Conservation-related Resettlement in Central Africa: Environmental and Social Risks

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ABSTRACT

Since the Rio Conference of 1992, which declared the conservation of biodiversity and the creation of national parks to be priorities, resettlements resulting from conservation projects in Central Africa have been on the increase, as people living inside protected areas are relocated. Hardly any of these resettlements have been successful. There has been resistance to moving in the first place, and even returns to former villages inside the national parks. Resettlement is still the most common way to deal with people who happen to live in African national parks, but the risks which arise from these resettlements have led some scientists to rethink their position. This article focuses on the Congo River Basin. It reviews the only 'official' relocation programme in the region (Korup National Park, Cameroon) and evaluates different approaches of national parks in Equatorial Guinea, Cameroon, Central African Republic, Congo (Brazzaville) and Gabon. The author uses the Impoverishment Risk and Reconstruction model introduced by Cernea to evaluate the risks faced by the resettled populations, and to elaborate some social and environmental guidelines to mitigate them.

INTRODUCTION

> The forest does not belong to us, we belong to the forest. Mó-bele created it as our home. If we do not live inside the forest, mó-bele becomes angry, because it shows that we do not love the mó-bele and his forest.
>
> Kpokpo, a Baka elder from Bongo (CAR)

The idea of conservation arises from the observation that certain elements, which are considered useful for mankind, are disappearing from a given environment due to overuse or natural phenomena. As long ago as 350 BC, Plato expressed the feeling thus: 'What now remains compared with what

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then existed is like the skeleton of a sick man, all the fat and soft earth having been wasted away, and only the bare framework of the land being left' (Plato, 1961: 389c). Over the years conservation has acquired many connotations: to some it has meant the protection of wild nature, to others the sustainable utilization of natural resources. The most widely accepted definition, presented jointly by a number of international conservation agencies in 1980, is that of 'the management of human use of the biosphere so that it may yield the greatest sustainable benefit while maintaining its potential to meet the needs and aspirations of future generations' (IUCN et al., 1981: 14). The same document defines the objectives of the conservation of living resources as the maintenance of essential ecological processes and life-support systems, the preservation of genetic diversity, and the guarantee of the sustainable use of species and ecosystems.

Although nature has been protected since ancient times, the reasons for doing so have changed. Until recently, conservation had not been related to the value of nature as such, but to the value of some special feature of that nature which was being utilized by people. Thus, hunting reserves were protected in ancient Mesopotamia, in China, and in medieval Europe, but although such reserves did protect natural areas, their major purpose was to provide a setting for royal hunting (Nash, 1967; Thomas, 1983). Temple gardens have been preserved over the centuries in China and Japan, and the cedars of Lebanon were maintained around holy places; but it was the holy places and not the trees that motivated this conservation. The idea of preserving wild areas for their own sake originated in the United States with Catlin, Thoreau and Muir (Nash, 1989; Runte, 1979; Shabecoff, 1993). Nowadays the appreciation of wild nature is associated with scientific knowledge, particularly ecological knowledge. It is a sophisticated taste not usually to be found among those who earn their livelihood in close contact with the wild, but among the inhabitants of the completely artificial world of the modern metropolis.

The concept of preserving wild nature for its own sake has been increasingly accepted since the Rio Conference of 1992. Especially those ecosystems which are little affected by human activities, are considered to be worth preserving for a variety of reasons:

- A scientific benefit can be derived from studying ecosystems, particularly concerning the functioning of the biosphere. It is assumed that from studies of undisturbed ecosystems much can be learned about the functioning of those systems which have been modified.
- More or less undisturbed ecosystems are said to be important for the continued operation of those systems that people have created.
- It is also claimed that there are aesthetic and recreational values attached to wild areas and wildlife. That is the etymological background of the word 'National Park', which describes one type of protected area.

Ecosystems can be protected in a variety of ways, depending upon the desired objectives. This article will focus on the protection of unmodified

natural communities, with their full array of wild species. At a time when such communities are becoming increasingly rare, the desire to protect them has became increasingly popular. In Central Africa, governmental institutions, bilateral governmental agencies and international agencies have adopted strategies to protect as much undisturbed forest as possible (CARPE, 2001; Ribot, 1999; Weber et al., 2001). Table 1 gives an indication of the level of deforestation and protection in a number of countries in the region in the mid 1990s.

The Yaoundé Declaration of 1999, ratified by six Central African heads of state (Equatorial Guinea, Cameroon, Central African Republic, Congo, Gabon and Chad), expresses the conviction that the creation of national parks and other protected areas all over the sub-region is the most effective instrument to protect nature (Sommet, 1999: 3). These national parks are defined as:

> a natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation that is inimical to the assigned purposes of the area, and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible. (IUCN, 1994: 7)

But even in Central Africa, the idea of the rainforest as a vast wilderness with abundant freely-ranging wild animals — an undisturbed ecosystem just waiting for researchers and tourists to study and enjoy — is based on myths. There is very little 'no-man's land' of any biological importance, since an environment with a dense biodiversity is also a fruitful area to live in. The so-called 'wildernesses' marked green on the colonial maps are often communal land shared between villages or used by hunter-gatherer societies (Naughton-Treves and Weber, 2001). Nevertheless, certain areas have

Table 1. General Data on Deforestation and Level of Protection in Central Africa

Country	Total Area km^2	Original Tropical Forest km^2	Remaining Tropical Forest (1992) km^2	Remaining Forest (% Original)	Number of Protected Areas (1994)	Protected Forest (1994) km^2	Protected Forests (% of remaining forest)	Population Density (1995) per km^2
Cameroon	475,440	376,900	155,330	41.2	14	11,339	7.3	28.4
Central African Republic	622,980	324,500	52,236	16.1	13	4,335	8.3	5.3
Equatorial Guinea	28,050	26,000	17,004	65.4	4	3,145	18.5	14.3
Gabon	267,670	258,000	227,500	88.2	6	17,972	7.9	5.1
Republic of Congo	341,500	341,500	212,400	62.2	10	12,106	5.7	7.6
Total/ Average	1,735,640	1,326,900	664,470	50.1	47	48,899	7.4	12.2

Source: Naughton-Treves and Weber (2001: 31–33).

been set aside in recent years as national parks. So what happens to the people who live there or who use the area for their livelihood?

IUCN, the World Conservation Union, had already recommended some years ago that 'the establishment of protected areas should not lead to the dislocation of native peoples, and their indigenous life-style should not be disrupted, providing that these in themselves do not lead to the reduction of the ecological integrity of the area' (12th General Assembly 1975; quoted in Eidsvik, 1990: 38). Amend and Amend describe two consequences following the logic of this catch-22 situation:

> Promote the relocation of inhabitants (for urgent ecological reasons), with the consent of the affected parties; or
> Integration of local inhabitants into the park concept, with the establishment of continuous environmental education and awareness programs, and at the same time seeking alternative sources of income that will reduce the pressure on natural resources. (Amend and Amend, 1995b: 461)

CONSERVATION AND RESETTLEMENT IN CENTRAL AFRICA

Between 1996 and 2002, I carried out surveys in eight protected areas and national parks in the Congo Basin; see Table 2. Some visits resulted from consultancy contracts directly related to resettlement, dislocation and questions of landownership, others were official or private project visits.

None of the eight protected areas had adopted an official strategy to integrate local inhabitants, but only one (Korup National Park, Cameroon) included a resettlement component. Does this mean that the other parks are empty? The Noubale Ndoki National Park in the Republic of Congo is permanently inhabited only by American researchers; the only settlements within the 20 km support zone of the park are two small villages (Bomassa and Makop-Liganga), whose working inhabitants are all employed by the Wildlife Conservation Society (WCS). This appears, then, to be a real wilderness — a paradise for animals, researchers and tourists. When I first visited the area in 1999, I tried to find out why the Babenzélé 'pygmies' did not utilize this region. I was told that 'they used to come in the past, time and again, but that they are not allowed to enter the national park any longer' (pers. comm.). The pygmies had been expelled from a territory which the government and international experts saw as 'no-man's land'. No compensation was given, and no alternative strategies were proposed to secure their livelihoods. A government official was perplexed by my questions. Although initially offering more formal arguments ('How can we resettle people who have no settlement?'), he eventually said 'we can do [with the 'pygmies'] what we want' (pers. comm.).

The governments in the region see themselves as owners of the territories set aside as protected areas, but how much are they contributing to the global strategies of conservation? Today these areas are protected as research and tourist resorts for Europeans and North Americans. It is rare

Table 2. List of the Protected Areas covered in this Study

Name	Country	Total Area (km^2)	Year of visit(s)	Impact on local populace	Compensation	Success?
Korup National Park	Cameroon	1259	1997–2002	Involuntary resettlement of villages Expropriation of traditional land use titles	Yes No	No No
Lake Lobeke National Park	Cameroon	4000	1999, 2002	Expulsion of pygmy groups Expropriation of traditional land use titles	No Partly	No No
Dzanga-Ndoki National Park	Central African Republic	1220	2000, 2002	Expulsion of pygmy groups Expropriation of traditional land use titles	No Partly	No No
Nsoc National Park	Equatorial Guinea	5150	1998	Expulsion of villages Expropriation of traditional land use titles	No No	No No
Gamba Protected Areas Complex	Gabon	7000	1997	Expulsion of villages Expropriation of traditional land use titles	Partly Partly	No No
Ipassa-Mingouli Biosphere Reserve	Gabon	100	1997	Expulsion of pygmy groups Expropriation of traditional land use titles	No Partly	No No
Noubale Ndoki National Park	Republic of Congo	3865	1999, 2001	Expulsion of pygmy groups Expropriation of traditional land use titles	No Yes	No Yes
Odzala National Park	Republic of Congo	5090	1996	Expulsion of pygmy groups Expropriation of traditional land use titles	No No	No No

Definitions: While an 'involuntary resettlement' is an organized approach in which the local population receives assistance through the national government and/or the promoter of the national park, an 'expulsion' is a displacement without assistance (Fischer, 2002: 134). A 'village' is permanently inhabited by the rural populations. 'Expulsion of pygmy groups', means that 'pygmy groups', which do not have permanent settlements, were expelled from the forests which they used and inhabited on a temporary basis. 'Expropriation of traditional land use titles' covers cases in which the national government or the promoter of the national park did not consider common property rights such as utilization rights as legal title. 'Success' is meant to denote that all parties involved are satisfied with the outcome of the displacement.

to find an African scholar in the research groups, and it is unknown for inhabitants of nearby villages to wander around in the national park to enjoy its 'aesthetic and recreational values'.

These problems — so central in the sustainability paradigm — are not restricted to the Central African sub-region. In 1999 the Refugee Study Centre in Oxford organized a landmark conference under the title 'Displacement, Forced Settlement and Conservation' (Chatty and Colchester, 2002), which gathered papers on this topic from all over the world. In 1995, an IUCN publication on South America argued forcefully:

> one extreme [of dealing with people living in protected areas] has been to systematically close one's eyes to reality and refuse to recognize the fact that a large number of national parks are not spaces without inhabitants. This has caused a sort of schizophrenic behaviour in many officials: formally enforcing the laws and regulations, maintaining publicly that human populations do not, or should not, exist within the protected natural areas; while they know that reality is different. Since the presence of these populations is not publicly recognized, no effort is made to study and understand the situation, nor to propose solutions that may benefit the local population, while assuring the long-term conservation of the protected area. And so the problem continues to get worse; the local people distance themselves from the park authorities and the possibility of conflict grows; clear policies are not arrived at and no one really knows what to do. (Suárez de Freitas, 1995: 13)

But while South American National Park managers and the IUCN try to find solutions and to elaborate strategies (IUCN, 1996), Central African conservationists seem untouched by these considerations.[1] It might be argued that this is because most inhabitants of national parks are hunter-gatherers or other 'unorganized societies'; they do not have a system of representation and therefore hardly ever 'participate' successfully in the European mode of decision-making. It might also be argued that under the dictatorial regimes in the region, hardly anybody cares what happens to these ethnic minorities.

IUCN came to the conclusion that 'policies which ignore the presence of people within national parks are doomed to failure' (McNeely, 1995: 23),

1. Some will deny that this is true, referring to buffer zone management and biodiversity conservation projects in the study region. While it is true that many projects work in close co-operation with the rural population, it is also true that these projects are often related to traditional 'protection' projects (Schmidt-Soltau, 2002a). Most participatory buffer-zone management is still closely connected to the national park next to it and will be perceived as its extension, because the concept of buffer-zones only makes sense if there is a core protection zone at its centre (Neumann, 1997; Sayer, 1991). 'Community conservation is advocated as a means of ensuring the integrity of protected areas, and extending the reach of conservation practices beyond these boundaries into the vast areas of the earth's surface where there are no parks and where the interests of local communities prevail' (Brockington, 1999: 2). There are community-based conservation projects which offer the rural population a real chance to decide whether or not they want to protect certain areas; but these are unknown in Central Africa, because the only income-generating activity directly resulting from conservation — eco-tourism — is non-existent in the region.

but this does not answer the question of what to do with the people. Actual cases of resettlement due to conservation have, until recently, been quite limited in Central Africa but, as with examples from other regions of the world (see Chatty and Colchester, 2002), one can conclude that resettlement of inhabitants of national parks has hardly been successful. These failures have expressed themselves in a resistance to move, or even in people returning to their former villages inside the national park, because (in contrast to other forms of displacement) their traditional land was still accessible and suitable for human settlement (Schmidt-Soltau, 2000). In some conservation projects, when the force of argument has failed to persuade people to move, the argument of force has been used instead. In the Kibale game corridor in Uganda, game guards and foresters burned down villages and killed people on the spot who refused to move for the sake of wildlife (Cernea, 1997; Feeney, 1999).

It is not only the IUCN that warns against the folly of ignoring people: Colchester (1997: 107) similarly concludes 'that the strategy of locking up biodiversity in small parks, while ignoring wider social and political realities, has been an ineffective strategy'. Yet the mainstream is still in favour of resettlement. The main argument for the creation of uninhabited wildernesses is the finding that the establishment of community-based conservation — a strategy intended to bring people and parks together — contributes neither to conservation nor to the well-being of the rural population (Oates, 1999). Since community-based conservation does not live up to expectations, some argue that 'a renewed focus on protected areas as a primary storehouse of biodiversity is needed' (Kramer and van Schaik, 1997: 38), without searching for other options. While in South America (Amend and Amend, 1995a), and in southern and eastern Africa (Western, 2002), most environmentalists no longer believe that the removal of people is the key to biodiversity conservation, the discourse remains unchanged in Central Africa. A number of 'law-and-order conservationists', who had to leave eastern and southern Africa after the implementation of community-based conservation projects there, came to Central Africa to promote the 'protection of untouched wildernesses'.

RESETTLEMENT AND RISKS

The World Bank's policy on involuntary resettlement (World Bank, 2002) is considered by most experts as best practice (Chatty and Colchester, 2002) for involuntary displacement arising from conservation projects, yet even this is not being followed in some areas. In the remainder of this article, I will try to adapt the Impoverishment Risk and Reconstruction model of Cernea (1999, 2000), which can be seen as the theoretical backbone of World Bank policy, to the situation in the Central African rainforest. The set of potential risks from involuntary resettlement which are incorporated

into the model include the risks of landlessness, joblessness, homelessness, marginalization, food insecurity, education losses, increased morbidity and mortality, loss of access to common property, and social disarticulation. Cernea himself has called for scholars 'to monitor forthcoming forestry related programmes in African countries for their displacement implications and to develop alternative strategies' (Cernea, 1997: 34): this article should be seen as an effort in that direction.

The Risk of Landlessness

In the Central African rainforest, land has both an economic value, as the source of livelihoods, and a social dimension. But even the economic value is a slippery concept. Small hunter-gatherer groups might be seen as the traditional owners of first class primary forest: in extreme cases, like the Northern Congo, they might lay claim to up to 1000 km^2 of primary forest valued in millions of dollars for its timber alone. But is this a real value or a hypothetical sum? The hunter-gatherers will never have a chance to cash this natural wealth, since all territories which are not used for agricultural production or officially demarcated as private property are classifed by law as government land. As a result, conservation projects in the region refuse to consider traditional land titles as land ownership or as the basis for claims for a proper resettlement procedure. This is in stark contrast to the World Bank policy which recommends a resettlement policy framework for all cases of displacement, which:

> ensures that the displaced persons are
> (i) informed about their options and rights pertaining to resettlement;
> (ii) consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives; and
> (iii) provided prompt and effective compensation at full replacement cost for losses of assets attributable directly to the project. (World Bank, 2002: 3)

This leads to the question, what are the 'full replacement costs' for unrecognized land titles? The World Bank specifies that not only people who have a formal landholding, but also 'those who do not have formal legal rights to land but have a claim to such land or assets and those who have no recognizable legal right or claim to the land they are occupying' are entitled to receive at least resettlement assistance (ibid.: 6). The Bank recommends that if the displacement of indigenous people cannot be avoided, preference should be given to land-based resettlement strategies (ibid.: 4). But how? Since there was no unoccupied land in the first place, it is logical that the conservation projects will not be able to provide an adequate piece of land to the displaced population without affecting the livelihoods of other people. In practice, it is impossible to compensate 'equally' in these particular cases. Whatever compensation

might be provided in cash or kind, life will never be the same for the displaced people.

In discussions with park managers, it appeared that those conservation projects that refused to compensate indigenous forest dwellers in the region, did so because they thought that recognizing traditional land titles would jeopardize their resettlement programmes, since it would be impossible to refund the losses of the inhabitants 'equally' in cash or in kind. The logic of the projects was therefore to refuse legal recognition in order to avoid endless discussions on how to compensate the un-commensurable. This is a dangerous logic, both for conservation goals and for the well-being of the rural population.

This policy to expropriate the rural population without compensation seems to violate several international laws and conventions. The ILO Convention 169 (1989) specifically addresses the issue of the forced displacement of indigenous groups, but unfortunately, no African state has ratified this Convention. One might argue that these international conventions do not fit Central African realities — but it is hard to get around the fact that all but two of the eight national parks surveyed also violate the African Charter on Human and Peoples' Rights, which was adopted on 27 June 1981 by the Assembly of Heads of States and Governments of the Organization of African Unity (OAU), and which came into force on 21 October 1986. Article 21 of the Charter states:

> (1) All peoples shall freely dispose of their wealth and natural resources. This right shall be exercised in the exclusive interest of the people. In no case shall a people be deprived of it.
> (2) In case of spoliation the dispossessed people shall have the right to lawful recovery of its property as well as to an adequate compensation.

Whatever the legal arguments, conservation projects do not benefit in the long run by riding rough-shod over the rural population: there has to be 'fair' compensation, if projects are to be successful.

So who are the stakeholders in these projects? Clearly, there are two main parties: those behind the conservation-related displacement programmes, and the rural populations affected by displacement. Each of these can be divided into at least two sub-groups. Within the former group, international conservation agencies, donor organizations and bilateral governmental bodies can be seen as the initiators of conservation, while the national governmental authorities are responsible for the creation of national parks and other protected areas on the ground. The affected rural population can similarly be divided, into those people who are actually displaced, and those who own the land where the displaced are resettled — known as 'hosts' in the resettlement literature (Schmidt-Soltau, 2003). Are the replacement costs, or — to use the terms of the World Bank — the guidelines for livelihood restoration, negotiated between individuals and the state, the state and the international community, or between settlements and the promoters of conservation? In the case of Korup National Park,

Cameroon, the prospective resettlers barely negotiated or defended their interests at all: the inhabitants of the park agreed to resettle 'voluntarily', without any written agreement or compensation (Schmidt-Soltau, 2000). One can question the legality of these voluntary agreements, but it would also be important (although outside the scope of this article) to analyse why the affected populace did not resist more actively (see Schmidt-Soltau, 1998).

Several NGOs are trying to defend the rights of the forest people but the leaders of conservation projects in the region are wary of this contact between 'anthropocentric' organizations (Charancle, 1997) and the people threatened with displacement, fearing that it will lead to 'unrealistic' requests for compensation. The displacement of indigenous people from their land has been labelled 'genocide' by some human rights groups such as the Independent Commission on Humanitarian Issues (ICIHI, 1987). It is not surprising that neither the 'lords of conservation', like the Worldwide Fund for Nature (WWF) and Wildlife Conservation Society (WCS), nor the national governments, are enthusiastic about working with people who criticize their activities or try to force them to spend millions of dollars compensating the rural population for their land-losses (Schmidt-Soltau, 2002b). Nevertheless, international conservation agencies are turning a blind eye to the fact that national governments are breaking binding international laws and charters to establish protected areas as cheaply as possible, when those agencies should be safeguarding the inhabitants of protected areas, and ensuring that they receive assistance to bargain for the best possible compensation. An estimated level of compensation of US$ 40,000 per capita[2] would not ameliorate all social impacts, but it would offer the inhabitants of the Central African rainforests at least some form of compensation for their losses. The only real way to reduce the risk of landlessness is through an open discussion between all stakeholders (or their representatives) as equal partners, resulting in written and legally-binding contracts which include reasonable compensation for everybody.

Beside the social risks for the people, the process of sedentarization — and forced sedentarization in particular — also carries risks for biodiversity. As deforested 'islands' are created in the middle of the forest, to accommodate the newly settled, the canopy of the rainforest is opened up. While the temporary settlements of hunter-gatherers can be identified two years after they have been abandoned only by a higher biodiversity — non-indigenous crops such as bananas and plantains — the ecosystems of abandoned *permanent* settlements will only regenerate after hundreds of years.

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2. Estimate extrapolated on the basis of the value of the forest as a source of livelihood, based on a socio-economic survey of 2700 households and the value of net stand timber. For full details, see Schmidt-Soltau (2002b).

The Risk of Joblessness: Risk of Loss of Income and Sources of Subsistence

The risk of losing sources of livelihood is mostly related to those activities which resulted in the plan to resettle people from protected areas in the first place. In order to establish a picture of these economic activities, it is useful to look at a livelihood survey which was carried out in one of the remotest areas in the region (the Takamanda forest reserve area) in 2000/2001 (Schmidt-Soltau, 2001). Belying its name of 'reserve area', no conservationists or state agents had penetrated this area before the survey. Our team, which included officials from the Cameroonian Ministry of Environment and Forests (MINEF), was the first governmental team seen in the region for thirty years.

Following the recommendation of international conservation agencies and donors, the Cameroonian forestry law prohibits all hunting, gathering, fishing and logging activities without governmental permission, as well as 'subsistence hunting and gathering with traditional methods' (MINEF, nd: 26). It is also 'illegal' to own firearms without a licence issued by the government services (ibid.: 29–30). In the research area, with a population of nearly 15,000 people, nobody had 'permission' to make his or her livelihood from the forest, and none had applied for a licence for their rifles. According to the law, all hunting with modern methods (wire traps, guns and poison) is seen as poaching, and all gathering as larceny. Beside the pure economic impact on their livelihoods, the psychological effect of this on the population is disastrous. 'The project treats us as beggars', said one — and beggars do not have a legal right for compensation. It is not surprising that these displaced forest-dwellers do not respect the boundaries, laws and regulations of national parks created on their former land. Conflicts arise, which result in imprisonment and in increased hunting. In the words of Cernea (2000: 27), 'eviction from traditional lands has been typically disastrous to those affected'. Many conservation projects include attempts to provide the displaced population with alternative income-generating activities (Weber et al., 2001), but the implementation of these schemes is often problematic. Those involved in conservation projects claim that legal discussions are endless, and get in the way of their real aim — the conservation of nature. However, while organized resettlement programmes may also struggle, experience has shown that resettlement without a legal procedure to deal with questions of ownership and traditional land use rights (whether these are covered by laws or not), are doomed to failure (McNeely, 1995).

The greatest single cause for the depletion of natural communities and wild species has been the desire to use land for more productive purposes. While hunter-gatherers rarely establish permanent plots, an increase in farming has led to extensive clearing of forests and savannas, burning of vegetation, and the cultivation of previously undisturbed land for crop production. Farming is the main source of livelihood for the sedentarized

population, and provides 30.4 per cent of its cash income (Schmidt-Soltau, 2001). The challenge for the resettlement of non-sedentarized people does not arise from a lack of available land but from farming patterns: the settlement of semi-permanent farmers and hunter-gatherers forces them to change their lifestyle, and to acquire new farming skills. Conservation projects need to assist in this process.[3] Since farming also has to make good the losses resulting from reduced hunting, gathering and fishing, the establishment of a long-term sustainable marketing system, financed by the promoters of resettlement, should receive as much attention as technical farming assistance.[4]

The gathering of non-timber forest products (NTFP) is undertaken for subsistence as well as to generate cash income. It represents the most important source of cash income — 33.4 per cent (Schmidt-Soltau, 2001) — for the inhabitants of primary rainforests. It is sometimes argued that the intensive gathering of leaves, bark, fruits, and so on for cash is harmful to the integrity of the ecosystem: however, most forests suffer no long-term damage from subsistence use, as long as the population density is low. Conservation projects could assist, for example by offering resettled villages a certain area of primary rainforest as a sustainable source for their subsistence NTFP needs. This could be integrated into the buffer zone management of the national park, and would result in a better understanding of the need for protection among the resettled, as well as serving the overall concept of conservation. Problems arise when a gathering zone for resettlers is carved out of land already occupied by other villages: this can eventually lead to the necessity of assisting the host villages as well as the resettled former inhabitants of the national park.

Hunting (including fishing), whether carried out by resident societies or hunter-gatherer groups, is considered a serious threat to biodiversity, especially since most hunting is nowadays carried out for sale and not for subsistence. Accounting for a 21 per cent share of cash income (Schmidt-Soltau, 2001), it is important enough to be resistant to all forms of environmental education. The relevance of hunting as a source of cash income continues to increase, since prices are increasing. While in some areas elephant-meat is the cheapest meat, in other areas it is considered a delicacy, and the price is five times higher than that of beef. All over Africa, the idea of rearing chickens and goats as replacements for bush-meat has failed, representing too great a change in the dietary habits of the settlers. Since hunting for subsistence can be sustainable as long as there is enough land

3. And not only for one year, as was offered in the Korup National Park resettlement programme (Schmidt-Soltau, 2000).
4. The people displaced from the sanctuary areas in the Gamba Protected Areas complex were assisted in producing tons of cassava each year, but the output never reached the markets because of infrastructural constraints. Output levels fell dramatically after the project stopped paying subsidized prices (Lahm, 2001).

available and endangered species are not hunted, it seems advisable to offer a hunting zone to the former inhabitants of the national park, which can also be used for gathering and fishing. Conservation projects have argued that all kinds of hunting must be banned, since the hunters' wire traps also kill endangered species. Following the examples of eastern and southern Africa, however, it should be possible to negotiate an agreement with the rural population that they do not hunt certain endangered species,[5] in exchange for the right to hunt legally species which are not endangered, and which are the main source of cash income.[6] Since wire traps do not differentiate between endangered and other species, selective hunting would also require legalized access to rifles and ammunition. While there might be an understandable reluctance on the part of conservationists to the idea of handing out rifles to hunters, this is the only realistic way to link conservation with the needs of the rural population. As long as the resettlers are not encouraged (or not able) to select their game according to the principles of sustainable hunting, nobody wins — neither the rural population, living in fear of law enforcement, nor the conservation project, facing the problem of unorganized and unregulated hunting. For hunting, especially, legalization is the best form of control.

The World Bank urges that 'displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher' (World Bank, 2002: 1). Conservation project leaders in Central Africa are aware that they have to offer alternative forms of income generation to protect the parks, because unlike the savannas in East Africa, law enforcement is nearly impossible in the forests. In the Dzanga-Ndoki National Park and in the nearby Dzanga-Sangha Dense Forest Reserve (both in the Central African Republic), it was planned to compensate the BaAka 'pygmies' — even without an official resettlement programme — for their income losses, including losses from hunting and gathering for subsistence, and loss of land, through alternative income-generating activities, such as farming, livestock-breeding, eco-tourism and so on. Although this idea is supported by the theory (see Carroll, 1992; Noss, 2001), the practice is rather different. The permanent plots of the BaAkas' settlements in Bayanga are miserable places, where alcoholism and disease are rife (Sarno, 1993). Clearly, such a dramatic change in lifestyle cannot be achieved overnight, or even within one generation.

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5. Which do not, in any case, represent a significant percentage of the total cash income in non-conserved areas (chimpanzee account for 1.6 per cent, drill for 1.5 per cent, gorilla for 1 per cent, and elephant for 0.5 per cent) (Schmidt-Soltau, 2001).
6. Including porcupine (26.1 per cent), blue duiker (13.9 per cent) and bush pig (7.8 per cent) (Schmidt-Soltau, 2001).

Is there any way in which the former inhabitants of national parks in Central Africa can share in the benefits of the projects? An official of Korup National Park declared that 'everybody benefits from a national park, which is a place for hiking, camping, game viewing, photography and scientific research' (WWF, 1991: 11), but how many villagers will appreciate these opportunities? It is hard for those affected by displacement to accept the arguments on posters and leaflets, that safeguarding biodiversity is important for future generations. In Equatorial Guinea, the spokesman of a group of displaced villagers stated: 'the whites and the animals are against us, we have to fight back'. Conservation projects talk up the possible benefits from tourism. Jack Ruitenbeek — an internationally well-known consultant with WWF — made a cost–benefit analysis for the Korup National Park, in which the benefits of resettlement seem to more than cover the social and economic costs: this is still quoted in the literature (Perrings, 2000: 37). However, Central Africa is not the Serengeti and the rainforest is less attractive to tourists than big game parks.[7] In 1988, Ruitenbeek estimated that 1000 tourists would visit Korup National Park, each staying seven days, amounting to 7000 overnight stays. He expected this figure to increase by 10 per cent per year (Ruitenbeek, 1988: 20). In 1999, Korup National Park actually recorded 300 overnight stays; in 2000 the figure was 240; and in 2001 it was 290 (pers. comm., GTZ adviser to Korup National Park project). These figures include everybody who entered the park: for instance, I am registered as having spent more than ninety days in the park, even though I was not a tourist and my stay had no direct financial benefits for the displaced population. Clearly, tourism is not going to generate any substantial benefits in the near future:[8] other sources have to be found.

The Risk of Homelessness

In the research area, this risk may at first sight seem insignificant. Neither the houses of semi-permanent and permanent settlements, nor the huts of hunter-gatherers, require much cash investment; they can be dismantled and rebuilt without much effort — and, indeed, the people expelled from national park areas have erected new houses in the old style at their new

7. Apart from the geographical differences with East Africa and its open plains, tourism also requires a certain level of infrastructure, from hotels and roads to trained staff and security, that simply does not exist in Central Africa. The political instability of the region contributes further to the reluctance of the international tourism industry to invest here, because 'investments in tourism typically take 25 to 30 years to realise returns' (Fabricius and de Wet, 2002: 158).
8. 'It is highly unlikely that revenue from wildlife and/or tourism will ever constitute a particularly large source of income for all members of a community at household and individual level' (Sullivan, 1999: 10).

plots. But habitations which are suitable for a hunter-gatherer lifestyle are not suitable for resident farmers. This poor housing contributes to declining health and growing resentment of the resettlement process. It is for good reason that the World Bank recommends that new communities of resettlers should receive housing, infrastructure, and social services comparable to those of the host population (World Bank, 2002). The example of Korup National Park illustrates that co-operation and discussion between the resettling agencies and the people to be resettled are the key to success. The Korup Project constructed a town with sixty-three stone houses for a village which formerly had twenty-three mud huts. The houses, with roofing tiles and integrated kitchens, reflected the European mode of housing, but did not suit the lifestyles of the new inhabitants, who complained of smoke problems when cooking on open fires in their new kitchens (Schmidt-Soltau, 2000). There is no global best-solution for house construction: planners need discussions with the affected population to determine what kind of construction is suitable for a particular environment and for specific needs. Moreover, children should have easy access to places of education and everyone should have reasonable access to health facilities in the new location. Even with careful planning, however, it is not easy for displaced populations to consider their new settlements as home. From her numerous case studies, Elizabeth Colson concludes: 'the overwhelming evidence [is] that people resent being uprooted, find it traumatic, and in the long run look back in grief and with an anger that lasts longer than the wars or the dams that forced them out' (Colson, 1999: 28).

The Risk of Marginalization

The risk of marginalization is closely related to the geographical position of the new settlement area. When the new neighbours speak the same or a similar language, and belong to the same ethnic group, the risk that the resettlers 'spiral on a downward mobility path' (Cernea, 2000: 16) is relatively low. Alienation and marginalization occur especially when resettled people find themselves strangers (without rights) in the midst of a homogeneous population from a different cultural, social and economic background. The hunter-gatherer groups which have been expelled from the nature reserves in the study area do not function as independent groups, but live in a strange 'partnership' with their settled Bantu neighbours — a situation which some interpret as slavery (Turnbull, 1962) and some as an excellent intercultural partnership (Grinker, 1994). Without the option of 'disappearing' into the forests, the hunter-gatherers lose some of their economic and spiritual resources. This same problem was identified by Mathur, looking at several case studies of reservoir resettlement: 'one unfortunate outcome is a feeling of alienation, helplessness and powerlessness that overtakes the displaced. This stems from the way in which the

people are uprooted from homes and occupations and brought to question their own values and behaviour, and the authority of their leaders' (Mathur, 1995: 18).

Another form of marginalization can arise from the resettlement process itself. In the village of Ekundu-Kundu, in Korup National Park, the resettlers were initially treated like celebrities. After the decision had been made to resettle them as a pilot village, government officials, ambassadors, scientists, foreigners and project employees visited the village, listened to the people's requests, and left them with the impression that not only their resettlement, but also they themselves, were important. Of course, this interest could not last indefinitely: a year after they had moved, the National Park authorities decided that Ekundu-Kundu was no longer to be managed as *the* resettlement village, but was to be treated as just one among the 187 villages with which the national park interacts. It was quite a shock for the villagers to lose all their benefits and special attention (Schmidt-Soltau, 2000). This psychological marginalization risk, which is often associated with economic marginalization, is difficult to mitigate: without the establishment of an initially close interaction with the authorities, the new settlement cannot be constructed, but to prolong the period of special attention is also risky, because it raises expectations among the resettlers, and increases the envy and resentment of other local communities which are not involved in the programme.

Resettlement has in many cases resulted in an attitude which can be described by the French word *attentisme*: the people are waiting for assistance from outside to manage their daily live. Some suggest that very limited assistance is the key to reducing marginalization risks (Roder, 1994), while others argue that 'any special requirement of a migrant community should be respected' (Pfister-Ammende, 1973: 319). There is no easy or general way to avoid the risk of marginalization, but acknowledging the risks and increasing the awareness of all concerned, may be a first step.

The Risk of Food Insecurity

This risk is not directly relevant for displacements from national parks in Central Africa, since government departments have not been able to execute their strict forestry laws in any of the research areas. Nevertheless, the conservation projects are not without effect. The diets of hunter-gatherers are known to be more diverse that those of settled agriculturalists (Fleuret and Fleuret, 1980; Flowers, 1983; Haaga et al., 1986; MacLean-Stearman, 2000), and this diversity is clearly threatened by displacement. In the long run, the lack of legalized land titles and clear land-use rights could have consequences for the food security of the resettlers. Moreover, the conservation projects themselves can create problems for farm activities. Around the Noubale Ndoki National Park, for example, the authorities

have been forced to provide foodstuffs from outside at a subsidized rate to the inhabitants of the nearby villages, since the increasing elephant population which results from the conservation project, is undermining all efforts to establish farms. At first glance this system, which provides the rural population with food and secures the lives of a protected species, seems admirable. In the long run, however, it is a dangerous strategy, since the food supply is unstable. During the 1999 civil war in Congo, the WCS team responsible for the project had to leave the country. Since the villagers were not receiving donated food, and had no farms for subsistence, they had to start hunting for cash (to buy farm products) and for subsistence. They were still able to do this, but a new generation which does not have the skill to survive as hunter-gatherers would face an increasing risk of food insecurity.

The findings of Galvin et al. (1999) also suggest that conservation policy affects the availability of resources to people living near protected areas. This influences their nutritional status, especially that of adults. The rural population living near a protected area surveyed had a lower nutritional status than other people from the same ethnic background, and their agricultural yield was significantly lower (ibid.). Rogge (1987) insists that resettlements which are unable to achieve self-sufficiency have to be considered failures: 'Self-sufficiency is used to denote the subsequent attainment of complete independence from any form of external help, when people are not only self-reliant in their food production but are able to generate all their own infrastructural needs and requirements, so that settlements are fully self-contained units' (ibid.: 87). A self-sufficient agricultural system will not only reduce the risk of food insecurity, but also mitigate the risk of marginalization, because it allows the resettlers to base their living on their own productivity.

The Risk of Education Losses

In the study area, the major problem in this category is not so much the loss of formal education, as the loss of traditional knowledge. Since traditional knowledge is interrelated with the land, the resettlement process will inevitably affect this knowledge. In South Africa, Fabricius and de Wet found that 'much traditional knowledge has been lost because of forced removals, as people (especially the younger generation) became detached from natural resources and spent even more time away from rural areas as migrant workers' (Fabricius and de Wet, 2002: 154). There may be little hope of avoiding this, but conservation agencies could offer the possibility of documenting as much of this traditional knowledge as possible — not as an information pool for scientists, but as a library for future generations of the resettlers to consult their 'former' traditional knowledge.

The Risk of Increased Morbidity and Mortality

A changed environment and an exposure to interactions with different ways of life always entail health risks. Research has also shown that a shift from foraging to farming may be accompanied by a decline in overall health (Cohen, 1989). On the other hand, all the new settlements involved in this research are closer to existing health facilities than the original habitations, deep in the forest. The risks to life and health can be reduced with such practical measures as the installation of sanitary facilities in permanent settlements. While in the forest, the BaAka 'pygmies' could move to a new site as soon as their settlement was considered dirty; now they are suffering from water-borne diseases and sicknesses carried by sand flies, exacerbated by their 'relaxed attitude' to excrement (Sarno, 1993). Three activities which could reduce the risk of increased morbidity and mortality would be: (a) an ongoing health education programme for the resettlers (including information on sexually transmitted diseases); (b) legal access to forest areas for the collection of traditional medicinal plants; and (c) financial guarantees for health-related infrastructures, following the recommendation of the World Health Organization (WHO, 2002).

The Risk of Loss of Access to Common Property

In the Central African rainforest there is very little distinction between the risk of landlessness and the risk of losing access to common property, since for most people, the forest is both their only land, and their common property. Even among resident farmers only the user rights for 'farm plots' are owned individually (by the 'house' or 'household'), while all untransformed land is owned collectively.

The Risk of Social Disarticulation

Social disarticulation of resettled hunter-gatherer societies is not a risk but a fact. 'When technological change comes too fast and too soon for a society, it makes stable adaptations difficult if not impossible to achieve without severe pain, emotional stress, and conflict' (Coelho and Stein, 1980: 22). The forced change of lifestyle breaks existing social links within the group and in the group's relations with others. The high prestige of the elders, which results from their knowledge of the land, was the only social stratification, and this has disappeared in all the cases studied. The leading figures in the groups are now those young people who have picked up some words of French or English and are able to express themselves in meetings with project staff. They are also the ones with the strength and vigour to explore their new environment and its hunting and gathering opportunities, while

the elders stay behind in the new settlements, complaining about the changes and the destruction of their world.

Another problem arises from the complex interaction between the 'pygmies' and the resident Bantu farmers. Now that the 'pygmies' no longer have access to the forest, the long-standing social interaction between these two — which was based on the exchange of forest products for farm products — is collapsing.

Downing (1996: 12) suggests that the risks of social disarticulation might be mitigated by the 're-establishment of shattered social geometries', while Marcus (1994) recommends spatial memory studies. Completely avoiding this breakdown of society may not be possible, but engaging a trusted spokesperson for the resettlers (until they are able to provide a representative of their own to defend their interests) might offer some safeguards. These spokespeople should have a deep knowledge and respect for the customs and socio-cultural settings of the displaced people, to be able to advise the conservation project staff and facilitate interactions with neighbouring societies.

RISKS FOR THE BIODIVERSITY OF THE PARKS

There is another set of risks at play — risks which affect the very environment and biodiversity that the national parks are trying to protect. Conservation aims to protect 'wildernesses' against the impact of mankind. This is not the place to discuss at length whether 'untouched nature' can be still be found on this planet, although studies suggest that most 'wilderness areas' have been modified or managed by humans at one time or another.[9] Those who see forests in terms of ecosystems for men and wildlife fear that the biodiversity of the forest might change after resettlement because nature will lack the impact of human activity (Meggers, 1996; Posey and Balée, 1989). Nabham et al. (1991) have documented a decrease in biodiversity in protected areas over a twenty-five year period, although the reasons for this are unclear. Some scientists stress the 'significant link between cultural and biological diversity' (Jacorzynski, 1999: 2), but the existence of a link does not say much about its effects.

There are, however, a number of biological risks directly related to the displacement of hunter-gatherer groups from the forest and their forced sedentarization. Even if displaced people are allowed to use certain parts of the forest for subsistence hunting and gathering, their resettlement as farming communities has certain impacts on the environment.

Increased Communication and Trade

It has been documented that 'the expansion of national parks, game reserves and protected habitats — freed from human presence — has generally been

9. For more on this, see Jacorzynski (1999); Pimbert and Pretty (1997); Sponsel et al. (1996).

accompanied by a declining of wildlife' (Galaty, 1999:1). In the research region, both conservationists and informants from the rural population explained this decline in terms of the increasing involvement of the rural population in the market economy. Displaced hunters in Gabon saw their increased economic desires as ample justification for an increase in hunting. The forest — whether protected or not — remains the main source for cash income, which is then used to buy the products brought in by traders.

Increased Population Density

While the 'traditional forms' of land-use in Africa are considered to be sustainable (Dove and Kammen, 1997; McKey et al., 1993), the same does not seem to be true of post-resettlement land-use patterns. On the basis of several case studies in South Africa, Fabricius and de Wet concluded that:

> The main negative conservation impacts of forced removals from protected areas are that they contribute to unsustainable resource use outside the protected areas, because of increased pressure on natural resources in areas already degraded due to over-population. People's expulsion from biodiversity-rich areas led to their attitudes to conservation and conservationists becoming increasingly negative, with measurable increase in poaching and unprecedented incidents of natural resources being vandalized, often accompanied by land invasions. (Fabricius and de Wet, 2002: 152)

The finding that displacement results in environmental degradation through an increase of permanent settlements is echoed by others (for example, Colchester, 1997), especially given that soil erosion is often more serious in permanently used agricultural plots than under shifting cultivation regimes (Duncan and McElwee, 1999).

Increased Reliance on Agriculture

Environmental scientists have documented the fact that the forest ecosystems of Central Africa were utilized in a sustainable way before the colonial encounter (Novellino, 1998; Oldfield and Alcorn, 1991). Even the often-criticized slash-and-burn agriculture is considered in the literature to be the only environmentally sound way to produce food in an inhospitable tropical environment (Thrup and Hecht, 1997). The process of resettlement brought an end to this sustainable land-use pattern. 'The typical resettlement scheme introduces a relatively closed and mature pattern of cultural ecology. In the place of biotic and social diversity, the settlement scheme brings uniformity of product and uniformity of producer with the instability to be expected from a system of low diversity and a high rate of productivity to biomass' (Palmer, 1974: 241). This leads to land degradation and erosion (Kibreab, 1991, 1996).

Increased Social Stratification

This social impact has biological implications, because it leads to an increased harvest of forest resources. In a more or less egalitarian society, most people do not use these resources for anything other than their daily needs. An increasing social stratification results in the capitalization of resources for the storage of money or as an indicator of status and prestige (Fratkin et al., 1999). The European lust for ivory, which has been imitated by the individuals installed as 'traditional leaders', had resulted in an increasing internal demand for elephant-tusks (Oldfield and Alcorn, 1991). Nowadays, cars and television sets have taken over as symbols of power and wealth, but the forest remains the source of the cash income needed to obtain them.

Breaking down Taboos against Hunting and Gathering of Certain Species

Resettlement from national parks 'will alienate the local population from conservation objectives and thus require an ever increasing and, in the long run, unsustainable level of investment in policing activities' (Turton, 1999: 1). This is because rural populations do not see any reason not to hunt key species such as elephants and gorillas, if they are no longer in direct 'spiritual' contact with them. In Equatorial Guinea, displaced people explained their increasing involvement in gorilla-hunting in terms of a reduced fear that the evil spirit of the killed gorilla would seek revenge at night, because the eviction from the park placed them outside the forest, 'where the spirits cannot rule' (pers. comm.).

Breaking down the System of Traditional Hunting and Gathering Territories

As long as 'wildlife is permitted to contribute meaningfully to their welfare people will not be able to afford to lose it in their battle for survival. If wildlife does not contribute significantly to their well-being, people will not be able to afford to preserve it' (Child, 1995: 232). This is the core of the decision as to whether one capitalizes from wildlife dead or alive. Even if the resettlers are 'compensated' for their reduced hunting, they are unlikley to see a need to follow laws and regulations unless the value of the wildlife and plants in question are documented in detail. Another problem occurs when territories are not seen to belong to individuals or groups, but to abstract entities such as the state. People who use a certain area as a livelihood source are quite concerned if outsiders start to hunt or gather there as well. Villages involved in community-based conservation projects often see themselves as the 'more effective rangers' (Western, 2002).

Decreasing Hunting and Gathering Zone Rotation

'There is empirical evidence in which disruption of traditional arrangements that protected and regulated the use of common property resources, either by land reform or by extension of state ownership over previous "common" resources have led to overexploitation of such resources because of their de facto conversion into open access' (Kibreab, 1991: 20). At first glance, this statement does not seem to make sense, but the bio-monitoring of several unprotected areas has demonstrated that rotation stimulates an increase in wildlife and NTFPs (Bennett and Robinson, 2000). In their summary on sustainable hunting methods, Bennett and Robinson come to the conclusion that 'traditional' conservation methods of rotation of harvest zones — supported by a scientific bio-monitoring, which establishes sustainable off-take levels — is a more effective method of conservation of endangered key species, than the 'creation of unmanaged wildernesses' (ibid.).

Thus it seems that the resettlement process itself contributes significantly to the degradation of forest ecosystems. This is in keeping with studies on other ecosystems (Black, 1998; Fabricius and de Wet, 2002; Kibreab, 1996). Whether the unavoidable biological impacts of resettlement should be seen as tolerable side-effects of conservation, or as impacts which jeopardize the conservation goal itself, is difficult to judge without further research. From an initial assessment of the biological impacts of resettlements from parks in Central Africa, conservationists and state agencies do appear to have underestimated the biological impacts. It may therefore be advisable to include something like a biological cost–benefit analysis in the planning of future conservation projects, to provide all stakeholders with a detailed knowledge of the biological risks of resettlement as a conservation instrument, as well as its social risks.

CONCLUSION

This article has looked at the various risks and problems caused by the resettlement of inhabitants of national parks, and has outlined some possible methods to reduce these risks and impacts. All the national parks in Central Africa have displaced or are displacing people. Regardless of whether or not the people have legal land titles or land-use rights, this is involuntary resettlement, because they have no chance to say 'No'. The only way to secure both the well-being of the people and the objectives of the conservation projects is to implement legal procedures following international standards such as the World Bank Operational Directive 4.12. In 1996, the Central African Republic adopted a law on involuntary resettlement which meets the World Bank standards, but a law on the statute books does not reduce the risks for the resettlers — it also has to be applied.

Some might argue that the costs of resettling inhabitants of national parks according to the proposed guidelines are too high, but who can set a price on

the conservation of nature or the well-being of the population? While the better-educated inhabitants of national parks may agree to the need for conservation, they might also ask whether the costs are equally shared? While they are forced to change their lifestyle completely for the sake of conservation, who else is being asked to pay a price? Have national parks and protected areas been created in Central Africa because of the high natural value of the tropical rainforest, or for economic reasons? And as long as the costs are not equally shared, who can question the fundamental right of inhabitants of protected areas to resist displacement, and all its attendant risks.

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