. Production of banana sweets from organic banana plantations, and of bamboo furniture and sweets from other local fruits are some examples. Most projects were initiated through discussions with local actors (farmers, school teachers or other community members), but without institutional support from headquarters. Environmental education and an integrated plan for the prevention and control of forest fires are other important initiatives, where the park cooperates with buffer zone institutions. Participation in development initiatives in the surrounding area is seen as a mean to improve park conservation by staff of the Forestry Institute. Nevertheless, park staff envisions a more active involvement of stakeholders than staff from the distant headquarters. As this engagement does not correspond to an institutional priority, other tasks are seen as more important by the decision-making level and incentives are entirely absent.

Stakeholders from the buffer zone do not question the existence of the park. However, depending on prior contact to the park, their educational level and their social organization, they demand a more active participation in planning and execution of the development initiatives in the buffer zone. The conservation and development activities were not a priority among the park administrations tasks and even the local actors, used to outsiders planning their activities, did not take responsibility for them.

Participation occurred at different levels over time and space. For most of the initiatives analyzed, the level of involvement was low (level B to C in Figure 1). Negotiation and interactive participation (levels E and F) existed only for specific concerns, such as fire prevention or environmental education, where contracts with municipal governments or industrial companies were signed.

![Picture 3. Production of banana sweets in the buffer zone of Rio Doce State Park. (Courtesy Elke Mannigel)](image)

**Private Reserve of Mata do Sossego**

The Private Reserve is the smallest of the three areas owned and managed by an NGO. In contrast to its size, the reserve has an important contribution...
to conservation as it is situated in a larger forest remain and harbors one of the most threatened primate species of the region. The rural communities surrounding the reserve are characterized by coffee monoculture by small-scale farmers, with little access to economic or social services. Contacts between the reserve staff and the surrounding communities were good and regular in areas where activities were carried out, but more distant with other communities, due to time and transportation constrains. Relationships with local associations were collaborative and exchanges occurred frequently. Cooperation with state institutions depended on personal interest of staff in the local offices, making the relationships at times complicated.

The work of the NGO focused on the communities and the establishment of sustainable agricultural techniques and agroforestry in the coffee plantations. Contact was initiated through participatory rural appraisals, where whole communities were called to discuss their problems. In the first community, conservation objectives were only a very small part of the issues listed as important. This changed over the years, as work initiated in new communities and conservation objectives became more important in the region and were stated more clearly by the NGO. Farmers associations got initiated and alternatives to coffee monoculture came to the fore.

Reserve staff and employees working in the headquarters had different perspectives of participation in local development. Their opinions diverged on optimal level of stakeholder and community involvement. Reserve staff saw participation initiated during development approaches as an end to empower local communities and stakeholders to promote their own activities in the future, envisioning an interactive participation (level F), or the take over of responsibilities by communities (level G). Focus for NGO staff from headquarters was the conservation of the reserve and the development activities were seen as a mean to get the support of the local communities for their objectives.

All different levels of participation could be found in the relationship of the NGO with the rural communities and the different stakeholders in the area surrounding the reserve. Minimal contact to the rural communities was observed in areas outside the project intervention (level A), but interactive cooperation with shared responsibilities (level F) could also be frequently observed for certain topics in the last few years. Transfer of responsibilities (level G) did only occur for very specific tasks, and NGO staff acknowledges that this might be more possible in the future. Involvement of institutional actors, especially the state institutions, depended on personal interests, as institutional priorities did not include rural development or alternative practices.

The initiatives might not assure immediate conservation of the reserve or remaining forest patches in the surrounding area, but they certainly contributed to social organization within the municipality. Although support for conservation var-

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Picture 4. Buffer zone of the Mata do Sossego Private Reserve. (Courtesy Elke Mannigel)
ies depending on the personal views of the stakeholders, an increase in cooperation could be observed. Support for local development that would not cause adverse environmental impact was the common ground of communication and agreement. Environmental conservation became more important over time and agricultural alternatives became more of an issue within the municipality. Local groups acquired a degree of social awareness that prompted self-organization to defend their rights.

**How does participation work?**

In all three protected areas studied here, park managers, buffer zone stakeholders and residents of the local communities confirm changes towards a closer relationship over the past few years. Although the areas were quite different in regards to their history of establishment, the characteristics of their surrounding regions and implemented approaches, some general conclusions about participation and buffer zone initiatives can be drawn.

The context of the initiatives was determined by the political and legal back-grounds, the support provided by the international cooperation project Doces Matas and the history of the areas themselves. Although local conflicts concerning all three protected areas were common, their overall existence was not questioned, neither by buffer zone institutions, nor by residents of the adjacent rural and urban communities. The governmental areas were created a long time ago and the private reserve is small and distant to most rural communities, aspects that both contributed to acceptance of the areas.

**Desired level of participation**

Different interpretations of participation became obvious in the three case studies. The desired level varied substantially depending on the different groups involved (Figure 3).

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<th>Protected area staff</th>
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*Good: 2* indicates a high level of participation.

Figure 3. Desired levels of participation for the different actors for activities in the buffer zone.

Participation level preferred by the actors from the surrounding region varied substantially for local stakeholders and residents of the local communities in
all three areas. Institutional stakeholders were interested in participating actively not only in discussions but also in decision-making, especially concerning activities in the buffer zones or in management of the areas, where public use and other activities affected them. Conversely, participation was mainly seen as a means to improve protected area management and to assure their long term conservation by staff of the protected areas and headquarters’ staff of the managing institution. Only local staff of the private reserve, and some members of the ecological tourism group acting in the buffer zone of the national park saw participation in local development initiatives as an end and an avenue to empower local communities. Their objective was the mobilization of the communities or buffer zone stakeholders to pursue their own development goals in a sustainable way.

All protected area managers aimed at more active levels of involvement than their respective superiors in the distant headquarters, especially for activities in the buffer zone.

**Level of participation implemented**

Participation level implemented varied for the different activities and increased over time for some of them. All different levels of participation described in the framework were found in the three protected areas. Participation increased over time for activities promoted in the buffer zones of the national park and the private reserve, changing from low levels of involvement (levels B or C) to a more active participation of local actors (level E or F). Participation was higher from the beginning on in the private reserve, but in both governmental areas more active levels of participation occurred for specific activities. Involvement level of local communities was lowest in the state park (level B - C), where few changes occurred over time. The integrated plan for fire prevention from the same park, however, is a good example for shared authority (level F). Transfer of authority (level G) was found only for specific activities and concerning some stakeholders in the private reserve.

**Picture 5. Coffee farmer and intercropping with legumes in the buffer zone of the Mata do Sossego Private Reserve. (Courtesy Elke Mannigel)**

**Picture 6. Farmers market in the vicinity of the Mata do Sossego Private Reserve – a first attempt to increase income. (Courtesy Elke Mannigel)**
Factors influencing implementation of participatory approaches

The factors influencing participation could be separated into four groups: individual, socio-cultural, institutional and logistical. The different factors interact and either increase or decrease participation (Figure 4). Where participation levels are low, certain negative factors enhanced one another. Established stereotypes, insufficient knowledge of the different realities and low institutional priority interact and make it increasingly difficult to overcome existing conflicts. Established stereotypes, insufficient knowledge of the different realities and low institutional priority interact and make it increasingly difficult to overcome existing conflicts. Individual factors, such as personal contact, social skills and self-confidence were found important to raise participation levels, especially in the early phases of the process. Once participation is established, increased involvement promotes a series of positive factors, which enhance each other. With raising involvement, knowledge about the local and institutional realities increases and joint planning and implementation is facilitated. Institutional factors are important for the higher participation levels. Social organization in the buffer zone and the decentralization of protected area institution are essential to reach higher levels of participation, as effective negotiations can not occur without these changes. The involvement of the decision-making level of protected area institutions in the local activities may be an alternative to decentralization, but achievement seems impossible for all protected areas.

Figure 4. Model of factors influencing participation level according to Mannigel, 2004.
Different approaches to participation in buffer zones

In the three case studies two different approaches for the promotion of conservation and development projects in the buffer zones of protected areas could be observed (Figure 5).

1. Promotion of activities in direct cooperation with rural communities

The institution managing the protected area promotes local development and conservation initiatives in the rural communities to reduce negative impacts on the area and raise acceptance.

**Advantages:**
- contact established with rural communities, towards minimizing impacts of land use and promoting local development;
- personal contacts between protected area management and residents of the surrounding communities;
- better knowledge about local realities;
- facilitation of joint learning
- better self-confidence of community residents and social organization in the buffer zone.

**Disadvantages:**
- interests of communities and staff from the headquarters of the protected area institution is low in the beginning;
- low institutional support through the protected area institution;
- difficult logistics.

In regions dominated by conflict and stereotypes, interest in active cooperation of rural community residents and staff from headquarters of the protected area agencies is low. Sustainability of the initiatives can only be granted through empowerment or continued supervision of the activities by protected area staff. To strengthen local communities on one hand, participation has to be understood as an end in itself. This is rarely the case in protected area management, as biodiversity conservation is almost always seen as more important than the promotion of independent local development. Continued assistance on the other hand cannot be provided, if the institutional interest and personnel and financial resources are low. Because many protected areas are owned and managed by governmental institutions, this approach may thus be impossible to implement.

2. Institutional cooperation

Management of the protected area...
and stakeholders from the buffer zone cooperate in planning and execution of activities.

**Advantages:**
- strategic alliances to minimize impacts on the area and promote local development;
- high interest in cooperation on thematic areas were objectives are common;
- easy logistics.

**Disadvantages:**
- prerequisite of organized stakeholders in the buffer zone;
- challenge of adaptation to local realities.

Especially local stakeholders and local protected area staff are interested in this type of engagement, as shown in the case studies. Institutional backup is often low for governmental stakeholders and protected area institutions, but headquarter staff normally does not oppose such strategic cooperation for specific issues. Implementation is therefore advisable for governmental institution in protected areas with large, heterogeneous buffer zone, where institutional stakeholders exist.

**Contribution to poverty alleviation**

In all three case studies analyzed high expectations were observed, especially for buffer zone actors, concerning the outcomes of the development initiatives. Short term financial gains were envisioned in the beginning of almost all activities. However, none of the approaches observed in this study increased economic benefits for the surrounding community substantially over the past four years. This lessened participation and enthusiasm of local stakeholders over time in some of the initiatives. Some stakeholders, especially habitants of the rural communities, expected external solutions for their problems and neither self-organization nor development on their own account took place. Where participation and promotion of the initiatives was seen as a mean to increase efficiency of the conservation, the agencies did not value the independent development of the communities and project success depended on continued external support. Where conservation objectives were stated clearly in the beginning and development initiative were seen as an end to empower communities, an increase in self-consciousness of community members and social organization in the buffer zones could be observed. Interest in organic coffee culture and ecological tourism development increased especially in the National Park and the Private Reserve. These can be first steps towards sustainable economic alternatives in the future.

For the protected area administrations, and especially for headquarter staff,
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development goals were less important. Most of them saw the participatory projects as a mean to increase management effectiveness of their areas. Institutional support by the responsible agency was therefore often low. Personal interest and capacities of park staff influenced their commitment in the initiatives. Missing knowledge about economic issues, such as access to markets, commercialization and financing mechanisms reduced effectiveness of the approaches.

Taking into account the shortcomings of protected areas, such as shortage of financial resources and specifically skilled personnel, the promotion of development projects does not seem to be a task suited for conservation agencies. Sustainable development and contribution to poverty alleviation in the buffer zone is possible, but it remains a challenge to all actors involved. In smaller areas, such as the Private Reserve, direct implementation in the local communities might work well, but for larger areas this is not viable. In this case strong partnerships and transfer of authority to local actors are necessary. Social organization of the buffer zone, social skills as well as existing social organization is necessary requirements for such transfers. As sustainable changes take time, initiatives should be designed as long term projects from the beginning on. In summary, the case studies cited in this paper show that under specific circumstances a substantial contribution to poverty alleviation through sustainable development in the buffer zone of protected areas is possible, but it remains a challenge to all actors involved.

Notes
1 One of the recommendations of the World Parks Congress in September 2003 in Durban (number V 29) states that protected areas should strive to contribute to poverty reduction at the local level. Resolutions from the World Conservation Congress in Bangkok in November 2004 state the new role of conservation organizations in poverty alleviation and development: “conservationists must strive to increase responsiveness to the concerns of the poor who live in and around areas significant for conservation” (RESWCC 3.016). A linkage of protected areas to the surrounding landscapes/seascapes is sought to restore the relationship between people and places minimizing conflicts and assuring biodiversity conservation on the long term. Another resolution form the World Conservation Congress calls upon the World Conservation Union (IUCN) to strengthen, facilitate and promote the full and active participation of all stakeholders in the implementation of activities which tangibly benefit poverty reduction and nature conservation” (RESWCC 3.014).
2 IUCN category II
3 Many authors affirm that participation is essential for sustainable management of protected areas, see for example Wells et al., 1992; Borrini-Feyerabend, 1996; Pimbert and Pretty, 1997; McNeely, 2001; Pretty, 2002.
4 A more comprehensive analysis of the case studies, including the second approach of participation

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in the management of the protected area, can be found in Mannigel (2004).

5 See for example Barrett and Arcese, 1995; Gibson and Marks, 1995; Brandon et al., 1998; Agarwal and Gibson, 1999; Brandon, 2000.


10 Fundação-SOS-Mata-Atlântica, 1998; CI-Brasil


12 All three protected areas and their surrounding region, history and important local stakeholders are described in detail in the study by Mannigel (2004).

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Participation: a prerequisite for conservation? The Natura 2000 network and local protest in the island of Cyprus.

Anna Philippou

Abstract. The establishment of Protected Areas is a tool of great importance for the conservation of the biodiversity of our planet and is characterized as “the most widely accepted means of biodiversity conservation so far supported by national and international agencies”. Local communities, however, do not always welcome the establishment of Protected Areas on their grounds with the same enthusiasm. The present study investigates the reasons that led a few villages in the Akamas peninsula, such as Inia and Droussia, to oppose the Natura 2000 European network of Protected Areas. It describes a few important findings of a qualitative inquiry conducted in both urban and rural areas of the island, aiming to examine how people value Protected Areas and whether they were aware of the Natura 2000 network. The results suggest that people living near the candidate sites of Natura 2000 oppose the network because they have been left out of the selection process. Additionally, the survey demonstrates that even though people hold favorable attitudes towards the environment, they were not familiar with the Natura 2000. People in rural areas were the most receptive to the establishment of Protected Areas on their lands. In the light of the analysis described in this paper, it appears essential that, during the next phase of the Natura 2000 local government agencies work with village residents to make certain that the opportunity is made available for them to engage with stronger voices in the decision-making processes that affect their lives.

The establishment of Protected Areas is “the most widely accepted means of biodiversity conservation so far supported by national and international agencies”. But communities living in or around Protected Areas do not always greet their establishment with the same enthusiasm. Such an example is the implementation of the European Union’s network of protected areas—Natura 2000—in Cyprus. Here we examine this case to provide insights into people’s attitudes towards Protected Areas. Specifically we address the attitude that Cypriots have towards the existence of Protected Areas and natural environment and whether they are familiar with the Natura 2000 network in Cyprus. We also analysed the way in which the Natura 2000 network was implemented in Cyprus and the reasons why the local communities in the Akamas peninsula, and specifically the village of Inia, came to oppose the Natura 2000 initiatives.

Picture 1. A local resident of Inia returns to the village from his goat-herding activities. (Courtesy Anna Philippou)
Cyprus is located in the Eastern part of the Mediterranean occupying an area of 9251 km². In ancient times it was entirely forested and was known as the “green island of the ancient world.”

It is still rich in fauna and flora with a great number of species relative to its small size and one of the richest floras in the Mediterranean basin. It is also listed as one of the biodiversity hotspots in the Mediterranean basin. The Cyprus flora includes 1800 different taxa of which 7% (128 taxa) are endemic.

Since 1974, 36% of the territory of the Republic of Cyprus has been under the control of the Turkish occupation troops, 162,000 Greek Cypriots (32% of the Greek Cypriot population) have become refugees and important habitats in the Northern part of the island have been destroyed. In addition current trends of tourist development and the over-exploitation of resources place the natural habitats and the endemic species of the island at risk.

Natura 2000 was initiated in 1992 aiming to cover fragile and valuable natural habitats and species of particular importance for the conservation of biological diversity within the EU. Its legal basis is found in the Habitats Directive (1992) and the Birds Directive (1979). Under EU law, all EU countries must adopt Natura 2000. The Habitats Directive does not call for the exclusion of all human activities within the Natura 2000 sites, but human activities can be maintained as long as they do not threaten the biodiversity objectives of the Protected Areas.

The Natura 2000 network must be seen in the context of the global growth of the coverage of protected areas—from 2.4 in 1963 to over 20 million km² in 2005. In September 2003, the Fifth World Parks Congress in Durban, South Africa, announced, “the global network of protected areas now covers 11.5% of the planet’s land surface. This surpasses the 10% target proposed a decade earlier, at the Caracas Congress, for 9 out of 14 major terrestrial biomes”. According to Geisler, in 1950 there were fewer than 1000 protected areas worldwide. The count grew to 3,500 in 1885 and to 9,800 in 1995 before exploding to today’s 105,000.

The Natura 2000 initiative may be typical in its inadequate attention to local needs. Some observers have noted that “so far, the compilation of national lists for important habitats and species around Europe has been the responsibility of civil servants and scientists who follow a set of scientific criteria, while the perspectives of local people living in those habitats have not always been incorporated in the selection process”. Indeed, there are many difficulties arising when promoting the ideals of human dignity while pursuing nature protection. “The vexing dilemma between preserving biodiversity and protecting the livelihood of populations deemed to endanger biodiversity is neither new, nor easy to solve”.

A common assumption in the conservation arena has been that local people are responsible for the environmental degradation and that people have an adverse effect on the natural ecosystems. For that reason, some maintain that conservation goals are best achieved when all anthropogenic forces are removed from the Protected Areas. In addition, the ideology that fragile nature should be preserved as an “untouched wilderness”, probably influenced by the American wilderness ethics, leads many conservation initiatives to focus on eliminating or restricting people’s access to natural resources. As a consequence, the designation of Protected Areas has been associated with forced displacement and loss of access to natural resources for the people living in and around them, with little or no compensation leading to local protest and opposition. In such cases, protected areas have increased poverty often amongst the poorest of the poor.

The problems of this approach are evident in the resistance they generate, as these cases demonstrate. In the early autumn of 1997, four landowners from Karvia, Finland, went on hunger strike to protest against the proposed Natura 2000 network. The reasons for their protest were that the landowners had not been consulted in the selection process, that they disagreed with the Ministry’s proposals and that they felt that they had to stand up for their rights. The hunger strike got much public attention and it ended a week after a visit to the scene by the Minister of Agriculture and Forestry and after nearly half of the areas had been withdrawn from the Natura 2000. Additionally, it is worth mentioning that due to the fact that no arrangements were made for public involvement, the process “prompted a huge reaction, including almost 15,000 letters of appeal nationwide”. In France the opposition came firstly from the representatives of private forests called “Group 9”, later joined by important representatives from the agricultural, forestry, game and fish-breeding sectors. “Group 9” objected to the methods used by the Ministry of Environment for the compilation of the lists of sites. They also demanded the surface
areas of the Natura 2000 sites to be reduced and financial resources to be allocated so as to compensate for the loss of earnings due to the new management measures. This led to a huge protest and the Ministry of Environment re-launched the Natura 2000 on 5th of February 1997 resulting to a decreased number of sites and the incorporation of local people in the selection process.\textsuperscript{17}

It is not only morally and socially just to incorporate local people in the conservation process but it is also advantageous to conservation.\textsuperscript{18} People need incentives in order to see conservation in a positive way. Their income losses have to be compensated based on both moral and legal standards. There appears to be an urgent need to make conservation concepts comprehensible to the general public. Adams says: “When people feel passion for nature, the arguments that carry conviction, and also the possibility of broad democratic support, are those that make sense to ordinary people”.\textsuperscript{19} A first step here has to be attempting to understand local positions and perspectives. We attempt this here for Cyprus.

The research method
In order to examine people’s attitudes and perspectives towards the environment and Protected Areas, a survey was conducted by means of a questionnaire administered through personal interviews. The survey was conducted in July 2004 in both urban and rural areas all over the south part of the island in order to shed more light to people’s attitude towards the environment and identify whether people were familiar with the Natura 2000 network. Additionally, in order to examine why people in the villages of Akamas peninsula protested against the Natura 2000, a focus group in Inia and an interview with the Community Leader of Droussia were undertaken. Furthermore, an interview with the Project Leader of Natura 2000 was also conducted in order to provide an insight on how the first phase of the project— the selection of candidate sites— had been conducted and what difficulties the Cypriot team had faced during the procedure.

Findings
The Project Leader of Natura 2000 in Cyprus reported that the compilation of the list of the candidate sites was based on scientific evidence only. Local communities were not consulted in this process. On the contrary, they were only informed after the selection procedure was over and the government began an informative campaign to raise public awareness and enlighten them about Natura 2000 and its importance. Initially, 43 areas were recognized as candidate sites for the Natura 2000 network but due to political obstacles (seven of them were in the Northern (occupied part) and three under the UK Sovereign Base Areas) only 33 were finally included in the network, covering 22.6 % of the island’s surface. More than half of these areas (18 out of 33) are private land.

The survey revealed that interviewees have favourable attitudes towards the environment and they appreciate the ecological, cultural and economic significance of the Protected Areas and the environment in general. However, even though interviewees were positive towards the environment, only 40% of them were familiar with the Natura 2000 network, the majority of these
The survey surprisingly demonstrated that people living in rural areas, even though they stated that they do not support the Natura 2000 network as much as people in urban areas, were more willing to sacrifice their land for environmental protection compared to people in urban areas.

In contrast, even though the majority of the urban sample (93%) claimed to support the network, when they had been asked whether they would sacrifice their land, a 66% stated that they would respond negatively.

These findings are very important as they suggest that rural people, the ones that are mostly affected by the Natura 2000 network are receptive to the possibility of establishing Protected Areas on their land. However there are also strong discrepancies between these declared attitudes and actual behaviour, as the Inia case illustrates.

The Akamas Peninsula

The village of Inia has a previous conservation history beginning 15 years ago. In 1989, the Ministry of Environment decided that the Akamas peninsula was of great importance and therefore it should be protected. Therefore, they drafted the Akamas scheme and the area around the peninsula was listed as a Protected Area. According to the community leader of Droussia, “…it was aiming to protect the Akamas peninsula by converting private land to governmental. The government took away our land in exchange to money and other land. However, this was only in the papers.”

Following a request from the Cyprus Government in 1992, a project was set up by the World’s Bank Mediterranean Technical Assistance Programme (METAP), and funded jointly by the very few important sea turtle nesting areas in the Mediterranean region and is protected under the Barcelona Convention. Both the loggerhead (*Carretacarreta*) and the Green turtle (*Chelonia mydas*) depend on the Akamas beaches for their survival. Also, monk seals have been occasionally reported in the area.

The main occupation of the people living in the village of Inia is sheep or goat raising and viticulture. Due to the urbanisation trend that has been prevalent in the island during the past few decades most of residents are older men and women.

The Akamas peninsula is one of the most important natural habitats of Cyprus. Both the loggerhead (*Carretacarreta*) and the Green turtle (*Chelonia mydas*) depend on the Akamas beaches for their survival.
World Bank and the EU, to prepare a management plan for the Akamas and its surrounding area. The resulting report, usually referred to as the World Bank Study, was published in 1995 and it called for the strict protection of the beaches and of the core area (which largely corresponds to the State Forest) and the creation of buffer zones around it, which would be restricted to traditional activities, with little or no development to be taking place. The main aim of this study was to declare Akamas as a National Park. However, still there is not much done and even though Akamas is considered as a National Park, there are no clearly defined boundaries. So far, only Lara-Toxeftra is listed as a Marine Reserve under the IUCN category IV.22

In addition, strict restrictions have been imposed on private land in Akamas and very small development coefficients (1/2 or 1%) are allowed23, according to the residents of the area. This scheme affected the villages in the Akamas peninsula, known in the island as the Laona district. People with lands in the Akamas scheme have protested, claiming that they have not been compensated for their land.24

When, therefore the government decided that Akamas should also be part of the Natura 2000 network, it was likely to meet opposition. Local people felt that the parts of the village that were not included previously in the Akamas scheme would now be included in the Natura 2000 network. As stated by the community leader of Drousia:25 “What was left out before is included now. We can’t get away with it. Our lands are “locked” and we cannot do anything about it.”

The residents of Inia, due to their previous experience with conservation schemes, are very negative towards the Natura 2000 network. They believed that only the land that does not have the perspectives for development or cultivation should be part of the network. They said, “We spent so much time to transform this barren land into cultivated land. Now they want to take it away from us. All our efforts, time and sweat are going wasted. We do not want this to happen and this is why we are opposing the Natura 2000.”26 These sentiments were reminiscent of Thedossopoulos’ work on resistance to sea turtle conservation in southwest Greece.27 In both cases residents emphasised their long personal histories of struggling with, and transforming land, which is then simply overridden by protected area establishment.

The government, people said, took them into account only when it was election time. As expressed by an elderly man from Inia:28 “So many times, so many governments promised to make a difference. They have done nothing yet. The same situation is pending since 1989”. The Community Leader of Drousia29 also stated that: “Three different governments in the last 15 years were unable to do anything about it”. “The community council went visiting the government officials but every time we returned to Drousia more and more disappointed.”

The sense of stunted progress is strong. As expressed by a villager from Inia:30 “We feel completely ig-
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No one is caring neither for our rights nor for us. Our village is not developing any more. Nearby villages have successfully come out of poverty and raised their living standard. Inia used to be the best village among them. Nowadays, things have changed. The government deprived us from our land rights and we cannot sell the land, or cultivate it or even built our house on it. Government locked our lands and at the same time deprived our village the opportunity to be developed. We are condemned to live in poverty”.

“We agree in protecting some areas that are ecologically sensitive. We do not agree to protect the whole village for ecologic reasons. They should at least allow some degree of sustainable development”, Mr. Andreas G. Charalambous, a residence of Inia, stated. “If the government suggested some kind of compensation in exchange with our land we would not have been that negative. But requesting our land in exchange for nothing… this is unacceptable. We demand the same opportunities that existed before the Natura 2000 network”, a 65 year old said.

Additionally, the community leader of Drousia said, “…Personally, I would sacrifice my property for environmental protection. But I would request some exchange in return. "

The Government tried to inform the citizens about the Natura 2000 through various means. However, the dissemination of information was made after the sites had been selected on a set of scientific criteria stated by EU. According to Community Leader of Drousia: “To tell you the truth, the senior officer of the Ministry of Environment came and tried to talk to us about the network. We were very negative towards it because of our previous history with the protective areas schemes. Actually we did not even let him talk about it. Then, the Ministry of Environment sent us some maps with names in a foreign language and we did not understand which areas were included in the network.”

Mr Charalambous, both a teacher and a lawyer, is considered as an important person in the village of Inia. He organ-
ised a group of 105 landowners that took the government in court to fight against the deprivation of their land.\(^{35}\) They lost the case on the ground that a government is allowed to impose restrictions on individual freedoms in the name of the common good. Now, they are raising money from the villagers (\(~£150\) per each affected landowner)\(^{36}\) and they are making procedures to be heard in the European Court of Justice in Hague. “We are hoping to bring an end to this situation. Private property is a basic human right and we are being deprived of it. The landowners should be refunded in return for their land. We will fight for our rights.” he also said.\(^{37}\)

According to Mr. Andreas G. Charalambous, “The residents of Inia demand only three things from the government: The first and most important one is equal treatment. Secondly, we demand the right to exploit our land and property in the way we want it to and lastly we want equal opportunities of economic development. We will only compromise and give our land to the government only if we exchange our land with other land of equal economic value and of equal opportunities of exploitation, if we are compensated in terms of money and if the land remains to the owner but the owner receives money for not exploiting it. We believe that we are not requesting something extraordinary or something that is outrageous.”\(^{37}\)

According to the Community Leader of Drousia:\(^{38}\) “The Government should cooperate with local communities to sort these things out. We request honesty, understanding and fair trade. It is a basic human right that every person should not be deprived of its private property. We want the common good but we should not be the ones who must pay for it”. Additionally, Mr. Andreas Charalambous concluded, “No scheme can survive if there is local opposition. The government should engage residents in the process. There must be a two-way relationship. It requires honesty, good will, cooperation and, of course, money. We want a greener environment but we cannot afford to be the ones that will pay for it. All Cypriot citizens should pay for a greener environment. The government should put green taxes. The environment is something that concerns all of us and everyone must contribute equally to make our island a better place.”

In 2004 the Government announced that it was at the final stage of preparing a management plan for the Akamas peninsula. The proper cost of management plan was around £120 million pounds to be spent on both the environmental protection and on the compensation of the landowners.\(^{39}\) Hopefully, that would reconcile the demands of the local people and the conservation of the Akamas Peninsula.

A year later (2005), however, still nothing has been signed and the community leaders of the local communities are threatening to go on hunger strike outside the Presidential Hall for as long as they can, in order to force the government to take some action and bring an end soon to the current situation.\(^{40}\) If this management scheme fails and villagers take the government to court, conservation would take a step backwards...
The unpalatable, if unsurprising, conclusion from our analysis is that schemes such as the Natura 2000 are welcome as long as they do not affect the personal interests of the citizens. The Natura 2000 wishes to reconcile a scientific objective— biodiversity conservation— “while taking economic, social, cultural and regional requirements into consideration”. However, the separation of the scientific standards of the Natura 2000 network from those of the social debate has brought strong local opposition from persons in the island of Cyprus as it did before in other European countries.

As the results of the focus group suggested, the people of Inia want to be incorporated in the selection process. They may be more willing to conserve the environment if protected areas are established on fair grounds with sufficient incentives. In addition, they want to be “equal partners with other bodies in a possible future administration and management scheme, which would give solution to the problem of coordinating the various activities and could help resolving arising conflicts.”

In the case of Inia, people depend on their land for their living and they emphasized that they are not willing to bear personally the cost of environmental protection. They suggest that: “Everyone must pay its fair share in order to protect, conserve and manage what is left for future generations.”

Locally, participation is perceived to be morally and practically essential for implementing conservation schemes and policies. As Michaelidou and Decker (2003) suggest: “nature conservation and community viability are interdependent and should be simultaneously addressed if both are to benefit”.

But this is no panacea. There are profound contradictions at work here. The villagers of Inia demand to develop their land within the framework of all EU regulations. In addition, they pursue the construction of an asphalt road that will connect their village to the beaches of Lara (12km) and exploit their land for tourism infrastructure. However, such an action will connect and open up all the protected beaches to mass tourism and will have serious implications not only to the flora but also to the fauna of the area and especially both to Loggerhead and Green turtles. Local people may be the most passionate and intelligent defenders of their environment...if only the state and the powerful economic actors allow them." But this will take a careful structuring of the costs and benefits.

Without contact with nature, people’s capacity to understand and engage with it withers. As Aldo Leopold correctly observed, “Conservation is not merely a thing to be observed in outdoor museums, but a way of living on the land”. The future of conservation will turn on the extent to which a strong individual connection to nature and natural processes is maintained for the world’s people in the 21st century.

Picture 3. The Baths of Aphrodite beach in the Akamas peninsula. On top of this beach, there is a small cave were Aphrodite was said to bath. According to the myth, the goddess’s baths are a source of fertility. (Courtesy Demos Philippou)
as Adams suggests. Yet the sad irony is that in some cases people’s own interactions with the land, and with nature, may not be to nature’s detriment. As Adams’ observes, “without conservation action where they live, people are destined forever to live in landscapes stripped of their natural diversity”. It becomes a tragedy when conservation action becomes part of the alienation process. That is why it essential that, during the next phase of the Natura 2000 local government agencies work with village residents to make certain that the opportunity is made available for them to engage with stronger voices in the decision-making processes that affect their lives.

Much fewer studies examine the links between local communities and Protected Areas in Europe with respect to Africa or Asia. But no matter where the Protected Areas are established, the guiding line underlying community conservation remains the same. As Brechin et al. suggested: “The most feasible and socially just alternative for long-term success is for the conservation community to work constructively with people at all levels, as difficult and imperfect as that may be. To proceed in this fashion will require that we adopt a stance of open dialogue and concerted negotiation with a wide array of actors in diverse contexts ranging from local people to government officials to international leading institutions.”

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Εφημερίδα «Φιλελεύθερος»: Τα χωριά του Ακαμά με επαναστατούν, 05/05/05 Ακης Εθελοντής.


Trakolis D., "Local people's perceptions of planning and management issues in Prespes Lakes National
The prospects of forest clean development mechanisms (CDM) to contribute to social equity in Brazil

Man Yu Chang

Abstract. The evolution of the rules of the market mechanisms of the global climate regime tends to favour corporate participation as well the generation and trade of carbon certificates as such. This trend is reflected by investor’s preference for larger scale energy CDM projects. One criteria proposed here to assess the contribution of CDM projects to social equity is whether they are conceived so that low-income communities may take part in the activities that either reduce or sequester carbon as direct beneficiaries of the economic activity proposed and the carbon credits generated. In the Brazilian case, the inclusion of rural households in reforestation projects for carbon sequestration or the production of crops for renewable biofuel are examples of the potential for income generation and distribution to individuals of lower economic standing in the population. Although CDM projects for cleaner and more efficient energy may be more effective in climate change mitigation, the social contributions of these projects often remains diffuse or indirect, whereby social components are superficially linked to the project. Analysis of the impact of the pilot forest carbon projects in Brazil, based on a typology of forest carbon projects, indicates that the social benefits and social participation in most of the pilot projects have fallen short of their potential. In order for low-income small landholders to take part in the carbon market, the recently approved small-scale project helps, but remains far from sufficient. It further requires a synchronizing of conditions and adjustment to the local realities without which it becomes unviable. The conditions are: the political commitment of local and national governments to provide supportive and conducive policies in a timely manner; the organization of small landholders for their effective participation; and the willingness of CER (Certificate of Emission Reduction) buyers to invest in a premium price for the image of corporate social responsibility. The combination of these conditions suggest that the prospects of forest CDM to contribute to social equity in Brazil is likely to be very limited and constrained to a small niche of the growing carbon market.
The prospects of forest clean development mechanism (CDM) projects to contribute to sustainable development in Brazil and social equity may be illustrated by a critical analysis on three distinct but interrelated spheres: i) the present setup of rules of the global climate regime and its reflexes on the competitiveness of forest CDM projects in the context of the carbon market; ii) the kind of impact pilot forest carbon projects in Brazil are effectively bringing and how likely they are to contribute to the sustainable development of the country; iii) the pre requisites for CDM projects to contribute to social equity through the promotion of sustainable livelihood.

**Forest CDM in the global climate regime**

The CDM is a compensation mechanism established by the Kyoto Protocol (KP) in order to make less costly the attainment of targets for carbon emission reduction of Annex 1 countries. This mechanism allows Annex 1 countries to compensate part of their reduction through the implementation of activities in non Annex 1 countries, whereby either GHG (greenhouse gas) in the atmosphere will be sequestered or emission in the latter will be reduced. In its conception it is expected that CDM will promote a double gain: the mitigation of climate change and sustainable development in the host countries.

The original justification for the CDM proposal was meant to apply for emission reduction activities such as energy efficiency, whereby the cost & benefit in developing countries outweighs those in developed ones. However, as a result of conflicting interests of different blocks of countries, the KP has considered at its onset four different forms of carbon sequestration: i) reforestation and afforestation that sequester carbon (including agroforestry systems); ii) sustainable forest management that sequesters and reduces emissions; iii) forest conservation and protection from deforestation, which are taken as an emission avoidance; and iv) the substitution of fossil fuels with renewable biomass that reduces emission. Among the four modalities only in fuel substitution the emission reduction would be permanent.

In 2001, after a long and exhausting debate at COP 7, the Marrakech Accord eventually approved carbon sequestration as a modality in the KP, but with restrictions. The controversial forest conservation, which had been a deadlock for the advancement of deliberations at COP 6, has however been excluded for the first commitment period of the KP from 2008 to 2012. It has also been decided that forest CDM projects cannot exceed 1% of the emission of Annex 1 countries, at 1990, times five, during the first commitment period. In 2004, at COP 9 in Milan, it has been defined that CERs (Certificates of Emission Reduction) generated by forest activities would be temporary. These measures aimed at restricting compensations of existing emissions rather then reducing them.

The fact that forest carbon stocks are non permanent has been one of the main divergences among countries regarding carbon sequestration. The decision, also taken at COP 7, that forest carbon credits would be temporary, has given back, on the one hand, the possibility to reverse land use, but on the other, has reduced the competitive-
The intertwined roots of poverty, wealth and environmental degradation

Conservation can end up enhancing poverty... but conservation can also provide livelihood benefits... if initiatives embrace rights, secure access to resources and real participation.

In addition to the above mentioned restrictions, the on-going pilot forest sink projects has signalled that forest projects are by nature uncertain, which has led to more restricted regulations which imply higher complexity and transaction cost for their implementation. Just to name a few: the need to prove the absence of forest coverage before December 1989 for project eligibility; the higher complexity of the project baseline design to prove carbon additionality; complexity in the methodologies for quantification and monitoring of carbon stocks; uncertainties due to higher risks of uncontrolled leakage such as forest fire, disease and drought, etc. All these characteristics of forest projects contribute to the demise of project results, hence reducing the competitiveness of forest sink projects.

In view of the complexity and higher transaction cost for the implementation of forest sink projects, and considering that many of the least developed countries (LDC) can only participate in forest CDM as they present little attractiveness for technology transfer or energy projects, small-scale projects have also been proposed for forest activities at COP 9. These projects will follow simplified procedures and modalities so that low-income communities may take part of CDM projects. The final definitions of this modality took place at COP 10 in December 2004 in Buenos Aires. These projects are limited by the cap of 8 kilo tons of net anthropogenic CO₂ per year, in average, during each commitment period and they should be implemented specifically by low-income communities or individuals.

Regarding the outcome of forest projects in the following commitment period there is still one important technical and much controversial issue to be settled which may effect the definition of its continuity. The Marrakech Accord established at COP 7 that LULUCF (Land-Use, Land-Use Change and Forestry) activities refer to those directly promoted by human activities. The difficult task of separating carbon sequestered from anthropogenic activities from those of natural occurrence, such as the CO₂ and nitrogen fertilization³, remains. At present, science is still incipient to understand the complex dynamics of carbon flow between the biota and the atmosphere. Specifically, it lacks the methodologies to determine the increase of carbon stock in the biota due to carbon fertilization.

The present regulations of the global climate regime and the nature of forest carbon stocks are reflected in the behaviour of investors in the CDM market. The trend points to a reduction in demand for Annex 1 investors for forest projects as compared to the expected demand at the onset of the Climate Convention.

The special conditions enjoyed by small-scale forest projects should theoretically enable them to benefit small landholders in regard to income generation and social inclusion. Unfortunately, room for this modality of projects within the carbon market is minute due to their low economic competitiveness.
The preference has migrated ostensibly towards projects in the energy sector. The prospects are that there is clear preference by investors and prevalence of big scale energy projects in the carbon market. Many experts on the issue announce that there are more carbon projects in elaboration than there is a demand for them, which make forest small-scale carbon projects even less palatable.

The special conditions enjoyed by small-scale forest projects should theoretically enable them to benefit small landholders in regard to income generation and social inclusion. Unfortunately, room for this modality of projects within the carbon market is minute due to their low economic competitiveness ranking behind energy projects and large scale forest projects. Most investors prefer large scale projects because they can generate a larger amount of removed carbon, except for those that are seeking corporate social responsibility image. Another reason for its lower preference is that small-scale projects present lower economic competitiveness, since transaction cost is higher per unit of carbon sequestered. Pedroni and Locatelli (2004) developed a model for cost-benefit analysis for forest carbon projects and showed that the minimum economically feasible size is around 500 ha. This shows that the reduction in cost due to the simplified procedures and modality would benefit very little the cost structure of projects below 500 ha, which depending on the type of ecosystem would be the maximum size for small-scale forest projects. In other words, cost reduction will only be economically significant for projects of greater scale.

Another limitation of small-scale projects is that the capacity of small landholders to participate in the carbon market is very low as they lack the information on the market and the knowledge of the rather complex procedures of the carbon market. Many low-income communities are not sufficiently organized for their own representation. Besides, many potential financers of CDM projects with social concern, such as the EU, Japan and Holland are not particularly in favour of forest CDM projects, precisely for their ephemeral nature (non-permanence) discussed before.

Map 1. Localization of Pilot Forest Sink Projects in Brazil.
Pilot forest carbon projects in Brazil and their likeliness to contribute to sustainable development

Analysis of on-going pilot forest carbon projects in Brazil may offer a picture of the possible limitations and potential of their effective contribution to the sustainable development of the country. Chang (2004) has analyzed in her thesis four pilot forest sequestration projects on-going at the time of her research in 2001. They are:

- PLANTAR Project in Curvelo, in the central savannah of the state of Minas Gerais;
- PEUGEOT Project in Juruena, in the Amazon forest of the state of Mato Grosso;
- Climate Action Project in Guaraqueçaba, in the Atlantic Forest of the state of Paraná;
- Bananal Island Carbon Sequestration Project (BICSP) in the Bananal Island, in the transition area of savannah, Amazon Forest and marshland of the state of Tocantins.

The analysis of the projects started with a typology of forest carbon projects based on their main objective (commercial, conservation or development). The impact assessment is built into a matrix with the different impacts identified (positive and limitations), the beneficiaries (investors, local communities, NGOs, national community or the diffuse global community) in the three dimensions of sustainability (ecological, social and economic), in various tiers (global, national, regional and local) and in regard to the duration of the impacts (long or short term). Although much quantitative data have been collected during the field research, the evaluation is basically qualitative due to the different stages of project implementation and the very nature of sustainability analysis.

The conceptualization of the typology of forest carbon projects is theoretically based on the interpretations of different environmental concepts on Sustainable Development (SD) (see Figure 1). Conceptually there seems to be a consensus on the idea that the three pillars of SD are the economic, ecological and social dimensions and that they should be present and integrated simultaneously. The most common understanding of this integration is that it should be in balance, without prevalence of neither. The idea of equilibrium, although attractive, is very imprecise, as there is no way to define a generic equilibrium, a priori. In reality, for each situation there are always different “technical” ways of combining the three dimensions of sustainability, whereby the choice taken is always political. There is tension and often opposition among the dimensions, whose integration requires a certain trade-off among them. It is the opposition of the confronting parties within society that define the priorities, sometimes prioritizing one and sometimes another dimension, depending on the interest and strength of the prevailing party in each concrete situation.

The three types of forest carbon projects identified in Figure 1 are as follows:

- Commercial Projects, which prioritize the generation of CERs to compen-
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sate for CO₂ emission and to improve the environmental image of the corporation for market competition. Also in this type are national enterprises interested in the financial resources available for CDM, e.g. Peugeot and Plantar Projects.

- Conservation Projects, which prioritize secondary ecological benefits - conservation - while fixing carbon. Often these projects are initiatives or mediated and implemented by environmental NGOs, e.g. Climate Action Project.

- Development Projects, which prioritize social and environmental objectives while fixing carbon. Usually these projects are financed by corporations seeking for corporate social responsibility image besides the compensation of their carbon commitments. The implementers are usually characterized by a development profile, sometimes the government itself, e.g. BICSP Project.

The analysis of the study cases led to the conclusion that, regardless of the type of carbon project, all do contribute to some extent with positive social or ecological impact, because all operate within the concept of sustainable development, as shown in the theoretical framework. In other words, although priority is given to one of the dimensions of sustainability, all take into consideration the other dimensions. However, what distinguish them from one another are the different priorities, which limit the achievement of the secondary objectives.

The findings showed that all projects made some effort to include some kind of social or ecological components to compensate for their specific deficiencies and in order to assure the image of sustainability. This is more evident if the project’s priority is to generate marketable carbon certificates, as the CDM Executive Board requires that the hosting government declares that the project contributes to its sustainable development for approval.

Below is a synthesis of the socio-environmental impact of the four pilot projects analyzed.

Let us begin with the commercial type projects: the social and ecological benefits of **Plantar Project** are restricted to what an industrial enterprise could offer, within the limits imposed by the competition of the pig iron sector. The main social benefit of this project is the maintenance of 1,270 jobs, specific to the sector, where the charcoal burning process is still very labour intensive. The Plantar Group claims that their employees would be eliminated should the
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company close its doors in view of the lack of financing for reforestation in the country. The Project presents several deficiencies regarding its contribution to the local sustainable development, particularly as regards the strengthening of local livelihood. Given the reforestation vocation of the region and the long experience of Plantar in the production of cloned seedlings with cutting edge technology, there is considerable potential to extend the benefits to local farmers through an outgrow scheme similar to the existing Forest Farmer program. However, the company claims that such a program would hinder their operation, demonstrating no commitment to social promotion effort. The company limited its actions to a modest environmental education program and a “child friendly” certification by complying with a law forbidding the use of child labour. In addition, the need to purchase large plots of land for reforestation, and, the high replicability of the project by other enterprises within the sector creates a risk of unleashing the process of land ownership concentration in the region. The ecological benefits can be summarized as compensation and mitigation efforts to reduce the negative ecological impact of legitimizing industrial plantations of exotic species.

The Peugeot Project, also a commercial type, generated social benefits that are primarily short term in nature. The Project has created job and income opportunities for local populations, such as the collection of native tree seeds, tree planting, and initial maintenance. It also benefited the local municipality by increasing service tax collection. It has adopted an environmental program aimed at improving relationship with local communities by promoting the Project directly to them, local students in particular. In partnership with a local NGO, the IPN, the project has created a forest extension activity and has distributed multifunctional seedlings to small landholders in the vicinity of the project area. However, these benefits have not been a product of local demand and are ad hoc in nature. They have been concentrated on the initial phase of tree plantation. During the maintenance phase, starting from 2003, both the demand for jobs and the taxes levied fell sharply. The extended nursery that supplied the project has been deactivated. Continuity of benefits was not secured, as they are not part of the primary objectives of the investor or implementer. The ecological impact of the project is mainly the reversion of the pasture to reforestation within fences of the project property. To some extent it has also contributed to the public awareness of the importance of forest resources through extensive reforestation in an agricultural frontier where deforestation is common practice. However, the effectiveness of

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this impact to sustainable use of forest and land resources by local producers depends largely on a concerted effort of other development agents and opportunities, such as adequate technical assistance, promotion of environmental education and availability of financial support.

Regarding the two commercial type projects, the research has identified that the lack of social participation and input from other stakeholders is a common feature. Decision making is biased towards the economic sustainability of the funding enterprise; for example, the economic feasibility of Plantar S.A., and the creation of an environmentally friendly image for the competitiveness of the Peugeot Corporation. As a matter of fact, centralized decision making is a strong characteristic of the private sector, and is a big limitation to the construction of sustainable development.

The lack of precision in the term “sustainable development” leaves room for commercial projects to use their proactive social and environmental actions for their market strategies as their contribution to sustainable development. A healthy sustainable development requires the participation of different stakeholders, from identification, planning, and implementation to the evaluation of the project activities. Therefore, although commercial projects may offer some social benefits, they tend to be limited by impermanence for they exist at the discretion of the market pressure of the investing enterprise.10

The case of the conservation type Climate Action Project takes place in the APA (Environmentally Protected Area) of Guaraqueçaba. Its main objective is to preserve the Atlantic Forest and the biodiversity therein while generating carbon certificates. The conservation priority of the project in an APA acquires social significance as supposedly, the decision for its status has been decided on a collective basis and the implementing NGO acts as a partner to the official environmental institutions to enforce the necessary protection. Under these circumstances there is preponderance on the ecological objective, towards which the other two dimensions (economic and social) should converge and be subordinated in the construction of the local sustainable development.

The implementing local NGO is in the process of adopting a participative conservation approach and is working in association with other development and commercial organizations in the area. The project supports economic activities considered socially and ecologically sustainable to small landholders in the vicinity of the project reserve, such as the production and export of dried organic banana, in partnership with Terra Preservada, the Federal University of Paraná – UFPR and the official extension system. It has created 80 jobs among the three project reserves; has donated environmental books to local school libraries; and has supported land titling of small parcels on the border of their reserves. The ecological contribution of the project is primarily the protection and restoration of degraded areas by buffalo ranching to forested area through natural regeneration and reforestation inside the project area transformed into natural reserves. Findings show that, although the outcome of the development component has yet to consolidate, should the local communities...
strengthen their participation in decision making and should the partnership with other development organizations carry on, the project activities are likely to contribute to sustainable development of the region in the long run.

It is worth mentioning that the conservation type projects, in order to take advantage of the CDM resources, align the objective of carbon fixing with the conservation agenda of the implementers. This action may be socially legitimate from the perspective of diffuse benefit, if an important ecosystem under threat is being protected. However, these projects could only be considered socially sustainable if their actions will also attend effectively to the socio-environmental needs of the local population with genuine participation in decision making. Otherwise, they remain simply conservation projects, as many indeed are, where the community development activities are used to secure the conservation agenda itself.

The Bananal Island Carbon Sequestration Project - BICSP is one that has been transformed from conservation to a development type project due to project implementation contingencies. However, in practical terms, it has shifted its activities towards social component and research activities. It has introduced the so called “social carbon”, meaning carbon fixation with primary focus on social aspects. The project outstands in two development features compared to the other projects analyzed in this research: it did not purchase land for carbon sequestration and it has put emphasis in community participation. Their actions aim at addressing the socio-environmental demands of the agrarian reform settlers. The main social contributions are: environmental education to school students, teachers and members of the community in general; capacity building to small farmers; support for ecologically sustainable income generating activities; establishment of agroforestry systems; and the distribution of seedlings to land reform settlers, communities and indigenous groups.

Although the activities point to the direction of social and ecological sustainability, the project has rendered limited results, both in terms of carbon fixation and in terms of tangible improvement to the beneficiaries’ livelihood. This is partly explained by the fact that the implementers made the political decision to target small settlers of land reform settlements with little potential to sequester carbon. The trade-off between carbon benefits and the social benefits committed by the project was rather high. The small scale of the result could therefore be justified by the limited infrastructure, in terms of team and logistics of an isolated project vis-à-vis its tremendous task. The case of the development type leads us to the isolated activities, not linked to development programs and structures of bigger outreach, tend to render punctual and insignificant tangible results...
conclusion that even when activities lead to the direction of sustainability, if they are isolated or not linked to development programs and structures of bigger outreach, they tend to render punctual and insignificant tangible results. The ecological contributions are basically indirect actions, such as environmental education, distribution of seedlings and the establishment of pilot agroforestry systems.

Limitations of the carbon market and the conditions to benefit low income communities

The section above concerning the conceptualization of the typology of forest carbon projects has dealt with the idea of setting up trade-offs among different dimensions of sustainability, which is often a political decision. We also see in the impact assessment of the pilot carbon projects that there is indeed trade-off between the economic priority, herein represented by the generation of carbon certificates, and the social priority, represented by the promotion of local livelihood. This trade-off in a way translates the contradiction between the market and the attendance to social needs in a broader sense. The capacity of carbon projects to provide concrete social benefits may be restrained by the very nature of the market, as corporations are ultimately pressed by the market competition and may be forced to seek less costly alternatives. Market instruments for environmental management may be theoretically efficient, but in practice are restrained precisely by the trade mediation. The markets, in general, are not very good to attend simultaneously to social demands and the efficient allocation of resources. This is perhaps the main reason the carbon market is not likely to commend sustainable development as stipulated by the CDM.

Besides the pilot projects in Brazil analyzed above, which have demonstrated their limitations to attain substantial social benefit, a peer look on projects that are strictly of developmental type in other countries may broaden one’s understanding of the matter.

The case of the **Scolel Te Project** in Mexico has emerged from indigenous communities in the Chiapas region. Throughout the implementation process the project decided to expand the number of participants in order to raise the amount of carbon sequestered. This has caused the project to reallocate the development activities to a second priority due to high maintenance costs. Gradually the project has become more carbon than development oriented. According to the authors, while the majority of government officials are concerned with the carbon component, NGOs and project developers involved are not willing to channel the resources primarily to carbon activities. In practice, the Project has demonstrated that it is difficult to attend to carbon requirements without compromising social demands.

Market instruments for environmental management may be theoretically efficient, but in practice are restrained by the trade mediation... markets are not very good to attend simultaneously to social demands and to the efficient allocation of resources.

The considerations above lead us to the important role of engaged governments in CDM projects so that social-environmental demands can be prioritized. The carbon market will not spontaneously create room to benefit small and low-income producers. In order for this to occur, it is necessary for engaged governments to compensate for this handicap.

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by reducing the risks and costs of these projects laying specific public policies to assist these target beneficiaries.

There are a number of pre requisites that forest CDM projects must follow in order to effectively promote rural livelihood. It is very important that local stakeholders will participate actively in decision making. Project design needs to be flexible and adaptive to the local context so that it can address the specific needs of the local people and responsibilities of carbon accounting. It is important that project activities fit in local land use conditions, local demand for forest produce and still meet the carbon requirements. If social issues are to be prioritized they need to be addressed at the beginning as an integral part of the project design, and further followed throughout implementation, otherwise they are likely to remain as an appendix and fail on most counts of contributing to sustainable development. Participation and access to decision making could be greatly enhanced by working with community-based organizations.... This implies that communities need to gain a minimum level of organization to be eligible...

Another great limitation regarding the likeliness of forest CDM to contribute to sustainable development is high transaction cost of projects engaged with social priority. One of the possibilities which are highly recommended is to build on synergies with compatible development strategies for it is not likely that forest carbon projects can reach significant social accomplishment in isolation.

**Conclusion**

Taking CDM in general an overview of the present definition of its rules and the carbon market one may infer that although it is explicit in the KP that CDM should contribute to sustainable development of the host country, the competition for resources will most likely weaken this requisite. If the Brazilian Government or any other national government imposes stringent social sustainability criteria it will risk reducing the competitiveness of the country, as long as there are other countries willing to accept looser criteria to attract the project.13 In effect, the competition for the CDM resources may push the projects too close to investment as usual. Whilst this is the reality, less stringent social sustainability criteria should not be encouraged. However, they should be addressed as part of a broader set of conditions that need to be in place and be made attractive as an essential component of this broader context.

In this sense for forest CDM projects to contribute to social equity it is important to highlight the role of engaged governments in the design of conducive policies and the formatting of developmental type carbon projects...
adapted to local realities; assist in the dissemination of information to scattered small landholders, and dispose the resources and official infrastructure so as to reduce transaction cost. The engagement of public institutions in the process helps to secure public policies and provide the necessary support and create synergy in existing development activities.

Regarding the forest CDM the present setup of rules tends to favour larger scale energy and landfill projects. Forest projects are less competitive and the small-scale ones are even less so, although they are more likely to include small landholders into the carbon market.

Thus, realistically, one must recognize that the market share for forest CDM projects with social priority is minute.

Notes
2 The accreditation period can be fixed as 20 years renewable twice, or 30 years, renewable only once.
3 Some recent researches suggest that the accelerated growth of trees is in response to the fertilization effect as a result of the high CO₂ concentration in the atmosphere and nitrogen accumulation (IPCC, 2001).
4 As announced by the CDM/JI Program of the Ministry of Environment of Japan.
5 The field research and the reporting of three of the four study cases: Peugeot Project, Planter Project and BICSP Project was carried out by an interdisciplinary team composed by Manyu Chang (socio-economist), Fernando Veiga (agronomist) and Emily Boyd (forester), coordinated by Peter May (resource economist), supported by the International Institute of Environment and Development, London, published under the title Local Sustainable Development Effects of forest Carbon Projects in Brazil and Bolivia: a view from the field (May et al., 2004).
6 The detailed matrix is available in Portuguese in the complete version of the research published by Editora Annablume, http://www.annablume.com.br under the title: Seqüestro Florestal de Carbono no Brasil-Dimensões políticas, socioeconômicas e ecológicas.
8 Concerning the typology proposed, it merits mentioning that four study cases are little in number to generalize the characteristics to the project types. Instead they serve as indications to signal possible impacts in other cases of the same project type.
9 Available in the complete version of the research as mentioned before.
10 This is the case of AES Barry and the Camisea Project analyzed in the thesis, whereby the proactive social and ecological activities have been interrupted due to financial difficulties and even insolvency of the investor.
12 Boyd et al., 2005.
13 It is similar to the fiscal war in Brazil where different states of the federation dispute for the establishment of transnational corporations by granting longer grace period of tax levy and other exemptions.

References

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Livelihoods and conservation—arguments shaping the debate

The intertwined roots of poverty, wealth and environmental degradation

Conservation can end up enhancing poverty...

...but conservation can also provide livelihood benefits...

...if initiatives embrace rights, secure access to resources and real participation


Pierré, N., As contradições nas dimensões do desenvolvimento sustentável, CEM-UFPR, working paper, Curitiba (Brazil) 2003.

UNFCCC, Simplified modalities and procedures for small-scale afforestation and reforestation project activities under the clean development mechanism and measures to facilitate their implementation. Advance version. Decision 14/CP.10 FCCC/CP/2004/10/Add.2, 19 April, 2005.

Una visión desde Mesoamérica

En la mayoría de los países del globo existe un reconocimiento generalizado de que la degradación ambiental acentúa el problema de la pobreza. No obstante, en la práctica, pese a los esfuerzos realizados desde la perspectiva técnica, no se han establecido claramente las relaciones entre la conservación de la biodiversidad y la reducción de la pobreza. Asumir el tema de la pobreza como una preocupación que requiere atención y buscar formas innovadoras para su reducción no asegura automáticamente la conservación de la biodiversidad. Por otro lado, es evidente que si no se considera el tema de la pobreza los objetivos de la conservación de la biodiversidad en los países del trópico no se cumplirán.

En una mayoría de las experiencias de desarrollo rural tradicionales, los problemas sociales y ambientales se han atacado de forma sectorial, orientados a cubrir las necesidades a corto plazo con políticas asistencialistas...
de las comunidades a las que se dirige la atención—en su gran mayoría locales y pobres—hacia las instituciones involucradas, sean estas gubernamentales o no gubernamentales. Detrás de los conflictos socio-ambientales y los problemas de desarrollo rural subyacen problemas íntimamente vinculados: la degradación ambiental y la pérdida de la biodiversidad, la pobreza y la vulnerabilidad social. Las respuestas que se han tratado de implementar no han sido del todo positivas. En Mesoamérica, la respuesta tradicional al problema ambiental ha sido, por una parte, la creación de áreas silvestres protegidas y, por otra parte, los problemas de índole social, tales como fuentes de empleo, alimentación, educación, salud, se han intentado resolver desde las instituciones públicas y organismos de cooperación internacional, desde una lógica asistencial para cubrir las necesidades. Ambas iniciativas son valiosas, pero en la mayoría de los casos realizadas de manera aislada y atomizada.

Los esfuerzos de conservación en Costa Rica se encuentran en una encrucijada. Existen dudas sobre la efectividad de las áreas protegidas para la conservación de los recursos naturales, incluyendo aquellos bajo protección del Estado. Actualmente, muchas de las áreas silvestres protegidas se encuentran geográficamente en los espacios de acción e impacto de las comunidades rurales, y un porcentaje importante de ellas todavía no se han pagado a sus dueños originales. Estas comunidades, a la vez, son los grupos sociales que generalmente muestran los niveles más bajos en educación, servicios sociales básicos, fuentes de empleo. Es en las comunidades rurales y pesqueras donde se encuentran los mayores niveles de pobreza del país y una dependencia más fuerte sobre la base de recursos naturales para la subsistencia.

Como si fuese poco, producto de la degradación ambiental y las condiciones sociales, se observa un aumento en la vulnerabilidad social ante eventos naturales. Muchos de los efectos devastadores de estos eventos en la región Mesoamericana, se debieron principalmente a la marginación social y la degradación ambiental. Elemento detonador, además de la generación de conflictos socio-ambientales, es el hecho de que las comunidades locales bajo estas condiciones no logran asegurar las fuentes de subsistencia, provocando una alta competencia por los recursos naturales. Es claro que los puentes entre la conservación de la biodiversidad y disminución de la pobreza en nuestras comunidades rurales no se han construido...
En este contexto CoopeSolidar R.L una cooperativa de autogestión de servicios profesionales para la solidaridad social en Costa Rica, presenta una nueva forma de trabajo y gestión que intenta abordar como uno de los elementos fundamentales el tema de la pobreza. Desde hace algunos años, ha iniciado un proceso de asociatividad con otras estructuras cooperativas de autogestión en busca de clusters cooperativos empresariales que innoven en la forma de desarrollar actividades sostenibles desde lo social, lo económico y lo ambiental.

Este artículo, pretende compartir el avance conceptual y metodológico e incluir una reseña del proceso que ha logrado el establecimiento de una relación de asociatividad entre dos cooperativas, Coope Sol i Dar R.L. y Coope Tárcoles R.L. una cooperativa de pescadores artesanales que desarrollan su actividad en el Pacífico Central de Costa Rica. Esta relación de asociatividad puede brindar algunos elementos para la construcción de puentes entre la reducción de la pobreza y conservación de la biodiversidad.

**Un proceso de acompañamiento hacia una relación de asociatividad y un uso sostenible del mar**

A la entrada del nuevo siglo, el cooperativismo continuó siendo válido como modelo de gestión socio-productivo que considera la preocupación por el ser humano en forma integral desde lo social, económico y personal. Una cooperativa permite incorporar en su gestión a familias e individuos (hombres, mujeres y niños) en el desarrollo de actividades que mejoran las condiciones de vida, aún en circunstancias sociales y económicas críticas.

Por su parte, el movimiento cooperativo costarricense potencia recursos económicos y humanos que deben aprovecharse desde el marco del desarrollo sostenible. Los procesos de capacitación, transferencia de tecnología, préstamos productivos y otros deben incorporar la temática ambiental como eje transversal de trabajo.

A principios del año 2003, CoopeSolidar R.L. y CoopeTárcoles R.L iniciaron una relación de fortalecimiento mutuo, como parte de un proyecto de liderazgo de la Fundación AVINA. Esta alianza ha permitido poner en práctica algunas de las recomendaciones del X Congreso Nacional del Movimiento Cooperativo Costarricense, en materia de ambiente y desarrollo sostenible. La alianza tiene como objetivo general incidir en la incorporación de la temática ambiental y de desarrollo sostenible dentro del marco de las actividades de pesca artesanal de CoopeTárcoles R.L. a través del desarrollo de una relación de asociatividad y colaboración novedosa, una alianza estratégica cooperativa empresarial fundamentada en la responsabilidad social y ambiental.

*Foto 2. Bote de pesca artesanal, Tárcoles Costa Rica. (Cortesía CoopeSolidar R.L.)*

*Policy Matters 14, March 2006*
Se espera que la iniciativa permita el uso sostenible del recurso pesca, la conservación de los recursos marino costeros y el desarrollo local justo y equitativo. Existe un interés en el fortalecimiento del valor de la solidaridad entre cooperativas, en esta iniciativa ambas cooperativas Coope-Tárcoles R.L y CoopeSolidar R.L se dan la mano, esperando que su ejemplo logre interesar a los órganos de segundo y tercer nivel del movimiento cooperativista en esta iniciativa, brindando su apoyo para continuar con la discusión sobre el tema de ambiente y desarrollo, dentro y desde el cooperativismo.

El sector pesquero nacional, desarrolla sus actividades desde muy diversas estructuras de organización siendo una de ellas las cooperativas. Su trabajo desde este sistema de organización micro-empresarial, permite una mejor y más justa distribución de beneficios derivados del uso de los recursos pesqueros. Además, permite el desarrollo de actividades productivas más integrales, que sustentadas en los valores cooperativistas pueden ser de largo plazo, dejando un espacio importante para la discusión y puesta en práctica del concepto de desarrollo sostenible.

CoopeSolidar R.L ha procurado conocer cómo, desde la práctica y a través del reconocimiento de distintas formas de conocimiento de los pescadores artesanales, se percibe el tema de ambiente y desarrollo, con el fin de realizar una propuesta de más largo plazo y mayor impacto en el movimiento cooperativo nacional sobre el tema de ambiente y responsabilidad social. Esta inquietud ha sido motivada desde el proceso de formación y consolidación de esta cooperativa de autogestión a través de la cual se brindan los servicios profesionales en un marco de solidaridad social, la cual ha afianzado la idea de que el cambio de actitudes y la promoción de valores que fundamentan la sostenibilidad, encuentra un espacio de organización propicio en el cooperativismo por sus valores de solidaridad y bienestar.

Los cambios que se han venido produciendo en la definición de formas de pesca responsable, responden a directrices que aprueba el Consejo de Administración (órgano de toma de decisión de la cooperativa). Estas directrices son aprobadas posteriormente por la Asamblea General y son posteriormente incorporadas a las prácticas de trabajo diario de los pescadores artesanales.

Se ha logrado desarrollar con Coope Tárcoles R.L. un proceso de discusión sobre la incorporación del tema ambiental en la gestión de su cooperativa. De los resultados obtenidos hasta ahora, se puede identificar los siguientes:

1. Reforma de los estatutos de Coope Tárcoles R.L. para incluir como uno de sus objetivos la promoción de la búsqueda de formas de gestión sostenible de los recursos naturales y culturales.

2. La consolidación de un proceso orientado a definir el interés del sector privado local, para articular un modelo de desarrollo en el área de influencia de la cooperativa, que permita el reconocimiento de sus intereses hacia una pesca...
Policy that matters!

Livelihoods and conservation — arguments shaping the debate

The intertwined roots of poverty, wealth and environmental degradation

Conservation can end up enhancing poverty... but conservation can also provide livelihood benefits... if initiatives embrace rights, secure access to resources and real participation.

El aprendizaje ha sido grande y ha dejado en evidencia la necesidad de un trabajo solidario y responsable, que aporte al fortalecimiento de las organizaciones de base... y social con la comunidad de Tárcoles.

3. La identificación de los valores y actividades que pueden desarrollar a partir del Código de Pesca Responsable de la FAO, que ha conducido a la adopción de un Código de Pesca Responsable propio como un instrumento voluntario.

4. La incidencia en la discusión del proyecto de ley de pesca, de manera que incorpore algunos de los aspectos más relevantes salidos de la experiencia de estas cuarenta familias pescadoras organizadas en CoopeTárcoles R.L.

5. Intercambios y espacios de reflexión con otros grupos de pescadores artesanales para hacer conciencia sobre la importancia de una pesca responsable y la necesidad de que se reconozcan sus aportes a la conservación.

El aprendizaje hasta ahora ha sido grande y ha dejado en evidencia la necesidad de un trabajo solidario y responsable, que aporte al fortalecimiento de las organizaciones de base que desarrollen un uso sostenible de sus recursos naturales y promuevan el desarrollo de sus habitantes con responsabilidad social.

Esta relación de asociatividad entre Coope SoliDar R.L. y Coope Tárcoles R.L. aspira a a gestarse en el mediano y largo plazo en torno a cuatro ejes principales de trabajo:

1. Una relación asociativa entre CoopeTárcoles R.L y CoopeSolidar R.L, entre técnicos y líderes de proyectos con las comunidades fundamentada en valores de transpar-

2. La elaboración de convenios, acuerdos y alianzas de trabajo y comercio justo entre CoopeTárcoles R.L y el sector privado local, principalmente turístico.

3. El desarrollo de investigación que logre integrar el conocimiento técnico con las formas de conocimiento y saber local, constituyéndose en la base de la toma de decisiones en las diferentes esferas.

4. La creación de la primera área de conservación comunitaria marina en Costa Rica.

Foto 3. David Chacón introduce el código de pesca responsable desarrollado para CoopeTárcoles R.L. (Cortesía CoopeSolidar R.L.)
Recuadro 1. Cooperativa de Pescadores de Tárcoles R.L. CoopeTárcoles R.L.
“Nuestro Código de Pesca Responsable”
Acompañamiento: Coope SoliDar R.L.

Los Asociados de la Cooperativa de Pescadores de Tárcoles, CoopeTárcoles R.L., entendemos nuestra responsabilidad social y ambiental como cooperativa de pesca artesanal, y en cumplimiento de uno de nuestros objetivos establecido en los Estatutos: “Promover la búsqueda de formas de gestión sostenible de los recursos naturales y culturales”, adoptamos voluntariamente el siguiente Código de Pesca Responsable.

Estamos conscientes de que:

- El recurso pesquero del Golfo de Nicoya ha sido seriamente deteriorado por la sobreexplotación y la contaminación.
- El camarón y la langosta son especies de gran valor para nosotros, pero son especies en peligro de extinción.
- Todavía nosotros pescadores artesanales hacemos usos de algunas artes de pesca que dañan el recurso a largo plazo:
  - Trasmallos en la desembocadura de los ríos.
  - Pesca en la desembocadura de los ríos.
  - Mallas menores a las 3 pulgadas.
  - Pesca con rastras artesanales.
  - Captura de especies amenazadas o en tallas muy pequeñas.

Este código de pesca puede permitirnos mejores relaciones de apoyo y de negocio con INCOPESCA, MINAE, INFOCOOP y el sector privado de la zona.

Es fundamental para el desarrollo y bienestar de nuestras familias permitir la recuperación de la pesca y tomar medidas de salud e higiene en nuestra comunidad.

La Isla del Caño es un área de reserva para la langosta.

Reconociendo que mucho podemos hacer desde nuestra actividad diaria de la pesca artesanal nos proponemos desarrollar un proceso paulatino para:

- Informar a todos nuestros asociados sobre la problemática del Golfo de Nicoya, su situación ambiental y el impacto en nuestra vida, y compartir en la medida de lo posible esta información y preocupación con los demás compañeros pescadores artesanales.
- Definir entre todos los asociados principios de gestión ambiental que nos permitan mejorar y contribuir con la conservación, tratando de involucrar a la comunidad de Tárcoles.

Nos proponemos cuidar y limpiar nuestra playa a través de:

- La formación de brigadas de limpieza.
- Traer el pescado limpio a la playa
- Manipular el pescado adecuadamente.
- No desviscer el pescado en la playa.
- Lavar la panga y dejarla boca abajo.
- Cambiar el aceite adecuadamente y reciclarlo.

Non proponemos también de:

- Mejorar el espacio para la manipulación del pescado.
- Saber más sobre las leyes vigentes, nacionales e internacionales, cumplirlas y procurar que otros las cumplan.
• Fortalecer y capacitar permanentemente al Comité de Vigilancia para actuar en denuncias efectivas contra las artes de pesca destructivas u otros métodos dañinos al ecosistema marino.

Para garantizar el cumplimiento de estos acuerdos, el Comité de Educación y Bienestar Social desarrollará un proceso de educación sobre:
• Artes de pesca legales en el país y el impacto ambiental que tienen otros artes de pesca.
• Especies en vías de extinción: características de la especie, por qué están amenazadas, ciclos de vida, etc.
• La legislación ambiental y cómo podemos ayudar para hacerla cumplir.

Cuando un asociado incumpla las disposiciones establecidas en este Código de Pesca Responsable se le aplicará según el Artículo 19 de los Estatutos una corrección disciplinaria por parte del Consejo de Administración. La primera vez que incumpla recibirá una advertencia por escrito. La segunda vez que incumpla será suspendido de sus derechos como asociado.

Cuando exista una voluntad manifiesta para no cumplir lo establecido en este Código de Pesca Responsable, se tratará según lo establecido en el Artículo 18 de los Estatutos como una causa que puede hacer perder la calidad de asociado. En este caso se debe seguir el procedimiento establecido en el artículo 20, el Comité de Vigilancia o el Consejo de Administración deberán elaborar un informe, que será de conocimiento del Consejo de Administración, el cual informará al asociado sobre los cargos y pruebas en su contra. Se le brindará la oportunidad de presentar su defensa. El Consejo de Administración tomará la decisión, si se trata de una expulsión se deberá incluir como punto de agenda en una Asamblea General.

Le solicitamos a las instituciones de gobierno competentes: INCOPESSCA, Guardacostas, INFOCOOP, ICT, INA, y al sector privado su apoyo y colaboración para que podamos cumplir con lo que voluntariamente aquí nos hemos comprometido.

Firmado en Tárcoles, a las diecisiete horas del veinte de noviembre del año dos mil cuatro.

Adoptado en Asamblea General Ordinaria y presentado a las autoridades competentes en actividad pública del viernes 8 de abril del 2005.

### Algunas conclusiones
Podemos concluir que si bien existe todavía una cierta disociación entre los esfuerzos de conservación y la necesidad de reducción de la pobreza, en los últimos años se han ido desarrollando esfuerzos e iniciativas que en su accionar apuntan hacia enfoques alternativos basados en la conservación de la biodiversidad con equidad, en la distribución justa de beneficios, en el mantenimiento de la capacidad de carga de los sistemas naturales y en el mejoramiento de la calidad de vida de quienes menos tienen. Iniciativas que pretenden asumir este reto deben tomar en cuenta:
• La valoración de los enfoques interdisciplinarios que respeten y promuevan la preservación de formas de vida y valores encaminados hacia un mejor bienestar individual y colectivo.

• La participación efectiva de los sectores excluidos de la toma de decisiones, en la construcción de un modelo de desarrollo que permita disminuir la vulnerabilidad social y ambiental de los ecosistemas y su gente.

• La contribución a la equidad a través de la construcción creativa y consensuada de mecanismos para una distribución más justa de beneficios de la conservación, que garantice también la incorporación del enfoque de género y el respeto a las diferencias étnicas y a la diversidad cultural.

• El reconocimiento de los derechos de los pueblos indígenas y campesinos, en cuanto a sus territorios y tierras, derecho a la objeción cultural en el uso de recursos de la biodiversidad y derecho al conocimiento informado previo.

• El análisis de la problemática ambiental que ubique en justa perspectiva las actividades económicas que tienen un impacto ambiental grave y la responsabilidad de los sectores que contribuyen en mayor medida al deterioro de los recursos naturales. Esto es la búsqueda de la equidad en el análisis de los impactos ambientales de los grupos más vulnerables frente a los sectores económicos de mayor influencia y que producen un mayor impacto ambiental.

• La articulación de los actores locales con gobiernos e instancias regionales que contribuyan a una gestión ambiental participativa y descentralizada, tratando de canalizar espacios para que las instancias comunitarias acceden a los niveles políticos y globales, garantizando una mayor democratización del poder en la toma de decisiones.

En todo este proceso debe predominar la consolidación de la confianza en las capacidades locales y la discusión de principios éticos que puedan guiar los esfuerzos en la construcción de nuevas prácticas de desarrollo y conservación, con el fin de acrecentar el capital social, natural, económico y cultural de nuestros pueblos.

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Poverty and biodiversity in the Cross River Forest Region of Nigeria

Emmanuel O. Nuesiri

Abstract. It is estimated that about 300 million individuals located in Africa live in poverty and rely directly on biodiversity for livelihood. In recognition of the relationship between poverty and biodiversity loss, there is a global consensus that biodiversity conservation should also deliver poverty alleviation. In 1996 a conservation and development project was initiated at Ebok-Boje in the Cross River Forest region, home to the critically endangered Cross River Gorilla (Gorilla gorilla diehli). The project introduced alternative livelihood opportunities as an incentive for local poor people to stop hunting. Project objectives were not attained because poverty alleviation is not to be attained only by introducing the “right” technical solutions but by combining this with a nuanced understanding of local socio-economic dynamics. Successful initiatives would need to deﬂect increased consumption to more biodiversity friendly pathways and identify potential conservation “champions”. These should be the focus of capacity building initiatives enabling them to speak for biodiversity as a result of internalised conservation ethic.

It’s about 3pm and I am seating in a bushtaxi at Okuni market waiting for it to get full and take me to Boje, the field office base of the Afir Mountain Wildlife Sanctuary Project. Okuni market is a major market in Boki local government area and—as any other self-respecting African market—bustles with activity. The commodities that are dominant are bananas, plantains and garri (milled cassava). While waiting, I make conversation with the taxi driver on a range of issues from national politics to local subsistence agriculture. Eventually I ask him why so many bananas in the market and he responds:

‘Bananas command a good price in the market and have a short crop rotation cycle. Boki has no industries, no government jobs and is the least developed local government area in Cross River State. The primary means of living is farming and trade in farm produce... I also own a farm which I visit regularly on weekends to supplement income from taxi driving’

Contemporary development and biodiversity conservation discourse is filled with rhetoric on poverty alleviation. This reflects the fact that the majority of the world’s people live in poverty with about 300 million individuals located in Africa. Studies show that this has a huge impact on biological resources as the poor rely directly on these resources for their livelihood.
It is maintained that there is a vicious cycle of poverty leading to biodiversity loss, which then leads to greater poverty. Numerous strategies have been executed with the purpose of lifting the poor in developing countries out of poverty. The most recent coming out as usual from the World Bank’s stable is the Heavily Indebted Poor Countries (HIPC) initiative.4

Integrating conservation and poverty alleviation

At the 1992 Earth Summit in Rio, there was global consensus that efforts at biodiversity conservation should also deliver poverty alleviation.5 Since then, a plethora of initiatives under the rubric of integrated conservation and development (ICDP) projects and or community-based conservation (CBC) have sought to achieve this twin task.6

In 2000, in recognition of the gravity and complexity of this task, the UN declared poverty alleviation as one of eight millennium development goals, alongside environmental sustainability. The target of the poverty alleviation millennium goal is the halving of the number of poor people who live on less than a dollar a day and suffer from hunger, by 2015. The environmental sustainability millennium goal aims to “integrate the principles of sustainable development into country policies and programmes and reverse the losses of environmental resources”. The UN maintains that the millennium development goals are mutually re-enforcing and goes on to re-assert the standpoint that “economic growth, which work to improve peoples’ lives, can also work to improve the environment”.7

Based on the above premise, Pro-Natura International in 1996 initiated a conservation and development project at Ebok-Boje (also known as Ebok-Kabaken or Ebaken) in the Afi Forest Reserve of the Cross River forest region. Ebok-Bjoe is in Boki local government area of Cross River State, Nigeria and is a critical site.
The intertwined roots of poverty, wealth and environmental degradation…

Conservation can end up enhancing poverty…

…but conservation can also provide livelihood benefits…

…if initiatives embrace rights, secure access to resources and real participation for biodiversity conservation. Boki is home to species of high conservation value including the migrant barn Swallow (Hirundo rustica), Baumann’s Greenbul (Phyllastrephus baumannii), Grey-necked Picathartes (Picathartes oreas), endangered primates (Mandrillus leucophaeus, Pan troglodytes vellerosus) and the critically endangered Cross River Gorilla (Gorilla gorilla diehl). Oates et al. (2002, p.83) note that “it has been suggested that this [Ebok-Boje] is the largest wintering roost site of barn swallows in Africa, occupied at times by 20 million birds”.

The Pro-Natura initiative at Ebok-Boje was aimed at providing incentives for the people of Ebok-Boje to stop hunting the migrant barn swallows for food. The initiative, which is now under the auspices of the Nigerian Conservation Foundation (NCF) and the Italian League for Bird Protection (LIPU), consists of an environmental education component, a piggery project and an academic study fellowship for two Ebok-Boje community members to Italy. It is known that about 200 000 barn swallows were caught everywhere for food in the Ebok-Boje area. Other threats facing wildlife in the area include habitat loss via land clearance and bush burning for farming and habitat disturbance due to logging operations.

Francesco Micheloni, LIPU’s contact person for the Ebok-Boje project, in his report on his most recent trip to Boje asserts that the people are no longer interested in eating the swallows. However, Micheloni does not state if this is as a result of successful project interventions or other contingent factors. It is common knowledge in Ebok-Boje that the piggery project set up to provide an alternative source of protein and income-earning venture for the local people collapsed when donor funding ceased. The environmental education initiative is severely limited and the study fellowship benefited just two community members who travelled to Italy.

Obstacles or opportunities: neither either-or but both-and

Field contacts in Boje indicate that hunting of Barn Swallows for food has not ceased. Part of the allure of hunting for Barn Swallows is the relative ease with which this can be done relative to hunting for other wildlife.
Poverty, wealth and conservation in the area. The creation of the Afi Mountain Wildlife Sanctuary (AMWS) and subsequent deployment of sanctuary rangers has made it increasingly difficult to hunt larger wildlife.\textsuperscript{14}

Thus, despite on-going conservation intervention with respect to protecting an important wintering roost site for the European Barn Swallows, its fate still hangs in the balance. However the point that this article wishes to dwell upon is the collapse of the piggery project. It is also maintained that the project collapsed as a result of the disinterest on the part of community members appointed to manage the piggery on behalf of the Ebok-Boje community.\textsuperscript{15}

This in part reflects a common mindset in this region that views labour demanding exogenous alternative income generating activities with disfavour.\textsuperscript{16} Farming of crops with short rotation (such as banana) with an assured annual yield and high market value (such as oil palm) is high on favoured list of income generating ventures. If this is the case why did the community accept the piggery project? A common response I received was that the community decision-making process was captured by the most articulate who placed personal rather than community interest at the fore. This individual(s) put on the garb of community spoke person(s) and won the “trust” of the conservation organization field personnel working in the area at the time. It is worth noting that the above outcome is not new to the conservation and development debate.\textsuperscript{17}

This example draws attention to the fact that rural poverty cannot be eliminated simply by having the right technical solutions but by combining this with an understanding of local socio-economic dynamics. The fact that international NGOs are interested in conserving biodiversity in Boki is viewed by local people—rightly or wrongly—as an opportunity for material and financial benefits, preferably in the form of monetary compensation rather than labour demanding community projects.\textsuperscript{18} This mirrors the pervasiveness of a “get-rich-quick” mentality in Nigeria.\textsuperscript{19} How then could NGOs effectively deliver conservation and poverty alleviation under these circumstances? This is a very pertinent question, given that Nigeria and Cameroon have just signed an agreement creating a trans-boundary protected area in the Cross River forest region between both countries.\textsuperscript{20}

Would increased prosperity not lead to increased consumption and consequently increased exploitation of forest resources?

The conservation importance of this region has attracted several high profile international organizations to the region, including WWF, WCS, FFI, GTZ, CIDA and USAID. The starting point would be for these actors to recognize that only a long term (minimum fifteen years) approach would yield meaning-
ful outcome in the region. There is also a real need for a comprehensive understanding of the ecological, historical and socio-economic causes of biodiversity loss in the region. This would form the foundation for a locale-specific and pragmatic biodiversity friendly poverty alleviation strategy. The strategy would need to provide effective solutions to the problem of soil productivity with a view towards enhancing productivity of existing farmlands and bringing into usage abandoned farmland.21

The choice of crops should be left in the hands of the local people. The goal should be to freeze farmland expansion and provide gainful employment within a long term time frame. This must be coupled with capacity building aimed at raising the marketing acumen of the local people. Would increased prosperity not lead to increased consumption and consequently increased exploitation of forest resources? Yes, it would in the short term, but long-term strategies can be put in place to ameliorate the negative impact of increased local wealth on biodiversity. This would involve historical analyses of resource exploitation to reduce the probable impact of increased wealth on the resource base.

Results from this exercise could be used to deflect future consumption to more biodiversity friendly pathways. Demographic analyses could be used to design tailored programmes aimed at inculcating the conservation ethics into younger community members. This proposed intervention could be designed on a 5-year rotation aimed at working with the next immediate generation of potential labour force and consumers. Environmental education programmes should be initiated with the dual purpose of building conservation conscientiousness and identifying potential future conservation “champions”. These children should be the focus of capacity building initiatives designed to develop local leaders who would speak for biodiversity as a result of internalised conservation ethic.

The plethora of international development and conservation organizations in the Cross River forest region could be problematic. Rather than each organization seeking for pre-eminence and thus breeding institutional rivalry, it is in the best interest of all if they work in synergistic harmony. They would also have to reach out in equitable partnerships with the various local NGOs in the region. I do acknowledge the role of broader political and economic factors towards the perpetuation of poverty in Nigeria and other developing countries.22 However, it is beyond the mandate of conservation NGOs to engage comprehensively in this arena. At best conservation NGOs should add their voice to the call for a more people responsive and poverty alleviating global political and economic order.

Conclusion
The proposals herein are not presented as silver bullets as there are no easy answers to an effective coupling of biodiversity conservation with poverty alleviation. However, the interconnections between poverty and loss of biodiversity in developing countries such as Nigeria indicates that conservation NGOs cannot opt out of this arduous task.
Poverty, wealth and conservation

Notes
1 UNDP, 2000; DFID, 2001; Mellor, 2002; Sanderson and Redford, 2003
5 See ‘Combating Poverty’ and also ‘Conservation of Biological Resources’ in Agenda 21 available online at: http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm
7 See http://www.developmentgoals.org/Environment.htm
8 Ezealor, 2002
9 IUCN, 2003; Oates et al., 2002.
10 Ezealor, 2002.
11 See Ali Notizie June 2000 (LIPU – UK Conservation Newsletter) available online at http://www.lipu-uk.org/Pubs/Publications.htm
13 Ezealor, 2002.
22 Cheru, 1992; Hellinger et al., 2001; Pimbert, 2001; Okunnadewa et al., 2002.

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