

# The end of forcible displacements? Conservation must not impoverish people

Michael M. Cernea & Kai Schmidt-Soltau

The vexing dilemma between preserving biodiversity and protecting the livelihood of populations deemed to endanger this biodiversity is neither new, nor easy to solve. Importantly, empirical knowledge has not been available equally about both terms of this dilemma. An asymmetry in information and knowledge created a discrepancy with far reaching effects on policies, resource allocation, governmental practices, and with pressing demands upon future scientific interdisciplinary research. While biological sciences have forcefully made the policy case for conservation, social research has not developed a cogent *generalized* argument apt to escalate the social issues vested in conservation at the same high policy level. Biosphere sustainability concerns have gained important policy backing and financial resources, e.g. for the establishment of protected areas (PAs), while the recommendations made in the name of social concerns remain both under-designed and woefully under-resourced<sup>1</sup>.

In Central Africa, the area of our recent empirical investigations, governmental institutions and bilateral and international agencies have adopted strategies to protect as much undisturbed forest as possible. The Yaoundé Declaration of 1999, ratified by seven Central African Heads of State, expresses the consensus that the establishment of protected areas in this sub-region is the most effective instrument to protect nature<sup>2</sup>. While the 2002 World Summit on Sustainable

**It became clear that the "pygmies" were expelled from a territory considered by the government and international experts as land "not fit for humans". In addition to the expulsion, no compensation or alternative livelihood strategy was enacted, in law, in formal decisions or on the ground.**

Development (WSSD) in Johannesburg just maintained as a goal that 10 % of all land should be protected, the Heads of State in the

Central African sub-region came up with the plan that in ten years time no less than 30 % of the landmass of their states will be under protected status<sup>3</sup>. Both the development community and the conservation community are faced with a compelling question: will the new extension of protected areas be, again, predicated on the forced displacement and impoverishment of their resident and mobile peoples?

So far, a common premise and characteristic of creating many protected areas across the developing world has been one difficult to execute and even more difficult to morally justify: the forcible uprooting of resident and mobile populations, often coerced violently to relocate "somewhere else" (often not quite clear where), unsustainably and receiving by far less legal protection and financial resources than provided for the preservation of non-human species. Surprising as it may be, no UN Convention has been adopted so far by the international community to protect the interests and livelihoods of the involuntarily displaced populations, comparable to and mirroring the UN Convention for Biodiversity. Again, this is what we mean by imbalance in public discourse and practice.

Justified alarm about the underestimation of social impacts of irresponsible displacements, and the need for a consistent conceptual approach to cumulative social impacts, has been sounded by some donor agencies and social researchers.<sup>4</sup> This need arises from findings that "*policies that ignore the presence of people within national parks are doomed to failure*"<sup>5</sup> and that "*eviction from traditional lands has been typically disastrous to those affected*"<sup>6</sup>. Nevertheless and despite all requests, satisfactory practical guidelines on how to deal with resident and mobile peoples in the course of establishing protected areas that call for their eviction are still missing.

In the 1990s, Michael M. Cernea developed a conceptual model of the risks of impoverishment



**Figure 1:** A recently "sedentarised" Baka woman harvests water close to Dja Reserve (Cameroun). (Courtesy Grazia Borrini-Feyerabend)

embedded in the development-induced displacement and resettlement of populations. The origin of the Impoverishment Risks and Reconstruction (IRR) model is both empirical and theoretical. Empirically, the model is distilled from the extraordinary accumulation of research findings during the last three decades in many countries. Theoretically, it builds on the state-of-the-art of resettlement research and poverty-related research. This model was first used on a large scale in a World Bank analysis of some 200 development projects<sup>7</sup> and has been tested and applied in a number of studies, including in the report of the World Commission on Dams<sup>8</sup>, in an all-India monograph on population displacement<sup>9</sup> and in numerous studies of displacements in the irrigation and mining sec-

tors<sup>10</sup>. The model is now used by major development agencies involved in operational resettlement.

A first systematic study of the impoverishment effects of indigenous population displaced from protected areas on the basis of the IRR model was carried out in nine sites in six Central African countries (Cameroon, Central African Republic, Equatorial Guinea, Gabon, Nigeria & Republic of Congo) by Kai Schmidt-Soltau between 1996 and 2003. To his surprise and in contrast to their declared "collaborative management" approach<sup>11</sup>, none of the surveyed protected areas had adopted an official strategy to integrate local inhabitants into the park-management. Only two protected areas (Korup National Park & Cross River National Park) had an explicit resettlement initiatives dealing with resident and mobile people within their borders. One could have assumed that in the other protected areas in the region the dilemma biodiversity versus people did not occur, but this assumption would have been wrong. The Nouabalé-Ndoki National Park in the Republic of Congo, which recently received wide recognition through National Geographic articles and the CNN Mega-transect, should serve as example. The park is permanently inhabited only by American and British researchers and the entire population of the two permanent settlements within the support zone is composed of employees of the Wildlife Conservation Society, which manages the park in collaboration with the Congolese authorities. When Schmidt-Soltau first visited this area in 1999, he tried to find out why the indigenous Babenzélé population could not be found in the park. He learned that "*in the past they used to come time and again, but they are not allowed to enter the national park any longer*". It became clear that the "pygmies" were expelled from a territory considered by the government and international experts as land "*not fit for humans*". In addition to the expulsion, no compensation or alternative livelihood strategy was enacted, in law, in formal decisions or on the ground.

We used the IRR model as a tool to analyze

the situation in the Central African rainforest and for deriving lessons and recommendations to reduce pauperization risks. As we shall see, not all the risks identified in the general IRR model are applicable to displacements from Central African rainforests but the risks are important overall and should be regarded as an inter-connected system. Who is facing these risks? The total number of people affected and displaced, physically or economically, from the nine protected areas and their resources is estimated to be between 40,000 and 45,000 individuals.<sup>12</sup> Based on the overall average population density in the study region, we consider this to be a conservative estimate. With two exceptions, all the examined protected areas expelled the inhabitants without providing them with new settlement areas. That means that an additional 25,000 to 50,000 people in the study region have been, at the same time, transformed into reluctant hosts for the displaced people. In total, between

190,000 and 250,000 people are likely to have been adversely affected in various ways by conservation projects in the six case study countries in Central Africa and around the same number of people might be affected within the next ten years. Global assess-

ments of displacement from protected areas in rainforest ecosystems conclude that millions of "conservation refugees" have been created or are facing displacement-related impoverishment risks within the next few years<sup>13</sup>. Forcing such a significant number of people to face impoverishment risks demands that these risks be examined in more detail and addressed with appropriate responses. To this end, the eight major impoverishment risks related to displacement identified by Cernea (2000) will now be examined with reference to the Central African contexts.

#### **a) The risk of landlessness**

Land has social, economic and cultural dimension, and especially so for indigenous people. In our study area, the level of land losses

incurred by the local population because of conservation-related displacement varied between 70% and 90% of their territories<sup>14</sup> with an overall value in the six countries of 1.1 billion US \$<sup>15</sup>. While the total figure seems high, our extrapolation figure per ha is rather conservative. In fact, it is the extent of the land declared under protected status that results in such a high figure. In 2002, 92,000 km<sup>2</sup> were under protection and in 2012 210,000 km<sup>2</sup> are expected to fall under some protection category<sup>16</sup>. Neither conservation agencies, nor the governments in the region considered to provide any fraction of this amount to compensate forest populations for their land and livelihood losses<sup>17</sup>.

#### **b) The risk of joblessness (loss of income and means of subsistence)**

The forest is the main and often only source of income and subsistence for the inhabitants of the Central African rainforests<sup>18</sup>. Their income losses have to be compensated based on both legal and moral standards. Conservation proponents are aware that they must provide realistic alternatives for income generation to local people, but genuine economic incentives are seldom secured. For instance, the principle of compensating the Aka "pygmies" in the Dzanga-Ndoki National Park (Central African Republic) for their losses (cash income and subsistence) through alternative income generating activities, such as farming, livestock breeding, eco-tourism etc., is well outlined in theory<sup>19</sup> but certainly not translated into practice. If one travels to Bayanga, one does not see any sign of successful partnership but rather miserable plots, where alcoholism and diseases seem to be ruling<sup>20</sup>. An entire change in lifestyle cannot not be implemented over night or even within one generation. The difficulties to introduce alternative income generating activities as trade offs for the uprooting of livelihoods generated by the conservation initiatives also shows that cash compensation is not a meaningful option for hunter-gatherers.

Despite ultra-optimistic calculations on paper, tourism is generally unable to generate significant benefits. Exceptions notwithstanding, in

**In addition to new impoverishment risks imposed on people, forcible resettlement also generate new and unanticipated risks for biodiversity itself, an outcome that should give pause to many conservationists.**

most cases tourists do not even generate enough income to cover the management costs of the protected areas, let alone extras to compensate the resettled populations. Other solutions have to be found either to prevent the unacceptable income-impoverishment of the displaced people, or to stop displacing them. It is not up to the generosity of a conservation project to assist the former inhabitants of a park at their new location— it is a political and moral responsibility.

### **c) The risk of homelessness**

In the region under study this risk exists in a modified form, not in its primary meaning. Houses of semi-permanent and permanent settlements as well as huts of hunter-gatherers hardly require monetary expenditures and can be re-built without much effort. This was observed in the cases surveyed. The people expelled from a protected area erected new houses in the old style on their new plots. But habitations suitable for a hunter-gatherer lifestyle are not suitable for resident farmers. Resettlement housing appeared to be associated with decreasing health status.

### **d) The risk of marginalization**

The risk of marginalization results directly from the instant loss of traditional rights and status of PA-displaced people and is also related to the geographical position of the new settlement areas. The cultural alienation and marginalization occur especially where the displaced peoples resettle as strangers (without rights) in the midst of homogenous neighbors from a different cultural, social and economic background.

### **e) The risk of food insecurity**

Fortunately, this risk can be considered as virtually absent, in the short term, for people displaced because of protected areas in Central Africa. In none of the studied areas governmental services are able to fully implement their restrictive forestry laws, which prohibit hunting and gathering, and these are means by which people, evicted or not, supplement their staple diet. It is however known that the dietary diversity among hunter-gatherers and incipient horticulturalists is higher than that of settled agricul-

turalists<sup>21</sup>. In the long run, the lack of formal land titles and the denial of land-use rights could also result in food insecurity for the resettled people, wherever the forestry laws will be fully enforced. Another serious problem for farming activities arises from conservation itself. Around the Nouabalé Ndoki National Park, for instance, the conservation project is forced to provide imported foodstuff on a subsidized rate to the inhabitants of the nearby villages, since the increase in elephant population due to conservation undermines their efforts to establish farms. At first glance this system, which both provides the rural population with food and secures the lives of protected species, seems to be acceptable. In the long run however, the system is dangerous, as nobody can guarantee that the food supply will go on forever. The findings of Galvin suggest that rural population living near protected areas have in general a lower nutritional status than other people from the same ethnic background.<sup>22</sup>

### **f) The risk of increased morbidity and mortality**

A changed environment and exposure to a more frequent interaction with out-of-the-forest life embody multiple health risks. Research has determined that a shift from foraging to farming may be accompanied by a decline in overall health.<sup>23</sup> On the other hand, in all cases surveyed we found that the new settlements are closer to formal health services and facilities, which is a risk reduction factor.

### **g) The risk of loss of access to common property resources**

The specific characteristics of the Central African rainforest modify this important and widespread impoverishment risks identified in the IRR model. In the rainforest context there is hardly a difference between the risk of landlessness and the risk to lose the access to the common prop-

**The conservation projects that refuse to compensate indigenous forest dwellers in Central Africa did so because they thought recognition of traditional land titles would put an end to their resettlement schedules and "their park".**

erty resources from the forest, since the forest in its total meaning is both individual and common property. Even among resident farmers only the user rights for farm plots are held individually by the household, while all untransformed land is "owned" collectively. Apart from the few cultivated products on these house-plots, all other food products— roots and fruits, medicinal plants, fish from streams, etc.— come from the forest as common property. Separating and relocating resident communities out of the forest deprives them simultaneously of their ownership of the forest and of access to its resources as a common pool for all. This is not a potential impoverishment risk: it is an all too real impoverishment fact through prohibition of access! What for other communities may be experienced as two distinct risks of impoverishment is, in this case, virtually one merged actual damage – a multifaceted, fundamental process of deprivation of resources and de-capitalization, to which current park-establishment practices do not provide a remedy.

#### **h) The risk of social disarticulation**

Social disarticulation of uprooted/ resettled hunter-gatherer societies is also not a risk but a fact. Politically weak communities are further disempowered by removal out of their habitat. "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".<sup>24</sup> The forced change of lifestyle atomizes existing social links within the band and in its relation to others. The high prestige of the elders, resulting from their knowledge of the land, and the related social stratification, have all but disappeared in the park-displacement cases we studied. The leading figures in the bands are now younger men, 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 people who have the physical strength to explore their new environment and its opportunities, while the elders are staying behind, complaining about the changes and the destruction of their world. Local officials, and sometime

**Is it morally acceptable for conservationists to free ride on the "underdeveloped", "underprivileged", "underrepresented" inhabitants of the Central-African rainforest?**

even sophisticated researchers or international experts, often confuse the mere "settling" of the conservation-refugees at the new location with instant "local integration". This certainly is not social re-articulation. Kibreab convincingly critiqued the "tendency among scholars and international agencies to use the concepts of local settlement and local integration synonymously" and explained why "local integration and local settlements are two separate conceptual categories with different substantive meaning".<sup>25</sup>

To sum up, a system of impoverishment risks is inflicted on 'conservation refugees' such as forest-dwellers. These people, already among the most vulnerable and the poorest in the world, are rendered even poorer and more destitute through forced displacement. This is obvious from the analysis of field evidence in the region, and from the analysis of additional evidence from other regions in

Africa, Asia and Latin America. And yet, this is not the whole story. In addition to new impoverishment risks imposed on people, forcible resettlement also generate new and unanticipated risks for biodiversity itself<sup>26</sup>, an outcome that should give pause to many conservationists.

#### **How displacements backfire: the new risks of biodiversity loss**

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"<sup>27</sup>. And it is noted that displacements result in environmental degradation through an increase of permanent settlements<sup>28</sup> and that soil erosion tends to be higher in permanently used agricultural plots than under shifting cultivation regimes.<sup>29</sup> The increased social stratification induced through displacement has in turn biological implications because it leads to more intense harvesting and extraction of forest resources. Increasing social strati-

fication, in fact, precipitates capital accumulation<sup>30</sup>. In turn, Turton concludes that displacement for conservation “*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*”<sup>31</sup>. In all, the research findings signal that the consequences of the displacement and resettlement processes may have in themselves a set of degrading effects on forest ecosystems. We term these as a ‘second generation’ degrading effects, considering that the presence of residents in parks is also causing, under certain circumstances, some ‘first generation’ effects. Trade-offs must therefore be weighted between the cost of efforts to contain the ‘first generation’ without resorting to displacement and having to bear the costs of the ‘second generation’ effects. It seems reasonable to recommend that all future conservation projects predicated on displacement provide donors and all stakeholders with a detailed *ex-ante* assessment of both the impoverishment risks for the people and the ecological risks for the environment.

## **Discussion and conclusion**

Research holds that the creation of protected areas through forcible resettlements that do not provide an equitable and sustainable livelihood alternative to the expelled local population results in lose-lose situations<sup>32</sup>. The common practice of providing no assistance to forcibly displaced peoples represents the path of least resistance. And yet, leaving without assistance and guidance people who derived their livelihood from the area now to be protected is the worst possible option for the people<sup>33</sup> and for biodiversity conservation<sup>34</sup>. Forcibly displacing people also often involves unacceptable physical violence on the ground.

Government officials implementing forced displacement for park creation openly argue that all territories not utilized for agricultural production or officially demarcated as private property are, by decree, government land and that small hunter-gatherer bands can be in extreme cases the customary owner and user of 1000 km<sup>2</sup> of

first class primary forest, valued in million US \$. In addition, the costs involved in resettling inhabitants of protected areas according to socially sound guidelines<sup>35</sup> would be too high. And yet, the world’s largest development agency, the World Bank, recommends a resettlement policy for all cases of displacement that recognize not only legal property rights but also customary rights<sup>36</sup>. The policy<sup>37</sup> stresses that the displaced persons should be:

informed about their options and rights pertaining to resettlement;

consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives; and

provided prompt and effective compensation at full replacement cost for losses of assets attributable directly to the resettlement.

Based on many discussions with park managers, our findings suggest that the conservation projects that refuse to compensate indigenous forest dwellers in Central Africa did so because they thought recognition of traditional land titles would put an end to their resettlement schedules and “their park”. Therefore, the illicit logic of the projects is to refuse legal recognition to avoid endless discussions about compensating the uncommensurable<sup>38</sup>. This is both dangerous and disastrous: dangerous for the conservation goals, disastrous for the well being of the rural and forest population and counter-productive for any complementary development objective. It is important to make biodiversity conservation less costly, but is it acceptable that conservation agencies and national governments continue to break accepted international resettlement standards in order to establish protected areas as cheaply as possible? Is it morally acceptable for conservationists to free ride on the ‘underdeveloped’, ‘underprivileged’, ‘underrepresented’ inhabitants of the Central-African rainforest?

**Conservationists should not be not singled out for displacement critique . . . but it is an unfortunate fact that displacements for the sake of setting up protected areas are carried out in most cases at very low standards, or with no legal protective standard at all**

**Community based conservation and real co-management approaches are the only morally acceptable and effective answer in sight.**

Resettlements can have negative consequences no matter what its causes and goals, and conservationists should not be singled out for critique. It is simply a compelling imperative that wherever displacement is disastrous for people's livelihood and tramples upon human rights, it should not be done. This is true for conservation but also for development projects such as dams<sup>39</sup>, highways, urban expansions, etc. But it is an unfortunate fact that displacements for the sake of setting up protected areas are carried out in most cases at very low standards, or with no legal protective standard at all. As in most developing countries resettlement policies are totally absent, the absence of policy invites and facilitates abuse and unaccountability. The remoteness of many protected areas also tends to camouflage violence and lack of compensation from the public eye and scrutiny. Forced displacement results in some of the worst consequences conceivable for the immediately affected people, sometimes possibly for the next generation as well.

The silence of some conservationists that promote resettlements is very unhelpful, tolerates the intolerable, and must be replaced by a clear and principled position of opposing such forced and violent acts. If resettlement is deemed nec-

essary and feasible, it should be carried out following standards that consistently ensure decent relocation, equitable compensation and sustainable reconstruction of people's livelihood. And it could be used as a means of last resort. But as long as basic resettlement international standards are not met, it is contrary to most stated donors' and NGOs' policies, poverty reduction commitments and ethical principles to continue displacing and sacrificing weak and vulnerable populations.

For the inhabitants of state-declared protected areas the principles of sustainability are not the question in dispute. Their question is whether the costs and benefits of preservation are equally shared. The benefits are global, but the costs are mostly local, and are paid by the poorest and most vulnerable groups. Nobody beside the inhabitants of prestigious-category protected areas is forced to change its lifestyles for the "survival of biodiversity" and start a new life from scratches. But the claim and grievances of those who are forced to do so, their legitimate requests to share in the benefits of development, remain unanswered. To avoid lose-lose situations is necessary to secure both people's well being and the conservation of the rainforest ecosystem.



**Figure 2: Truckload in Congo Brazzaville.** Conservationists fear that forest areas not under protected status will end up entirely exploited by loggers. (Courtesy Christian Chatelain)

There is no easy answer about how the risks of impoverishment can be reduced. But acknowledging these risks could at least make all stakeholders aware of them and prompt preventive actions and approaches. Forced displacements out of protected areas have been for decades a mainstream "remedy", albeit a remedy that creates new problems. Too often, national governments embraced and practiced displacements with irresponsible abandon. For them it has been relatively easy to exploit the quasi-total political weakness of remote, uneducated, unorganized, poor, indigenous populations, much easier than to institute and financially support some good management systems. But displacements have spectacularly failed, time and time again, to



**Figure 3: Young Bakas from a new settlement close to Dja Reserve (Cameroun).** (Courtesy Grazia Borrini-Feyerabend)

achieve the balanced solution to the sustainability objectives under whose flag they were advocated. Not only is their failure documented by evidence: they have been proven to create a host of additional social, political and economic problems—ranging from impoverishment and infringements of human rights to new adverse environmental effects. Then what to do? We see two possible answers to the problems generated by current displacement strategies.

First answer: if population resettlement will continue to be used as a strategy for conservation (through the creation of protected areas that do not contemplate hosting a resident population), some international standards for responsible resettlement<sup>40</sup> should be fully implemented and monitored by national governments, donor governments, or sponsoring international NGOs. That would require, as a premise, the adaptation of explicit country policies and legal frameworks guaranteeing the rights of those displaced and their entitlements to reconstruct their livelihoods. Global benefits from the created protected areas should be rooted on local benefits for the displaced communities. Pursuing this route would imply also remedial and retrofitting actions (as has been done in some World Bank-supported development projects that entailed involuntary resettlement) in protected areas where livelihood issues fell far short of such

standards.

Second answer: forcible evictions for conservations should be openly and explicitly questioned, side-lined and abandoned as a policy. Continuing to rely on them can only signify tolerance and acceptance of the same type of outcomes that this approach has produced so far. The crucial commandment is to search for solutions that help to improve livelihoods rather than impoverishing poor people further. In this sense, conservation should entirely re-orient itself. It should embrace complexity rather than running away from it, and include conservation goals, research goals, and livelihood goals.

Looking ahead at the next ten years in Central Africa, we do not see the strategic prerequisites for answer one to be in place, however scantily. Such prerequisites include the political will to adopt national policies and legal frameworks for resettlement; adequate financing; and organizational/institutional capacity to create alternative opportunities and foster the active engagement of the resettled people<sup>41</sup>. From past and current experiences we conclude that, realistically, such prerequisites can be hardly built in a short time, at least in the Central African countries we studied. We are thus left with the answer number two, an answer that must be internalized by both conservationists and policy makers. Answer two is feasible and does not demand to renounce conservation goals. On the contrary, it calls for a renewed effort at conservation, one in which resident peoples and communities are seen as natural and rightful inhabitants and caretakers of their land and as resourceful agents of conservation nor merely squatters and poachers. Ultimately, community based conservation and real co-management approaches are the only morally acceptable and effective answer in sight.

**Michael M. Cernea** ([mcernea@worldbank.org](mailto:mcernea@worldbank.org)) is a member of CGIAR's TAC/I Science Council (1998-2003), Member of Romania's Academy of Sciences and Research Professor of Anthropology and International Affairs at George Washington University. **Kai**

**Schmidt-Soltau** ([SchmidtSol@aol.com](mailto:SchmidtSol@aol.com)) is a sociologist and independent consultant with GTZ, EU and the World Bank based in Yaoundé (Cameroon) since 1997. The authors' conclusions expressed in this paper should not be attributed to the institutions with which they are associated.

#### Notes

- 1 See Cernea, 1999; Schmidt-Soltau, 2002a.
- 2 Sommet, 1999.
- 3 COMIFAC, 2002.
- 4 Among those Brechin et al., 1991; Geisler, 2001; Brockington, 2002; Risby, 2002.
- 5 Page 23 in McNeely, 1995.
- 6 Page 27 in Cernea, 2000; Chatty and Colchester, 2002.
- 7 Cernea and Guggenheim, 1996; Cernea, 2000.
- 8 WCD, 2001.
- 9 Mahapatra, 1999.
- 10 Downing, 2002.
- 11 In Cameroon, for instance, the forestry law requires that the population participate in all management decisions (Article 26 of the national forestry law of 1994) but on the ground this participation is usually not in the least visible (Schmidt-Soltau 2003).
- 12 For Boumba Beck National Park: PROFORNAT 2003; Curran & Tshombe 2001:521; for Cross River National Park: Schmidt-Soltau, 2001; for Dja biosphere reserve: Abilogo et al., 2002: 10; FPP, 2003; for Dzanga-Ndoki National Park: Noss, 2001:330; for Ipanga-Mingouli biosphere reserve: MDP, 1994; IFORD, 2003; for Korup National Park: Schmidt-Soltau, 2000; for Lake Loboke National Park: PROFORNAT, 2003; Curran & Tshombe 2001:521; FPP, 2003; for Loango National Park: MDP, 1994; IFORD 2003; for Moukalaba-Doudou National Park: MDP 1994; IFORD 2003; for Nouabalé Ndoki National Park: PROECO, 1997; for Odzala National Park: Joiris & Lia 1995:41.
- 13 Geisler, 2001.
- 14 Schmidt-Soltau, 2002c.
- 15 Schmidt-Soltau, 2002c.
- 16 We assessed the lost stumpage value to be at least US \$ 120/ha. This is a conservative estimate, and far below what Carolin Tutin estimated as opportunity cost for forest parks in the Congo-basin, i.e., US \$ 150 per ha per year (Tutin, 2002: 81).
- 17 As a matter of fact, however, such values are also returned to the resident population in very limited proportion, if at all, even in the case of full exploitation, e.g. for logging.
- 18 Schmidt-Soltau, 2001.
- 19 Carroll, 1992; Noss, 2001.
- 20 Sarno, 1993.
- 21 Fleuret and Fleuret, 1980; MacLean-Stearman, 2000.
- 22 Page 4 in Galvin et al., 1999.
- 23 Cohen and Armelegos, 1984.
- 24 Page 22 in Coelho and Stein, 1980.
- 25 Page 468 in Kibreab, 1989.
- 26 Marquardt, 1994.
- 27 Fabricius and de Wet, 2002.
- 28 Colchester, 1997.
- 29 Duncan and McElwee, 1999.
- 30 Fratkin et al., 1999.
- 31 Turton, 2002.
- 32 Cernea, 1985; Cernea, 1997.
- 33 Schmidt-Soltau, 2002a.
- 34 Terborgh and Peres, 2002.

<sup>35</sup> See, for instance World Bank, 2002; OECD, 1992; ADB, 2002

<sup>36</sup> The World Bank clarifies that in addition to people who have a formal landholding title also "those who do not have formal legal title to land but have a customary right/entitlement to such land or assets, including those who have no recognizable legal right or claim to the land they are occupying, are entitled to receive at least resettlement assistance" (page 6 in World Bank, 2002).

<sup>37</sup> World Bank, 2002, page 3.

<sup>38</sup> Terborgh and Peres, 2002.

<sup>39</sup> See the IUCN Report of the World Commission on Dams.

<sup>40</sup> E.g., the ones set up by agencies such as the World Bank and OECD.

<sup>41</sup> World Bank, 1996: 183-186; OECD, 1992.

#### References

- Abilogo, E., H. Aye Mondo, P. Bigombe Logo and S.A. Nguiffo, *The ECOFAC project and the Baka pygmies of the eastern border of the Dja biosphere reserve*, Brussels 2002.
- African Development Bank, *Involuntary Resettlement Policy Draft*. Abidjan, May 2002.
- Brechin, S.R., P. West, D. Harmon and K. Kutay, "Resident people and restricted areas: A framework for inquiry", in: West, P. and S.R. Brechin (eds.) *Resident people and national parks: Social dimensions in international conservation*, University of Arizona Press, Tucson, 1991.
- Brockington, D., *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania*, Bloomington, Indiana, 2002.
- Carroll, R.W., *The Development, Protection and Management of the Dzangha-Sangha Dense Forest Special Reserve and Dzangha-Ndoki National Park in South-western Central African Republic*, WWF-Press, Bangui, 1992.
- Cernea, M.M., "Alternative Units of Social Organization Sustaining Reforestation Strategies", in: Cernea, M. (ed.) *Putting People First: Sociological variables in rural development*, World Bank, Washington D.C., 1985.
- Cernea, M.M., *African Involuntary Population Resettlement in a Global Context*, World Bank, Washington D.C., 1997.
- Cernea, M.M.(ed.), *The Economics of Involuntary Resettlement—Questions and Challenges*, World Bank, Washington D.C., 1999.
- Cernea, M. M., "Risk, safeguards and reconstruction: a model for population displacement and resettlement", in: Cernea, M. M. and C. McDowell, *Risk and reconstruction: experiences of resettlers and refugees*, World Bank, 11-55, Washington D.C., 2000.
- Cernea, M.M. and S. Guggenheim, *Resettlement and Development, Report of a World Bank Task Force on the Bankwide Review of Projects Involving Involuntary Resettlement*, 2<sup>nd</sup> ed., World Bank, Washington, 1994.
- Chatty, D. and M. Colchester, *Displacement, Forced Settlement and Sustainable Development*, Berghahn, Oxford, 2002.
- Coelho, G. V. and J.J. Stein, "Change, vulnerability, and coping: stress of uprooting and overcrowding", in: Coelho, G. V. and P.I. Amed (eds.), *Uprooting and development*, Plenum Press, 9-26, New York 1980.
- Cohen, M. N. and G. Armelegos (eds.), *Paleopathology and the origins of agriculture*, Academic Press, Orlando, 1984.
- Colchester, M., "Salvaging Nature: Indigenous people and protected areas", in: Ghimire, K. B. and M.P. Pimbert (eds.), *Social Change and Conservation - Environmental politics and impacts of National Park and Protected Areas*, Earthscan, 97-130, London 1997.
- COMIFAC (Conférence des Ministres en charge des forêts de l'Afrique centrale), *Position commune des ministres de la sous-*

région Afrique centrale pour RIO + 10, Yaoundé 2002.

Curran, B. K. and R.K. Tshombe, "Integrating local communities into the management of protected areas: Lessons from DR Congo and Cameroon. In: Weber, W., L.J.T. White, L.J.T., A. Vedder and L. Naughton-Treves (eds.) *African Rain Forest: Ecology & Conservation – An Interdisciplinary Perspective*, Yale University Press, New Haven, 2001.

Downing, T.E., *Avoiding New Poverty: Mining-Induced Displacement and Resettlement*, IIED and World Business Council for Sustainable Development, London 2002.

Duncan, C.R. & P.D. McElwee, *Conservation at what cost? The logic of sedentarization, resettlement and displacement in Southeast Asia*. Paper presented at the Conference Displacement, Forced Settlement and Conservation, St. Anne's College, Oxford (UK), 1999.

Fabricius, C. and C. de Wet, "The influence of forced removals and land restitutions on conservation in South Africa", in: Chatty, D. and M. Colchester (eds.), *Displacement, forced settlement and sustainable development*, Berghahn, 142-157, Oxford, 2002.

Fleuret P. & A. Fleuret, "Nutrition, consumption, and agricultural change", *Human Organisation* 39: 250-260, 1980.

FPP (Forest peoples project), *Indigenous people and protected areas in Africa*, Forest people project report, Moreton-in-Marsh (UK), 2003.

Fratkin E.M., E.A. Roth and M.A. Nathan, "When nomads settle: The effects of commercialisation, nutritional change and formal education on Ariaal and Rendille pastoralists", *Current Anthropology* 40(5):729-735, 1999.

Galvin, K.A., J. Ellis, R.B. Boone, A. Magennis, M. Smith and S.J. Lynn, S.J., *Compatibility of pastoralism and conservation? A test case in the Ngorongoro conservation area (Tanzania)*, paper presented at the Conference on Displacement, Forced Settlement and Conservation, St. Anne's College, Oxford (UK), 1999.

Geisler, C., *Your Park, My Poverty: The Growth of Greenlining in Africa*, paper presented at a Cornell University Conference on Displacement, 2001.

IFORD (Institut de formation et de recherché démographiques), Base de Donnée Gabon, Yaoundé, 2003.

Joiris, D.V. and C. Lia, *Etude du milieu humain du Parc National d'Odzala*, ECOFAC consultancy report, Brazzaville, 1995.

Kibreab, G., "Local Settlements in Africa: A Misconceived Option?" *Journal of Refugee Studies*, 2(4), 468-490, 1989.

MacLean-Stearman, A., "A pound of flesh: social change and modernisation as factors in hunting sustainability among neo-tropical indigenous societies", in: Robinson, J.G. & Bennett, E.L. (Eds.) *Hunting for Sustainability in tropical forests*, Columbia University Press, 233-250, New York, 2000.

Mahapatra, L.K., *Resettlement, Impoverishment and Reconstruction in India: Development for the Deprived*, Vikas Publishing House, New Delhi, 1999.

Marquardt, M.A., "Settlement and Resettlement: Experience from Uganda's National Parks and Reserves", in: Cook, C. (ed.), *Involuntary Resettlement in Africa*, World Bank Technical Paper 227, Washington DC, 1994.

MDP (Ministère de la Planification du Gabon), *Base de donnée sur la population*, Libreville, 1994.

MINEF (Ministry of environment and forestry), *Forestry Law Compendium*, Yaoundé, 1994.

McNeely, J.A., "Indigenous people and national parks in South America", in: Amend, S. and T. Amend (ed.), *National Parks without people? The South American Experience*, IUCN-Press, 19-24, Gland (Switzerland), 1985.

Noss, A.J., "Conservation, Development and the 'Forest People' – The Aka of the Central African Republic", in: Weber, W., L.J.T.

White, A. Vedder and L. Naughton-Treves (eds.), *African Rain Forest: Ecology and Conservation – An Interdisciplinary Perspective*, Yale University Press, 313-333, New Haven, 2001.

OECD (Organization for Economic Co-operation and Development), *Guidelines for Aid Agencies on Involuntary Displacement and Resettlement in Development Projects*, DAC, Paris, 1992.

PROECO, Etude socio-économique et cartographique des populations rurales au Nord Congo, GTZ-GIS system, Brazzaville, 1997.

PROFORNAT, Base de donnée sur la population au sud-est Cameroun, Yokadouma, 2003.

Risby, L. A., *Defining Landscapes, Power and Participation. An examination of a National Park Planning Process for the Queen Elizabeth National Park, Uganda*, University of Cambridge, PhD Thesis, 2002.

Sarno, L., *Song from the Forest: My life among the Ba-Banjelli Pygmies*, Bantam Press, London 1993.

Schmidt, J. *Influence des acteurs externes sur les Baka dans la région de Lobéké*, Minef-Proforinat-GTZ Consultancy Report, Yokadouma, 1998.

Schmidt-Soltau, K., *Conservation and Resettlement in the Central African Rainforest*, paper presented at the resettlement workshop on the 10th World Congress of Rural Sociology, Rio de Janeiro, 2000.

Schmidt-Soltau, K., *Human Activities in and around the Takamanda Forest Reserve: Socio-economic Baseline Survey*, GTZ-Consultancy report, Mamfe, 2001.

Schmidt-Soltau, K., *Conservation initiatives and local responses around Korup National Park (Cameroon)*, paper presented at the Annual Conference of the Association for Anthropology in Southern Africa, Rhodes University, Grahamstown (South Africa), 2002a.

Schmidt-Soltau, K., *The Environmental Risks of Conservation-related Displacements in Central Africa*, paper presented at the International Symposium on Multidimensionality of Displacement Risks in Africa, Kyoto University, Kyoto (Japan), 2002c.

Schmidt-Soltau, K., *Is there a right to resist conservation induced displacement?*, paper presented at the 8th Biannual Conference of the International Association for the Study of Forced Migration, Chiang Mai (Thailand), 2003.

Sommet 1999, *Sommet des Chefs d'Etat d'Afrique Centrale sur la conservation et la gestion durable des forêts tropicales: Déclaration de Yaoundé*, WWF-Press, Yaoundé, 1999.

Terborgh, J. and C.A. Peres, "The problem of people in parks", in: Terborgh, J., C. van Schaik, L. Davenport and M. Rao (ed.), *Making Parks Work: Strategies for Preserving Tropical Nature*, Island, 307-319, Washington DC, 2002.

Turton, D., "The Mursi and the elephant question", in: Chatty, D. and M. Colchester, *Displacement, Forced Settlement and Sustainable Development*, Berghahn, Oxford (UK), 2002.

Tutin, C.E.G., "Parks in the Congo Basin: can conservation and development be reconciled?", in: Terborgh, J., C. van Schaik, L. Davenport and M. Rao (ed.), *Making Parks Work: Strategies for Preserving Tropical Nature*, Island, 76-85, Washington DC, 2002.

WCD, *Dams and Development: A New Framework for Decision Making*, Earthscan, London, 2001.

World Bank, *Operational Policy 4.12: Involuntary Resettlement*, World Bank, Washington DC, 2002.