

## **Displacement and Relocation from Protected Areas: Towards a Biological and Historical Synthesis**

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### INTRODUCTION

THE ISSUE OF DISPLACEMENT AND REHABILITATION of people from wildlife areas is a recurrent and central theme in the context of crises in nature conservation in India. Few are aware of the older antecedents of widespread dislocation of resident peoples during the founding of National Parks in the USA or the establishment of India's Reserved Forests, though both date back to the late nineteenth century (see Schama 1995; Rangarajan 2001a; Jacoby 2001). The displacement of people who herded, gathered forest products or cultivated land was a central feature of twentieth century nature conservation in southern and eastern Africa and India, though the drama played out at different times and in different ways (Carruthers 1995; Neumann 1998; Rangarajan *in press, b*). Displacement, carried out to enhance levels of nature protection, has often been accompanied by impoverishment and dispossession of the displaced. In fact, few would argue with the contention that the sequestering of land for preservation has more often than not, occurred at the expense of local inhabitants, especially those who were displaced (Brockington 2002).

India is one of the countries where the issue of relocation has lately acquired centre-stage in debates on biodiversity conservation. Between 1969

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and 2001, the area under National Parks and Sanctuaries in India grew ten-fold, to five per cent of the total landscape (Rangarajan 2001a). Only a small part of this land was cleared of all human habitation, yet it is a central point of conflict and a critical aspect of policy. While displacement from Tiger Reserves in India since 1973 may have officially affected 80 villages and 2900 families, the actual numbers may be far higher. The recent Tiger Task Force Report calls for priority to be given to relocation from the core areas of the Tiger Reserves while calling for a transparent, just and open process of decision-making (Ministry of Environment and Forests 2005).

When, whether and how should such relocation be done if done at all? What are the ways in which to analyse their efficacy in terms of conservation and social justice? These questions are easier to pose than to answer. Closely linked to these questions are the clear, even sharp differences between the dominant cultures in the practice of conservation, represented by biologists on the one hand, and social scientists on the other.

Biologists and social scientists often examine different parts of a large complex picture and also have different ways of asserting an argument. Biologists mostly focus on the impacts of differing kinds of human use of the ecosystem, with species and ecosystems at the epicentre. Social scientists have largely examined process and pattern of conservation-induced displacement of communities and the resultant impoverishment of cultures and livelihoods. Their study revolves around people as actors, with nature as a mere backdrop (Worster 1996). It is not surprising, therefore, that the views on the role of people's displacement in conservation policy are sharply divided along disciplinary lines.

Biologists tend to assess the issue of relocation in terms of the viability of habitats, ecosystems and endangered species. Recent work on large terrestrial carnivores points to the relatively tiny percentage of habitat of large-bodied vertebrates where populations are intact and the habitat secure. The tiger (*Panthera tigris*) or the greater one-horned rhino (*Rhinoceros unicornis*) for instance occupy just one to five per cent of their historical range. Races of some species such as the Asian lion (*Panthera leo persica*) and the hard-ground barasingha (*Cervus duvauceli branderi*) are confined to single sites, microscopic remnants of a once vast range (Divyabhanusinh 2005; Karanth 2006). Conflicts with peoples resident inside protected areas (PAs) can be intense with high rates of loss of livestock and crops and even on occasion, of human lives (Madhusudan and Mishra 2003; Treves and Karanth 2003). Conservationists also point to successes in ecological restoration after village displacement, as in the case of the Gir forest, the last home of the endangered Asiatic lion (*P. l. persica*) since the early 1970s. Many scholars have referred to the ability of prey and predator populations to recover in zones free of human settlements in prominent Tiger Reserves (Karanth 2006).

In contrast, social scientists tend to see the issues of equity and justice as central to sociological and historical analysis of conservation processes. Such

perspectives have helped unravel why and how displacement, even when a biological success, can impose high costs on under-privileged groups (see Jalais 2005). Most scholars of society, history and anthropology, then, find echo in the views of activists and others who oppose displacement from wildlife sanctuaries. Such critics point to the recurrent pattern of displacement of communities and loss of livelihoods caused by PAs (Brockington 2002; Schmidt-Soltau 2003).

The chasm between the biologists' and social scientists' perspectives on relocation issues is widened by the fact that neither group attempts to derive insights from the scholarship of the other. For instance, the biological evidence (to be examined in detail below) is rarely backed up with concomitant understanding of the social and economic conditions of those who have been displaced by executive action. Often evidence of the well-being of oustees is almost entirely anecdotal (e.g., Johnsingh 2005). Even first-rate natural history and wildlife biology is no substitute for serious social and economic analysis, leaving claims, that the lot of the displaced has improved, open to doubt (for instance, see Johnsingh 2006). The glaring lack of knowledge of social science scholarship, indefensible in itself, also inhibits the ability to critically learn from the past record (Panwar, unpublished 1973 and 2003).

Conversely, the wealth of sociological and historical materials on relocation focuses mainly on deprivation and loss of amenity. Conservation-induced displacement in India is relatively recent, dating back to the early 1960s, but there is a longer legacy of displacement for forest conservancy from the late nineteenth century onwards (Rangarajan *in press, a*). Yet, only rarely have sociological investigations drawn on the rich insights provided by biologists. Clearly, there is a need to combine the insights of the biological and sociological disciplines to examine issues at hand.

A critical look at the various strands of evidence from different disciplinary traditions can help delineate where the differences lie and what they are about. In this respect, it may be useful to begin with a brief look at an Indian wildlife reserve that one of us (Shahabuddin) has been working in.

### ***The Sariska Case***

The Sariska Tiger Reserve in Rajasthan, western India, where the tiger was recently reported to have become locally extinct, is a case in point. In February 2005, an Indian newspaper reported the shocking story that the tiger population of Sariska, already highly depleted to less than ten individuals by 2004, had been poached out of existence. It was suspected that well-organised poaching gangs had hunted out the last few tigers, possibly with the connivance of some local villagers.

This extinction crisis, did not bring, as hoped by many, a deeper delving into the long-term causes of habitat degradation or tiger poaching by the management. Instead, the Reserve was closed off to the public and to independent

scientists for five months shrouding the governmental machinations with an air of secrecy. Soon after, a long-dormant (and highly inadequate) plan for relocation of eleven villages from the core area of the Reserve was revived. Announcements were made in the media of the intention to 're-introduce tigers' after the 'revival of forest habitat'. Immediate efforts were made to step up protection of the Reserve with the help of para-military forces. The priorities were clear. The aim was to create a 'people-free zone' in Sariska without any idea of how this would help. As the report of a governmental committee, set up after the tiger crisis, says:

*'In Sariska, all the reasons responsible for disappearance of tigers in toto zero in on one single factor and that is the large number of villages inside the Reserve, where no successful rehabilitation of villages has ever taken place. Therefore poachers could shelter in the villages of the area and kill tigers.'*

and

*'Tigers and people do not coexist. Wherever villages exist, the tigers in the vicinity have slowly perished.'*<sup>1</sup>

The post-crisis approach was apparent to many conservationists as simply a continuation of past park policy, based on a lack of transparency, public participation or scientific involvement in decision-making. As successive management plans for the Reserve indicate, the emphasis in management strategy had always been on relocation and curtailment of rights of residents, belonging to the largely pastoral Gujjar community, to whose activities—in the form of grazing, fodder-collection and fuelwood use—forest degradation was wholly ascribed (Johari *in press*). Recent ecological research does indeed point to linkages between forest resource use and habitat degradation (Kumar and Shahabuddin 2005). Patterns of resource extraction over the last few decades have resulted in declines in habitat-selective animal species and adverse changes in tree composition and structure (Shahabuddin and Kumar 2005). It was clear by 2005 that a substantial proportion of Sariska was too degraded to support any mammalian prey or predator species (see also Johnsingh et al. 1997).

Yet, close investigation revealed that the history of habitat change in Sariska was far more nuanced (Shahabuddin et al. 2005). The linkages between forest use and biodiversity decline are more complex than normally believed. For instance, even casual visits revealed that much of the extractive pressure on the Reserve is generated by adjacent urban centres. Yet, no attempt has so far been made to compare the quantum of biomass extraction from the towns (and villages) surrounding the Tiger Reserve to that originating from the resident villages. Indeed, this contribution of external factors to forest degradation was not even recognised in the management plans for the Reserve (Government of Rajasthan 2004). Forest managers have also consistently ignored the contributions of departmentally-run commercial forestry to

forest degradation, many of whose effects are still manifested in the forests of Sariska. For instance, the local rarity of several commercially extracted species such as *Acacia catechu* can be partially attributed to its use for making charcoal in the past. Even-aged young stands of *dhok* trees (*Anogeissus pendula*) on the hill slopes which were subject to selective logging, point to other such effects (Shahabuddin et al. 2005). Studies on patterns of forest utilisation in another Reserve, Ranthambhore, suggest another major lacuna (Dayal 2005). Important distinctions were never made between different kinds of households and their varying intensities of pressure on the forests. Such variations have been found crucial to assessing impacts on ecological structure and function (Dayal 2005). That many of these critical habitat management issues remain unexamined by ecologists to this day does not help the matter. While Sariska has seen much biological research, ecologists' work solely focussed on ecosystem structure and function without reference to variable human pressures, socio-economic variables or cultural history (Rodgers 1990; Johnsingh et al. 1997; Kumar and Shahabuddin 2005).

What was further ignored in the public discourse over the Sariska tiger crisis was the bitter history of administrative misgovernance including ineffective forest protection from commercial interests, inequitable relocations in the past and gradual tightening of restrictions over legitimate resident rights without provision of alternatives (Shahabuddin et al. 2005; Johari *in press*). With no security of livelihoods, local people maximised their short-term gains from the forest in whatever way they could. For instance, practices like ecologically damaging goat-rearing evolved as a direct response to banning of agriculture in the villages. They somehow survived on a precarious debt-based economy supported by minimal developmental infrastructure (Shahabuddin et al. 2005). Even daily-wage activities were slowly closed off as a livelihood option for local residents, as was any form of developmental activity (Shahabuddin et al. 2005).

All these actions were defensible according to the park management. As one forest guard justified the need for relocation:

*'These Gujjars don't want to work. Gujjars are lazy. Their women work while they eat posht<sup>2</sup>. They don't want to move out because they want everything for free. They would never agree to leave this place because they wouldn't find free fodder and income outside Sariska. Therefore they need to be evicted from the forest forcefully if this sanctuary has to be saved.'* (Shahabuddin et al. 2005).

What had further alienated the local population was the continuing access of forest lands to more powerful players such as miners and commercial tourist operators through the years. Even today, pressures from burgeoning religious tourism that threatens important microhabitats and endangered species, also go largely unrecognised and uncontrolled (Government of Rajasthan 2004). If there had been a free-for-all in the Reserve, it was also a consequence of visi-

ble lack of motivation in the forest protection staff and widespread corruption, including timber smuggling (see also Robbins 2000).

Even a year after the tiger crisis, and several committees later, compelling issues for improvement of biodiversity protection are still to be taken up with seriousness. For instance, the necessity of building long-term partnerships between local residents and the management or for the redistribution of economic benefits from the Reserve to local villages, are topics that do not receive the attention of the management any more than they had in the past. Neither has there been any talk of enhancement of positive interactions between local people and the Reserve management through compensatory activities for livestock loss or crop losses, even those mandated legally. There are urgent and critical issues of reforestation in the buffer zone, currently a degraded wasteland. Addressing these could stave off extractive pressures from the core area. Ironically these have still not begun to be discussed even at the highest levels.

There is a need to question the premises of such coercive conservation that is based not only on incomplete scientific evidence, but also on insensitivity to socio-economics and culture. The issues raised by the case of Sariska Tiger Reserve have much wider ramifications. They call for, at the very least, a synthesis of the skills and insights of diverse communities of knowledge. There is now sufficient scholarly work to undertake a more rigorous and holistic exercise that combines ecological and sociological insights on displacement. While such synthesis cannot, in itself, resolve issues of justice or equity, it can certainly help create the space for an informed and serious debate.

#### ***Views of Nature: The Biology of Displacement and Habitat Restoration***

Biologists and forest managers see displacement of ecosystem-dependent people as unavoidable to secure large 'inviolable' areas of wilderness where the needs of biodiversity conservation can be prioritised (Terborgh et al. 2002; Johnsingh 2005; Karanth 2006). Their premise is that activities of villagers inside PAs, either agricultural activities or forest biomass extraction, are detrimental to biodiversity conservation values. An increasing number of scientific studies point to the habitat degradation caused by biomass extraction such as grazing, fuelwood collection and commercial non-timber forest produce (NTFP) extraction inside areas set aside for biodiversity conservation (Siebert 2004; Karanth et al. 2005). For instance, in Bhadra Tiger Reserve in the Indian state of Karnataka, between 8 and 10% of sanctuary area was found to be degraded by extractive activities (Karanth et al. 2005). In Sariska Tiger Reserve, adverse changes in vegetation structure and plant species composition were caused by chronic biomass extraction that was likely affecting forest avifauna as well (Kumar and Shahabuddin 2005). The Biligiri Rangan Hills Temple Sanctuary in southern India reports reduced recruitment of some extracted NTFP species and changing tree species composition of forests due to

long-term use (Murali et al. 1996; Shankar et al. 1998). The latter is especially significant as such non-wood forest product extraction is sometimes seen necessarily as a benign activity with no adverse consequences. Studies in Pin Valley National Park in the Indian Himalaya indicate that there may be competition for pastures between domestic goats/sheep and wild ibex given the coincidence of diet choice (Bagchi et al. 2004). Biologists therefore emphasise the fact that *some* amount of inviolate zone (strictly protected area) is required to maintain the entire spectrum of biodiversity as well as to minimise conflicts with large mammalian fauna (Terborgh et al. 2002; Ministry of Environment and Forests 2005).

Yet, foresters and biologists most often base their arguments on the simplistic assumption that the relationship between human use and biodiversity is negative in all cases and at all levels. Such linear causative linkages may be convenient to managers in decision-making. But they have clouded complexities of ecosystem dynamism and diversity that would involve much a greater engagement with human use issues (see also Schama 1995). For instance, the existence of villages inside forests in the past has resulted in the formation of open grasslands. These were beneficial for endangered native herbivores including deer and antelope (Rangarajan 1996; Schaller 1967/1998). After village relocations, such formations have to be managed with fire and cutting in order to maximise biodiversity values as is the case in Kanha National Park. Thus *some* degree of human use has actually favoured increase in animal diversity at the landscape level by creating a heterogeneous ecological mosaic so that some biodiversity elements are favoured over others in different patches. At the same time, studies also show that chronic, large-scale and intense biomass extraction can reduce biodiversity to very low levels. These non-linear relationships between human use and forest at different spatial scales (see also Connell 1978) have never really been acknowledged by PA managers and biologists. The size of the disturbed area, past land-use, intensity of biomass extraction and type of vegetation also play significant roles in how human use affects biodiversity status of an area (see Struhsaker 1997). Such considerations need to be built into a larger perspective on PA management that might allow for limited biomass utilisation. For this, clear management objectives are required for protected areas with respect to which elements of biodiversity will be favoured over others. However, such objectives are, more often than not, missing from PA management strategies (Middleton 2003).

Discussion of the possibilities of controlled extraction leads us into a consideration of the socio-economic and institutional conditions under which it is possible to maintain 'non-destructive extraction of biological resources'. Studies of the kinds and levels of human use that would be compatible with biodiversity conservation are yet few and far between and limited to very few sites globally. In conservation sites where such studies *have* been carried out, the literature indicates that animal and plant populations that are subject to

human extraction, can be sustained only under carefully controlled extraction programmes which are managed by local residents having a stake in conservation of the given resource (Rai and Uhl 2004). For example, exceptionally high-valued activities such as trophy-hunting or wildlife tourism may provide a sustainable basis for long-term conservation in Asia and Africa (for instance, see Sizer 1996; Puri 2006).

However, many seemingly sustainable, use-based programmes are dogged by difficulties, both biological and economic in nature (Rodgers et al. 2003). For instance, numerous hurdles remain in understanding genetic and ecological impacts upon wild ungulate populations and long-term economic feasibility of trophy-hunting, for instance in the northern mountains of Pakistan (Shackleton 2001). In other cases, highly controlled extraction may not always allow use of forests to the extent that they will provide sufficient economic incentives to the local populace for long-term conservation (Plowden 2004; Silvertown 2004). Biologists also fear that while it may be possible to maintain populations of extracted species through sustainable use, hardly any information is available on indirect effects of plant part extraction on dependent animal species including frugivores, pollinators or seed dispersers (Shahabuddin and Prasad 2004). Such groups of animals may be critical for continuing existence of tree communities in tropical forests. Above all, many recent experiments in use-based conservation such as the Joint Forest Management scheme in India and Community Forest Enterprises in Mexico (see Bray et al. 2003; Shahabuddin 2003) still lack rigorous evaluation from an ecological perspective. Thus it would be safe to assert that success in 'sustainable extraction' is likely to be contingent upon a host of local ecological, social and market conditions that are, as yet, far from universally applicable and above all, scantily studied (Rai and Uhl 2004; Silvertown 2004). In developing countries like India, exactly what levels and kinds of extraction would be compatible with the long-term aims of biodiversity conservation are issues that scientists have only recently begun grappling with (e.g. Shahabuddin and Prasad 2004).

Many biologists also argue that extracted habitats, even under conservation programmes, cannot be a true substitute for strictly protected habitat in terms of biodiversity protection. This is because when the needs of economy and livelihood take precedence over biodiversity conservation, forest habitats are likely to lose some of the elements of biodiversity (see for example, Weinstein and Moegenburg 2004; Siebert 2004). In situations where there is heavy demand on natural resources due to large dependent human populations, it is even more likely that economic imperatives may override ecological ones. Additionally, endemic species, narrow specialists and habitat-restricted species tend to lose ground in human-used landscapes (Raman et al. 1998; Lohr et al. 2002). That more adaptable, geographically widespread and opportunistic fauna tend to flourish in human-altered landscapes is now an established fact (Raman et al. 1998).



The importance of strictly protected habitats, as advocated by most biologists, also lies in their acknowledged role as 'source habitats' or 'refugia' where increased productivity of plant and animal resources enhances their utilisation potential in adjoining habitats and safeguards vulnerable species from local extinction (Gell and Roberts 2003). Maintenance of forest refugia in a mosaic of anthropogenically-altered agro-forestry landscapes, as undertaken by forest-dependent communities in the past, has also been mooted as a means to reconcile the apparently opposing aims of conservation and development (Joshi and Gadgil 1991). Landscape-level approaches combining strictly-protected refugia with multiple use areas, are in fact being considered seriously by modern conservationists as well (see Bray et al. 2003).

The conflict between 'preservation' and 'use' and how these are to be defined, is a contentious one in parks everywhere. But what is remarkable in the Indian case is the marginal role of science and scientists whose participation could have lent far more credence to the entire exercise of rational PA management. However, critical as these issues are, they cannot be tackled in a historical vacuum. Even without a long digression into the histories of dispossession or reservation of land for conservation, a brief look at the past will help.

### *A Touch of History*

The dislocation of human populations to enable conservation is not quite so recent a phenomenon. The nineteenth century witnessed several proposals for such relocation for a mix of objectives of the colonial power. Initially, the major concern was simply to aggregate settlements to enable surveillance and collection of revenue.

Conservation of biological diversity was often associated with relocation of resident peoples: this was part of the early record in the US and in the former colonial world in Asia and Africa. The parallels of displacement and impoverishment have only recently begun to come to light. In Yellowstone, the Nez Perce people were written out of the history of the region: their presence in the past posed uncomfortable questions for the management of the world's first national park created in 1874 (Jacoby 2001). Such exclusionary logic often turned the evidence on its head. As Simon Schama wrote of Yosemite, what the settlers admired as pristine nature was the result of controlled fires lit by the Ahwaneechee people. Far from being 'Edenic and untouched', it looked the way it did due to long-term low intensity use, which was now curbed (Schama 1995: 186). The Grand Canyon, another famous park was secured by excluding the deer hunting of Havasupai peoples; in Glacier Park, it was the Blackfoot Native American nation that was denied entry (Spence 1996; Jacoby 2001). What is crucial is that much of the displacement took place at a time the parks were seen as crucial not to protect rare fauna but to safeguard 'natural wonders' like the Grand Canyon. Traces of the former

American Indian presence would remain as in the very name Yosemite<sup>3</sup>, but not much else was left. To this day, tiny remnant populations of Native Americans seek access as a matter of right, most prominently by the Blackfoot in the Glacier Park (Keller and Turek 1998: 43–65; Spence 1999).

The Indian case was somewhat different from the American one. The British wielded power over a subject peasantry. India never became a major destination of white settlers as the North America did. In the latter, the takeover of land as national park was only one in a series of steps by which Native Americans were displaced. Yet forest reservation in India foreran its counterpart in the USA and set the stage for game parks and reserves.

The reservation of a fifth of the land area of British India as government forest between 1878 and 1900 aimed to increase revenue and also to upgrade the growing stock of marketable timber. Already early in the century, especially in southern and western India, surgeons and botanists had come up with what a modern scholar calls 'a circular, self-reinforcing and self-justifying argument' that the control of hill people was essential to save the forests from them (Williams 2003: 366). The project of making itinerant peoples sedentary or localised was often legitimised in terms of the greater imperial interest. Such projects were not always easy to carry out into practice. There were large scrub and forest patches where the writ of rulers meant little. The Gir hills in western India, were under local princes who only lightly administered them. Even in the 1840s, British representatives urged that scattered hamlets of the Charan and Rabri grazers ought to be aggregated into larger settlements (Rangarajan 2001a). Little came of all this. Elsewhere major changes did come about.

The displacement of the Baigas from the Banjar Valley Reserved Forest, now the Kanha National Park in central India provided an uncanny foretaste of what often recurs to this day in such processes of displacement. The small tribe of the Baigas was seen as highly destructive to the regeneration of the *sal* (*Shorea robusta*) tree due to their slash and burn agriculture. The exclusion of the Baigas and their confinement to a select tract did not benefit them. They neither made a transition to settled agriculture nor could they become paid wage labourers. The Baiga case has been well-documented but there were counterparts in the case of itinerant peoples in southern India (Radhakrishna 2001). The sedentarisation of their production process or of their settlements facilitated departmental control of the wooded estate, revenue collection and extraction of labour dues. But displacement contributed to impoverishment. Deprived of the rights to the forest, especially of hunting and gathering, they were more vulnerable to debt and often lost control of their agricultural plots. Little that was promised to them actually materialised on the ground (Rangarajan 1996; Prasad 2003). Princely reserves were policed as exclusive hunting grounds but displacement was rare, the forced eviction of ten villages from Dachigam in the Kashmir being a case in point. There was

an echo of the Yosemite case: Dachigam which meant 'the ten villages' became the name of the hunting ground (Chitralkha Zutshi, *pers. comm.*)

Displacement for conservation became a norm only in the early 1970s. Prior to that, there was some displacement in the Sariska Wildlife Sanctuary in Rajasthan as well as of a Maldhari settlement or *ness* in the Gir Forest (Rangarajan 2001b; Johari *in press*). But the first time there was a coordinated relocation drive to secure the habitat of endangered mammals was in the Kanha Park in Madhya Pradesh. The village of Supkhar was relocated to open up living space for the central Indian barasingha (*Cervus duvauceli branderi*) (Panwar 1978). In an ambitious bid, nearly 500 families of buffalo-herding Maldharis were moved out of a core zone of the Gir Forest. While there were differences on the exact relationship of their cattle to the vegetation and different ungulate species, the move did reduce the levels of lion predation on domestic stock (Saberwal et al. 1994). Displacement has since become an important objective of park managers in several states. It was often funded by federal government under schemes like Project Tiger launched in 1973. Such relocation was undertaken in Ranthambhore, Rajasthan and Bandipur, Karnataka, and once more, on a larger scale than in the past in Kanha, Madhya Pradesh (Krishnan 1976; Rangarajan *in press, b*).

The social and economic impacts of such relocation were not documented in the early phase. It first attracted attention of journalists and only subsequently of sociologically-oriented researchers (on Bandipur see Padmanabhan 1998). Problems in social terms were well illustrated by a researcher who was told by Maldharis in the new settlements how the fat content of the milk was worse outside the forest. Deprived of adequate pasture, they were the victims of conservation-induced displacement (Saberwal et al. 1994).

Recent field studies are just beginning to reveal the contours of deprivation and social injustice that have resulted from displacements from PAs (Brockington 2002; Sharma and Kabra *in press*). Social scientists and anthropologists point to the extreme marginalisation and impoverishment that often results from village displacement, particularly in developing countries where governance systems tend to be ineffective and enforcement mechanisms are weak (Neumann 1998). In India, there is as yet no full length study of conservation-related displacement that can compare with those in eastern or southern Africa. In Tanzania and South Africa, cases of forceful eviction of pastoral peoples from game reserves are becoming increasingly common (Carruthers 1995; Neumann 1998). Such authors have also pointed to the weak biological basis for village relocation in most conservation sites (Brockington 2002).

That oustees most often belong to marginalised ethnic groups further exacerbates the social impacts. A pioneering long-term study of relocation from Kuno Wildlife Sanctuary in India, for example, shows that relocation has had a highly adverse impact on the livelihoods and lives of the displaced people (Kabra 2003; Sharma and Kabra *in press*). The exercise was unsatisfactory with respect to several aspects such as identification of suitable land for reset-

tlement, assistance to tide over uncertain agricultural output and incomes during the transition period and provision of alternatives to resources previously available from forests. On the whole, there was little attention to ensuring livelihood security of people moved to an alien socio-technological environment, which led to severe impoverishment and destitution. The adverse effects were especially severe as the people concerned belonged to an economically marginal community, the Sahariyas that depended heavily on forest produce for both nutrition and incomes. In 2004, many displaced villagers attempted to move back to the Kuno Sanctuary facing risk of starvation in their resettlement sites (Sharma and Kabra *in press*; Kabra *pers. comm.*)

Nor is the case quite so exceptional. In Tadoba-Andhari Tiger Reserve, Maharashtra in western India, too, the study of the proposed relocation site indicates that the evacuees will lose many of the forest resources they have traditionally been dependent on without obtaining adequate substitutes (Mehra et al. 2004). In this reserve, the oustees in question belong to the Gond tribe who are almost completely dependent on the forest for fuelwood, fodder, food and commercially sold NTFP species. However, the proposed relocation site has far lower densities of commercially important plant species such as bamboo (*Bambusa arundinacea*), mahua (*Madhuca indica*) and tendu (*Diospyros melanoxylon*) that currently provide the only cash income for the villagers (Mehra et al. 2004). It does not help that the relocation plan does not specify how such biomass and livelihood needs are proposed to be substituted in the new site. Similarly, in Sariska Tiger Reserve in India, studies of the relocation plan and package that has recently been finalised, suggest that village displacement is likely to cause further impoverishment of an already marginalised semi-pastoral community (Shahabuddin et al 2005).

Long-term stability of livelihoods and incomes is a critical benchmark. In Kuno, Madhya Pradesh, what was initially a positive case, turned negative. Sahariya tribals were relocated in a process that was corruption-free, fair to women as owners and executed in consultation with elected representatives (Kabra 2003). The follow-up showed a radically different picture, with a loss of amenity mainly due to water scarcity and lack of fodder. The Forest Department argued that it was the civil administration that failed to provide adequate follow up after relocation of the Sahariyas (Chauhan 2003). But as in the case of the Maldharis of the Gir Forest, little thought was given to the inputs for production such as fodder. The loss of amenity was inherent not only in execution but also in the design process (Choudhary 2000; Rangarajan 2001b). While involuntary displacement is not established policy, and has now been explicitly rejected over a decade ago, things on the ground are not always so clear. In the Kuno case, the closure of police outposts in a forest tract known for armed banditry made the continued present of habitations in the forest difficult. This policy initiative by the civil administration was a precursor to discussions with the villagers about displacement. Yet, it ensured

that their movement from their own homesteads would only be a matter of time (Sharma and Kabra *in press*).

A lot hinges on *who* is being displaced. In Kuno in central India as was the case with the Gir Forest, Gujarat, the displaced persons were mainly or wholly from marginal social groups. The Sahariya Scheduled Tribes in the former or the Maldhari pastoralists in the latter were historically at the bottom of the pyramid of power. Their displacement and impoverishment are only one aspect of a continuing assertion of power, in this case by the Forest Department over their land and lives (Rangarajan 2001b). In Bhadra Wildlife Sanctuary in Karnataka, southern India for example, the forest management (with the help of local voluntary organisations) was able to secure fertile agricultural land for almost all displaced persons and a household relief package that cost four times as much as the norm (Karanth 2005). Although independent evaluations are still needed, the instance of Bhadra does suggest that a sensitive approach on the part of forest managers coupled with sustained engagement with the needs and aspirations of displaced persons can be relatively more successful in rehabilitating people's livelihoods in new socio-economic milieus.

Much hinges not only on the nature of the communities, and their place in the social order, but also on the region in question. The twenty-eight states of the Indian Union are widely divergent in their record of administrative practice and their socio-economic conditions. It is notable that Karnataka where the Bhadra relocation took place is a state with far better social safety services than the central Indian region where Kuno lies. These differences in regional politics and social milieus can make all the difference in a country as vast as India. In fact, far from being even-handed, in much of central and northwestern India, many of today's nature reserves are old princely hunting grounds and the manner of exclusion often reproduces old hierarchies. A case study of a government forest in Rajasthan, western India shows a decline in access to lower castes while the former landed elite has reasserted power via a parallel economy of bribe-giving that guarantees them forest resources. The hierarchies at the local level may be as critical as those between government bureaucracies and villagers (Robbins 2000).

The picture becomes clearer when comparisons are drawn between contrasting experiences in different sites in various states. Even if preliminary, such insights are vastly better than those generated via largely anecdotal evidence. The latter, often from administrators may help record their own experiences but is no substitute for sociological investigation by independent personnel (for administrator views see Negi 2003; Chauhan 2003).

Why is failure in displacement, rather than success, the norm? The principal cause of faulty relocation plans has been identified as the lack of adequate provision of technical and financial inputs required for successful creation of agricultural livelihoods by oustees in a new environment. Such insensitive planning is organically linked to lack of administrative transparency, local

participation or expert involvement as well as to inadequate financial commitments (Shahabuddin et al. 2005; Sharma and Kabra *in press*).

The case for equitable village displacement has been supported by a few recent instances indicating that it is possible to relocate people with much greater attention to assuring livelihood security and human dignity of displaced people (Dreze et al. 1995). Unfortunately, such sensitive planning has been the exception rather than the rule, partly because there are as yet no legal requirements to be met by the government during the process of relocation (Fernandes 2004). Given the broader body of evidence, it is difficult to differ with the considered view that relocation should be a last and not a preferred *first* option (Sharma and Kabra *in press*).

### ***Relocation in PA Management Policy***

The question of effectiveness of relocation by itself, in conserving biodiversity is one that begs further discussion. It is important to realise that even the maintenance of an 'inviolable zone' after relocation of human settlements, requires the active participation and involvement of peripheral villagers in densely populated countries such as India and Madagascar (Wright and Andriamihaja 2002). There is obviously a lack of recognition that even if a relocation process is adopted and those displaced are successfully rehabilitated, there will nevertheless remain a people-wildlife interface that PA personnel will have to manage. Thus, some forms of co-existence, co-management and compensation suggested by policy-makers in India (Ministry of Environment and Forests 2005) and elsewhere (Reid et al. 2004; TPCG and Kalpavriksh 2005) are not a luxury but a reality to be dealt with. Unfortunately PA managements of many tropical countries do not have even the basic expertise or human resources that can allow development of management systems through which people can move towards a more compatible coexistence with wildlife (Rabinowitz 2001; Rodgers et al. 2003). Experiences indicate that it may be possible to have co-management programmes for nature conservation that involve sustained long-term engagement with and participation of local communities and other stakeholders coupled with strong governance mechanisms, transparency, and scientific involvement (see case-studies in Meffe and Carroll 1997; Ruiz-Perez et al. 2005). Such terms of engagement make possible several levels of conservation in and around PAs, ranging from strict nature protection, controlled use areas and even agricultural land use that is friendly to landscape-level conservation (see Wright and Andriamihaja 2002; Bray et al. 2003; Reid et al. 2004; Puri 2006).

Environmentalists also point to the unfair prioritisation of village displacement in PA management policies in comparison to the relative neglect of more powerful players including industrial groups and tourist operators by forest managers (TPCG and Kalpavriksh 2005). Many examples, where action on relocation is prioritised over other causes of biodiversity loss can be listed.

The damage being caused by rampant and uncontrolled nature tourism globally is an increasing cause for concern (Klug et al. 2002). Johnsingh (2006) talks of large timber depots, risky ammunition dumps and irrigation projects being equally damaging of conservation values, yet being overlooked in the wider balance of power in the prominent Rajaji National Park in the Indian sub-Himalayas. In India, national NGOs have therefore, rightly, called for a change in conservation policy that treats ecological damage caused by resident populations on par with that caused by mining and industry.

Conservation debates in India have also opened up discussion on the hitherto ignored role of the larger rural landscape economics in forest degradation (Ministry of Environment and Forests 2005). There is no doubt that today most of the conservation areas in developing countries are being used intensively by scores of invisible people, some of the most marginalised. These are the poachers, the head-loaders and the *tendu*-leaf collectors who depend to a large extent on forests for their livelihoods. It is important to note that these forest-dependent occupations are not profitable or preferred options for most. Most forest-dependent people are either landless or cultivate marginal lands and lack even the minimal level of skills to shift to urban-based occupations. Some belong to persecuted 'criminal tribes' such as the Bawariyas of Sariska who see tiger poaching as a mostly risk-free investment for life. It will be necessary to develop rural livelihoods, undertake land reforms and regenerate agricultural livelihoods particularly with the aim of integrating hitherto marginalised people into the mainstream economy. Effectiveness of village relocation in serving the intended aims of conservation will therefore, to a large extent, depend upon innovative thinking beyond PA boundaries.

### ***Towards a Conclusion***

Village relocation has clearly emerged as an important issue in conservation that needs to be examined far more closely than it has been in the past. Public discussion of this critical conservation issue has recently expanded, a development that *can* lead to increased transparency and accountability on the part of forest managers and other concerned officials (see Council for Social Development 2003). While scientists and forest managers need to be sensitised to the socio-economic and cultural needs of resident peoples, so do social scientists require understanding of the ecological requirements of endangered species. Such sensitisation has to be coupled with coordinated engagement of social scientists, biologists and forest managers on such critical questions as whether, how and where to relocate.

Arbitrary and unjust displacement without a care for the aspirations of those who are moved is not only ethically unacceptable. It also goes against the grain of a more effective approach to nature conservation. Larger issues of an implicitly political nature impinge on how events unfold. In an insightful essay, Brockington (2004) argued that coercion may work given the unequal

levels of power in society and the economy. Referring to the case of the Mkomazi Reserve in Tanzania, he shows how conservation can be viable in an exclusive and unjust way. There is a grain of truth in such an assertion. But in the Indian case, the larger issue of equity and justice impinge in larger ways than they did in the past. The maturing of electoral democracy and the assertion of once marginal groups has not redressed the balance of power in a very hierarchical society. But it has definitely made coercion more problematic and may open up spaces for more just approaches in biodiversity conservation.

### Notes

1. Rajasthan State Empowered Committee on Forests, 2005.
2. Derivative of opium used locally.
3. 'Yosemite', in the language of the Ahweneechee people, means 'some among them are killers'. This refers to killings by militias in the 1850's before the declaration of a State Park in the area in 1864 (Runte 1987).

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