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Strategies for social and environmental conservation in conservation units

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Conservation units in the Amazon region can conserve both social and environmental values, but achieving this requires a strategy. A “strategy” is a broad approach, or general direction, for making progress towards a goal, not the details of how individual situations are handled from day to day. Here the goal is social and environmental conservation, meaning assuring the long-term maintenance of both the human and non-human portions of ecosystems. Two groups of considerations are presented here for choosing strategies for conservation: linking conservation to the interests of local peoples, and linking conservation to core national and global interests.

I.) Linking Conservation to the Interests of Local Peoples

Since the launch of the National System of Conservation Units (SNUC) in 2002, Brazil’s conservation units such as parks and reserves are grouped into two categories: “sustainable use” and “integral protection.” The first category includes federal units such as extractive reserves, national forests and state-level conservation units such as sustainable-development reserves and state forests. Sustainable-development units are intended to maintain traditional populations such as rubber tappers and Brazilnut gatherers, and, in the case of the *várzea*, communities supported by fishing and by small-scale logging in flooded forests. Integral protection units such as national parks, biological reserves and ecological stations do not have resident populations within them but the involvement of populations in the surrounding buffer zones is essential both to the effectiveness of the reserves and to the welfare of the people. Indigenous areas, although not considered to be conservation units, protect much larger areas of natural habitat than do units under the SNUC, and the role and interests of their indigenous inhabitants are subject to the same considerations (Fearnside, 2003).

The political attractiveness of “sustainable use” conservation units is much greater than that of units for “integral protection.” This is evident from the proposals made by the Amazonas state government’s Secretariat of Sustainable Development (SDS) for conservation units to be created in the Area of Provisional Administrative Limitation (ALAP) along the Manaus-Porto Velho (BR-319) Highway. While completely protected areas also have their place, the rationale for allocating a substantial part of conservation effort to the “sustainable use” category is strong, especially for the *várzea* (Amazonian floodplain) where virtually the entire area is occupied by local residents.

A strategy for investment in conservation must face the tradeoff between options that take on long, expensive struggles for creation of a few highly protected areas versus a strategy of seizing opportunities to quickly create large reserves, even if relatively weakly protected. For this opportunistic strategy one must be able to pick up the ball and run with it when the opportunity arises. Ecologists will recognize the parallel with “r” and “K” selected life-history strategies (MacArthur and Wilson, 1967). This refers to how plants and animals allocate their efforts in growth, defense and reproduction. For example, a Brazilnut tree (*Bertholetia exelsa*) is slow-growing, has hard wood and produces a relatively small number of large seeds with thick shells whereas a *Cecropia* grows quickly, has soft wood and many tiny seeds without defensive shells. The r-selected *Cecropia* is adapted to quickly spreading to occupy openings that appear in the forest, either caused by trees falling as when toppled by

storms or by agricultural clearings made by humans, whereas the K-selected Brazilnut is adapted to outcompeting its neighbors as it slowly grows in the shade of the forest. These strategies are appropriate for different periods in the process of ecological succession. The same is true of strategies for conservation units. In Amazonia, we are still very much in the “r-selected” phase where rapid expansion of conservation units, even if they are incompletely protected and/or weakly defended, has the greatest payoff for conservation, both social and environmental.

At present, opportunities are much more evident for sustainable-use units than for integral protection. In particular, the receptiveness of the current government in the state of Amazonas to creating substantial areas of reserves represents an opportunity that should be matched with the support and investment of entities interested in conservation, both social and environmental. Opportunities such as these are temporary, as they tend to become unavailable due to political changes or to the continued advance of destructive occupation of the habitats that might be conserved.

The sustainable-use category includes the presence of local peoples, which is seen by some as an impediment to conservation. The fact that local people can damage natural ecosystems is undeniable. Nevertheless, these people also represent an opportunity. Inclusion of the people, as opposed to relocating them, gains support at all levels, from political support at in the upper echelons of government to on-the-ground presence in guarding the environmental resource.

The most immediate results from creation of sustainable-use areas are seen in the case of those based on fishery resources. Exclusion of outside fishing boats creates local support for proposed conservation units such as sustainable development reserves (RDS) and extractive reserves (RESEX). Simply closing off the access of commercial fishing boats from distant centers, such as Manaus, increases the amount of fish that can be harvested by the local population and removes the open-access situation that makes unsustainable exploitation the logical choice for all involved (McGrath, 2000).

One source of income in conservation areas that include human populations is from sale of sustainable products that are certified for environmental niche markets. These can include fish, açai, wood and handicrafts. Often the local people who sell these products are not fully aware that the principal product they are offering to the market is social and environmental correctness, and that they must be very careful to be correct or risk losing this market from one day to the next.

In discussing the creation of sustainable-use units, one must be constantly aware of the multiple pitfalls presented by “politically correct” discourse on this subject. The supposedly “sustainable” activities are not always sustainable, nor are they always environmentally benign. Logging can easily pass these limits. Problems can be caused by the very success of projects that prove to be highly productive, attracting immigration. Immigration may mean simply moving from one side of the river to the other, but when this increases the population of a conservation unit it has impacts. Local people are not necessarily environmentally conscious. The alligator extermination effort in an environmental protection area (APA) near Itacoatiara described by Ronis Silveira provides an apt example.

Political support of local people was generated by former Amazonas state governor Gilberto Mestrinho's calls for elimination of the alligator population in the *várzea* near Nhamundã, and by his sending his wife to distribute artificial limbs distributed to *várzea* residents who had been attacked. In other words, anti-environmental positions can bring support.

II.) Linking Conservation to Core National and Global Interests

This author has proposed environmental services as a means for making conservation into a basis for supporting the human population in the Amazonian interior (Fearnside, 1997). The proposal had originally been made as a more modest complement to plans for forest management for timber (Fearnside, 1989a) and for extraction of non-timber forest products (NTFPs) (Fearnside, 1989b).

The basic rationale for this applies to ongoing government programs to create reserves and to support local residents, such as those in the *várzea*. One must ask "Why does the Pilot Program to Conserve the Brazilian Rainforest (PPG7) and its Pró-Várzea project, the Brazilian government in general, and environmental NGOs care about people in the *várzea*?" The answer is not human rights, correction of historical injustices, or poverty alleviation. For example, building schools and health centers in urban shantytowns (*favelas*) is much cheaper per capita than is providing these services to an equivalent number of poor people in far-flung reserves.

The population is accustomed to receiving government support as a political favor, essentially in exchange for votes. This includes benefits to which the population theoretically has rights as citizens, such as retirement benefits, as well as new programs like the "family scholarship" (*bolsa família*). It will be important to assure that this pattern does not accompany payments for environmental services, such as the "forest scholarship" (*bolsa floresta*) program that was created by the government of the state of Amazonas on 26 April 2007.

There must be constant reinforcement of awareness among the local people that it is their role as guardians that is the reason for the support they receive, and that they must perform in this environmental role. The reasons for supporting the programs must be disentangled both for the supporters and the supported. For example, support for Pró-Várzea was withdrawn by the British government because of a policy on poverty reduction was issued for all British aid expenditures as a national decree. The support that had been flowing to projects such as Mamirauá was summarily transferred to Africa. This is not an indication that environment isn't of interest. The same relationship applies to strategies on the international level to get financing for conservation units (PPG7, etc.). This author served on the International Advisory Group (IAG) of the PPG7 for nine years (1992-2001), during which time this was repeatedly evident.

There has been notable progress over the past few years in creating conservation units and in organizing civil society in the Amazonian interior so that these units act as a force for conservation. This can lead to a tendency to become complacent and self-congratulatory.

However, important as the many advances may be, they rest on a shaky foundation. This was dramatically apparent at the time of the Pró-Várzea conference in December 2006, shortly after a confrontation had occurred between Environment Minister Marina Silva and Dilma Rouseff, the head of the “Civil House” (*Casa Civil*) -- the second most powerful person in the Brazilian Government. A situation such as this, which can recur at any time, showed that Brazil’s notable progress on environmental matters could be reversed virtually overnight. A new minister of the environment could easily be indicated by such political figures as Blairo Maggi or Jader Barbalho. Due to political favors that the current administration has received from these notoriously anti-environmental politicians, these are not entirely hypothetical possibilities (e.g., Leal, 2007).

The subordinate nature of environmental concerns was made publically clear on 21 November 2006 when President Lula da Silva declared that environment is “*entrave*” (impediment, or “monkey wrench”) for development (e.g., Paraguassú and Nossa, 2006). The statement was made while speaking at political rally on the same stage as Blairo Maggi, Brazil’s largest soybean entrepreneur. Lula listed “*entraves*” as including indigenous peoples, *Quilombos* (descendants of escaped African slaves) and environmentalists. *Riberinhos* (riverside residents) were left off list, perhaps out of forgetfulness. The statement served to remove the illusions of many as to the distinction between rhetoric on environmental and social issues and the core priorities of the government. Another reminder came when, just prior to the Pró-Várzea meeting, Brazil abstained on a critical vote in the UN Council on Human Rights, with the practical effect that the UN continued to do nothing to stop genocide in Darfur. Brazil’s foreign ministry was putting the oil purchases of its trading partner China ahead of any considerations based on human rights (*Folha de São Paulo*, 2006; Gallas, 2006; *O Globo*, 2006). These illustrations illustrate the unreliability of expecting concern for others, such as poverty alleviation, to override selfish financial interests.

The federal government’s launching of the Program for Acceleration of Growth (PAC) in January 2007 indicates the fragile nature of environmental advances. The Amazonian portion of the program is a package of highway and other development projects, with no environmental initiatives included. One of the most destructive projects, the BR-319 Highway linking Manaus to the arc of deforestation in Rondônia, is going forward without an environmental impact study (EIA/RIMA) (Fearnside and Graça, 2006).

These events indicate the need for concerted effort to elevate the position of the environment in decision making. Environment must pass from being a matter of public relations to becoming a core interest of decision makers. Because environmental services involve both national and global core interests, this represents the firmest foundation for social and environmental conservation, both inside and outside of conservation units.

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