

A Critical Analysis of Three Approaches to Tropical Forest Conservation Based on Experiences in the Sangha Region

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ABSTRACT

The WWF Dzanga-Sangha Project (DS) has been operating in southwestern Central African Republic (CAR) since 1988. Although it was initiated with an emphasis on anti-poaching, the project has evolved into a "model" Integrated Conservation and Development Project (ICDP). The DS project includes programs for wildlife protection, tourism development, research, education, and rural development in its goal to develop, protect, and manage the Dzanga-Sangha Dense Forest Special Reserve and the Dzanga-Ndoki National Park. This paper addresses a key question: Is the ICDP approach the right one, or would a traditional conservation approach be at least as effective? ICDPs find themselves situated between traditional protectionist approaches with complete exclusion from resources and more development-oriented approaches where local people are expected to manage their own resources sustainably. The DS project has faced numerous difficulties in achieving its goals, including population increase, diamond mining, unsustainable logging, poaching, and unsustainable financing of project activities. Although it is recommended that integrated approaches are likely to be most effective, there are cautions. Not all areas are suited for the ICDP approach; the cost of ICDPs is extremely high and finances must be guaranteed for the long term; costs may be too high in large human population density areas for the majority of households to receive sufficient benefits; ICDPs are not the solution. They are only slowing the inevitable process of failed conservation objectives.

BACKGROUND

The Dzanga-Sangha Special Dense Forest Reserve and the Dzanga-Ndoki National Park in the southwestern region of the Central African Republic (CAR) have been recognized as protected areas of international importance. Besides diverse tropical flora and fauna (Blom *et al.*, in press.; Harris 1994; Blom 1993 a, b; Fay *et al.* 1990) the area contains one of the highest densities of western lowland gorilla (*Gorilla g. gorilla*) and forest elephant (*Loxodonta africana cyclotis*) known in Africa (Carroll 1986 a, b, c, 1988, 1994; Fay 1989, 1991; Blom *et al.*, in prep. a, b)

The human population density in this area is low, concentrated in small settlements along the roads (Carroll 1986 a, b), and includes a unique ethnic group, the BaAka pygmies. From 1972 until the early 1980s the logging company Slovenia Bois selectively logged a 1000 km² area, before going bankrupt and closing down. Recently the company was revived after a takeover by new owners. Its name was changed to Sylvicole de Bayanga. Logging operations have restarted on a much smaller scale, employing fewer than 150 people. The town of Bayanga grew rapidly during the heyday of Slovenia Bois, but cycles of boom and bust resulted in similar cycles of immigration and emigration. The result is a highly mobile population and significant fluctuations in the number of inhabitants of Bayanga.

Since their gazetting, both the park and the reserve have been managed by the Dzanga-Sangha project. This project is a collaborative effort of the Central African government, the German technical agency GTZ/LUSO, and the World Wildlife Fund/World Wide Fund for Nature (WWF), with financial and technical assistance from the governments of Germany and the United States, the World Bank, as well as several private organizations and donors.

The Dzanga-Sangha project started in 1988 with an emphasis on anti-poaching, justified by the fact that the area was being overrun by elephant poachers and immediate action was needed. The fact that one can still encounter large numbers of elephants in broad daylight is largely due to the continued anti-poaching effort. From the start of the project, however, it was felt that collaboration with the local population was essential. Local people demanded, rightly so, direct benefits from the project. With increased funding becoming available in the early 1990s, the project started expanding further into rural development and adopted a strategy now often referred to as an Integrated Conservation and Development Project (ICDP).

The objective of the Dzanga-Sangha project is the development, protection, and management of the Dzanga-Sangha Dense Forest Special Reserve (3159 km²) and Dzanga-Ndoki National Park (sector Dzanga, 495 km², sector Ndoki, 726 km², see Figure 1). The Dzanga-Sangha project includes programs for wildlife protection, tourism development, research, education, and rural development. The Dzanga-Sangha area is managed in an integrated manner, allowing limited traditional hunting, agroforestry development and commercial logging in buffer zones, as well as total preservation of the natural forest ecosystem in the core area (Carroll 1992).

The Dzanga-Sangha project has been successful in its main objective, namely, the protection of the core area, the Dzanga-Ndoki National Park (Blom *et al.*, in press., Blom *et al.* in prep. a, b). The rural development program has also been fairly successful in changing attitudes of local people towards a more positive and collaborative relationship with the project. Although the project has not been entirely successful, it is generally considered a model project and one of the few really successful ICDPs.

But can this success in the short term be extended into the future? Is the ICDP approach the right one, or would a traditional conservation approach be at least as effective? These are essential questions for the future of the trinational area and conservation in general. I hope to clarify some of these important questions here based on the Dzanga-Sangha experience.

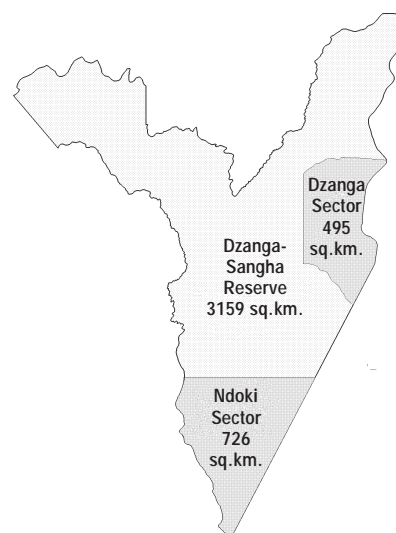


Figure 1 Sectors within the Dzanga-Sangha protected area, Southwestern Central African Republic

THE THEORY

Conservation in Africa has basically seen two main approaches. The first is what I would call “protection” conservation, where an area is declared off limits for the local people and “protected.” Most of the wildlife reserves and national parks in Africa have been designed using this approach. The second approach is what I would call the “development” approach where local people are expected to manage their own resources sustainably. These are two extremes, and in reality most projects currently fall somewhere in between these two endpoints. The two approaches are often referred to as “conservation for the people” versus “conservation by the people.”

Both approaches have clear drawbacks. It has become increasingly difficult to justify the removal of people from their traditional lands to make place for “nature.” It is now considered by many to be morally wrong, politically difficult, and practically impossible. This approach, however, has given us almost all of the protected areas in Africa.

The “development” approach, in my view, is naive. People almost invariably want to increase their standard of living. An increase in standard of living clearly means an increase in the use of natural resources, which leads to over-exploitation.

The ICDP approach, as used in Dzanga-Sangha, lies somewhere in the middle between these two extremes. One could refer to it as “conservation with the people.” It tries to combine the advantages of both, while attempting to avoid many of their problems. In reality it does involve all the usual problems as well, but they are minimized. By trying to find compromises we navigate through the problems.

A serious problem that many ICDPs have come across is immigration. The fact that many ICDPs contribute to some extent to raising the standard of living or at least expectations thereof, has often led to migration toward these project sites. This is particularly so in poor countries such as the Central African Republic.

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THE PRACTICE

The Dzanga-Sangha project is an interesting case study through which to look at the effectiveness of ICDPs. At first glance it looks like a successful program. But ICDPs should not be judged on their short-term successes, or failures for that matter, but rather on their long-term impacts. Of course it is impossible to tell what will happen 20 years from now, but I would like to point out some obvious problems the project will have to deal with if it wants to remain effective:

Population Increase. Although data from demographic studies we carried out are not yet available, it is safe to assume from observation that the population in the area is increasing, from both immi-

gration and population growth. The last two years have seen a dramatic increase in deforestation for agricultural land.

Diamond Mining. Diamond mining, with its associated poaching, is extremely destructive to the environment. The ecosystem of the riverbed being mined is destroyed and a relatively small area of forest is clear-cut. A large area, in some cases a 40 km radius around the camps, is depleted of wildlife to feed the miners. Several large camps, counting thousands of inhabitants each, are just north of the Dzanga-Sangha Reserve as well as just inside its most northern boundaries. Recent socioeconomic studies have indicated an increase of mining in the Reserve, as people are desperately trying to make a living in a worsening economic situation.

Unsustainable Logging. Commercial forest exploitation has been carried out in the area since the 1970s. The present company has one of the worst records in Africa when it comes to sustainable forestry, paying taxes and wages, or providing social services. The government of CAR has recently suspended its activities on grounds of mismanagement. Given the fact that the government is so strapped for money, it is certain that some form of exploitation will resume in the near future.

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Poaching. Although poaching for elephants and apes has been successfully brought under control in a major part of the area, the overexploitation of bush meat remains a major challenge (see also Noss 1995). It must be pointed out that hunting by traditional means or with registered guns is allowed in the Reserve, but hunting by snares or for trade outside the Reserve is strictly forbidden.

Unsustainable Financing of Project Activities. At present the project is almost entirely financed by outside donors. A maximum of 5% of its costs are at present being covered by government funds and tourism combined. In recent analyses of the tourism potential, I have estimated that in the present setting tourism could cover a maximum of 30% of the basic protection costs of the area (Blom, in prep). It is unrealistic to expect the government to come up with the remaining funds. Much of the donor funding is tied to political conditions and can easily be cut in these politically unstable countries.

HOW THE PROJECT IS DEALING WITH THESE PROBLEMS

Population Increase. This issue is probably the hardest one of all to tackle. We are at present studying ways to limit migration, first by analyzing the phenomenon and its underlying causes (both “push”

and “pull”). We hope to develop a regional land-use plan as well as village level land-use plans to limit migration. We are also studying the possibilities of some sort of resident permits linked to socioeconomic benefits.

Diamond Mining. In this area we have had some noted success through simple law enforcement. This progress was possible only after a long campaign of lobbying and information dissemination at all government levels, as well as an extensive information campaign in the diamond camps. Some of the camps in the north were established in the area before the reserve was gazetted, however, and are too large to move. Here we are negotiating a southern limit of their activities as well as looking at ways to provide alternatives outside the Reserve.

Logging. We are in negotiations to buy the logging company and to turn its infrastructure into a forestry school, with or without commercial logging under our control.

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Poaching. We are increasing law enforcement by doubling our guard force to 60 men, as well as increasing their effectiveness by intensive training. As a result of explaining the importance of wildlife for the local economy, people are slowly becoming aware of the importance of its conservation and sustainable management. Wildlife is important as a source of protein for a large part of the local population. In addition, wildlife, which is the major tourist attraction, contributes an estimated US \$18,400/year to the local economy (figures for 1995; Blom, in prep). Tourism also offers direct employment to local residents, as well as 40 percent of the tourist revenue, which is contributed to a local NGO for community development.

Unsustainable Financing. One of the problems with ICDP projects is that they are expensive. I estimate the costs of simply maintaining the park and reserve, which means basic protection and upkeep of infrastructure, at US \$800,000/year. An ICDP will cost at least three times that much. Our approach to addressing this problem is based on several ideas:

- privatize the project and turn it into a foundation or para-statal, run along business principles responsible for the overall management of the Dzanga-Sangha area while leasing it from the government;
- generate and optimize income from tourism, safari hunting and logging, while taking into consideration ecological and social parameters;

- create an endowment trust fund and use the generated income to finance basic operations of the foundation (Blom 1996);
- gradually turn over much of the rural development to local NGOs, which are usually more cost effective;
- increase the amount of funding going toward these NGOs, by increasing tourist revenue and attracting direct donations

If the Dzanga-Sangha project had chosen a “protection” conservation approach, we could have saved at least five million \$US, which instead was pumped into the rural development component. Had this money been put into a trust fund, we would by now have accumulated sufficient funding to guarantee sustainable funding for basic operations. A very strong argument indeed from a conservation point of view. However, it would have been impossible to carry forward, given the very strong opposition by local residents to the project in the past. The fact that the project has shown consideration for local people’s ambitions has dramatically changed the atmosphere in Bayanga. On the other hand, had we turned to the other side and only concentrated on rural development without any law enforcement, I’m convinced that poaching would now be completely out of control, as has happened for example in Korup National Park in Cameroon.

We should not forget that conservation work means fighting a losing battle. We are only slowing down a runaway truck.

| FORMS OF CONSERVATION | PROTECTION | INTEGRATED | DEVELOPMENT |
|-----------------------------------|-------------------------|----------------------------------|----------------------------|
| | <i>“For the people”</i> | <i>“With the people”</i> | <i>“By the people”</i> |
| Morally justifiable? | No longer | Yes | Yes |
| Politically feasible? | Very difficult | Difficult | Easy |
| Local perception? | Negative | Mixed | Positive |
| Local input? | Virtually none | Variable, usually more over time | High |
| Costs? | Low | High | Variable, but usually high |
| Long-term conservation potential? | Low to medium | Medium to high | Low |

Table 1

CONCLUSION AND RECOMMENDATIONS

The table on the following page summarizes, in my opinion, the reality of the three approaches mentioned in the central African context.

It is my view that in most cases some form of integrated approach would be best. However, I do have some strong words of caution. First of all, not all areas will be suited for such an approach. For example, areas with little or no population pressure are obviously better off with a "protection" approach. Second, the costs of an integrated project are high and funding must be guaranteed for a long time (20 years minimum). If no such commitment is available such a project should not start. Third, in areas with high population pressures, the costs of an ICDP will also be high, in many cases too high. The majority of the households in the area must benefit substantially from the ICDP approach in order for it to make an impact. Last but certainly not least: ICDPs, like any other approach, are not the solution. We should not forget that conservation work means fighting a losing battle. We are only slowing down a runaway truck.

REFERENCES

- Blom, A. 1993a. *List of the large mammals of the Dzanga-Sangha Dense Forest Reserve and the Dzanga-Ndoki National Park*. Central African Republic: World Wildlife Fund.
- _____. 1993b. *List of the birds of the Dzanga-Sangha Dense Forest Reserve and the Dzanga-Ndoki National Park*. Central African Republic: World Wildlife Fund.
- _____. 1996. *Proposal for the creation of an environment trust fund for Dzanga-Sangha*. Central African Republic: World Wildlife Fund.
- _____. in prep a. The impact of tourism on protected area management and the local economy in Dzanga-Sangha (Central African Republic).
- _____. in prep b. Kpanou, J.-B., Otto, K., Mbea, E., Godobo, P. and Almasi, A. A survey of the diurnal primates in the Dzanga-Ndoki National Park, Central African Republic.
- _____. Kpanou, J.-B., Otto, K., Mbea, E., Godobo, P. and Almasi, A. in press. Antelope survey of the Dzanga sector of the Dzanga-Ndoki National Park, Central African Republic. *Gnusletter*.
- _____. in prep c. Kpanou, J.-B., Otto, K., Mbea, E., Godobo, P. and Almasi, A. Elephant surveys of the Dzanga sector of the Dzanga-Ndoki National Park, Central African Republic.
- Carroll, R.W. 1986a. Status of the lowland gorilla and other wildlife in the Dzanga-Sangha region of southwestern Central African Republic. *Primate Conservation* 7: 38-41.
- _____. 1986 b. The creation, development, protection, and management of the Dzanga-Sangha dense forest sanctuary and the Dzanga-Ndoki National Park in southwestern Central Africa Republic. Unpublished report. New Haven, CT: Yale University.
- _____. 1986 c. The status, distribution, and density of the lowland gorilla (*Gorilla gorilla gorilla*) (Savage and Wyman), forest elephant (*Loxodonta africana cyclotis*), and associated dense forest fauna in southwestern Central African Republic: research towards the establishment of a reserve for their protection. Unpublished report. New Haven: Yale University.

- _____. 1988. Relative density, range extension, and conservation potential of the lowland gorilla (*Gorilla gorilla gorilla*) in the Dzanga - Sangha region of southwestern Central African Republic. *Mammalia* 52: 309-323.
- _____. 1992. The development, protection, and management of the Dzanga-Sangha Dense Forest Special Reserve and the Dzanga-Ndoki National Park in southwestern Central African Republic. Dzanga-Sangha Reserve Project and World Wildlife Fund. Washington D.C.: World Wildlife Fund.
- _____. 1994. Feeding ecology of the western lowland gorilla (*Gorilla gorilla gorilla*) in the Central African Republic. Unpub. Ph.D. Dissertation. New Haven, CT: Yale University.
- _____. 1989. Partial completion of a census of the lowland gorilla (*Gorilla g. gorilla*) (Savage and Wyman) in southwestern Central African Republic. *Mammalia* 53: 203-215.
- Fay, J. M. 1991. An elephant (*Loxodonta africana*) survey using dung counts in the forests of the Central African Republic. *Journal of Tropical Ecology* 7: 25-36.
- _____. C. A. Spinage, B. Chardonnet and A. A. Green. 1990. Central African Republic. In *Antelopes global survey and action plans*, ed. by R. East. Gland: IUCN: 99-109.
- Harris, D. 1994. *Interim check-list to the vascular plants of the Dzanga-Sangha Project Area Central African Republic*. Unpublished report. Oxford: University of Oxford.
- Noss, A. J. 1995. *Duikers, cables, and nets: a cultural ecology of hunting in a central African forest*. Ph.D. Dissertation. University of Florida.

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Selected bibliography:

1990. with M. Alers and R. Barns. *Antelopes: global survey and regional action plans. Part three, West and Central Africa*. Compiled by R. East and the IUCN/SSC Antelope Specialist Group.
1990. with M. Alers, R. Barns, and A. Feistner. Notes on the current status and distribution of primates in Gabon. *Oryx* 23: 223-224.
1995. with R. Barns and M. Alers. A review of the status of forest elephants in central Africa. *Biological Conservation* 71: 125-132.
- In prep. with A. Almasi, J. B. Kpanou, K. Otto, E. Mbea, and P. Godobo. Progress reports on the habituation of the western lowland gorilla (*Gorilla gorilla gorilla*) in the Dzanga-Ndoki National Park, C.A.R. *Gorilla News Letter*.

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