

State power and protected areas: Dynamics of forest conservation in Madhya Pradesh, India

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Abstract

The traditionally coercive and state-controlled governance of protected areas for nature conservation in developing countries has in many cases undergone change in the context of widespread decentralization and liberalization. This article examines an emerging “mixed” (coercive, community- and market-oriented) conservation approach and its effects on state power through a case study on forest protection in the central Indian state of Madhya Pradesh. The findings suggest that imperfect decentralization and partial liberalization resulted in changed forms, rather than uniform loss, of state power. A forest co-management program paradoxically strengthened local capacity and influence of the Forest Department, which generally maintained its territorial and knowledge-based control over forests and timber management. Furthermore, deregulation and reregulation enabled the state to withdraw from uneconomic activities but also implied reduced place-based control of non-timber forest products. Generally, the new policies and programs contributed to the separation of livelihoods and forests in Madhya Pradesh. The article concludes that regulatory, community- and market-based initiatives would need to be better coordinated to lead to more effective nature conservation and positive livelihood outcomes.

Keywords – nature conservation, decentralization, liberalization, territoriality, political ecology, India

INTRODUCTION

Forest reserves, wildlife sanctuaries, national parks and other protected areas in developing countries have not only served the conservation of nature but also political and economic goals of (post-)colonial states and other powerful actors (Adams, 2001; Vandergeest & Peluso, 1995; Neumann, 1998). Typically, protected areas were established coercively and their management was top-down involving “fences and fines” set and enforced by (colonial) state authorities. This “fortress conservation” sought to exclude local populations who were seen as disturbances to nature.

A massive expansion of protected areas coincided with the emergence of modern, transnational environmentalism in the 1970s (Brockington et al., 2008; Zimmerer, 2006). Since the 1980s, furthermore, community-oriented conservation strategies have become popular (Brosius et al., 2005; Adams & Hutton, 2007; Few, 2000). These seek to involve local communities in the (joint) management of natural resources or, at least, compensate them for the imposed restrictions on resource use. At the same time, however, most developing countries started and strengthened policies of (neo-) liberalization, deregulation and privatization (Harvey, 2005), and the related neoliberal principles of economic rationality and market orientation affected in some cases conservation policies (Neumann, 1995).

However, the relationship between community-based and market-oriented strategies of nature conservation in protected areas has rarely been thematized in academic studies (exceptions include Neumann, 1995; Turner, 2004; Büscher, 2010). This paper aims to fill this gap in the literature through a case study on forest protection in the central Indian state of Madhya Pradesh and attempts to examine how state control over forests and forest resources was altered through decentralized and liberalized forms of governance. Thereby, we identify tensions and contradictions of an emerging “mixed” (coercive, community- and market-oriented) conservation approach and we seek to assess its interrelated political, environmental and socioeconomic implications in the case of Madhya Pradesh. We expect our findings to have resonance beyond India, as similar mixed conservation approaches are likely to exist elsewhere. Taking a cue from Robbins (2003), furthermore, the article connects elements from political

ecology and political geography and is also intended to make a conceptual contribution to geographical literature.

In terms of methodology, this paper draws upon data from 34 semi-structured key informant interviews conducted in 2005 and 2006 with forest officers of different rank, other policy-makers, representatives of local forest user organizations, and forest/livelihood experts from civil society and academia in Madhya Pradesh. This information was triangulated with data from three qualitative village studies on forest-dependent livelihoods conducted in 2005 and 2006 in southern and eastern parts of Madhya Pradesh (Betul and Shahdol districts) and complemented with information from three additional villages studies (two in Panna, northern Madhya Pradesh, and one in Betul district) that did not specifically focus on forest issues. Furthermore, we analyzed relevant secondary literature and various official and project documents.

After this introduction, we expand on the literature on political ecology and geography of protected areas by considering relevant technologies of power related to state control, decentralization and liberalization. Then, we briefly examine the establishment of direct, territorial state control over forests in Madhya Pradesh in the colonial period and its reinforcement through environmentalist legislation in the 1970s and 1980s. The subsequent two sections describe the recent policy shifts in Madhya Pradesh's forest sector, including the initiatives of decentralization of forest control and the partial liberalization of the timber and non-timber sectors. These policies and related practices are analyzed for their effects on the reconfiguration and differentiation of state control, as well as for their environmental and livelihood implications. In the concluding section, we summarize the findings regarding the complex effects of liberalization and decentralization on state control, forest environments and livelihoods and hint at some theoretical and policy implications.

A POLITICAL ECOLOGY/GEOGRAPHY OF FOREST PROTECTION

There have been a growing number of political ecology studies on nature conservation and protected areas (particularly national parks in Africa) over the past 10-15 years (for overviews see Adams & Hutton, 2007; Robbins, 2004; Neumann, 2005; Campbell et al., 2008). These studies have problematized the social constructiveness

of nature and related environmental narratives or myths (e.g., Cronon, 1995; see also Forsyth, 2003), the displacement and exclusion of local people from national parks (e.g., Brockington, 2002), the disruption of livelihoods due to imposed restrictions of resource use (e.g., West & Brechin, 1991; Ghimire, 1991; Sodhi et al., 2007) and resulting conflicts between state authorities and local communities (e.g., Kull, 2002; Neumann, 1998).

In political geography, protected areas have been a less popular theme. Studies focused mostly on (trans-) boundary issues (Fall, 2003; Dilsaver & Wyckoff, 2005; Büscher, 2010) or national parks as symbolic landscapes of national identity (Schwartz, 2006). However, insights from political geography on the nature of state control, decentralization and (neo-) liberalization, as well as related concepts of state power commonly used in political geography, can usefully complement the political ecology literature on conservation and control.

This section therefore brings together diverse bodies of literature from political ecology and political geography as they are relevant for, and relate to, the protection of forests, in particular the literatures on: the social construction of nature; territoriality and biopower; decentralized, participatory natural resource management; and the (neo-) liberalization of nature.

Protected Areas as Materially and Socially Constructed Landscapes

Political ecologists have argued that “nature”, although having its own biophysical reality and agency, is identified, conceptualized and represented through social and political processes (Forsyth, 2003; Peet & Watts, 2004). The idea (or “social construction”) of nature on which the creation of national parks has commonly been based, for instance, is that of “wilderness” or “pristine nature”, an area isolated from human influence (Neumann, 1998; Cronon, 1995). Political ecologists have viewed this idea as problematic because it implies a human-nature dichotomy and ignores activities of local communities in creating “natural” landscapes on sites that were subsequently demarcated as national parks (Neumann, 2005). Even for protected areas that are not envisioned as “pristine nature”, states attempt to create particular landscapes according to imagined ideals. In this way, the boundary between the

discursive image of a landscape and its material reality becomes blurred: “The imagined forest becomes the real one, and vice versa, through the enforcement of [social] constructs by powerful people over time” (Robbins, 2004: 110).

The material production of imagined landscapes (or “anthropogenic nature” [Kull, 2002]) necessitates the spatial exclusion of local people or restrictions on their practices that are deemed to disturb and encroach on nature (Fairhead & Leach, 1996; Campbell, 2002). The desired spatial separation of human activities and protected areas is then aided by the instruments of cartography (Adams & Hutton, 2007) and its modern-day successor, geographical information systems (Clapp, 2004). Mapping of protected forests precedes the installation of fences on the ground.

Protected Areas and Technologies of Power

Mapping is closely related to an important technique of governing; i.e., creating “territories” or bounded spaces that are protected “by excluding some activities and by including those [activities] which will enhance [what is to be protected]” (Cox, 2002: 3). While political ecologists have rightly argued that the demarcation of protected areas usually followed geometric or political rather than ecological logics (Zimmerer, 2000), this paper is more concerned with territoriality as a (state) strategy to exert power over people (Sack, 1986). For instance, Vandergeest & Peluso (1995) have identified the spatial demarcation of protected areas (in their case Thailand’s forests) as an important process in the development of the modern territorial state. While the initial motivation of this internal territorialization was to protect resources, “most states later employed the territorial administration to organize surveillance, gather information about the population, force them to settle down ... and organize close control over people’s everyday activities” (Vandergeest & Peluso, 1995: 390). Protected territories, then, have played an important role in the formation of modern (colonial) states and the expansion of direct state power. Though local people often disregarded and resisted new internal boundaries, and overlapping jurisdictions of different government departments weakened central state control (Vandergeest & Peluso, 1995).

Forest management in protected areas entails another modern technology of governing, that of “biopolitics” (Foucault, 2004). Through the use of science, modern states simplified, classified and measured nature and society in order to make them more legible and thus more manageable and malleable (Scott, 1998). For example, states in the 19th century used “scientific” forestry to reorganize woodlands into territorial production units and to determine unit-specific limits on allowable cutting rates with the objective to sustain maximum timber yields over time (which was defined as the optimal societal outcome). The application of scientific knowledge to protected forest areas implied the regulation of both nature and populations (Adams & Hutton, 2007); it tended to overlook, ignore or appropriate the knowledge systems of local communities, and so expanded state control (Robbins, 2000).

Decentralization, Containment and Technologies of the Self

Have the recent community-oriented approaches to natural resource management reversed the trend of expanding state power through territorial and biopolitical nature conservation? A review of community-based natural resource management (CBNRM) in the rural development sector indicates that a majority of projects failed to achieve their socioeconomic, environmental and political-emancipatory objectives (Blaikie, 2006). But CBNRM and co-management in protected areas entail a fundamental contradiction additionally (Few, 2000). Unlike in rural development, the primary goal of protected areas is not to strengthen local livelihoods but to protect biodiversity or a particular natural resource. Consequently, substantive community participation “is unlikely to be fostered in a protected-area project initiated externally and on biodiversity grounds. In such cases, the agenda for the project has already been set, community involvement is effectively limited to consultation and the overarching process at work when social issues are addressed is *containment*, not participation.” (Few, 2000: 408; own emphasis). However, even containment does not always go smoothly and uncontested; the opening of the planning process can provide local actors with political space to influence the decisions of the conservation agencies. These processes can also exacerbate tensions and conflicts within communities and within the state (and other external agencies) (Few, 2000; see also Mosse, 2001).

It has been argued that for CBNRM to become effective, it needs to be scaled up and institutionalized into political decentralization that involves a meaningful transfer of power to democratically accountable local institutions (Ribot, 2002). Decentralized decision-making over protected forests became widespread only in the late 1990s, and its modalities and impacts vary between countries (Pierce Colfer & Capistrano, 2005), but it generally involves only limited devolution of power (Ribot, 2002) through a bureaucratic, standardized approach that restricts flexible adaptation to local circumstances (Geiser & Rist, 2009). Nevertheless, decentralization has created new political arenas where social interactions between local actors and officials are reconstructed and through which conflicting ideas and interests between and within communities and the state are expressed (Geiser & Rist, 2009). Therefore, decentralization implies a change in the nature and modality of state control, yet rarely a simple transfer of power from the state to village “communities”.

Decentralization of natural resource management can also lead to increased environmental awareness and self-restraint among local communities. Agrawal (2005) found that local people in the Kumaon hills of northern India have – through experiencing and practicing decentralized governance of protected forests – developed environmental consciousness. “Environmental subjects” were created over time, as joint interests between villagers and the state had been manufactured and local people adopted and internalized particular environmental discourses. For the purpose of this paper, the validity and generalizability of Agrawal’s empirical account are less relevant than his conceptualization of “environmentality” based on Foucault’s ideas on governmentality. Thereby environmental self-discipline and self-enforcement (i.e., “technologies of the self”) resulting from decentralized governance supplement the “technologies of power” (e.g., territoriality, biopower or containment) employed by the state (or external conservation agencies).

Deregulation, Reregulation and Depoliticization

Most developing countries adopted neoliberal policies in the 1980s and 1990s (Harvey, 2005). This has also brought about the neoliberalization of nature; i.e., a form of environmental governance characterized by deregulation, reregulation and public-sector reform (McCarthy and Prudham, 2004). Thereby, strategies of nature

conservation have generally become affected by the neoliberal principles of economic rationality and market orientation (Neumann, 1995).

In terms of deregulation, states have partially withdrawn from direct interventions in protected areas. As many countries reduced their budgets (for nature conservation) in the course of economic liberalization, the management of (continuously expanding) protected areas, or some of their resources, has increasingly been taken up, or transferred to, parastatals, NGOs and private companies (Emerton et al., 2006; Turner, 2004). Where public-sector institutions remain, there is pressure to render them more efficient and competitive through reform (McCarthy and Prudham, 2004).

Yet, deregulation is often linked to reregulation in the sense that state action is reoriented toward the creation, facilitation and regulation of markets for environmental resources and services (McCarthy and Prudham, 2004). For instance, natural amenity values of protected areas are commoditized through ecotourism projects, which currently represent the most common way to generate state revenue through and for conservation (Turner, 2004). In the case of protected forests, other instruments to put a market price on environmental services include bio-prospecting royalties, water fees to pay for watershed protection, and credits for carbon sequestering (Pagiola et al., 2002; Emerton et al. 2006).

The effect of neoliberal governance of protected areas on state power is similarly complex than that of decentralization. While deregulation suggests a loss of direct state control over territories and resources at the expense of private actors and civil society, the commodification of nature gives the state a new powerful role as facilitator and regulator of new markets. This role tends to be of technocratic nature and beyond the public realm, thus rendering nature conservation increasingly depoliticized (Büscher, 2010).

DIRECT STATE CONTROL OVER FORESTS IN MADHYA PRADESH

Madhya Pradesh has the largest area under forests in India; more than 76,000 km², or 25% of the geographical area, are covered with open and dense forests, including teak, sal and miscellaneous forests. Almost all of these forested parts, plus about

17,000 km² of non-wooded area, are under state ownership and classified “Forest Land”. This land is sub-divided into Reserved Forests (c. 62,000 km², preserved for commercial timber production and with very limited and fixed concessions for local dwellers) and Protected Forests (c. 31,000 km², where specified trees and tree species are protected, and where provincial governments settle the rules regarding concessions to local populations for hunting, grazing and subsistence timber extraction) (MPFD, 2010a). Out of these protected forests, about 11,000 km² have been carved out as National Parks and Wildlife Sanctuaries (MPFD, 2010b). Small areas are furthermore covered with Village Forests (used for subsistence needs of the local community) and Private Forests. The state government is also empowered to formulate utilization and management rules for these unclassified forests.

It is estimated that 1/6th of Madhya Pradesh’s population of 60 million lives within five kilometers of a forest and uses some of its resources for subsistence needs and for sale (MPFD, 2010a). The reliance on forests is strong among, but not limited to, the *adivasi* (aboriginal, tribal) population that lives mostly in the forested hill ranges.

(Post-) Colonial Land Acquisitions and Territorializations

Today’s direct, territorial state control over Forest Land in Madhya Pradesh has its roots in the colonial period when forest legislation, a forest bureaucracy and scientific forest management were introduced. Legal foundations for state acquisition and management of forested land were laid in the 1850s and 1860s. In the Central Provinces, which covered a large part of today’s Madhya Pradesh¹, the state launched territorial claims over large tracts of forests between 1845 and 1860 (Baker, 1993). Indeed, the first Reserved Forest in India was established here in Hoshangabad district after the colonial government had confiscated the Bori forest from a Korku Chieftain, Bhaboot Singh, who was the local tribal leader of the revolt against the British in 1857 (Baker, 1993). This illustrates the close connections between the creation of protected territories and expanding state control in the colonial era.

In order to make possible the acquisition and management of forest land, the colonial government also created a disciplinary state apparatus during the 1860s. In particular, it established the central and various provincial forest departments and a separate

cadre of forest officers, the Imperial Forest Service (IFS; today standing for Indian Forest Service). The forest bureaucracy was hierarchically organized, but lower-tier officials were given substantial powers in their territorially defined “beats”, including the right to arrest forest offenders without warrant. This rendered the (armed) Forest Guard the principal arm of the state in remote areas and for long also the *de facto* police.

The Indian Forest Act of 1878, which became the basis of the still valid Indian Forest Act of 1927, solidified the classification of government forests into Reserved and Protected Forests and created an internal territorialization of protected forests to facilitate their control and management. Furthermore, previous forest-use rights of local communities were downgraded into concessions. In the aftermath of the 1878 act, the enclosure of forest land accelerated throughout British India despite some resistance, and it implied the exclusion local communities from accessing important resources they traditionally had been depending on (Gadgil and Guha, 1992). The anthropologist Verrier Elwin pointed to the state’s territorial strategies affecting *adivasis* in the Central Provinces of the 1930: “[The tribesman] was ordered to remain in one village and not wander from place to place. When he had cattle he was kept in a state of continual anxiety of fear they should stray over the [Reserved Forest] boundary... At every turn the Forest Laws cut across his live, limiting, frustrating, destroying his self-confidence” (Elwin, 1964: 115).

Another surge in government land acquisitions took place in the post-independence era in connection with land reforms and the creation of the state of Madhya Pradesh in the 1950s. Large areas of wooded and non-wooded commons that had been under formal control of *zamindars* or princely states were notified as Forest Land. As a consequence, many (tribal) people all of a sudden were rendered “forest encroachers”. Madhu Sarin commented on this process pointedly: “While zamindari abolition freed tenants in the plains from landlord oppression, in hilly forested areas it threw millions of forest-dwellers into the clutches of a far more oppressive zamindar – the forest department...” (Sarin, 2005). Some of this land was transferred into Revenue Land in the 1960s and 1970s, but often without proper forest de-notification. This led to a situation where 12,274 km² “orange areas” (named after their colouring on official

land classification maps) became claimed by both the Revenue Department and the Forest Department in undivided Madhya Pradesh (Garg, 2005).

Scientific Forestry and Biopower

The Forest Department has not only been a disciplinary arm of the state but also the agency to introduce and apply “scientific” forest management in India. In the 1850s, Dietrich Brandis, a German forester, introduced the method of Working Plans in colonial India (Negi, 2001). These guide the harvesting of high-value timber in rotating forest “coupes”. In each coupe, trees are felled only once in ten or more years so that replanting and regeneration can take place undisturbed in the meantime. Early plans allowed some traditional cultivation practices to continue in order to gain local acceptance (Negi, 2001; Barton, 2001). When they became implemented throughout British India in the late 19th century, however, Working Plans focussed more narrowly on the steady and sustainable production of timber (and state revenue). In the Central Provinces, traditional shifting cultivation and forest-based crop cultivation were banned in protected forests; the new “scientific” method of timber management allowed a doubling of forest revenue from Reserved and Protected Forests between 1897 and 1908 (Baker, 1993).

The application of scientific knowledge resulted in the ecological transformation of large tracts of forests in Madhya Pradesh. The implemented Working Plans and management practices favoured commercially valuable timber species so that miscellaneous forests were gradually transformed into teak and *sal* forests (also when some practices such as fire protection were found detrimental for the development of *sal* forests in eastern India [Sivaramakrishnan, 1999]). Industrial demand and prioritization between the 1950s and the 1970s further pronounced the ecological transformation of Madhya Pradesh’s forests into “timber mines” (Saxena, 2002) as miscellaneous forests were clear-felled to make way for 150,000 ha of teak and eucalyptus plantations. These state-created few-species / high-growth forests rich in saleable timber could offer increasingly little use value for local communities.

Environmentalism

Environmental motives served for a long time as a rationale and justification for increased direct state control over forests. In the mid-1800s, these included concerns about regional climatic change, water supply and soil erosion (Rangan, 1995). Environmental motives for forest protection regained importance in the 1970s coinciding with growing international environmentalism and concern about habitat destruction of endangered animal and plant species. In Madhya Pradesh, 25 Wildlife Sanctuaries and nine National Parks were carved out from Forest Land in the wake of the Wild Life (Protection) Act of 1972. In the sanctuaries, traditional use rights (e.g., collection of minor forest produce) were further curbed; forest dwellers in National Parks were resettled in “eco-development villages” outside, and entry to the parks became restricted to the purposes of research, tourism and photography.

Furthermore, forest protection became more environmentalist and centralized with the introduction of the Forest (Conservation) Act of 1980. This act nullified any state law that allowed the conversion of forest land to non-forest purposes. Furthermore, state governments were no longer authorized to de-notify Reserved Forests without prior central government approval, and clear-felling of “natural” forests for eucalyptus or teak plantations became subject to central approval in 1988. The state governments were also urged to act on forest “encroachments”, which led to large-scale evictions of people in Madhya Pradesh from Forest Land, including “orange areas” (Sarin, 2005). The act did not only have the political implication to increase control of the central government at the expense of state governments; paradoxically, it also empowered parts of civil society, that is, environmentalists who used it as the basis of various Public Interest Litigations (PILs). Acting on PILs and referring to the right to a healthy environment derived from the Constitution of India, the Supreme Court of India ordered total bans on tree felling in some parts of the country.

An increased environmentalist orientation was confirmed in the National Forest Policy of 1988. While the 1952 policy saw the primary function of forests in supporting the national industrialization strategy, the 1988 policy document defined environmental stability and ecological balance as the principal aims of forest protection. It also made first references to more participatory, decentralized and livelihoods-oriented models of resource management and to the need for cutting subsidies and liberalizing the timber trade. As such, the National Forest Policy of

1988 was a precursor of the decentralization and the deregulation of the 1990s and 2000s that some of our interviewees referred to as a “paradigmatic shift” in forest management and control.

DECENTRALIZATION AND PARTICIPATION IN FOREST MANAGEMENT

New Programs and Legislation

The policy goal of increased livelihood orientation and community participation in forest protection became operationalized in the Joint Forest Management (JFM) program. Madhya Pradesh introduced state-level JFM legislation in 1991 that guaranteed usufructory *rights* to identified villages near Reserved and Protected Forests in exchange for their participation in the management, protection and rehabilitation of local forests. Villagers in JFM areas gained, reclaimed or maintained access to non-timber forest products (NTFP), such as fuel wood, fodder, fruits and medicinal plants, to meet subsistence needs. They also received a proportion of the net profit made by the Forest Department from the sale of timber (100% in the case of timber sold from replantations made by villagers on formerly deforested land).

Central to the JFM programme was the constitution of local-level forest user organizations that were to include all eligible voters of the identified village. Members of the JFM executive committee were to be elected, with women, landless households, Scheduled Castes and Scheduled Tribes adequately represented. The lowest-tier forest official, the Forest Guard, was to serve as the secretary of the committee (at least for an initial two years after which this position could go to a local representative). The JFM committee became responsible for patrolling the forest, for protecting it from fire, illegal grazing, illicit felling, encroachments and poaching, and for reporting any forest offences to the Forest Department. The committee, together with forest officers, was also in charge of preparing and implementing micro-level Working Plans.

Between 1992 and 2005, more than 14,000 JFM committees were formed in Madhya Pradesh, and about 63% of the state’s total forest area is co-managed by JFM committees and the Forest Department (MPFD, 2010c). The scheme is ongoing but

not expanding anymore. It received external technical and financial support between 1995 and 1999 under a large World Bank program. This program also initiated a Village Resource Development Project that aimed to wean communities from their reliance on forest resources by creating agricultural infrastructure and other income generating opportunities.

Furthermore, India's Panchayats (Extension to the Scheduled Areas) (PESA) Act of 1996, which intended to adapt India's system of local governance (*panchayati raj*) to the particular socioeconomic and cultural conditions of "scheduled" tribal areas, had implications for forest governance. In particular, the act empowered tribal communities to manage local natural resources and it vested ownership of NTFP in the *gram sabha* (Menon & Sinha, 2003) yet within the provisions of existing law such as the Forest Act of 1927 or the Forest (Conservation) Act of 1980 (Singh, 2002). The government of Madhya Pradesh responded in 2001 to the PESA Act by moving decision-making powers throughout the state from elected *panchayats* to *gram sabhas* and their standing committees (Behar, 2001). However, state-level law remained unspecific about the authority of the community over natural resource management (Ojha, 2004). Ownership of NTFP was nominally transferred to *gram sabhas*, but the Minor Forest Produce Trading and Development Cooperative Federation (MFP-Fed), which is staffed with IFS officers, continued to organize the collection of major NTFP through its local Primary Forest Produce Cooperative Societies or, *de facto*, the Forest Guard. Now charging a "management fee", the department distributed only the net incomes from the sale of NTFP to the primary cooperative societies, which in turn had to pay 60% to individual collectors and invest the remainder in forest regeneration and village infrastructure development.

Containment, Local State Capacity and Re-territorialization

The new initiatives described above would suggest a significant change in forest governance in Madhya Pradesh toward the formal devolution of authority and responsibility from the state-level Forest Department to village-level JFM committees and *gram sabhas*. However, the Forest Department effectively circumvented the spirit of the PESA Act to advance direct democracy and bring subsistence forest resources under the direct control of local communities. In our study villages, the Forest Guards

continued to control both NTFP collection and the way how money for village development projects was spent. While highly engaged in the *panchayats*, villagers were made to believe that the NTFP sector was fully under the jurisdiction of the Forest Department. Furthermore, JFM committees rarely formed locally accountable institutions: Forest Guards (sometimes in collusion with JFM chairpersons) tended to control the local committees, their meetings, accounts and appointments to the executive (see also Sarin et al., 2003; Vira, 2005). Finally, the JFM committees and the local cooperatives remained separate from the *gram panchayat* and the *gram sabha*, therefore creating institutional overlap and undermining the authority of *panchayati raj* institutions. Devolution of forest governance and joint forest management were not embedded in wider democratic decentralization processes.

Furthermore, JFM was a bureaucratic program that only rarely resulted in true participation and livelihood-oriented forest management. Common villagers, particularly women, remained unaware of the activities of “their” JFM committee; micro-level Working Plans or village development schemes were not planned or decided upon in participatory processes. Villager participation was largely limited to providing information to the state (PRIA and Samarthan, 1999). The lack of wider community participation and consultation suggests that JFM was not even a strategy of containment, except for that of JFM chairpersons, perhaps. Rather, the co-management program primarily served the relatively inexpensive implementation of pre-designed forest development schemes, such as the afforestation of degraded lands, whereby livelihood needs, particularly those of women, tended to be ignored (see also Sarin et al., 2003).

Regarding forest protection, the literature and our interviewees suggested that the community watch arrangements under JFM were quite effective in supplementing forest surveillance by forest officials (PRIA and Samarthan, 1999), although there had been a shift from rotational community patrolling toward the engagement of watchmen from the community (Vira, 2005). Illegal felling and NTFP collection, especially by people from outside the JFM villages, could often be reduced. To some extent, therefore, JFM led to strengthened state capacity at the local level through the employment of local watchmen who are considered public servants when on patrol. In our study villages, however, it was usually the forest officers who enforced forest-use

rules. In one village, for example, the watchman from a locally dominant tribal group did not stop cattle herders to enter the forest on a regular basis. We were not able to find out whether he denounced the cattle herders (who came from a locally resented, non-tribal minority group) to a higher-up in the forest department who occasionally handed out fines to these offenders.

JFM also implied an additional territorialization of forests. Defined territories were assigned to selected villages for the protection, rehabilitation and replanting of forests. Thereby, not only Reserved and Protected Forests but also areas classified as Village Forests and “orange areas” were demarcated and allocated to JFM committees. This re-territorialization implied that additional land came under more direct control of the Forest Department; in some cases, the department even attempted to convert these lands into Protected Forests (Sarin et al., 2003).

This analysis indicates that (imperfect) decentralization through the JFM program did not result in a simple transfer of power from the state to local communities. Rather the contrary: state control and capacity were strengthened. But the JFM program also produced locality-specific political arenas where communities and state actors interacted in new ways. For example, the broader developmental role of Forest Guards beyond their traditional policing function provided a starting point for building more cooperative relationships between the state and villagers (PRIA and Samarthan, 1999). Local compromises and negotiations regarding forest-use restrictions also had become easier and improved the legitimacy of state-controlled forest management (see also Sarin et al., 2003). However, JFM did not result in the creation of environmental subjectivities; in fact, villagers accelerated unsustainable forest practices when they became deregulated, as in the case of NTFP harvesting (see next section). Furthermore, preexisting self-restraint collapsed in some other cases where independently evolved or NGO-initiated community forest management institutions were replaced by formal JFM committees (Sarin et al., 2003).

Generally, the above discussion reflected some common tendencies as revealed in the literature and in our own field studies, but different characteristics of local communities, forest environments, field-level officers and the influence of external

agencies resulted in diverse outcomes. It is in the nature of decentralization programs that they produce locality-specific effects.

Yet, devolution in forest governance also reconfigured the Forest Department. The department had become increasingly divided between the proponents of participatory, livelihoods-oriented forest management and those forest officers who favored the *status quo* or a return to the conventional state-centered “command-and-control” approach of forest protection. The first groups was bolstered in the late 1990s through the above-mentioned World Bank program, which promoted JFM but also made significant capital investment in the Forest Department, thus adding to its capacity. Some of the interviewed (mid-rank) forest officers, however, lamented the lack of a coherent vision and initiative from the highest ranks in their department after the discontinuation of the World Bank project in 1999: No common long-term strategy would have evolved because officers spend little time just before their retirement in the top post of the state’s forest bureaucracy and because the nomination into this post is determined based on seniority and not performance, ability or persuasion. Indeed, the shift toward more participatory forest governance slowed down after the World Bank project ceased. (The project’s second phase was not granted partly because of protests of mass *adivasi* organizations against growing (misuse of) power by the Forest Department.) After that, the Forest Department also moved back from the cooperation with civil society organization, which had been involved in the implementation of JFM and in a more general dialogue on forest policy.

Wider Implications

Official forest surveys based on satellite imagery and ground-truthing suggested that forest cover and density had increased in Madhya Pradesh’s JFM areas, particularly in previously degraded forests and in the early period of the program. This had helped offsetting forest loss due to encroachments in other areas, illegal felling, submergence alongside the Narmada and other dams, and mining activities (FSI, 1991-2009). Interviewed officials and development workers having first-hand experience of particular localities (but not all respondents in our studied villages) confirmed this assessment: forest replanting, rehabilitation and protection under JFM would have resulted in a slight (re-) generation of (secondary) forests in Madhya Pradesh.

In contrast, the Forest Department's attention to livelihood issues remained largely rhetorical; most new micro-level Working Plans, designed *de facto* by Divisional Forest Officers, continued to focus on the production of forests with high-standing timber trees and dense canopy cover. There was only a slow and patchy shift toward the production of more diverse and local-user-oriented forests, often depending on the attitude of local forest officers. Furthermore, the practice of rotational coupes, whereby timber trees were cut only every 10-15 years in a particular JFM area, was not in sync with regular or emergency livelihood needs. This points to a conceptual problem of reconciling Working Plans with local needs. Moreover, forest cover and canopy density continued to form the sole bases of the official monitoring system; other qualitative ecological attributes and livelihood values of forests were not assessed systematically.

Concrete livelihood impacts of JFM were therefore difficult to gauge and they differed between and within villages. As only 14,000 out of more than 22,000 forest-near villages were included in the JFM program, many people in non-JFM villages became excluded from their traditional access to forest resources leading to inter-village inequality, and in some cases conflict (Sarin et al., 2003). In JFM areas, furthermore, some of our interviewees stated that in their project villages, the (re-) generation of forests helped improving the local availability of fuel wood and fodder (from lopped tree branches). In other parts, by contrast, an increased canopy density reduced the availability of grasses for fodder which in turn shifted pressure to public grazing lands (TERI 2003).

JFM also led to intra-village inequalities and conflicts. The program tended to consolidate the power of existing village elites who were disproportionately nominated into executive committee positions even where they did not form the most forest-dependent group. It has been reported that unaccountable JFM committees failed to distribute the net profits from the sale of timber and MFPs (equally) among community members (Sarin et al., 2003). In our study villages, people were generally unaware of any resource transfers through JFM; village development projects were seen as funded through the Forest Department's own kitty; some projects (e.g., check dams) only existed on paper. Also, marginalized groups within the village, such as women or non-dominant caste groups who were excluded from the JFM decision-

making process, bore the majority of the costs of forest protection (i.e., income loss due to restrictions on particular uses such as the collection of bamboo shoots or the keeping of goats) (Sarin et al., 2003).

Yet villagers explained to us that they benefitted from casual wage labor offered by the Forest Department for replanting, forest protection and timber harvesting. Demand for the first two categories of work increased sharply under JFM. This was also reflected in growing expenditures of the Forest Department on casual wage employment (according to a forest official this figure had reached Rs. 48m (c. US\$ 1m) in the mid-2000s from only Rs. 12m a few years earlier).

Furthermore, the state's objective to "wean" local communities from forest resources seemed to be increasingly realized. Our village studies revealed that reliance on income from forest products steadily declined in recent years because of both new non-forest income opportunities and decreased availability and access to forest resources. Earnings from seasonal migration, local agricultural wage employment and owner cultivation increased significantly as the studied forest-near villages in Betul and Shahdol districts experienced agricultural expansion and intensification, which has been propelled by the above-mentioned JFM Village Resource Development program as well as other public and private investments.

DEREGULATION AND REREGULATION OF THE FOREST SECTOR

New Policies and Initiatives

In tune with India's accelerating economic liberalization policies since 1991, gradual and partial deregulation and reregulation of Madhya Pradesh's forest sector started in the mid-1990s. In the context of the above-mentioned World Bank project, the state reformed its *nistar* policies in 1995, for instance. *Nistar* denominates concessional rights to forest products, such as small timber, fuel wood and bamboo. Populist politics had extended these traditional rights to the whole population so that each rural and urban household had become entitled to purchase a limited quantity of these products at a concessional rate. *Nistar* products were thus offered at government-run depots across the state. The new policy limited these *nistar* rights to forest-near

villages, which also played a role in forest protection and rehabilitation (see previous section), while residents of villages and towns that were farther away from forests than 5 km had to buy these products at the higher market rate. In the beginning, the new *nistar* policy drew much criticism; opponents argued that it implied the commoditization of a subsistence right.

The World Bank project also advocated the abolition of material-supply subsidies to the wood-processing industries that had been introduced in the 1950s and 1960s to promote (import substitution) industrialization. In particular, pulp and paper mills benefited from the subsidized supply of bamboo and eucalyptus while artisans (e.g., bamboo weavers) had to pay full market rates for the relatively scarce raw materials. After the elimination of these subsidies, private industries increasingly purchased softwood from Africa, Southeast Asia and North America; a few of them also started raising their own tree plantations. These economic strategies were facilitated by other policies of liberalization: the lift of import restrictions on wood products in 1992, the subsequent decrease in import tariffs, and the loosening of land ceiling regulations for the purpose of private forestry. The Lok Vaniki programme starting in 1999 further aimed to promote forestry on private land through extension services, financial incentives and streamlined and decentralized procedures to fell and market timber trees. Despite these steps toward privatization, however, the Forest Department and the State Forest Corporation continued to predominate in the production of timber, and the department kept its monopoly on the marketing of wood in Madhya Pradesh.

Policy changes in the non-timber sector affected protected areas more directly. Generally, the Forest Department began to pay more attention to low-volume, high-value NTFP, particularly medicinal and aromatic plants, through which forest productivity could be enhanced at a time when policies gradually shifted from extractive to selective timber felling. Policymakers recognized that Madhya Pradesh had the potential to benefit from growing domestic and global demand in medicinal plants, and the promotion of NTFP was also in accordance with the official reorientation of forest policy toward livelihood needs, as it were primarily poorer social groups (including *adivasi*) who collected these products.

In 2003, Madhya Pradesh abolished the royalties and mandatory transit permits for non-nationalized NTFP with the stated objective to improve the economic situation and freedom of the mostly *adivasi* forest collectors through an improved, unhindered flow of NTFP from the forests to the market. Since then, non-nationalized NTFP have no longer been inspected and recorded at the roadside checkpoints of the Forest Department. By the same government order, which was part of the Bhopal Declaration adopted by the state government and implemented by the Department of SC/ST Welfare, the trading of five NTFP was de-nationalized (i.e., the tree fruit *harra* and four types of tree gum), leaving only the three NTFP regulated by the state (i.e., *tendu* (beedi) leaves, *sal* seeds and gums from the *kullu* tree). The nationalized NTFP had to be traded under the monopoly system of MFP-Fed. Villagers, who are automatically members of the local Primary Forest Produce Cooperative Societies, were to collect nationalized NTFP, *tendu* being the by far most important one, in defined seasons and they were to receive a fixed price from the cooperative or state-appointed traders. De-nationalized NTFP were no longer subject to any of these restrictions.

The MFP-Fed diversified, if not shifted, its role from engaging directly in the collection and marketing of unprocessed, nationalized NTFP toward facilitating the development and trading of diverse NTFP-based products. For instance, the federation opened in 2002 a Processing and Research Centre (PARC) for (forest-grown) medicinal and aromatic plants. This centre set up a state-of-the-art laboratory with equipment imported from the US to measure active ingredients of medicinal plants. Lab tests were also offered to private parties against payment. The aim was to implement quality control and standardization to facilitate domestic and international marketing of NTFP from Madhya Pradesh. During our visit we were also told that PARC intended to develop an online marketing platform for buyers and sellers and to provide information on global market opportunities. While much of its thrust was on facilitating the development of new (international) markets, the centre had also started to promote processing and value addition at the level of the primary cooperatives as well as to produce and market its own brand of herbal products.

Another initiative that was relevant for Madhya Pradesh's NTFP sector and protected forest areas came from the central Ministry of Health acting on recommendations of

the Planning Commission in Delhi. In 2003, the National Medicinal Plants Board started the Contract Farming Scheme for medicinal plants in order to ensure the pharmaceutical industry raw material supplies in adequate quality and uniformity. Another stated objective was to protect the wild stocks of valuable NTFP by releasing ecological pressure through their cultivation and *ex-situ* conservation on agricultural fields. Under the scheme, commercial growers received a government subsidy for the first three years of cultivating (originally forest-based) medicinal plants on arable private or common land. Subsidy recipients were expected to have a buy-back guarantee from an industrial buyer. The by far largest share of central subsidies under this scheme was allocated in Madhya Pradesh, particularly in the forest-far, industrial region around Indore, and for the cultivation of *safed musli*, a valuable tuber used as a tonic. The other supported NTFP with some significance in Madhya Pradesh was *amla*, a medium-sized tree producing antioxidant fruits rich in vitamin C that are used in medicinal and cosmetic products.

Ceding, Refocusing and Rescaling State Control

Liberalization and deregulation of protected forest areas in Madhya Pradesh were fairly limited. For instance, the state continued to finance forest protection at similar levels. Neither was there a transfer of formal authority over Forest Land from the Forest Department to private economic actors. However, the state modified, and in some cases even ceded, its control of particular forest resources and their collection, trading and distribution.

In the timber sector, the state maintained its monopoly on the production and sale of wood from protected forests while increasingly encouraging forest development elsewhere. However, it retreated from the role as provider of subsidized forest goods. This generally allowed the Forest Department to refocus on its core mandate of environmental protection. In the case of *nistar*, rights became benefits linked to forest protection. The elimination of wood subsidies, furthermore, increased state revenue from Reserved and Protected Forests and facilitated the declared shift toward less extractive timber harvesting. At the same time, the industry was enabled to provide for itself through imports and incentive schemes to grow their own tree plantations –

which, in turn, contributed modestly to the goal of the Forest Department to increase forest cover in the state.

The ceding of direct state power over non-timber resources in protected forests was more substantial than that of timber. In particular, the abolition of the transit-pass system and the de-nationalization of NTFP decreased state control over valuable forest resources. Private traders could move any amount of non-nationalized NTFP at any time of the year out of Madhya Pradesh's forests. As traded quantities were no longer recorded at road checkpoints, the Forest Department had lost any (indicative) knowledge of natural forest stocks and potential unseasonal (over-) harvesting. This signified a loss of biopower that could have been useful for promoting more sustainable NTFP management (see below). However, state control over the collection and marketing of NTFP had always been imperfect. Much more easily than timber logs, smugglers had been able to hide the small NTFP from the eyes of officials at checkpoints. Furthermore, the transit-pass system, as well as nationalized NTFP trading, had been highly corruptible and nexuses between local elites and representatives of primary cooperatives, traders and forest officials had often existed (Fehr, 2007). Thus, deregulation did not lead to a simple transfer of power from state officers to private traders (or collectors). Furthermore, denationalization concerned NTFP with declining market demand and was probably as much a cost-saving strategy as an attempt to empower forest collectors.

But the state did not fully retreat from the NTFP sector; partial deregulation was soon followed by the reregulation of NTFP production and marketing, particularly for commercially valuable and exportable species. Through projects such as PARC or the Contract Farming Scheme, the state tried to promote the protection and sustainable production of medicinal plants (as well as the development of an industry with export potential). In contrast to previous regulation, this was done by creating economic incentives rather than by imposing restrictions. Interestingly, the new state regulation of valuable medicinal plants was also not brought to bear in the forests, but in agricultural fields near Indore and through laboratories in Bhopal. State control was de-territorialized, relocated and rescaled, yet not always with the intended impact in the protected areas (see below).

Generally, state intervention in Madhya Pradesh's forest sector began to become more oriented toward markets and economic effectiveness. Furthermore, commoditization of nature was attempted through the promotion of eco-tourism in National Parks. One officer of the Department of Finance, reflecting an increasingly economic discourse pervading the public sector, suggested that Madhya Pradesh should be compensated financially by the central government for providing environmental services beyond its state borders thanks to the protection of forests. One of the former heads of the Forest Department, furthermore, was in favor of further deregulation and privatization as his instructions would not reach the Forest Guards anyways or only in an altered way. However, these views were not commonly shared within the department. Another high-ranking officer, for example, criticized the partial ceding and de-territorialization of state control: "The forester's [forest officer's] primary job should be in the forest." Similar to the viewpoints on the role of participation in forestry, these internal divisions weakened the Forest Department; in particular, they hindered the development of a common strategy for a more effective reregulation of the NTFP sector. Furthermore, many lower-ranking forest officers felt that JFM was misguided and that *adivasi* forest collectors would deplete NTFP due to their ignorance of the value of environmental conservation. Among these ranks, a return to more direct state control and restoration of their past authority was a common desire.

Wider Implications

Unlike the hardly deregulated timber sector, the partial deregulation and reregulation of the NTFP sector had significant environmental and socioeconomic effects. The availability of commercially valuable NTFP in Madhya Pradesh had declined over many decades, particularly in the case of some minor non-nationalized plants. This indicates that the previous territorialized control through the transit pass system had not been very effective to prevent resource depletion. However, the freed up flow of valuable species after the abolishment of transit passes – together with increased market demand for "natural" health products and improved road infrastructure – accelerated degradation. The costs of trading NTFP fell as trader licenses, transit passes and bribes no longer had to be paid. Consequently, the number of traders increased and they travelled to more and more remote villages as a result of competition for supply. Local institutions, such as primary cooperatives, JFM

committees and *gram sabhas*, generally made no attempts to regulate access to NTFP from protected forests so that unsustainable harvesting practices and overuse of particular plant species followed the rise of market demand (Fehr and Véron, 2007). By contrast, denationalization had little environmental impact as it concerned primarily NTFP with declining market demand.

The de-territorialized reregulation of the NTFP sector, such as through the promoted field cultivation of medicinal plants, failed equally to conserve and rehabilitate commercially valuable species in protected forest areas. *Amla* production outside the forests remained limited and did not relieve pressure on the forest trees, which were often harvested unsustainably by cutting of full branches to access the fruits. By contrast, the (state-supported) cultivation of *safed musli* in agricultural fields picked up rapidly and substantially. Rather than releasing ecological pressure on the wild stock, however, it resulted in a nearly total disappearance of this medicinal plant from protected forest areas in Betul district, for example. Because *safed musli* propagules were not available in nurseries, young wet tubers were taken in large quantities from the forests – beyond the regenerative capacity of the resource.

The livelihood impact of continued NTFP depletion was generally offset by new economic opportunities created by agricultural expansion and intensification in forest-near regions (see previous section). Except for nationalized *tendu* leaves, NTFP collection became an activity of last resort, particularly during the lean season. As such, it remained important for vulnerability reduction among the poorest villagers. However, women and older people were no longer able to engage in gathering some of the scarcest NTFP as distances and time necessary to find these had increased with depletion.

Furthermore, the partial denationalization of NTFP and the elimination of royalties had little economic impact on forest collectors. Denationalization concerned only few minor NTFP; the cost-savings from the elimination of NTFP royalties were not passed down to the collectors. Traders continued to fix the purchase price of non-nationalized NTFP among themselves, thus creating a monopsony-like situation whereby collectors received low prices.

Finally, the increased cultivation of medicinal plants in agricultural fields reinforced the spatial separation of livelihoods and forests: Livelihood opportunities shifted from poor, mostly *adivasi* and female collectors in forest-near areas to better-off, mostly male and non-*adivasi* cultivators farther away from forests. However, the cultivation of medicinal and aromatic plants implied high risks; commercial growers of *safed musli* and lemon grass in Madhya Pradesh, for example, ran big losses when sudden oversupplies – domestic and from China, respectively – had brought prices to collapse. The de-territorialized reregulation through contract farming and increased market information generally failed to protect growers from volatile (global) markets.

CONCLUSIONS

The combination of elements of political geography and political ecology proved valuable for the study of protected areas. Political-geographic concepts of different forms of state power, such as territoriality, biopower or governmentality, can usefully complement political ecology approaches that tend to be more limited to investigating power inequalities with reference to political-economic theories. In turn, the insight from political ecology that environmental dynamics can act themselves as a force of power or territorialization (e.g., NTFP degradation contributing to spatial separation of forests and people) adds to political-geographical conceptualizations that usually do not regard the environment as an agent.

Empirically, the paper showed that contemporary forest protection in Madhya Pradesh (and probably elsewhere in the developing world) included elements of conventional conservation methods based on territorial state control and biopower and of more novel instruments based on community involvement, market orientation and reregulation. Clearly, decentralization and liberalization of forest protection remained imperfect and partial, and contradictions with conventional conservation strategies emerged. For example, the PESA Act devolving forest resource ownership and management was at odds with the Forest (Conservation) Act strengthening central control over forests. Different interpretations of the law and diverging standpoints regarding community participation and regarding privatization also contributed to exacerbated frictions between different state and non-state actors and even within the forest bureaucracy.

Indeed, the emerging “mixed” approach of forest protection in Madhya Pradesh was not a well-designed, coherent conservation strategy. Rather, it represented a concoction of individual laws, directives, initiatives and programs originating from and executed by different state agencies, NGOs and international donors. Apart from measures taken in connection with the World Bank project perhaps, different state interventions into forest governance in Madhya Pradesh were conceived separately and remained largely uncoordinated. For instance, local level institutions were not encouraged to step in when the state retreated from the regulation of most NTFP. Or, JFM committees were not supported to become institutional beneficiaries of the Contract Farming Scheme for medicinal plants. For the most part, therefore, decentralization and liberalization of forest protection did not interconnect; contradictions were not preempted and potential synergies were not utilized.

Our research shows that (imperfect) decentralization and (partial) liberalization of forest protection in Madhya Pradesh did not result in a simple or significant loss of state control over protected areas. For instance, the Forest Department largely maintained territorial control over Forest Land and the timber sector. The greatest challenge to the (territorial) power of the Forest Department probably came from Supreme Court orders based on the Forest (Conservation) Act and related public interest litigations initiated by environmentalist groups. (This might have changed after the enactment of the landmark Forest Dwellers Act in 2007 that recognizes land rights of traditional forest settlers who have resided on Forest Land since 1930 or longer, thus challenging state ownership of some Reserved and Protected Forests.) Also, the loss of territorial and biopower over NTFP and their ineffective reregulation were relatively inconsequential because the department’s control over that sector had already been highly imperfect and because the monopoly over the most steadily profitable product (*tendu* leaves) was retained.

Indeed, one might even argue that the Forest Department was able to strengthen its power over forest conservation (yet in a modified way). For instance, JFM helped strengthen local state capacity through community involvement or the employment of paid local watchmen, respectively. This was enabled by the World Bank project, which also invested heavily in staff training and physical infrastructure of the forest bureaucracy. To some extent, JFM implied a shift from coercive policing toward a

more effective, persuasive and locally legitimate form of power – however, through containment of the elites rather than through democratic participation. Moreover, the Forest Department was able to retreat from unprofitable activities, such as industrial wood subsidization, *nistar* or control of minor NTFP. This permitted the forest bureaucracy to better focus on its core business and concern: environmental protection, timber production and expansion of forest cover.

It is difficult to gauge the overall environmental implications of the recent political-economic reforms in forest conservation because decentralization and liberalization cannot be isolated from other (interrelated) causes of forest degradation or regeneration. Furthermore, only forest cover and canopy density were systematically monitored. Yet, there were only slight fluctuations in forest cover after the beginning of forest governance reform in Madhya Pradesh in the early 1990s; the possibly positive net effects of the JFM program and private farm forestry were counterbalanced by other processes. Qualitative data, however, suggest that the depletion of valuable NTFP in protected forests accelerated in this period, mostly because of growing market demand for medicinal plants that coincided with ineffective reregulation of the sector, population pressure and increased consumerism and need for cash within tribal society. As a consequence of NTFP depletion, protected forests became less attractive for local communities facilitating the further separation of forests and livelihoods, a process that had been supported since colonial times. This also made it easier for the state to keep people out of Reserved and Protected Forests and to move closer to the imagined ideal of an unpopulated forestscape with high-standing trees, maximum wood mass and dense canopy. Apart from ecological change in the forests, agricultural intensification in forest-near regions aided the weaning of local communities from forest resources.

In terms of policy, this study points to the importance of coordinating (decentralizing and liberalizing) state interventions and of strengthening the capabilities of local institutions, particularly to reregulate the NTFP sector. Given the continued dominance of the Forest Department in Madhya Pradesh's forest sector, administrative reform and retraining will be required so that the rhetoric of livelihoods orientation can become reality and synergies between strengthening various environmental services of forests and meeting economic needs can be found.

ENDNOTES

¹ The Central Provinces covered a large part of today's Madhya Pradesh and Chhattisgarh, as well as smaller parts of Maharashtra, Gujarat and Rajasthan. Particularly the northern parts of Madhya Pradesh were ruled by a large number of small princely states. Historical data on the parts of Madhya Pradesh that were under indirect British rule are less easily accessible than information on the Central Provinces. Madhya Pradesh was bifurcated in 2000, when the state of Chhattisgarh was formed.

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