

branches in order to maximize their gains and pre-empt others from getting the fruit. In the process, the trees are damaged, other non-human consumers of the fruit are deprived of their food, future regeneration is jeopardized, not to mention that collectors get less income per kilo harvested for the lower-quality rind from unripe fruit.

In addition to ecological sustainability, there are a variety of other considerations that constrain good extractivism. These include the low density at which most NTFP occur, their low (and variable yields from year to year), their relative remoteness from markets, and the variability in these markets, thereby making harvest economically unprofitable, even if ecologically sustainable. Plowden illustrates this in his study of andiroba (*Carapa guianensis*) in humid tropical forests of the Brazilian Amazon region. Andiroba seeds have traditionally been harvested for their oil used as an insect repellent and to relieve rheumatism. There is now growing interest in it as a source of oil for medicinal soaps and natural insect repellent candles. Traditional methods of oil extraction yield small amounts of oil compared to mechanized methods, and investment in the required machinery for local processing may help overcome this difficulty. Nonetheless, the small quantities of andiroba available for harvesting remains a constraint to profits from collection, and Plowden suggests enrichment planting of this species as a means to achieve economic profitability. Enrichment planting of NTFP has also been suggested by Kathriarachchi and others, from Sri Lanka. They present the case of two important lianas, *Calamus ovoideus* and *Coscinium fenestratum*, the former, a rattan used to make furniture and baskets, the latter, an

indigenous medicinal plant. Both have been over-harvested in the wild, and the authors describe results from experiments that suggest they can be grown on degraded land, or in buffer zone plantations outside protected areas.

In contrast to andiroba, açai (*Euterpe oleraceae*) is a rather atypical NTFP. It occurs at high densities, it grows in flood plain forests in the Amazon region, making it relatively accessible (by boat), and it is a multi-stemmed palm, so it is possible to harvest both its high value fruits, and the heart of the palm, without killing the tree. However, there is a downside to açai: given its high value, and the increasing demand for it, regionally and internationally, there is an increasing trend of forest enrichment with açai, which is converting mixed flood plain forests to near monocultures. While this type of conversion is not damaging or degrading to ecological processes when compared with clear felling for timber, or forest conversion to ranches, it nonetheless comes at the cost of other native biodiversity. Weinstein and Moegenburg suggest that there may be ways of achieving a win-win situation with açai, for instance, by invoking market instruments such as certification, thereby providing people an incentive to maintain native diversity.

A win-win situation is something that Uma Shaanker and others also discuss. They stress the need to monitor impacts of harvesting at several scales in order that they can be mitigated or prevented. In fact, Uma Shaanker et al. suggest that a win-win situation is not merely achievable, but essential, for both ecological security and livelihood security in the long term.



Photo: Rucha Ghate

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# Re-Placing Nature

## Ben Campbell



Photo: Ben Campbell

As the environment has become an object of global concern, anthropologists have increasingly paid attention to the ways in which conservation projects and approaches have understood and reconfigured, local patterns of human-environment interactions. The articles in this special section compare the historical and cultural particularity of the idea of nature as a non-human domain, with the changes represented by the adoption of more people-friendly conservation policies.

North American-style wilderness preservation is now recognised as not viable for many areas of biodiversity that contain, or are surrounded by, human communities. But just as conservationists' understanding of nature has shifted, anthropologists also no longer see cultures as the discrete, formative meaning-

structures they were once presumed to be. The case studies from Nepal, Portugal, Spain, Finland, Cameroon, Greece and Brazil investigate how policies and discourses of conservation have made interventions that produce meanings of cultural diversity, as much as they have demarcated and regulated activities to protect areas of biodiversity. Who comes to be recognised as a local in areas designated for conservation, and what attendant rights and expectations follow from this?

Conservation solutions from the 1870s to 1970s tended to ghetto-ise nature in enclaves of bio-authenticity, or as resource reserves that excluded human intervention. The outcome of such conservation was a territorial nature-society divide. Nature was 'purified' of its social networks. As Ingold argues in his commentary on the collection, the terms nature and society do

not so much describe the world as make certain kinds of claims for it. The ways in which environmental protection is now thought about are deeply entwined with developments in global economy and social change. Post-Cold War adjustments of trading patterns, investment, and rural subsidies have rendered many areas of agricultural production unprofitable, while the market for ecotourism, and scientific interest in bio-prospecting have grown, all of which have consequences for how claims are made for valuing nature. In order to evaluate the extent to which conservation has become socially reflexive, these ethnographic case studies present the view points of people who are on the end of chains of policy-impact. These studies make apparent the cultural forms and terms of relevance in which conservation appears to them. These people have often had no comparable sense of a non-human context implied by a conservation worldview, yet they have to face, on a daily basis, the socially powerful consequences of this worldview.

Ethnographers increasingly record encounters with explicit formulations of the environment as being materially threatened by human activity. These formulations were once perhaps recognisable as culturally specific. They are now no longer a straightforward criterion for defining the difference between cultural universes. There are now several examples of people's adoption of the language of environmental protection as a discourse of the powerful to position themselves for instance, as 'forest people'-- in order to make claims for environmental entitlements.

The principal means by which communities are encouraged to view conservation favourably is through the provision of incentives

and material benefits to compensate for their loss of access to resources. This follows from the logic that resistance to conservation has been due to economic consequences for people's livelihoods. O'Neil's commentary on the collection argues against this kind of analogy between environmental and use values. Many of the articles develop the 'dwelling perspective' of Ingold to highlight the dissonance that can be expected when the environment is regarded merely as a source of income detached from human involvement, rather than as part of a way of life.

It is not then merely a matter of compensation or alternatives for livelihood support that is necessary to forge consent for conservation. These kinds of solutions, based on economic assumptions of human behaviour being motivated by rational cost-benefit calculations of resource alternatives, appear from the policy perspective as the more benign and people-friendly components of 'participatory conservation'. Such measures of replacing ecological dependence with alternative livelihoods do not address a key anthropological reality. This reality is that managing the environment by the regulation of resource use implies conceiving of the environment as something that is external, quantifiable and controllable, and frequently involves a 'cultural' transformation in the ways that people place themselves in their relational life contexts. In other words the expectation of convergence between traditional relationships with ecology and modern conservation has an important gulf to contemplate - the latter views nature as a non-human domain subject to human intentions, as opposed to a cosmology in which environmental entities are accorded all manner of responsive agency, including the care of humans.

This is not a simple matter of clearly identifiable 'moderns' and 'pre-moderns'. The studies discuss ways in which discourses of social

and ethnic identity enter the moral contexts of environmental projects in different contemporary states. In Greece, Portugal, Spain and Finland, examples are presented where people are exhorted to conform to stereotypes of communities with iconic ecological livelihoods: artisanal fishermen, transhumant pastoralists, and specialist reindeer herders. Those who find difficulty transforming themselves into folkloric images of national nostalgia, whose livelihood practices are more hybrid, and whose communities are more global, often find themselves subject to censure from environmental authorities that only permit culturally prescribed varieties of resource use, corresponding to 'proper' indigenous behaviour.

Practices of eco-governance in protected areas put into place regulations on movements of people, animals and 'natural' things within desired topological states. This effects a new territorialisation of life process, mediated through bureaucratic surveillance, check-posts, patrols, and permits. Legitimate user groups or other collectivities are established on the basis of property, birth, ethnic affiliation, or licensing arrangement. Likewise, non-human species are subject to an accounting of presence, recruitment, and loss, as if species can be pinned to the ground. Ingold argues that this 'parking' of nature is a distinct kind of place-making that assumes illusory borderlines between nature and humanity.

For O'Neill, the abstract, un-placed, discourse of global environmentalism makes assertions about environmental goods and ethics that are taken as universal and not relative to time, place, and culture. The authors of this collection of articles suggest that context-rich ethnographic environmental description is of as much intrinsic value for understanding how to make conservation politically and culturally sustainable.

## Role of Monitoring in Institutional Performance

Forest management in Maharashtra, India

Rucha Ghate and Harini Nagendra

Research on common property has pointed to the crucial role of 'monitoring' for its effective management. Institutions governing a common property resource such as forests need to safeguard themselves against situations where individuals extract more than their share. Monitoring is essential to guard forest areas against excessive forest use by community members and also against outsider entry. In addition, it is crucial to deal strictly with infractions to ensure compliance with rules.

Concentrating on 'rule compliance' as an indicator of monitoring by community members, we assessed the relationship between institutional structure, monitoring, and forest condition. Three frequently encountered institutional structures engaged in forest protection are those that are community-initiated, those that are promoted by non-governmental organisations (NGOs), and those that are state-sponsored (e.g., Joint Forest Management-JFM). Do communities follow rules stringently if they evolve the rules themselves? How do NGOs approach the question of dealing with infractions of rules? Does the

State encourage conformity with rules in communities that join JFM? We conducted a detailed comparison of rule compliance among forests in similar bioclimatic conditions and social environments but under different institutional regimes through a comparison of 3 case studies in the Gadchiroli district of Maharashtra in central India. We used detailed interviews with communities to assess monitoring, and a combination of forest plot data and evidence of illicit cutting, grazing, and fire, to evaluate forest condition.

Local enforcement was most effective where the community initiated forest management. The forest showed better regeneration and there was negligible evidence of grazing and fire, even though this community started its protection work in a degraded forest that had been under heavy pressure from surrounding communities. In the State-initiated JFM village it was evident that there was uncontrolled grazing and fire leading to heavy damage to the forest, despite their having had the initial advantage of a good forest subject to lower population pressure. There was insufficient monitoring of rule infractions due to the apathy of



Photo: Ben Campbell

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Photo: Rucha Ghate