

## Background to Western Ghats of Karnataka

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The Western Ghats of South India are rich in culture and ecology. The biodiversity contained in this mosaic of tropical forest types, from wet evergreen forest to mangrove swamp, is considered worthy of global protection efforts. At least 4050 flowering plants have been identified in the Ghats, of which about 1600 are endemics (Nair, 1986; Khan, 1995). Noticeable reptile fauna in the evergreen forests include the limbless frogs (caecilians), burrowing snakes (uropeltids) (Gadgil & Meher-Homji, 1990) and the king cobra. In total, 112 endemic species of salamanders, caecilians, frogs and toads occur in the Western Ghats (Khan, 1995). The Nilgiri langur, lion-tailed macaque, Nilgiri tahr and Malabar large spotted civet are examples of endangered endemic mammals and the area also contains potentially valuable genetic material for agriculture in the form of wild relatives of pepper, cardamom, mango, jackfruit and other widely cultivated plants (Gadgil & Meher-Homji, 1990). The moist deciduous forests of lower rainfall zones contain a rich mega-fauna which includes populations of elephant, tiger, chital deer, sambar deer, leopard and gaur. The rarity of the moist deciduous forest type, high degree of species endemism, unique variety of forest types, uniqueness of lowland evergreen forest in a monsoonal climate and the biogeographical significance of this isolated area between the African and Indo-Malaysian forest blocks combine to make the Western Ghats a very important biological resource (ODA/KFD, 1990). Sadly, it is also an extremely endangered one (Gadgil & Meher-Homji, 1990; Gadgil & Guha, 1992; Nadkarni, 1989; Dogra, 1992; Hegde, Shreedara & Hegde, 1994; Khan, 1995; Daniels, Chandran & Gadgil, 1993).

The vulnerability of local people has to be understood within the twin contexts of dependence on the environmental resources of the Ghats and dependence on increasingly distant sources of 'development' initiatives. In this largely agrarian region, people are dependent on subsistence production of paddy and the rather more lucrative spice gardens. In the coastal belt, fishing, coconut groves and cashew plantations are also important sources of subsistence and income. Most farming systems are mixed, combining crop cultivation with livestock. All farming systems are highly dependent on forest resources for fuel, livestock fodder, litter, green manure, fencing, construction materials and, less commonly, collection of non-timber forest products (NTFPs) for marketing, food and medicines. Spice gardens require large quantities of mulching materials to maintain moisture and prevent soil erosion.

Malaria, physical inaccessibility and the colonial control over forest resources have historically led to fairly low population densities in the interior of this district and a corresponding wealth of per capita natural resources. In all but the drier, Eastern fringes of Uttara Kannada and the relatively densely populated southern coastline of Dakshina Kannada, water and woodfuel shortage have not resulted in the huge demands on labour experienced in many other parts of India: dung, for example, is rarely resorted to as a fuel and water collection rarely involves distances of more than a few hundred metres, even in the summer months of March, April and May. The farming systems found in Uttara Kannada today have existed for centuries and beyond. The unique microclimate created within the multi-storey spice gardens, with the complex intercropping of areca palms, bananas, pepper vines, cardamom and ginger, reeks of stability, a sensation that is backed up by local folk history and by references in ancient religious scripts which date the spice garden system back as far as 1700 years. Lele (1993) suggests that some individual gardens have remained in permanent cultivation for upwards of 1000 years.

The livelihood crisis in Uttara Kannada has come in the forms of British colonial and Government of India forestry policies, the adoption of a modernising paradigm of development and growing landlessness. In a region of superior natural resources, two meals a day cannot be relied upon by the rural poor. Appropriation of forests as a resource for the empire and then for the state has eroded local access rights, replacing them with locally negotiated 'forest privileges'. Nationalisation of forests coincided with the transition from 'forests as local environments' to 'forests as commercialised national resources'. By 1981, 7727.84km<sup>2</sup> of Uttara Kannada's forests were classified as reserved, out of a total forest area of 8292.65 km<sup>2</sup> (Government of Karnataka, 1985). Just 20.20 km<sup>2</sup> remained officially classified as 'village forest', much of which was only granted to villages because it was degraded land. The total land area of Uttara Kannada district is 10,220 km<sup>2</sup>, of which 81% is legally controlled by the Forest Department (Government of Karnataka, 1985). For many then, the Forest Department is the most important government organisation in their lives.

"This District's natural wealth has now become a curse for it" says Pandurang Hegde, journalist and co-ordinator of the Appiko-Chipko Andolan movement. The fate of reserved forests since independence has been partly determined by a government conceptualisation that a highly forested area is a 'backward area' (Seabrook, 1996), leading to large-scale removal of timbers under concessional contracts to state and private industry (especially for the paper and plywood industries), organised smuggling of valuable timbers such as teak, rosewood and sandalwood, replacement of natural forests with monoculture plantations of teak, eucalyptus, acacia and casuarina (so-called 'scientific forestry'), the clearance of forests for industrial developments, submersion by reservoirs, mining, power lines, new townships and resettlement projects.

The 1988 Forest Bill determined that state forests should supply the basic needs of local people whilst plantation forests (state planting on wastelands and private planting on farms) should be grown to meet industrial needs. Whilst there is evidence that some industrial contracts are still (illegally) awarded and that smuggling is still an organised activity with contacts in high places, the majority of pressure on forests now comes from infrastructure developments such as dams, the Kaiga nuclear power station, transmission pylons and the Konkan railway; indirect threats include coastal industrial developments (such as Cogentrix's planned power station near Mangalore) which are increasing the deposition from air-borne pollutants. Despite the scale of threat from state and industry, local dependency on forest resources is fast becoming the major cause of deforestation. The demand for agricultural land has escalated in parallel with rising population levels and whilst most encroachment has been onto previously cleared forest lands, demands on forest resources continue to rise.

The livelihoods of local people are increasingly vulnerable to the policies and projects of distant organisations: government-sponsored agricultural change and the liberation of markets under the Uruguay round of the General Agreement on Tariffs and Trade have led to greater vulnerability to market prices; new seed varieties and patenting laws create vulnerability to transnational agro-industries; International Monetary Fund-induced liberalisation, combined with the Government of India's development agenda, increases vulnerability to industrial developments whilst the introduction of exotic species of flora and fauna threaten local biodiversity and crop pollination. Dogra (1992) estimated that the proposed dams on the Kali, Bedti and Aghanashini rivers and tributaries, combined with the Seabird naval project at Karwar and the Kaiga nuclear plant amounted to an expected displacement of 150 000 people over the next two to three decades. If one includes indirect displacement and displacement caused by the gradual encroachment of mining, this figure rises to 250 000, about one in five of the district's population. Such livelihood vulnerability is of course also an ecological catastrophe in the making. The collapsed dome of the Kaiga nuclear reactor (fortuitously prior to nuclear installation) served as an ominous reminder of the risks to local people from ever more distant spheres of decision making. As local control has been degraded, so have communal regimes of self-management.

Current projects which attempt to rebuild local management of resources operate within this context of vulnerability. Vulnerability has been induced by colonial, state and corporate appropriation of power and the continued time-space distancing of decisions which effect local livelihoods. Alienation and dependency are the key cultural consequences of this process and their reversal, through re-empowerment, must be a defining feature of any institutional solutions. An interesting question therefore arises concerning whether the same 'distant' powers which have built up such vulnerabilities can now return meaningful control to local people, enabling them to rebuild the

long-eroded social capital that supported local management of resources. This relates to the more fundamental question of whether grassroots development can be facilitated in a top-down fashion, one of the great development paradoxes of the 1990s.

The rationale for attempting to induce self-management is strong. Whilst there is theoretical and empirical evidence to suggest that people can respond to their own vulnerabilities and organise themselves spontaneously, this is still the exception and not the norm. The consequences of the dominant conceptions of progress, as mediated through effects on local environments, have a long history of stimulating protest in India. Today, we see the ongoing challenge to dominant paradigms of 'development' and 'knowledge' and one might speculate that such a challenge grows more powerful as consequences become more globally felt. However, whilst such risk-inspired struggles to regain control have led to cases of successful local management of natural resources, the ability of external (often distant) agents to reproduce such results through institutional supply are still uncertain.

The policy of Joint Forest Planning and Management represents just such an attempt to induce local management through institutional supply. The main features of JFPM are an alliance between the Forest Department, Non Government Organisations and villagers. Each participating village is helped to form a Village Forest Committee (VFC) with a remit to protect and improve existing forests. The VFCs are intended to become financially self-sufficient, receiving 50% of proceeds from the harvesting and sale of produce from designated Joint Forest Planning and Management land, half of which can be distributed to involved households (beneficiaries) and half to a Village Forest Development Fund. As such, villagers are turned into stakeholders, with the potential motivation and wherewithal to manage local forests.