

DEFORESTATION IN UTTARA KANNADA DISTRICT, KARNATAKA, INDIA

A Preliminary Report

(June 2006)

Not to be quoted

Kanchi Kohli and Manju Menon
(based on information collected by *Parisara Samrakshana Kendra*, Sirsi)



Facilitated by the Malnad Home Garden and Seed Exchange Collective, SIRSI

Supported by ATREE, Bangalore

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Information input: Pandurang Hegde, N.R. Hegde, *Parisara Samrakshana Kendra*, Sirsi
Final editing: Katherine Cofell (intern), University of Oregon

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DEFORESTATION IN UTTARA KANNADA DISTRICT – LINKS WITH LOCAL PEOPLE AND THEIR SOCIO-ECONOMIC AND NATURAL RESOURCE BASE

This report is a compilation of material on the status of deforestation in Karnataka's Uttara Kannada district. Most of the information has been collected by activists of the Sirsi based NGO, Parisara Samrakshana Kendra (PSK). Kanchi Kohli and Manju Menon, researchers who have been working in the area of environment and development, and forest violations in particular, have compiled the report. It is a baseline note on the alarming way in which the forests of the district are being blatantly decimated. Some of the information although a little dated, does still serve the purpose of highlighting the serious issue of green felling in the area.

The report is meant for use as an information source and lobbying tool for activists, researchers, NGOs, local communities, and the administration and state agencies. It clearly stresses the need for and urgency with which an in-depth and detailed investigative analysis of the situation is needed. ***If serious action is not taken now, and a strategy planned and executed, the famed forest rich Malnad area will very soon become a resource poor area with the communities reduced to being ecological refugees.***

The Malnad Home Garden and Seed Exchange Collective, Sirsi, facilitated the making of the report. The collective began in 2001 with the objective of documenting the diversity of the home gardens of the region, conserving local seed varieties, looking at food security, nutrition, and health issues, and helping set up conservation based enterprises amongst its members who are mostly women farmers. In recent years the value of protecting forests has become one of the prime focus areas for the collective.

The reasons why the Malnad Seed Collective is involved in a report like this is obvious. The rich mosaic of homesteads, home gardens, spice orchards, paddy fields, and *soppinabetta* forests survive because they rest on the bedrock of forests. The sustained health of these along with that of the human communities lies in ensuring the long-term health of the forest ecosystem. One cannot put a price tag to the ecological functions or services performed by these forests like soil and water conservation, providing leaf litter for agro-forestry, non-timber forest produce (NTFP), medicines, and being a wildlife habitat for important species of plants and animals. The very basis of life here in the Malnad, and the essence of the work of the seed collective is linked to the forest. Hence its protection is paramount to ensuring that the work and objectives of the collective are safeguarded.

The Malnad Seed Collective has been lobbying with the Biodiversity Management Committees (BMC) as well, urging them to take up forest protection as a key activity. It has also made a modest beginning in setting up forest nurseries by members. This is to make available at least a small percentage of the huge array of tree species available here – 450 at the last count. Many species like Cinnamon (*Cinnamomum* sp.), Rampatre (*Myristica malabrica*), Ashoka (*Saraca ashoka*), Bili Deodari (*Dysoxylum malabaricum*), Halmaddi Dhoopa (*Vateria indica*) and others are dwindling at an alarming rate. It is important to have a larger picture of the ecology and status of these and other species to help with any kind of informed local action. The collective members have also been sensitized to why they should think beyond their home gardens and play a role in preserving the forests. Some of them have responded by being very proactive and reporting back to the collective whenever there is tree felling in their area. A report of this kind will help with local learning and action. Once it is finalized, it will be brought out in Kannada for wider distribution locally.

Deforestation is a complex issue, existing at various levels and layers. It is important to have a basic understanding of the dynamics of this, if any kind of concerted action is to take place. This could range from the grass roots, local level to the highest authority and all the intervening levels. What is important here is that there is no time to be lost, and the case has to be taken up without further delay.

Sunita Rao
Coordinator
Malnad Home Garden and Seed Exchange Collective, Sirsi
June 2006

I. Uttara Kannada District Background

Location

Uttara Kannada district, formerly North Kanara, in Karnataka state is located between 13°55' to 15°32' N latitude and 74°05' to 75° 05' E longitude. Its geographic area is 10,291 km² (figure-1). The district shares boundaries with the state of Goa and Karnataka's Belgaum district to the north, Dharwar, Haveri and Shimoga districts to the east and Udupi district to the south. The western border is demarcated by the Arabian Sea, which creates a long, continuous, though narrow, coastline of 120 km. (*Annexure 1-Map of Uttara Kannada district*).

Topographically, Uttara Kannada district may be divided into 3 distinct zones or regions; the narrow coastline, the abruptly rising hills of the Western Ghats, and the flatter, elevated eastern portion that merges with the Deccan Plateau. Within Uttara Kannada there are 11 taluks. The district capital is at Karwar, the northernmost coastal taluk¹.

As per the district census, the forest cover is approximately 7397.283 sq. km, making Uttara Kannada one of the most forested districts in peninsular India. Of the district's forest cover, 6866.058 sq. km are under the jurisdiction of the Forest Department and 531.225 are sq. km under the Revenue Department.

Within Uttara Kannada's vast forest ecosystems there is a great mosaic of various major habitats and sub-habitats that support tremendous biological diversity. While the district is extremely rich in wild and domesticated biological diversity, there is limited comprehensive documentation of the district's colorful array of flora and fauna. Most charismatic species, including flowering plants, mammals and birds are documented while lower plants, microorganisms, reptiles, moths, beetles, other insects and various other invertebrates have yet to be uncovered and documented in any notable manner.

Furthermore, several endemic plant and animal species, non-timber forest products (NTFP) and medicinal plants are found in this region. The density of the trees above 30 cm GBH is 575/ Ha. and that of small plants is 34068/ Ha. Plants represented by species like *Dipterocarpus sp.*, *Diospyros sp.*, *Garcinia sp.*, *Michelia sp.*, *Calicarpa sp.*, *Holigarna grahami* and more (Uttara Kannada Biodiversity Strategy and Action Plan).

More than 400 NTFP species such as *Cinnamomum spp.*, *Vateria indica*, and *Garcinia gummigatta* are collected in the district, of which 45 are collected for commercial purposes. The remaining species are collected for medicinal, edible, non-agricultural and other purposes. The collection, consumption and selling of NTFP accounts for 33% of the total income to rural households in the district, making these practices important to local livelihoods.² (For more information on NTFPs see section 2.5).

These forests of the Western Ghats perform several critical ecological functions that support agro-forestry, agriculture and other forest-based livelihoods in the district. The forests are also the catchments of important rivers such as the Aghnashini, Sharavathi, Kali and Gangavalli.

Administering the Forests of the District

Uttara Kannada district falls within the 'Kanara Circle' of the Karnataka Forest Department (KFD). The district's administrative head is the Conservator of Forests (CF). The Kanara Circle is comprised of five territorial forest divisions with headquarters at Haliyal, Yellapur, Karwar, Honavar and Sirsi. A Deputy Conservator of Forests (DCF) heads each division. The entire forest area of the district is divided into 34 forest ranges, each under a Range Forest Officer (RFO), and 131 forest sections each under a Forester, and 425 beats each under a Guard.

¹ Excerpts from the Uttara Kannada Biodiversity Strategy and Action Plan (February 2003)

² Hegde, Pandurang, Balachandra Hegde, Narasimha Hegde. *Non Timber Forest Produce in Uttara Kannada, Karnataka*. Prakruti: Sirsi, 2000.

Table 1: Forest area of the Kanara Circle as per legal status

Sl.No	Department	Type of Forest	Area in Sq.km
1	Forest	1. Reserved	6840.948
		2. Protected Forest	25.090
		3. Village Forest	-
		4. Un-classed	0.020
		TOTAL	6866.058
2	Revenue	1. Reserved Forest	-
		2. Protected Forest	505.075 (?)
		3. Village Forest	26.150
		4. Unclassed	-
		TOTAL	531.225
		GRAND TOTAL	7397.283

Source: Annual Administrative Report of Forest Department, Kanara Circle 2000-01

Karnataka state has adopted several measures to conserve the district's forests.

One example of these measures includes the development of the Joint Forest Planning and Management (JFPM) programme. The primary objectives of the JFPM was to attain participatory management of forest resources and to augment the accrual of benefits to forest dependent communities. Funded by the United Kingdom Department for International Development (DFID), the JFPM was implemented in 1994-95 and resulted in the creation of over 300 Village Forest Communities (VFCs) throughout Uttara Kannada district with aims to meet the aforementioned objectives.

In addition to policy-level efforts to assess and conserve the forests in a participatory manner, the district is rich with stories of protection of forests by local communities at a grassroots level. There are several sacred groves that have been conserved by locals since time immemorial. In 1983, the district saw a peoples' movement called 'Appiko' on the lines of the Chipko struggle, to conserve trees from destructive elements. There have also been several other organizations and individuals in the district who have attempted to cease forest destruction, many of whom contributed efforts toward the ineffective felling ban passed by the state government in 1990 (see section 2.2: "Extraction of dead or fallen trees by the KFD").

II. Problems related to forest conservation

Since the late 1990s, rampant deforestation has been a major issue of concern in the Uttara Kannada district despite strong community efforts to conserve the forests. By carelessly hacking Uttara Kannada's forests, local communities and ecosystems have accumulated countless negative impacts. Some of these impacts include the loss of breadth and diversity of valuable medicinal plants, forest fragmentation, loss of wildlife habitats and corridors, and the loss of the spectacular forest cover of the Western Ghats.

The above problems are founded in the following nefarious, illegal and destructive human activities and are augmented by the incapacity or unwillingness of the KFD to tackle these issues with a firm hand.

1. Illegal felling and smuggling of timber

There is widespread destruction of green trees due to felling and smuggling by the timber mafia with support from some forest officials. Illegal cutting of valuable teak, rose wood and other trees by smugglers has become a common phenomenon in various places. (Annexure 6: Newspaper clipping of smuggling at Vajralli and Dehalli.)

In October 1999, illegal felling of trees was observed in Honnavar division in Gersoppa range. The area where the felling took place was planted with cane as part of the forest conservation project undertaken with funds from the Overseas Development Agency (now DFID). The area is also part of 'Kathle Kan' (meaning dark forest), a historic sacred grove.

R.N. Naik's report on felling in Karwar division, signed by Saxena³, says that although no permission was given for felling in the Working Plans in the years 1997- 98 and 1998- 99, it had been done by the Karnataka Forest Department (KFD). When the KFD officials were questioned about this, however, their response was that this felling was not as per the plans. It is still legal because the Karnataka Forest Code gives the DFO the power necessary to undertake felling without permission. The CF also mentioned that circulars had been sent to all DFOs establishing that felling may be undertaken in emergency situations.

The Forest Department (FD) staff is unable to deal with the smuggling pressures due to several reasons, aggravated by the fact that forest departments are located at a considerable distance from the forest areas. In some cases, the demarcation of forest areas has not been clearly delineated (e.g. in Chipgeri). In these areas, it is difficult to identify and act in response to illegal activities.

A letter by Parisara Samrakshana Kendra dated 22nd November 2004 to the Principal Chief Conservator of Forests (PCCF)⁴ states that information about areas where smuggling took place was given to the KFD and Shri Shivangowda. CCF Vigilance visited some of these areas on 5, 6th November 2004. He ordered an investigation into the cutting of rose wood, teak and other valuable trees near Jaddigadde area in Hulekal Range (Sirsi Forest Division). Subsequently, no investigation was taken up. Similarly, no action was taken in Upleshwar, Nandolli, Vajralli, Kolakumbri, Sanvalli and Bhatkal forest regions in response to notifications of illegal felling.

2. Extraction of dead and fallen trees by the Karnataka Forest Department (KFD)

Another great concern is that live trees are being felled on the pretext of extraction of dead or fallen trees. The practice and method of extraction of dead and fallen trees has been responsible for several destructive impacts in the district and, furthermore, the felling of live trees is a blatant violation of the Supreme Court order as well as the Karnataka State government's order of 1990 to ban green felling. Despite the efforts of activists, NGOs, local community members and government orders, deforestation in the Uttara Kannada district is on the rise with visual indicators along nearly every forest road.

The Sirsi Division Progress Report 2005-2006 put out by the Karnataka Forest Department lists the monetary value of illegally extracted forest products in forest offense cases that were handled by the KFD. Accordingly, Rs 7.68 lakh worth of rose wood, cinnamon, bamboo, fuel wood and acacia were confiscated in 2005. Approximately Rs 2.76 lakh worth of sandalwood was confiscated. The cost of sandalwood listed represents the government rates for sandalwood only; the market rate for sandalwood is around three times as much. Finally, Rs 1.22 lakh worth of stones, mud, soil and other items removed from the forest was confiscated.⁵

The Ban on Green Felling

In response to the agitations by Appiko and sympathetic community members, the Karnataka Government imposed a ban on the felling of green trees in natural forests on 10th October 1990. The order (No. 164/FDP90/Bangalore, 10th October 1990) states: "The ban on felling will continue in the evergreen forests of Western Ghats with the objective of maintaining the ecology and environment. Only dead trees will be permitted to be removed. Care should be taken to see that no damage is caused to other standing trees while removing dead trees from the forests." Not only is the language of the legislation ambiguous and noncommittal, there are also numerous loopholes that contradict the objective of "maintaining the ecology and environment".

To begin with, there is no enforced plan regarding *how* to extract dead trees without harming other life in the forest. Pandurang Hegde, in an article published in The Hindu Survey of the Environment 2004, explains that roads are

³ Source: Report by R.N.Naik, Government of India in Letter No: f(C) A/11 6/117/Mis/Kar, Dated 5th April 1999.

⁴ Source: Letter by Pandurang Hegde, Parisara Samrakshana Kendra to S.N.Rai, Principal Chief Conservator of Forests, Karnataka dated 22-11-2004.

⁵ Interview: KFD DCF Vijay Mohan Raj. 17 May 2006.

built in order to transport the dead timber and that numerous green trees are felled to make way for these roads. Furthermore, the classification of trees as “dead” is highly contentious because dead trees, whether standing or fallen, provide habitat for many species including the highly valuable honey bee (*Apis cerana*), contribute nutrients to the soil and support the growth of other flora including many of those used for medicinal and NTFP purposes, and provide fuel wood to a number of local families whose lives are sustained by the forest. “Dead” trees cannot, therefore, be removed without harming the ecology, environment, or rural families, many of whom farm important crops for use throughout India. Additionally, a diversity of mushrooms, lichens and insects live on these dead and fallen trees.

In addition to felling to make roads and for the removal of “dead” trees, the practice of extraction opens up the forest canopy, which causes wildlife habitats to become fragmented and threatens a number of plant and animal species in the forests. This region is the northern-most known habitat for lion tailed macaques, a species endemic to the Western Ghats. There are only few groups of these primates remaining in the region. Approximately 12 different kinds of woodpeckers, Malabar pied hornbills, jungle myna, and other rare birds have been recorded in this region, all of which make their nests primarily in hollows of dead trees. The opening of the canopy also leads to the recruiting of plants in early stages of succession. Plant species like *Macaranga peltata* and *Strobilanthus* that are light demanding pioneer species tend to colonise the gaps. Furthermore, there are possibilities of bombardment by exotic and weed species such as *Eupatorium* inside of the forest, which may result in the slowing down of the regeneration of natural forest to attain the climax evergreen forests that promote floral and faunal biodiversity.

A fact-finding mission report of April 2002⁶ draws attention to the green teak tree felling that was done in Barchi, Haliyal. Removal of teak in the name of ‘thinning’ operations by the KFD has been observed near Chipgeri.

An August 2005 letter to the Secretary, MoEF by Parisara Samrakshana Kendra highlights that ecologically unsustainable logging is being practiced in many parts of the Western Ghats⁷. It has been urged several times that the KFD should permanently stop the practice of extracting dead and fallen trees from crest line forests to avoid opening up of the vegetation cover and to reduce soil erosion.



An illegally felled green tree. When large trees fall they often destroy other trees in the vicinity causing more destruction than necessary. (Photo: Narasimha Hegde)

3. Road building to transport timber

The construction of new roads into forest areas has been responsible, to a great extent, for the increase in illegal felling and timber smuggling. Villagers opine that 75 – 80 roads of length between 500m to 3000m have been made

⁶ Source: Note titled ‘Green Felling in Barchi Forest’, highlighting the findings of a fact finding mission visit to Barchi area on 11-4-2002

⁷ Source: Letter by Pandurang Hegde, Parisara Samrakshana Kendra to Secretary, Ministry of Environment and Forests, Ref No: MoEF/4/7/2005, dated 5th August 2005

for the transport of dead and fallen trees near Challegadde in Shirguni village⁸. The process of constructing new roads and expanding old ones also causes significant loss of green trees and saplings. According to research on the impacts of logging completed by Prakruti, “[g]reen trees and young saplings were cut to make way for new roads. In some forest areas (such as near Jenumarana Kodlu, Challegadde) for transporting one dead and fallen trees, an average 375 square meters of new road was established.”⁹ Furthermore, studies by Parisara Samrakshana Kendra reveal that the road from Jaddigadde to Aitaalimane “constructed for transporting the dead and fallen trees opened a large area inside the natural forest. Out of the total forest area destroyed about 35.26% of forest was clear felled for construction of the road itself.”¹⁰

The Parisara Samrakshana Kendra report (1999) also reveals: “We have observed one of the earlier paths, which was made during the last extraction from the area. The regeneration in the road was poor with only few species. There are no trees above 30 cms GBH in this area. Besides, the road was damaged by severe soil erosion. It was also observed that each time [a road was damaged], a separate road was made to transport the timber easily. This resulted in disturbance of the entire forest area.”¹¹ Damage to forests is, evidently, very high in areas adjacent to roads.

Soil Erosion

Soil erosion is another major threat occurring in the clear felled region. The erosion of mud from the road and also from the valley plains has been observed within a week of rainfall in the monsoons. The fertile topsoil is washed off with the first rains too. This region normally gets more than 5000 mm of rain annually, so the extent of erosion each monsoon is high.¹²

4. Encroachments

Several reserved forests have been encroached for agricultural and non-agricultural purposes. One reason for this is for the extraction of dead and fallen trees. In the process of extraction, much of the forest area is clear-felled to access and remove the trees. Furthermore, these areas are attractive for encroachers to cultivate. Another incentive for individuals to encroach areas is because the availability of highly commercialized non-timber forest products such as Uppage (*Garcinia gummigutta*) and Rampatre (*Myristica malabarica*) could potentially bring families a considerable income.¹³ Unregulated and unsustainable collection of NTFPs within a fairly dysfunctional contracting system, however, harm both the forests and the people as economic returns to collectors are minimal within this system and encourage detrimental methods of extraction.

5. Illegal and Destructive extraction of NTFP

Non-timber forest products, as their name implies, are any products extracted from the forest that are not timber. NTFPs are based on their relevance and mode of relationship to the survival of local communities as 1) commercial, 2) edible, 3) non-edible and 4) medicinal items.¹⁴ Throughout all of India, there are around 3000 plant-based NTFPs, with a larger number of products derived from other forest sources.¹⁵ Clearly, NTFPs are crucial to the livelihoods of people living in forested areas as they provide sustenance, medicine and economic incomes. Lacking appropriate management and action plans, NTFPs are rapidly and destructively extracted in a manner that is clearing the forests of many essentials to both rural and urban Indians alike.

⁸ Source: Study by Parisara Samrakshana Kendra, Sirsi titled, ‘Impact of extracting dead and fallen trees from tropical wet evergreen forests of Western Ghats; A case study from Gersoppa Range’, 1999

⁹ Source: Impact Assessment of Logging in the Western Ghats of Karnataka, India., Prakruti/PSK, August 2005.

¹⁰ Source: Impact of extracting dead and fallen trees from tropical wet evergreen forests of Western Ghats; A case study from Gersoppa Range, Parisara Samrakshana Kendra, Sirsi, 1999

¹¹ *ibid.*

¹² *ibid.*

¹³ *ibid.*

¹⁴ Hegde, P. et al. Prakruti 2000.

¹⁵ *ibid.*

Cinnamon is a popular commercial and edible NTFP that has been illegally and destructively harvested for many years. Revenue to the state from tenders for cinnamon only from Sirsi division is Rs 35 lakh. In 1994 the Karnataka Forest Department imposed a ban on the collection of cinnamon (*dalchini*) leaves in Sirsi Forest Division of Kanara Circle in response to the species' increasing rarity due to unsustainable harvesting practices.¹⁶ The permission to extract cinnamon leaves was, however, given in other divisions. Due to this loophole, permission from one forest division could be used to collect and stock cinnamon leaves/buds illegally from Sirsi division as well. This provision made the ban in Sirsi Division ineffective. In recent years, illegal harvesting of dalchini leaves (*Cinnamomum spp*) has continued unabated in all forest ranges of Sirsi Forest Division as well as in other forest divisions in Kanara Circle. While harvesting, entire branches of the tree are lopped, hampering the regeneration of the species. Apart from the leaves, the buds are also collected. Several trees have died after the harvesting of leaves and buds. "We stopped the extraction near *Vaddi cross, Aralgadde and Challegadde* area near *Mattighatta* in Janmane Forest Range of Sirsi Forest Division. We noticed that more than fifty people are involved in harvesting the leaves with destructive harvesting methods," say members of Parisara Samrakshana Kendra, Sirsi. Such practices, unless curbed, are likely to cause the species to become extinct within a few years.



A cinnamon tree after harvest. Many trees are left without branches or canopy such as the one featured in this photo. (Photo: Narasimha Hegde)

Presently, tenders that are issued for the harvesting of leaves do not have any background information about the regeneration status of the species or information regarding which trees are ready for harvest.¹⁷ Further evidence that harvesting tends to be careless is that at least 40-50% of the canopy is to be left while harvesting as per protocol, but in numerous field visits by members of Parisara Samrakshana Kendra there have proven to be few trees with so much canopy. Another problem is that the buying price of cinnamon from collectors is significantly lower than the market price, giving collectors no incentive to harvest sustainably.

¹⁶ Source: Letter number M.F.P: CR-96: 89-90 dated September 19, 1994 referred to in letter by Parisara Samrakshana Kendra to S.N. Rai, principal Chief Conservator of Forests, Karnataka dated 15th January 2004, Reference Number PCCF/1/04/mfp

¹⁷ Letter to CF dated January 4, 05

Letters have been repeatedly written to the KFD (January 2004 to PCCF, December 2004 to PCCF, January 2005 to the CF Canara Circle) drawing attention to this grave problem and suggesting that the collection of cinnamon be banned for a period of ten years.

The harvesting of other NTFPs is likewise destructive to both the region's ecology and to the livelihoods of people living in the region. Cane or rattan (*Calamus spp*), for instance, is an NTFP in high demand as it is used to make fashionable furniture that is then sold in urban areas. In a case study by Mallikarjuna in 1996, it is determined that the Kunbis community of the Karwar Forest Division, whose livelihoods are largely based on weaving cane into various useful items for sale, are provided with only 17% of the cane harvest between 1992-1996, whereas the KFD harvests 83% for sales to urban industries. The result has been a gross over-exploitation of cane in the region, and has not only caused the number of plants to decline, but also caused a decrease in prices, leaving the Kunbis people in an unpalatable economic situation.¹⁸



Left: Sustainable harvesting of NTFP Cocum *Garcinia indica*. (Photo: Katherine Cofell)

Right: Creating mats from Wild Date Palm (*Phoenix sylvestris*) as a livelihood option. (Photo: Katherine Cofell)

Dhoopa: an endangered species

Halmaddi Dhoopa or white dammer (*Ailanthus triphysa*) is a tree that grows mostly in moist evergreen forests and semi-evergreen to deciduous forests. The species is used in incense (Agarbatti) and in the paint and varnish industry. *Ailanthus malabarica* was one of the species that plywood industries were allowed to harvest during 1950 to 1970. However, environment movements were able to stop green felling of *Ailanthus malabarica* in the Western Ghats. Later on the Government gave tender to harvest the resin from the trees to contractors. During the year 1982-83 a record of 589 tons of resin was collected in Western Ghats, and it was reduced to 4 tons in 1992-93. Earlier, the use of Dhoopa was restricted to only religious and cultural functions. Increased commercialization and urbanization, however, have created a greater demand for the product.

Over-extraction:

There are very few *Ailanthus malabarica* trees remaining in natural forests; most trees have died due to over-extraction. In order to extract the resin from a Dhoopa tree, it is necessary to inflict a deep wound into the tree causing the resin to ooze out. To obtain a significant amount of the resin, many cuts must be made, damaging the trees' cambium layer, which is essential for regeneration, and thereby altering the trees' secondary growth. Because

¹⁸ Hegde, P. et al. Prakruti: 2000.

extraction has historically been indiscriminate and unsustainable, there are very few trees and the availability of *Dhoopa* to collect is minimal; most collectors of NTFP elect not to extract *Dhoopa*.

The growth rate seems to be hindered by the extraction methods. This topic, however, needs to be studied in detail. Also, regeneration of this species is not known. Seeds (20 numbers) directly sown have not germinated at all. Some research institutions have included *Ailanthus triphysa* on the critically endangered red list.

Ban on tender to harvest the resin:

When the tender is given to contractors, they typically recruit their own people to harvest the resin. Unsustainable harvesting techniques are employed to harvest the resin, thus the resource base has been mostly depleted and destroyed. Lobbying with the government and evidence of unscientific harvesting resulted in an imposed ban on tender to harvest the resin. This ban, however, was only implemented in the Sirsi Forest Division. In practical terms, this does not serve any purpose because a tender/contractor who is legally permitted to extract from other forest divisions can use the same permit to transport illegally collected resin from Sirsi Forest Division.



Ailanthus malabarica after harvesting. (Photo: Narasimha Hegde)

Illegal tapping

Recently, there have been reports of illegal tapping of Dhoopa resin in Siddapur and Yellapur Forest Divisions in the Kanara Forest Circle. Members of Parisara Samrakshana Kendra, Sirsi visited these areas and found that several thousands of trees were affected by the illegal harvesting. These areas are especially remote and people within the area are afraid to reveal the situation to outsiders or to the senior forest officials for personal reasons. The PSK team had to conduct several visits and discussions with the local people to find out the facts.

In the Nagarjaddi and Soorimane Forests in Manchikeri Forest Range of Yellapur Forest Division, a huge quantity of *Ailanthus* trees have been wounded for crude and unsustainable methods used to tap the resin. Surveys and discussions with the local people revealed that more than 2000 trees were deeply wounded around the circumference of the trees. Such deep wounds invite a number of unfortunate outcomes. For instance, invasive stem borers have damaged several trees, especially young ones. These wounds provide easy access to the insides of trees, welcoming the stem borers in who then eat away at the trees until many of them die, benefiting no one.¹⁹

The PSK team brought media to this site and to carry the issue to common people and the Forest Department. Discussions were also held with local level Forest Department officials and staff regarding the situation.

PSK has sent letters to senior Forest Officials such as PCCF Bangalore, urging to ban harvesting and to illegal tapping of *Ailanthus* resin. Demonstrations on sustainable tapping of resin have been organized in three different locations. At these demonstrations, trees that have attained a girth of 90cms are blazed at 10cm X 12cm X 6cm.²⁰

¹⁹ Interview: Narasimha Hegde. 13th June 2006.

²⁰ Adapted from Hegde, P. et al. Prakruti 2000.

6. Destruction by small wood based industries

The operation of small-scale wood industries in the district has also contributed to the loss of forests. Granting permission for operation of several industries in Sirsi, Yellapur and other Forest Divisions within or close to forests areas has led to disastrous consequences in Kanara circle. These wood industries have accelerated the smuggling of valuable teak and rose wood from nearby forest areas.

Some of these industries are located within the town and actively work without prior or proper permission from the Forest Department.

Shrihari Wood Industries, Hulekal

Shrihari Wood Industries, located in Hulekal Forest Range, has made the complaint books of several neighboring villages such as *Sonagimane*, *Menasi* and *Vanalli*. SWI purchases low quality timber through the Forest Department's tender sale and from timber mills to manufacture furniture and other wood products. These are replaced by good quality timber from the forest to make furniture and any other articles. Smugglers slice the timber into specific sizes and carry them to the industry as head loads. At least once per week, the SWI owner's personal vehicle can be spotted going into these forest areas to bring out the timber. There is a short route from Keregadde cross to Vanalli on the Sirsi - Jaddigadde main road that was constructed via this industry. Timber smugglers commonly use this road.

It is evident that illegal smuggling of valuable trees is taking place to a great extent as hundreds of sites can be observed where such illegal cutting has taken place. Stumps of rose wood and teak trees are also visible. During summer months, smugglers put fire to the stumps and destroy them so that no proof of smuggling remains. Many villagers believe that several forest officials are involved in this smuggling business.

Jaddigadde, Gaddehalli, Shivaganga falls region, Savalaklu and Tenginamudi (in Sirsi Forest Division) are some of the places where this illegal activity is going on. These are ecologically important forest areas in the Western Ghats.

It is very essential to close this industry to save the forest. The industry has encouraged several local people to take up smuggling activity. Valuable green teak and rosewood trees have disappeared because of this industry. In the past, whenever a complaint has been made and information given, the local Forest staff have seized a small quantity of timber and not taken any further action. The local people are afraid of the owner of the industry and also feel that he enjoys the support of the FD. So they are not willing to lodge complaints anymore. They call the owner of the industry 'Mini-Veerappan'.

Source: Letter Dated 5th February 2004 to CCF, Vigilance



Forest cleared due to logging. (Photo: Narasimha Hegde)

7. Timber Mafia and the Bureaucracy Nexus

Despite repeated requests to officials at all levels in the Karnataka Forest Department, no action has been taken to curb these causes of deforestation. Officials have been repeatedly requested to inspect affected sites and to take strict action against those involved in the illegal cutting of trees in the forest areas. Although a vigilance team from Bangalore did visit the area few times, they have not taken any action against the culprits or geared the forest administration to protect the forests.

Local activist organizations strongly feel that the timber mafia in collaboration with forest bureaucracy and corrupt political leaders are destroying the forests.

8. Local community action against forest destruction

In Gonsar village of Sirsi taluk Uttara Kannada district, a local village level organization called '*Gonsar Grama Aranya Samrakshana Samiti*' was formed to fight against logging activity. After a number of aggravations, organisation members warned the Forest Department that if they fail to address the issues within the mentioned date, the '*Samiti*' would launch a struggle against logging²¹. In December 2003, the villagers of Gonsar halted the felling of trees by the FD and demanded that the road used for transporting cut timber be shut down by building a fence or laying trenches. They also sought that the degraded plots be used for growing medicinal plants and NTFP species indigenous to the area.²²

In an August 2005 letter to the Secretary of the Ministry of Environment and Forests, Parisara Samrakshana Kendra²³ has observed another community effort to protect the forests. The letter states, "The department has set up Village Forest Committees (VFCs) under JFPM²⁴ to protect and develop the forest. Recently, villagers and VFCs together caught a vehicle loaded green teakwood logs belonging to a smuggler (in Mensi area in Hulekal Forest Range, Sirsi Division, Canara Circle)."

The letter continues to state that the Forest Department did not honor the VFCs and villagers' requests and initiated no action against the smugglers. Furthermore, the seized vehicle was subsequently released by the Forest Department. Given such lapses on the part of the Forest Department, local people have lost confidence in the Forest Department's commitment to the forests and fear that smugglers will rob locals of their livelihoods, sustenance, and overall threaten their physical and mental wellbeing.

These are only two small known examples of the local community's response to a failing official system of forest conservation. The motivation of local communities to be centrally involved in conserving their natural resources can be used by the KFD to tackle the problems of smuggling.

Unfortunately, these community efforts are not without considerable threat to the communities. Through instances of the KFD's inability to retain the anonymity of concerned community members and due to the overall smallness of the villages, parties complained against may, and have, retaliated and exerted pressure on the communities to accept their illegalities and destructive behaviour. This takes on greater significance when individuals or small groups of concerned citizens taken on the task of informing the officials about illegal activities in forest areas. The identity of

²¹ Source: 'Impact Assessment of Logging in the Western Ghats of Karnataka, India', a study by Prakurti/Parisara Samrakshana Kendra, August 2005.

²² Source: 'Impact Assessment of Logging in the Western Ghats of Karnataka, India', a study by Prakurti/Parisara Samrakshana Kendra, August 2005.

²³ Source: Letter by Pandurang Hegde, Parisara Samrakshana Kendra to Secretary, Ministry of Environment and Forests, Ref No: MoEF/4/7/2005, dated 5th August 2005

²⁴ Joint Forest Planning and Management (JFPM) was a forest conservation policy adopted by the KFD in 1994-95 to involve local communities in the planning and management of identified forest areas. Under this initiative, committees were formed at the village level. These committees (VFCs) had the task of protecting the forest as per an MoU signed between them and the KFD. The VFCs were also made shareholders in the revenue and benefits in return for their help in protection.

informers and whistle blowers needs to be guarded so that they do not come into any danger from the smugglers or the officials of the KFD. Often, the illegal activities take place by the villagers themselves in collusion with the Forest Department.

III. Conclusions and Suggested Strategy of Response to the Deforestation Issue

The issues stated in this report are in no way unfamiliar to the KFD as local people, journalists and civil society groups for several years now, have communicated them. It is therefore urged that the following steps are immediately taken to arrest the causes of deforestation and to ensure that conservation laws and rules are upheld, offenders are punished adequately and in compliance with laws, and to strongly discourage future illegal and destructive activities.

- Stringent punitive action against all erring officials including watchmen and forest guards, who are often in compliance with the local tree felling activities and don't perform their duties.
- Award VFCs the power to temporarily take smugglers to custody until the FD arrives and takes over the enforcement procedures.
- Closure of all illegal wood based industries with a short deadline and imposing of fines and punitive action if they are not shut down by the given date.
- No more permissions to wood based industries within a stipulated distance of standing forests.
- Strict vigilance regarding the source of timber to the wood based industries that are operating legally. This vigilance can be done with the help of VFCs wherever they exist
- Surprise checks and investigations to forest areas by district level and higher officials the KFD along with civil society groups, journalists and concerned citizens.
- Change the present system of tendering and extraction of NTFPs.
- Demarcate forest areas clearly.
- Ensure ways by which forest staff can reside close to forest areas and maintain vigil.
- Establish a toll free phone line by which people can leave information about illegal activities in forest areas, anonymously.
- Share working plans and other forest work related documents with villagers through the local KFD offices so that they can help to keep a vigil on the activities inside forest areas too. It would help for the KFD to be more proactive and form small forest protection groups with local persons who are interested, and have village level meetings. At present any such effort has not been met with much enthusiasm or follow-up, even if the local persons show interest and go out of their way in paving a way to helping tackle the tree-felling problem. Identify appropriate methods of extraction of dead and fallen trees. Ban the extraction of dead and fallen trees from crest line forests.
- Issue a clarification on the Karnataka Forest Code to indicate the situations under which officers can order felling over and above what is already marked in the Working Plans and to what extent felling can be undertaken.
- Set up Biodiversity Management Committees (BMC) (as per the Biodiversity Act) in all panchayats and have them plan how they will locally protect their forests. Each BMC will need to have a plan that they will execute.
- Begin forest nurseries at every panchayat run by local villagers as a side enterprise. Species grown could be

popular ones, and also endangered or threatened species. Saplings should be easy to access or buy and not involve bureaucratic loopholes as is currently prevalent. This could be done in partnership with interested NGOs as well.

- Checklists of the status of the forests and species (threatened, endangered, extinct) should be made and freely available.
- A detailed investigation to look into the legal violations of the deforestation issue, specifically with reference to the Forest Conservation Act, 1980 and related orders of the Supreme Court in the T.N. Godavarman case as well as the Wild Life Protection Act, 1972.

Gaps in Information:

- Precisely how the timber mafia work and specific data regarding their occasional collusion with the Karnataka Forest Department.
- Official numbers tracking how much forest is lost each year due to illegal actions.
- Number of NTFPs in the region and, more specifically, the multiplicity of uses.
- News article on smuggling in Dehalli and Vajralli (Annexure 6)

Annexures

Annexure 1. Map of Uttara Kannada District, Karnataka

- to be added

Annexure 2. List of sites where green trees are felled and unscientific logging and harvesting of forest products have taken place as of mid 2005.

Sl.No	Place /Village	Forest Range/ Division/ Circle	Remark
1	Sanavalli	Mundgod/ Yellapur/Canara	Felling of teak trees
2	Shigehalli	Hulekal/ Sirsi/ Canara	Smuggling of Sandal wood
3	Jaddigadde,Savahakkal, Gaddehalli	Hulekal/ Sirsi/Canara	Rose wood and teak trees
4	Ramajikere	Banavasi/ Sirsi/Canara	Encroachment in two hundred hectares of Reserve forest
5	Lalguli, Girigirigudde	Yellapur/ Yellapur/ Canara	Smuggling of teak trees
6	Upaleshwar, Nandolli, Vajralli	Yellapur/ Yellapur/Canara	Smuggling of valuable trees
7	Mattighatta	Janmane/ Sirsi/ Canara	Unscientific harvesting of Cinnamon Leaves.
8	Challegadde	Janmane/ Sirsi/ Canara	Unscientific harvesting of Cinnamon Leaves
9	Gubbigadde	Sirsi/ Sirsi/ Canara	Unscientific harvesting of Cinnamon Leaves
10	Manchikeri	Manchikeri/Yellapur/Canara	Unscientific Harvesting of Vateria indica
11	Gonsar	Hulekal/ Sirsi/Canara	Unscientific harvesting of Cinnamon Leaves
12	Kudragod,Kelase	Hulekal/Sirsi/Canara	Smuggling of valuable trees & Unscientific harvesting of Cinnamon Leaves, unscientific logging.
13	Dongri.	Ankola/ Karwar/Canara	Unscientific logging impacts on NTFPs like Garcinia indica, Artocarpus lakoocha, Honey, Cinnamon and other species.
14	Chipageri	Manchikeri /Yellapur/Canara	Smuggling of teak trees
15	Keshavalli,Karkal	Hiregutti/Honnavar/Canara	Unscientific logging
16	Tumbri	Hosanagar/Sagar/ Shimoga	Unscientific harvesting of Cinnamon Leaves.

Annexure 3. GREEN TREE FELLING IN SHARAVATI VALLEY

The Karnataka Government banned felling of green trees in the natural forests of Western Ghats in 1990. At present, only dead and fallen trees are removed from the forests. This policy change was initiated to conserve the remaining natural forests of Western Ghats.

We have come across a case where the Karnataka Forest Department has blatantly violated this order and has felled green trees in evergreen forest Sharavati valley in Uttara Kannada.

The Forest Department has:

- Violated the order and has felled green trees
 - These trees were felled when there was a ban imposed by Supreme Court restricting any kind of felling in the forests. (Supreme Court interim order dated 12.12.1996 in the w p .No 202/95).
 - This is done illegally, as the concerned officials did not follow even the official procedure as well as departmental sanctions.
 - Clear felling of natural forests has been carried on despite of the ban imposed by the Central Government
- Thus in violation of the legal and official order, tree felling has been carried out and the culprits are free without any action being taken for having destroyed the evergreen forests. Parisara Sanmrakshana Kendra, based in Sirsi, sent a team of scientists and researchers to the Sharavati valley on a fact-finding mission to investigate felling.

Objectives:

- To enumerate the area where green fellings has taken place and to measure the stumps of trees.
- To measure the area clearfelled.
- To measure the area cleared for constructing new roads.
- To find out the number of green trees felled in the region.

Area: Sharavati valley in Honnavar Forest Division. The site is in Mahime, in Forest Survey No. 160. This is adjacent to the main road from Jog falls to Honnavar. This is situated on the border of Shimoga and Uttara Kannada. It lies at latitude 14°15'N and longitude 74°50 E (approximately). This is part of the Gersoppa Forest Range.

Methods:

Mapping and measuring area under road and clearings. Stumps were counted. To estimate density of trees and plants lost due to the clear felling, three sample plots of 20x20-meters were laid in the adjoining forest. The DBH (Diameter at breast height) and height of trees were measured.

Results:

Fourteen trees were extracted from this area for timber. They were extracted on either side of the newly constructed road. About 4140-sq. m of area was clearfelled for the road. Another 7612.76-sq m area was cleared for extracting the trees (including the area destroyed by felling tree). Totally, 1.18 ha of natural forest was completely cleared. From the quadrat data, we found that the density of trees (with GBH more than 30 cms) were 575 trees/ha. The average density of small plants including regenerating plants, are 34,068 per ha. Hence estimated number of trees felled in the 1.18 ha was 676 and small plants were 46,040.

Total damage done while extracting the timber can be summed up as following:

- Total area clear felled 1.18 Ha
- Area clear felled for road 4140-sq.m
- Trees destroyed 676 nos
- Small plants destroyed 46,040 nos

In Other words,

On an average, for extracting one tree:

- 48 green trees were felled(with a girth of more than 30cms)
- 2860 small plants were clear felled
- 295 sq m of area is cleared for making road
- 843 sq. m of forest was cleared

For removing one cubic meter of timber - 1.96 cubic meter of tree is destroyed.

Conclusion:

The Karnataka Forest Department (KFD) is responsible for conserving the natural forest. However, as the report of fact-finding mission indicates, KFD has been responsible for destruction of fragile evergreen forests in Sharavati valley.

- This felling has taken place in violation of state government order.
- This is in violation of Supreme Court interim Order
- It has clear felled the forests, which is in violation of Forest Conservation Act 1980.
- The forest officials have committed this illegal act and it has been supported by the KFD as no action has been initiated against the forest officials who are responsible for the felling.

Report Prepared by:

Parisara Sanmrakshna Kendra
Hulemalgi Brothers
Chowkimath
Sirsi (Uttara Kannada District)
Karnataka 581401

Annexure 4. Article in Hindu Survey of the Environment 2004 by Pandurang Hegde (hard copy)

Annexure 5. Letter to Harish Salve, Amicus Curiae, Godavarman Case

Harish Salve
Amicus curiae
In the ongoing Supreme Court
Case on Forests
C/o Supreme Court
New Delhi

December 22, 1999

Re: Violation of Supreme Court order dated 12/12/1996 (W.P.No. 202/95) in Canara Forest Circle, District: Uttara Kannada, Karnataka

Dear Sir,

We are a Voluntary Organisation involved in protection of forests. We would like to bring to your notice the tree felling that has taken place in the forests of Western Ghats in Canara Forest Circle, Uttara Kannada district, Karnataka. These felling are in violation of the Supreme Court order mentioned above. Kindly note that these felling have not been sanctioned by the Ministry of Environment and Forests under the Working Scheme. These indiscriminate felling will lead to destruction of the fragile ecosystem of tropical forest in Western Ghats.

The details of violations committed by Karnataka Forest Department are as follows:

Honnavar Forest Division (Canara Circle)
Range: Gersoppa
Place: Mahime
Forest Survey No. 160
Trees felled: 338
Year of felling: 1999(January to May)

Karwar Forest Division (Canara Circle)
Range: Ramanguli
Place: Kodlagadde Block
Trees felled: 194
Year of felling: 1999

Range: Joida/Kumbarwada
Block: Karamballi
Timber removed: 163.549 M Tons
Year of felling: 1999

These fellings has been identified and brought to the notice of authorities. However, there are forest areas, which has not been identified.

We have repeatedly written to State and Central government requesting them to take actions on this violation. However, they have not replied.

Therefore, we request the Supreme Court to intervene and take action on the violations of the order.

Yours faithfully,

Pandurang Hegde

For Parisara Sanmrakshana Kendra

Annexure 6. Newspaper clipping of smuggling at Vajralli and Dehalli (to be sourced)