

Reviving Traditional Forest Management in Western Ghats

Study in Karnataka

Traditional systems of forest management have often been ignored or summarily dismissed as forest departments in most states are keen to implement more recent joint forest management (JFM) schemes. This study of two districts located in the Western Ghats in Karnataka reveals that JFM schemes seeking to place degraded lands under plantations have neglected the dependence of the local people on 'kans' – sacred groves – present in both districts. Local people till recently retained management rights over these evergreen tracts. In the interests of conservation and to obtain a sustained revenue from NTFP products, it is necessary for the government to involve the local people in the management of the kans.

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The Western Ghats of India is one of the 'hotspots of biodiversity' in the world. This chain of mountains spread over an area of about 54,000 sq km is unique in terms of its endemic flora, fauna as well as the biological affinities it shares with forests in south-east Asia. People in the Western Ghats have traditionally followed conservation systems like setting up sacred groves, near natural patches of forests protected in the name of local deities and hence they represent patches of primary forests which have very high conservation importance [Malhotra et al 2001]. 'Kan' forests in the Western Ghats of Karnataka are such patches protected by people since historic times due to their sacred importance and hence these remain important for conservation of evergreen forests species in the Western Ghats.

Kans are patches of evergreen forests in the Western Ghats of Karnataka. The presence of these forests have been reported from Uttara Kannada district and Old Mysore districts like Shimoga and Chikmagalur [Chandran and Gadgil 1993, Pascal et al 1988, Buchanan 1870]. I review here the historical management status of kans in Uttara Kannada and Shimoga districts with reference to Siddapur taluk and Sorab taluk respectively. It is proposed that the management system followed in the Old Mysore could be helpful in designing present-day management systems. I also identify the joint relationship of local people and the state forest department in the earlier management system and compare that to the present-day programme of Joint Forest Planning and Management (JFPM – as its referred as in Karnataka). The discussion also refers to the potential of kans for a range of NTFPs (non-timber forest produces) based on the vegetation survey of about 29 kans in Siddapur (17) and Sorab (12) taluks.

Management of Kans – An Historical Perspective

It is estimated that historically about 6 per cent of the land use was under kan forests as mentioned in Table 1. Uttara Kannada in a 25 sq km area enabled to reconstruct the traditional land use system. Percentages of land under different land use in the focal area are given in Table 1. Indeed the figures in the data present the situation that prevailed more than 100 years ago and are approximate.

British government as soon as taking over the Uttara Kannada and Old Mysore state surveyed the respective areas to explore the resources. In later years the government tried to make

decisions relating to management of the forest area and certain years became the historical benchmarks in deciding the fate of the forests resources in the Western Ghats. Table 2 summarises the chronological history of Kan management.

The treatment of kans by the British government was differed in the erstwhile Bombay presidency and in the Old Mysore state. The Bombay presidency curtailed the rights of local people on the kans and treated these forests for timber exploitation. In the Old Mysore state local landlords enjoyed the rights over the kans till 1970s. Thus the area under Old Mysore state had formulated elaborate rules and regulations regarding the management of kans. The rights of people over the produce were also identified as follows, as defined in Annon (1901):

- (i) The occupant of a kan has the right to tap toddy trees subject to the Abkari rules, cultivate pepper, also to collect gum and honey and all jungle produce; he may further collect leaves ('soppu') for manure for use in the kan itself, and cut underwood and thin out top branches to the extent absolutely necessary for securing the growth of the pepper vines.
- (ii) The kan holder has the right to lop unreserved trees growing in the kan for soppu to be used in the kan itself.
- (iii) Where a kan extends to within 50 yards of the kan holder's house, he has the right to fell any unreserved trees, or to lop for soppu any reserved trees, which may be growing within 50 yards of his house on any side. Within those limits he is allowed full liberty to plant any trees or carry on any cultivation whatsoever. The soppu lopped under this rule must be used within the kan itself.
- (iv) Except in the cases covered by the foregoing rules, the kan holder has, as regards trees growing in the kan no right, either

Table 1: Land Use Reconstruction in Siddapur Taluk

Land Use	Percentage of Area
Kans	5.85
Supply forest	24.14
Shifting cultivation lands	23.40
Grazing lands	6.46
Fields and other cultivated lands	28.19
Area under miscellaneous uses	6.12
Ponds and rivers	2.00
Hamlets	3.84
Total	100.00

Source: Chandran and Gadgil (1993).

to fell or injure any timber whatever, reserved or unreserved, or to lop for soppu or otherwise to injure or interfere with, any reserved tree.

If, in violation of this rule, he cuts or injures timber of any tree, or lops for soppu or otherwise injures any reserved tree, the terms of the tenure of the kan shall be considered to have been broken and the kan shall be resumed, the offender being further liable to punishment for breach of forest rule.

(v) The kan holder has no right to plant coffee in the kan and infringement of the conditions of the kan tenure by planting coffee will render the kan liable to be resumed.

As regards the kan holder, the kan shall be deemed to be a district forest and as regards strangers, it shall be deemed to have status akin to state forests within the meaning of the Forest Rule of 1878 and all breaches of these rules are liable to be punished under Forest Rule of 1878 or under the Indian Penal Code [Anon 1901]. The system of partnership with lease holder and through him with local people was spelt out and was implemented till 1960s.

Status of Kans in Uttara Kannada

I describe here status of kans in mainly two ranges of Sirsi forest division – Siddapur and Kyadagi administratively falling into Siddapur taluk.

Siddapur taluk has a large number of kans – about 113 kans – (84 in Siddapur range and 29 in Kyadagi range) according to records of village forest registers (VFRs). Most of the kans form a contiguous forest patch by merging with the kan of neighbouring village. Degradation of kan forests in Siddapur taluk has a history of about 200 years. The kans near the growing Siddapur towns of Kondli, Haladkatte, Kunaji, Ballatte were further degraded after the selective felling by the forest department and absolutely failed to regenerate not even with deciduous species facing the brunt of increasing population. The majority population in the area is even today dependent on agriculture and lately on

Table 2: Historical Benchmarks for Management of Kan Forests

Year	Event in Shimoga (Old Mysore State)	Event in Uttara Kannada (Bombay Presidency)
1801		Mention of kans by Buchanan as forests of gods and pepper
1848	First record of kan revenue from Sorab taluk	
1867	British debated over existence of kans as separate land use pattern	
1868	Brandis and Grant report on kans of Sorab	
1878	Prohibition of coffee cultivation inside kans	Curtailement of rights over forests
1882	Kans converted to coffee plantations lost the status as kans in Chikmagapur (Kadur) district	
1885	Kan rules were published	
1888	Wingate, British forester remarks over destructive exploitation from <i>kans</i>	
1895	Amendment in kan rule-1	
1919	M S N Rao, forester comments over the drying of streams due to felling in Shimoga kans as 'disastrous'	
1922		Collins reports infestation of kans by <i>Lantana</i>
1940		Timber exploitation from kans for railway – <i>Dipterocarpus indicus</i> from Kattle Kan
1966		4000 ha of kan area for industrial felling in Sirs and Siddapur taluks
2001	Leftover kans as state forest or minor forest or reserve forest	Leftover kans as protected forest or reserve forest

horticulture like areca nut gardens. The cultivation of areca nut requires large amounts of green fodder in form of green leaves that ultimately take a toll of standing woody areas.

The degradation of kans in Siddapur could have following three major reasons:

(i) *Loss of rights of local people in Bombay presidency*: The forest department established by the British government in the Bombay presidency denied the rights of local people on their 'sacred kan lands' [Chandran and Gadgil 1993, Buchanan 1870]. This decision had a very adverse impact on the local management of not only kans but also overall natural resources in Malnad area.

(ii) *Plantations of Acacia auriculiformis*: During the period 1966 to 1985, selective felling was done in the evergreen kan forests in Siddapur taluk. Plantations of *Acacia auriculiformis* were set up in place of clear-felled areas. People had dependence on these kans for several needs like dry leaves, several non-timber forest products like pepper, wild nutmegs, etc, apart from the daily requirements like firewood. The plantations were unable to complete the needs of people. Obviously the earlier untouched kans became the only available resources to complete the daily requirements of the growing population. The village Kadkeri lost its kans to plantations of *Acacia auriculiformis*; hence, people of the village turned to the kan land of the neighbouring villages to complete their requirements.

(iii) *Areca nut cultivation*: The last two decades of 20th century saw rising market prices for the areca nuts from the Malnad region. It tempted even the marginal farmer to convert paddy land or encroach the kans in the valleys for the cultivation of areca nut without official *soppina bettas*. The vegetation in these encroached kans could be easily distinguished from undisturbed kans due to the selective protection to *Hopea ponga*. Also in many kans, selective protection has been given to *Garcinia gummi-gutta*, *G morella* and *G indica* due to their economic value.

Status of Kans in Sorab Taluk

In contrast to kans in Siddapur taluk, Sorab taluk kans still retain their potential. There were 116 kans in the taluk but according to the forest department the present number of kans is 65. The total number of kans in Sorab taluk could be more than 65 as many earlier kans are now have the status of minor forest or district forest and are not necessarily reserved forests as considered by many forest officials. There could be following three reasons for the present day condition of kan forests in Sorab taluk –

(i) *Recognised regime by the forest department till 1960*: The Shimoga circle of the Karnataka state forest department administered kans under a separate management regime till 1960, i.e., until the last reorganisation of the forests in the circle. There were official prescriptions followed for the maintenance of the kans since the time of the Old Mysore state under the management of British government. The management of kans and sharing of benefits was vested with local landlords like the gowdas of the village. There was a system of tax/lease ('shisht') to be paid by the local gowdas in whose name the kans were leased out. The state forest department continued the system till the local landlords lost their rights on kans mainly due to the land tenancy act.

(ii) *Lesser areca nut cultivation*: Unlike Siddapur taluk the kans in Sorab taluk do not favour areca nut cultivation and thus face a lesser impact.

(iii) *Role of NTFPs from kans in supporting the local economy*: The forest department auctions the non-timber forest products like pepper, cinnamon, resins, etc, which are basically collected from the kans. The local Idiga community remains a supplementary income from the collection of NTFPs. But the contract system for purchasing these NTFPs is eroding resources like cinnamon where the bark is recklessly removed or the pepper vine is uprooted instead of carefully plucking the berries by the collector.

Potential of Kans: Geographical Distribution

Siddapur taluk shows a large number of kans – about 112 kans – (83 in Siddapur range and 29 in Kyadagi range) according to the records of village forest registers (VFRs). Sirsi taluk also has 106 kans. Talbot (1976) mentions the kan forests in Anshi area of Uttara Kannada district. The coastal taluks like Honnavar, Kumta, Ankola also have a history of kan protection [Chandran and Gadgil 1993, Buchanan 1870]. There is also mention of kans from Sonda, Banvasi areas in Uttara Kannada district [Anon 1901, Buchanan 1870].

In Shimoga district kans have been reported from taluks like Tirthahalli, Hosanagar, Sagar, Sorab, etc. Records available with Sagar forest division mention kans in taluks such as Sagar (82), Sorab (172) and Hosanagar (60). The monograph on Malnad kans, *Soppina betta* and Kumri lands (1901) also mentions the existence of kans in Chikmagalur (erstwhile Kadur) district of Old Mysore state.

This suggests that the kans tradition was quite widespread in Malnad district and Hassan district also might not have been any exception due to similarity of this area with rest of Malnad. Along with the number of kans, the extent and the size range are also important to understand the potential of these forest patches in present-day context. As discussed earlier kans were exposed to different kind of exploitation like selective felling, conversion to plantation, allotting the land for non-forest purposes like rehabilitation of people, etc. So it makes a worthwhile exercise to know the potential of kan area available and the status of forest on these kan lands.

Present Status of Kans in Siddapur

An attempt has been made to understand status of kans in Siddapur taluk by considering the encroachments, history of forest working and present status of some of the kan sites.

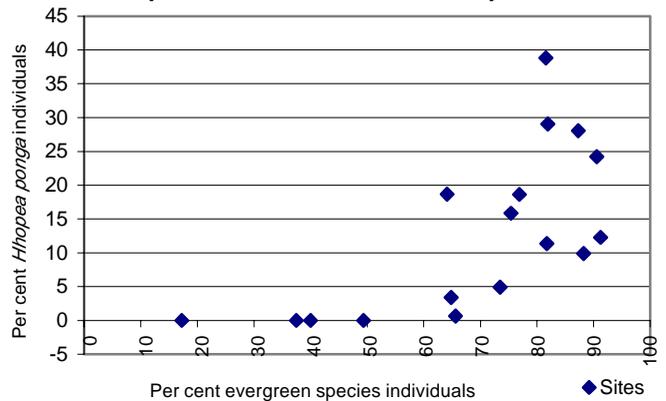
As per the village forest registers, Siddapur taluk has in all 112 kans divided into two forest ranges – Siddapur (83) and Kyadagi (29) respectively. Kyadagi range was formed recently; earlier it was part of Siddapur forest range. As shown in the Table 2, kan area is about 1.4 per cent and 4.5 per cent for Siddapur and kyadagi forest ranges respectively.

According to Shanmukhappa (1966) about 624 ha from 26 kans were worked or selectively felled from Siddapur and Kyadagi forest ranges. In the working plan the land survey numbers are not given. But village names in the kan list were matching. So the worked area for these kans could be traced using the old forest records. There was not any information available regarding the extent of extraction from a particular beat or survey number. The main species extracted at an average girth above 200 cm were – *Persea macrantha*, *Elaeocarpus tuberculatus*, *Spondia mangifera*, *Symplocos spp.*, *Canarium strictum*, *Hymenodictyon excelsum*, *Alstonia scholaris*, *Ailanthus excelsa*, *Salmalia malabarica*, *Mangifera indica*, *Dysoxylum malabaricum*, *Dipterocarpus indicus*, *Calophyllum elatum*, *Vateria indica*, *Cedrela toona*, *Chukrasia tabularis*, *Tectona grandis*, *Dalbergia latifolia*, *Artocarpus hirsuta*, *Artocarpus integrifolia*, etc. Out of these species many of them were found in kans along with the reserved forests. This felling was mainly for commercial purposes to some organisational purposes of companies like for

Table 3: Summary of Kans in Siddapur

Range	Kan (ha)	Available (ha)	Percentage Available	No of Kans	Range Area (ha)	Kan Percentage in Range Area
Siddapur	1450.62	963.47	66.42	83	67542.8	1.43
Kyadagi	970.12	943.19	97.22	29	20880.8	4.52
Total area	2420.74	1906.66	78.76	112	88423.6	5.94

Graph: Relative Abundance of Two Species



Source: Gokhale 2002, unpublished.

WIMCO, Indian Railways, Indian Navy, etc, during the period of 1950 to 1970 [Shanmukhappa 1966].

Siddapur taluk has 56.35 per cent area under the forest department. There is apparently no land with the revenue department to accommodate the growing population and their basic needs like shelter. At most places people have encroached the forest department land for constructing houses. The other kind of encroachment results from livelihood reasons. Several new areca nut plantations have come up in recent times due to high prices available for areca nuts. Many of the plantations have come up in the valleys by converting the natural vegetation, some times even the *Myristica* swamps [Chandran and Mesta 2001]. The new plantations without official *Soppina betta* lands have to be dependent on the natural forests for mulching material. Many areas thus have been virtually encroached for the purposes of mulching material as shown in with the presence of monodominant species *Hopea ponga* in some of the kans. Kans have also been encroached by other online government departments to construct hospitals, primary schools, bus stops, etc.

The graph correlates the relative abundance of *Hopea ponga* with the relative abundance of evergreen individuals in 17 kan sites in Siddapur taluk.

In spite of these pressures like conversion to plantations, houses, grass cultivation, etc, there could be substantial area still available under the kans, which needs urgent attention. Table 3 shows that more than 1900 ha of forest could be still under kans in Siddapur taluk.

Reviving Kans

The above discussion of historical abuse of the kans by the state forest department and the efforts to detach the local people from the nearby resources might lead to a pessimistic impression of a lost battle as well as the valuable global resource in terms of rich plant diversity unique in the world.

But there has been a continued relationship of people and kans through the medium of local deities ever since this part of the Western Ghats began to be settled. The patches inside kans even today harbour local deities like Chowdamma, Jatakappa, Bhutappa, etc. Brandis, the first inspector general of India surveyed the kans of Sorab in 1868; at the same time he toured the Kodagu district in southern Karnataka. In Kodagu he could recognise the large numbers of sacred groves ('devarakadus') where forests were protected in the name of local deities. Very interestingly he never even made passing reference to the sacred values attached to the kans which were observed by Buchanan in 1801. Buchanan considered the sacred values of kan forests as a contrivance for not handing over these forest patches to the British administration. For unknown reasons communities in Shimoga

and Uttara Kannada could not assert their traditional rights over kans officially like devarakadus of Kodagu. In spite of that, the of local the people, of conserving forests for the local deity continued to a large extent and eventually was restricted mainly to the area immediate to the deity and not the larger forest tracts. The larger forest tracts became part of the management regimes of the forest department as mentioned above.

The present-day relationship of the people with the larger forest tracts is mainly to obtain a supplementary income from the sale of NTFPs and it is not influenced by old tradition. The forest department is also aiming at the extraction of the valuable NTFPs like cinnamon bark and leaves with the help of contractors. The contract labourers working with the contractors are extracting the NTFPs in destructive manner ultimately the harming the long-term benefits from the NTFPs as well as evergreen forests of the Western Ghats.

Joint Forest Planning and Management Programme

In the western Ghats of Karnataka there are about 700 VFCs established covering the districts – Uttara Kannada, Shimoga, Chikmagalur, Kodagu and Dakshina Kannada [Rao et al 2002]. I studied JFPM at five sites in Sorab and Siddapur taluks as given in Table 5.

The joint forest management scheme of the state forest department has totally neglected the dependence of local people on kans in both the districts. The major emphasis of the scheme is more on converting degraded lands under plantations. For the Western Ghats region the emphasis also could have been to jointly manage the existing stands of forest as the region is bestowed with evergreen forest tracts known for the its rich flora and fauna. Local people historically enjoyed limited rights over these kans. The government also earned reasonable revenue from the kans. Even today kans have the potential of yielding good revenue due to the potential of *Piper nigrum*, *Cinnamomum malabathrum* as well as several NTFPs like *Artocarpus gomezianus*, *Zanthoxylum rhetsa*, *Z ovalifolium*, etc. To conserve these species rich evergreen forest pockets in the central Western Ghats there is an urgent need to extend hands to the local people to ensure joint kan management.

At sites 1 and 2 in Table 5, natural evergreen forests have not been considered in the preparation of micro-plans even though the natural forests are officially under JFPM area. People are either not aware of the resources available in these areas or the forest department is unaware of the potential of the natural forests in these areas. The important fact is at both these sites the natural forests

Table 5: Kan Management at Five JFPM Sites

No	JFPM Village	Taluk	Management of Kan
1	Tavarehalli	Sorab	Neglected
2	Malalgadde	Sorab	Neglected
3	Kanhalli	Sorab	<i>Acacia auriculiformis</i> plantation in forest gaps
4	Kangod	Siddapur	Plantations
5	Naligar	Siddapur	Neglected

Source: Gokhale 2002, unpublished.

Table 6: Possible Joint Management of Kans

Ways Tasks →	Decentralised	Joint Performers	Local Level	Open Bidding
NTFP collection	VFC			
Controlled harvest		VFC, FD		
Quality control			VFC	
Market channels				FD, LAMPS, Industry
Benefit sharing		VFC, FD		
Forest protection		VFC, FD		
Overall monitoring		VFC, FD		
Linking research upto field		FD, Scientists		

mainly consist of kan forests. The benefit sharing model suggested based on the NTFPs in kans needs attention in the context of making VFCs self-sustainable and also to sustain the interest of the people in forest protection and management.

One of the reasons for taking away kan forests from the landlords was to ensure equality over resources. But interestingly the VFC presidents at sites 1 and 2 earlier had rights over kans in their respective villages and these landlords continue to retain their influence over the population as well as the resources around them, as they the president of VFCs. As an effect of this at site 1, there is a separate informal group of local people earning from the collection and selling of NTFPs which is probably in conflict with the efforts of VFC.

Table 6 tries to summarise various tasks required to manage the kans jointly by the forest department and the already established VFCs.

Conclusion

By and large the current JFPM programme has shown its limitations to identify and address the local needs. The state forest department could manage the kans, i e, the vestiges of evergreen forest patches in the central western Ghats by improving the collection, regeneration and marketing of NTFPs in collaboration with local people instead of having the timber based approach for JFPM. The kan forests could be of immense use in managing the forests because of their potential to yield the highly required immediate economic benefits to local people. The joint management of forests and NTFPs will help make VFCs and JFPM as a self-sustained effort having the long-term impact on the conservation of the Western Ghats biodiversity. [EW]

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[I am thankful to Winrock-Ford Small Grant Programme for supporting this work. I am also thankful to M R Almeida, Madhav Gadgil and M D S Chandran for the valuable guidance. I am thankful to Bombay Natural History Society, Mumbai for hosting the project. Thanks are also due to Sirsi and Sagar forest divisions especially the range offices of Siddapur, Kyadagi and Sorab. Thanks are also due to K C Malhotra for his comments on the draft.]

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