



Economic Growth and Natural Resource Management: Are They Compatible?

SANREM CRSP/Philippines 1998 Annual Conference
Pine Hills Hotel, City of Malaybalay, Bukidnon, Philippines
May 18-20, 1998



SANREM CRSP
Sustainable Agriculture and Natural
Resource Management
Collaborative Research Support Program



Conserving Tropical Biodiversity Through Local Initiative

Dennis P. Garrity

Victor B. Amoroso

Co-Principal Investigators

SANREM Biodiversity Consortium

The SANREM Program aims to develop a new paradigm of research for Sustainable Agriculture and Natural Resources Management. A paradigm that includes people, communities, and local government bodies as reviewers, partners, and implementers of research with a depth and continuity of involvement that is quite unconventional. It is a paradigm that takes the whole landscape and lifescape of a watershed as the basis for formulating the questions and for resolving them. This approach seems well suited to tackling some of the really difficult issues in protecting the natural habitat of unique tropical biodiversity area in the face of inexorable human pressure. The Biodiversity Consortium of SANREM set out to see how to apply this framework in developing tools and approaches to increase the chances of conserving biodiversity with the active involvement of the communities that live near, and draw economic sustenance from those habitats. This paper reviews that experience. It focuses on what was done and why, and analyzes the implications. But beyond that it attempts to convey how our conceptual approach evolved over the few short years we have been working together. The story may, therefore, convey the iterative nature of trial and adjustment that are fundamental to such experiments in the interface between research and development.

Outsiders represent the interests of the global and national stakeholders in biodiversity conservation. They invariably enter with naïve ideas and little understanding of how complex the local biophysical, social, economic, and political situation actually is. The broad perception is that some type of participatory approach is the only feasible way forward. Examples of successful approaches are, therefore, essential in order to derive cost-effective methods for wider scale adaptation. Experiments are expensive; but they are certainly cheaper than the many huge development programs that had a flawed design because no research was done beforehand. The paper will report progress in scientific research, and in evolving processes to achieve participatory mechanisms to conserve the natural habitat of Kitanglad Range Nature Park, and the surrounding natural areas in the agricultural landscape. The processes are still in the formative stage. Sustained outside support will be required for some years to ensure their success.

The Global Experience

Two decades ago, it was commonly thought that protecting the environment would entail a significant drag on economic development. But in recent years, the global consensus has shifted toward the view that environmental conservation is not in conflict with development, but rather is a crucial element in sustainable development. The conservation of biodiversity has now become a widely shared goal among nations, leading to the implementation of many projects in attempts to save natural areas from degradation or destruction.

The classical method of preserving a natural area has always been to declare it off-limits and enforce exclusion. Boundaries were set and guards patrol the area. This often resulted in conflicts of interest and hostility between the enforcement agency and the local communities. Enforcement seldom worked because population pressure on the land was too great or the costs of enforcement were too high. The modern approach of integrated conservation-development suggests that enforcement ought to be linked with some form of compensation to the communities that are directly affected by the presence of the natural area, to enable them to recover some benefits from foregoing their use of the protected area. Conservation would only be ensured if the management of protected areas is reconciled with the social and economic needs of local people.

During the past decade there has been a rapid expansion in integrated conservation-development projects (ICDPs). However, the concept is so novel that the implementers of such projects have little experience to go on. Most ICDP projects were implemented by institutions that have not done this before. In the Philippines, the passage of the National Integrated Protected Areas System (NIPAS) Act in 1992 has been heralded as one of the most progressive attempts in the tropics to embody into law scientifically-advanced principles of establishing protected areas that have wide scientific support. But implementation presented an exceedingly complex challenge.

The NIPAS Act came none too soon. The Philippines' biodiversity heritage is globally valued in terms of its very high endemism. The country's species inventory includes about 13,000 species of vascular plants (8,500 species of flowering plants, 3,800 trees), which is about 10% of the world total; 556 birds (6% of the world total), and 210 mammals (4% of the world total). However, 60% of the endemic Philippine flora are already extinct, and a great many other species are endangered. Despite a logging ban on virgin forests, and the presence of 64 national parks and 19 wildlife sanctuaries, the on-the-ground protection for these areas is nominal at best. The NIPAS Act aims to remedy past deficiencies by focusing on scientific development of resource management plans for 100 priority sites, and mobilizing resources at the local level to implement them. Resource profiles and resource management plans are to be developed for each protected area. The first stage is focused at ten sites distributed across the country: Mount Kitanglad Range Nature Park is one of these ten. As this enormous effort gets underway, DENR, national and local NGOs, local governments, and the other stakeholders are grappling with the ways to proceed in uncharted waters.

The SANREM Biodiversity Consortium began its work by drawing on the lessons learned from the global experience with ICDPs as distilled in the excellent review by Wells and Brandon (1992). That review examined the experiences of 23 ICDPs from around the world. All these projects were attempts to reconcile the management of protected areas with the social and economic needs of local people. The following paragraphs indicate some of the key lessons learned.

Cooperation and Support of Local People is the Key

Communities near protected areas frequently bear substantial costs as a consequence of their proximity to these areas, and yet gain little in return. Local residents are usually poor and quite remote to normal government services. Their perception is that the protected area restricts their ability to earn a living, and they often see encroachment as a means to rectify this. International recognition of these realities gradually intensified through the Man and Biosphere Program of UNESCO in the 1970s, the World Conservation Strategy (1980), the World Commission on Environment and Development (1987), and was vigorously affirmed by the Rio Conference on Environment and Development in 1992. It is no longer politically feasible or ethically justifiable to exclude the poor from reserves without providing them alternative means of livelihood.

There Must be Explicit Linkages Between Project Components

Linkages between project component practitioners of ICDPs widely assume that people made better off by a development project will refrain from illegal exploitation of a reserve area, even if no enforcement is practiced. Wells and Brandon's global study found absolutely no evidence to support this. Attention to enforcement alone, or to development activities alone, has not provided sufficient success in ecosystem protection (Brandon and Wells, 1992; Kramer et al, 1997). An integrated approach with balanced attention to both is essential. However, there are very few good examples of effective application of explicit linkages between enforcement and compensation so far. This omission was seen as a serious weakness in most projects. In order to achieve the goals of protecting biological diversity and helping to improve the welfare of the people living near the protected area, it is necessary to pay very explicit attention to how the rural development activities directly support the objective of protection. In many projects an indirect relation is inferred, but is usually unconvincing.

Why is the linkage missing or obscure? Making an explicit linkage is difficult for a number of reasons. Often, when the project begins, particularly ones implemented by NGOs with a bottom-up approach, there is a clear need to build trust and confidence between the implementation staff and the local people. Sometimes this must be done in light of an environment of significant prior mistrust. In such situations, there are obvious advantages in implementing confidence-building activities in which the village community senses a clear positive gain. Negotiated linkages with park protection regulations are deferred until later. In other projects it appears that the institutions involved (being oriented toward development) are uncomfortable or ignorant about how to link enforcement with development. This process involves negotiations, and some form of agreement between outside institutions and local institutions about rights and responsibilities. This issue of linkages in the circumstances of Kitanglad poses a major challenge to SANREM.

Another difficulty is that many prospective development initiatives that are strongly advocated by the target population can themselves increase the pressure on the reserve rather than decrease it. Growth in agricultural productivity or construction of a road are examples. Introduction of practices or technologies that raise agricultural productivity will elevate land values, and may make it more attractive than ever to encroach on to reserve land. Implementation of such 'double-edged' changes must be assessed carefully, and must be linked with clear and effective enforcement mechanisms. The lesson is that the development aspects of the ICDP approach does not mean that direct enforcement is no longer needed. Rather, they justify making traditional enforcement mechanisms more effective. Enforcement from within the community may take a number of avenues. Our initial concept was that conservation agreements on a village-by-village basis appeared most likely to succeed (Garrity, 1995). This was later supplemented by much more comprehensive framework involving the natural resource management at the municipal, natural park, and ancestral domain levels.

Alternatives in Promoting Local Development

Compensation to communities may take many forms. The ICDPs that were reviewed by Wells and Brandon employed a diverse range of such mechanisms. Efforts to promote local development included: improved natural resource management outside protected areas, agroforestry practices, crop intensification and irrigation, conservation farming practices, community forestry, and others. Most projects attempted to encourage improved natural resource management practices in the areas outside the reserve. The objectives were to increase people's incomes, and to intensify the production systems away from the more extensive systems currently practiced. Agroforestry alternatives were emphasized in many projects.

Biodiversity Protection in the Manupali Watershed

The Biodiversity Consortium attempted to develop an integrated approach to conservation within the framework of the SANREM landscape approach. The landscape of the Manupali Watershed in Bukidnon, Philippines, is a microcosm of farm families and communities whose diverse vocations exert pressures on both the natural and managed ecosystems, particularly on the remaining protected forest of the Kitanglad National Park. The National Park is a relatively small ecosystem of approximately 50,000 ha, but is of the highest conservation value because of the high endemism of the vascular flora (Amoroso et al. 1996; Pipoly and Maslulid, 1995). It is also the site of the greatest diversity of mammals and birds in the Philippines (Heaney, 1993). It was recently found to have the highest tree density among tropical forests (Pipoly and Masmulid, 1995). This combination of a small, manageable size, and of a rich, singular biodiversity conforms to the type of protected ecosystem that Sayer (1995) proposes to receive the most determined attention in tropical biodiversity protection.

The present landscape of the upper reaches of the Manupali watershed consists of essentially three belts of land:

- 1) *The national park*, consisting mostly of pristine forested land existing at high altitudes (>1200 masl) with few current household land claims and National Park status,
- 2) *The external buffer zone* of the park, a belt of land surrounding the park that is managed by the Department of Environment and Natural Resources (DENR): This is land on the fringe of the forest and has now been partly converted to agricultural fields interspersed with *imperata*-dominated grassland. The encroachment here has been partly sanctioned through the expectation of social forestry stewardship contracts and eviction is not a tenable management option, and
- 3) *Privately owned agricultural land* that is further downslope from the public DENR lands. These are landholdings comprising a mosaic of agroforest, crop, and fallowed fields, with remnant forest existing in the steep ravines which border the streams that drain the national park.

The question our project addresses is: "How can the biodiversity of the Manupali watershed best be protected under the social and economic realities?" Our goal was to elucidate a more fundamental understanding of the people-ecosystem interactions that would lead directly toward development of practicable natural resource management plans. Our research was directed to develop the necessary elements of a workable social contract between buffer zone communities and the non-local stakeholders at the national and international levels concerned with resource protection. We asked: "What is a practicable social contract? And, what are the processes leading to its successful implementation?" We hypothesized that there are two essential conditions for sustainable buffer zone management and biodiversity conservation in the Kitanglad National Park, and other protected areas in the tropics:

- 1) Community-endorsed and -supported enforcement of the boundaries of the natural forest ecosystem, and
- 2) Agricultural/agroforestry intensification in the buffer zone in order to enhance income growth on static land resources, complemented by other forms of off-farm employment generation in the local and national economy.

Our work focused on both of these aspects: The first concerns institutional development based on local and national realities. The second is research that induces appropriate technical change suited to the biophysical and socioeconomic conditions of the buffer zone. The Consortium sought a model of buffer zone management that works, and that could be extrapolated to other protected forest situations. The social contract underlying the model

links the provision of assistance in intensifying agriculture to local responsibility for park boundary protection.

It is commonly assumed that the interests of local communities living in the environs of protected ecosystems are diametrically opposed to those of outside stakeholders concerned with global biodiversity (Wells and Brandon, 1992). Our research in the first phase of the project has provided evidence that this is an overly pessimistic assumption, at least in the context of Manupali (Cairns, 1996). There is, in fact, significant self-perception among communities on the boundary of Kitanglad National Park that the protection of the natural biodiversity is in their own self-interest, particularly among the Talaandig indigenous people, who regard the public lands as their ancestral domain. These values are articulated by local people as protection of the hydrological resources of the upper watershed for water supplies, and of the spiritual and cultural values of the forest, among others. The current failure to protect these resources appears to be due in large part to the lack of institutional mechanisms that provide a framework for management of these systems; mechanisms that explicitly include local interests, and address practical local needs for alternative livelihood directions. Lack of secure land tenure by the households residing in the buffer zone outside the park boundaries is a critical limitation to generating among them a perceived stake in park protection.

The Participatory Learning Landscape Appraisal (PLLA), and the follow-on research during the past four years, has documented the land use practices in the forest margins of Kitanglad National Park, and the high rate of slash-and-burn farming in the remaining forest (COPARD, 1996, Banaynal, 1996). This work highlighted the urgent need to develop an integrated sustainable buffer zone management program for the Manupali Watershed that can be extrapolated to the remainder of the national park and to other protected areas. The working assumption underlying our approach to development of a practicable social contract for the Manupali Watershed includes the belief that a whole landscape approach is essential in dealing with the existing realities. SANREM CRSP's participatory approach recognizes that the interests and actions of the end-user communities within the interdependent ecosystems will ultimately determine the fate of the protected forest and the agroecosystems that extend outward from it. The three project objectives were:

- 1) Develop and test the elements of a practical social contract for successful buffer zone management at the Kitanglad National Park, and a municipal natural resource management plan that will guide land use decisions for all zones of the landscape from the park boundary to the lowlands.
- 2) Develop elements of enhanced agrodiversity and better livelihoods in the Kitanglad National Park buffer zone and the adjoining private lands in Lantapan through the participatory development of improved agroforestry systems.
- 3) Characterize, protect, regenerate, and expand the natural biodiversity of the Kitanglad National Park and the buffer zone, and incorporate this information into a realistic natural resource management system for the upper watershed.

The three objectives translated into three subprojects were elaborated further in this paper.

Assembling the Elements of a Social Contract for Biodiversity Conservation

Our work on natural resource management strategies and policy had two components. The first focused on assembling the information needed to guide the development and implementation of a natural resource management plan for the Municipality of Lantapan. The second aimed to analyze the ancestral domain claim of the Talaandig people in relation

to the natural resource management issues of the natural park and the surrounding municipalities. It became clear that the interactions between these three domains (the Park, the ancestral domain claim, and the municipalities) must be clarified and reconciled. The work aimed to provide options leading to a consensus that would meet the various stakeholders' concerns.

The foremost policy issue facing the SANREM project is overlapping land rights and management priorities. While buffer zone research and conservation activities related to the Kitanglad park make up the majority of the SANREM work plan, much of the project area falls within the constitutionally protected indigenous rights of Talaandig communities. Tension between Talaandig control over the management of ancestral areas and the conservation priorities expressed by local government and park management is a critical consideration as efforts to promote sustainable resource management evolve. Of all aspects of the promotion of community-based natural resource management, dealing with the question of resource rights is perhaps the most difficult. Regulatory frameworks in most forested countries heavily favor the granting of large concession areas to forest industries or set aside wide tracts of land for conservation. This is often done at the expense of local communities that have internationally recognized rights to lands covered by these areas. In many parts of the Philippines, local people are actively resisting the expansion of forestry and conservation activities into their traditional lands they depend upon to survive.

The Philippine community forestry program is designed to address the needs of the nation as a whole, as well as, those of local communities that depend upon and have clear rights to forest resources. Central to this approach is the development of a package of options government now offers local communities, a package that in many ways is not unlike what is offered the forest industry. Foremost is the right to exploit forest resources in selected secondary forests. But unlike the forest industry, many local communities have long-term traditional rights over their land classified by the state as forest --- rights that must be considered during the development of tenurial instruments for local people.

Villagers, universities and NGOs in Indonesia and the Philippines have developed a two stage approach to promoting secure tenure for communities that hold ancestral rights. The first entails work within the state regulatory framework and promotes the granting of limited use and management rights to local individuals or communities. This responds to the immediate need for halting the conversion of ancestral lands to large-scale forest concessions while at the same time supports sound management of these areas. The second stage is a long-term legal and political struggle by local people to gain legal recognition that their lands have been misclassified as state forest zone and that in fact private rights are attached to these areas.

The community forestry program also includes opportunities for local people to be central players in the management of protected areas, particularly national parks. The National Integrated Protected Areas System (NIPAS) enabling legislation explicitly supports the rights of Indigenous Cultural Communities (ICCs) who are living within NIPAS sites. While this law has opened the door for ICCs to participate in the development and implementation of conservation areas within their ancestral areas, many questions, such as the processes that will lead to complementary management approaches remain unanswered (Dagondon et al, 1997).

In 1994, a group of Talaandig Datus (community leaders) prepared and submitted a Talaandig ancestral domain claim covering more than 40,000 ha. The claim includes the entire Kitanglad Park and surrounding buffer zone. In May of 1996, the Provincial Special Task Force on Ancestral Domain, chaired by the DENR and responsible for the recognition of ancestral domain claims and the awarding of Certificates of Ancestral Domain Claims (CADC), delayed action on the Talaandig claim by requesting an endorsement of the claim by the Kitanglad Park Area Management Board (PAMB), a group made up of local government officials, community leaders, government line agencies, and non-governmental organizations. After

