



STUDY OF SACRED GROVES IN WESTERN PANHALA TEHSIL OF DISTRICT KOLHAPUR

Shubhangi M. Gavade

New Model Jr. College, Kolhapur

Dr. Kiran P. Shinde

*Head, Department of Geography,
Vivekanand College, Kolhapur*

INTRODUCTION:

The patches of vegetation protected on the basis of religious faith are called sacred groves. Apart from India, they occur in other parts of Asia, Africa, Europe, America and Australia. In India, sacred groves are mainly distributed in the states of Andhra Pradesh, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Uttarakhand, West Bengal and the Union Territory of Puducherry. Their ecological, biological, cultural and historical values are invaluable. According to the National Environment Policy of India, ancient sacred groves should be treated as possessing "Incomparable Values". Many valuable medicinal plants and wild relatives of cultivated species are present in the groves which may have definite role to play in the future species improvement programmers'. It is estimated that the total number of sacred groves in India is likely to be between 100,000 and 150,000. However, very less number of them are enumerated, documented and studied. Sacred groves are known by different names in different regions as Than or Madaico in Assam, Matagudi, Devgudi or Sarana in Chattisgarah, Dev Van in Himachal Pradesh, Jaherthan or Sarana in Jharkhand, Devarakaadu or Kans in Karnataka, Kaavu in Kerala, Umang Lai in Manipur, Law Kyntang or Law Niam in Meghalaya, Jahera or Thakuramma in Orissa, Orans in Rajasthan, Kovilkaadu in Tamil Nadu, Bugyal or Dev Van in Uttarakhand and Garamthan or Jahiristhan in West Bengal. They may vary in size from a few trees to dense forests covering extensive tracts of land. Though there are many references to the sacred groves and sacred trees of India in early literature, the scientific study of them was initiated by Gadgil and Vartak.

In Maharashtra sacred groves are found in tribal as well as non-tribal areas. The sacred grove in western part is called devrai or devrahati whereas in the eastern part Madiyatribals call it devgudi. Gadgil and Vartak documented 233 sacred groves from Thane, Raigad, Jalgaon, Pune, Satara, Kolhapur, Yewatmal, Bhandara and Chandrapur districts. A recent study by Bombay Natural History Society shows existence of about 1600 sacred groves in Maharashtra. MahadevKoli tribe in the Western Ghats of Maharashtra also has the tradition of sacred groves. The average size of the groves is a few acres. Large groves are found occasionally. Smaller groves in the western and eastern parts rarely allow extraction of resource from the groves. Sacred groves form an important landscape feature in the deforested hill ranges of the Western Ghats of Maharashtra.

The Devrai word came from two local words; that is, Dev means God and rai means forest. So it means god's forest is Devrai. Such forest patches are considered a sacred forest by locals so they are called sacred groves. The groves thus act as key benchmarks of less disturbed vegetation in a mosaic of other traditional and modern forms of land use. The groves play a role in maintenance of the local ecological balance, conservation of watersheds, and preservation of bioresearches. Sustainable use of resources and use of management principles for different landscape elements are frequently linked to culturally distinct sentiments. In the villages in which groves are protected, regionally relevant folk knowledge supports traditional conservation practices. Local people have evolved their own traditional rules and management based on ancient practices which led to conservation and maintenance of the groves as relatively intact patches of forests as a by-product of their religious sentiments. During the last two decades farmers have sold large pieces of land to speculators for urbanization. This is due to the enormous rise in the price of land. This change has triggered several socioeconomic and cultural aspects in the region with a consequent loss of protective sentiments for the sacred groves. Kolhapur, once home of around 200 Devrai, has less than 50% of such forests at present. Much of the land is converted into agriculture or temple has been established removing the forest. "Hardly any private Devrai exists nowadays. The extreme variety of plant

species makes Devrai unique laboratory. In 1980s eminent ecologist Madhav Gadgil and V D Vartak created first inventory of Devrai forests in Maharashtra during which they documented 233 places. From Kolhapur district, 37 Sacred Groves were visited from Radhanagari; Bhudargad; Ajara; Malkapur areas, but apart of this a narrow passage between Malkapur (Shahuwadi Taluka) and Gaganwavada Taluka. e Western part of Panhala Taluka no reports are available about sacred groves. Hence, it has been decided to carry out the work entitled, "Study of Sacred Groves of Western Panhala Tehsil, District Kolhapur".

OBJECTIVES:

1. To explore the natural resources of selected sacred groves in study area.
2. To study past and present status of selected sacred groves in study area.
3. To prepare the list of ethno-medico-botanically important plants.

STUDY AREA

Panhala is about 20 km from the Kolhapur City and is famous for the historical place of fort Panhala which is Maratha capital for long time. Geographical coordinates of Panhala Taluka is 16°48'20" N and 74°06'19.80" E and elevation 750 m. It is enriched with lush green hills, beautiful landscape, fauna and flora. There are more than three thousand trees including fruits, flower, foliage, ornamental garden plants, grasses and medicinal plants. Panhala has not only been gifted with lush green cool nature, birds, fresh air and calm atmosphere but a place with great history blessed by Shivaji Maharaj. The Taluka is surrounded by Ratnagiri district to the west, the shahuwadi Taluka to the North, part of Karveer and Hatkanangale Talukas to the east and Gaganwabada and Radhanagari Talukas to the South. The area of Panhala Taluka is 565.09 sq km area out of area of Kolhapur district 7746 sq. km. panhalatahsil have 127 villages, with two big towns. To the west mountain ranges with red soil maximum, the river banks of Warna, contain fertile soil. The mountainous region in the west is made up of red laterite.

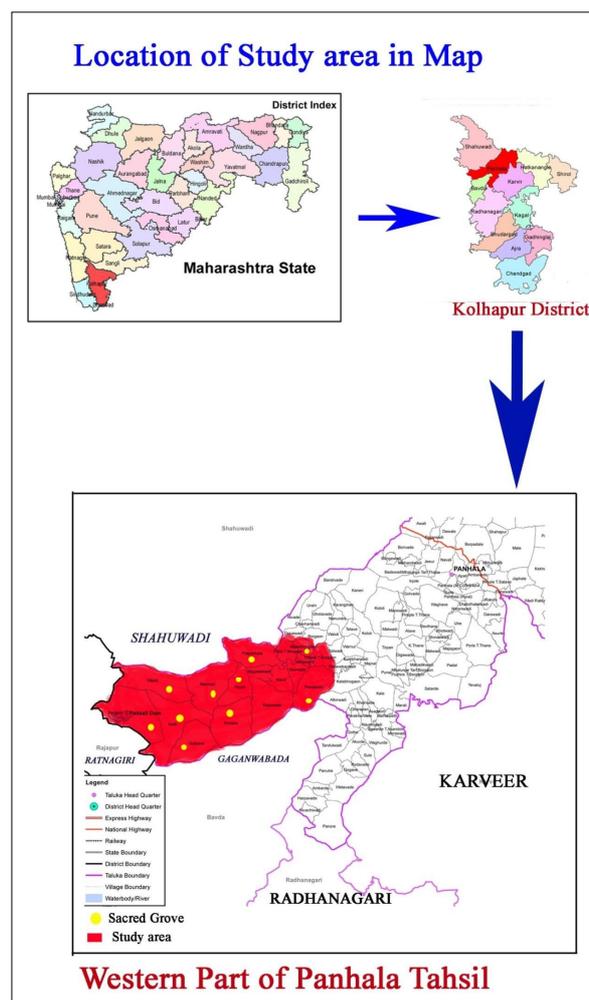
In Panhala tehsil there are 127 villages, out of this 34 lies western part of study area. In which Bajarbhogav to Padsali are covered by dense forest. There

are ancient trade route also be traced. About 200 years ago, goods from Ratnagiri through Kajirdaghat carried to market place of Bajarbhogav. Later in British era importance of Kajirdaghat is neglected due to road construction of Anuskuraghat (Pachal-Ratnagiri) and Karulghat (Vaibhavwadi). Through ancient trade route i.e. Bajarbhogav to Padsali, there are 10 sacred groves are spotted. Namely Padsali (Vithalai),Gothane (Dakroba), Kolik (Rasai), Washi (Laxmidevi), Manwad (Kamma), Pisatri (Kedarling),Pombre (Siddhoba), Patpanhala (Kapling), Pohalewadi (Tamjai), Bajarbhogav (Bhogeshwar) are documented and studied.

MATERIAL AND METHODS

Preparation of an up to date inventory of sacred groves in Western Panhala Tahsil:

A detailed survey through inventorying of sacred groves in Western Panhala was undertaken during December 2019 to March 2020.



The secondary information on existence of sacred groves was gathered with the help of previous literature as well as personal visits in the Talathi offices. The primary information about existence of sacred groves was recorded by personal visits. A questionnaire (in Marathi, the English versions of which is given as Annexure I of this chapter) was prepared for gathering the primary information on sacred groves from Talathi and local people. After the field visits, a detailed list of sacred groves with information was prepared. At the same time photographs of some sacred groves was taken. The selections of sacred groves for study were done on the basis of area of sacred grove.

Environmental Impact Analysis:

EIA is an important policy initiative to conserve natural resources and environment. Many human activities produce potential adverse environmental effects which include the construction and operation of highways, rail roads, pipelines, airports, radioactive waste disposal and more. Environmental impact statements are usually required to contain specific information on the magnitude and characteristics of environmental impact. The EIA can be carried out efficiently by the help of GIS, by integrating various GIS layers; assessment of natural features can be performed. With help of Google earth pro software satellite images are taken and determine Land cover means the feature that is covering the barren surface .Land use means the area in the surface utilized for particular use. The role of GIS technology in land use and land cover applications is that we can determine land use/land cover changes in the different areas. Also it can detect and estimate the changes in the land use/ land cover pattern within time. It enables to find out sudden changes in land use and land cover either by natural forces or by other activities like deforestation.

Identify and listed flora and fauna:

With help and guidance of botanist and zoologist, create list of flora and fauna with scientific names, identify medicinal plants and uses by local peoples, which useful for further study.

OBSERVATIONS:**1. Grove Name: 1. Vithalai Grove****Village Name: Padsali**

At Padsali village, very small grove is dedicated to deity Vithalai, Located at 16°41'47.58" N and 73° 51'5.56" E longitude and latitude respectively. Padsali village 52 km away from Kolhapur, Close to Kajirda Ghat, 22 km away from Bajarbhogav. This grove quite away from main village. The grove is very small comprising of just 7-8 trees left behind. Only 10 to 15 years ago this grove occupies 5 to 6 acre area. Due to agricultural expansion area of grove compressed. It is clearly show that satellite image taken in year 2005 and 2019. Circumference of grove heavily affected due to encroachment from east side. Major trees like Mango, Umber, Sagwan and Mad are found around temple. North side of temple, river is flows; we are spotted many Kingfisher birds. Trees are cut down for agricultural practices, no any plantation by villages and social forestry. West to grove another deity called Ugwai, ancient check post of Kajirdaghat pass and protective Fort Mudagad is quite nearer. This is ancient trade route which connects Ratnagiri and Kolhapur district. It starts Padsali and goes market place of Bajarbhogav. Dense forest around Mudagad protected in KarveerSanthan called "Shivaranya" by ChhatrapatiShahu of Kolhapur. Bison Gour or the Indian Bison (*Gavcecusgaurus- M. Gau*) is easily spotted in "Shivaranya" because The Marathas consider bison a bull and generally do not shoot it. Because of this superstition, the bisons have received natural protection and are found in fairly large numbers.

2. Grove Name: Dakroba Grove**Village Name: Gothane**

The Second sacred grove located near Gothane Village, 49 km from Kolhapur, South-East to Padsali. Located at 16°41'26.54" N and 73° 53'37.38" E longitude and lattituderrespectively. This grove quite big about 5 acre in size. This grove dedicated to Dakroba along with Valtai and Rasai. In 2015 new R.C.C. temple builds and replaced old styled temple. In Navratri, fuction is attained all villagers called "DakrobaJatra". Temple away from main village but road is passing through centre of grove and front of new installed temple. Dense forest "Shivaranya" much closer to grove. But from village side encroachment of

agricultural practices consider harmfully to sacred grove. Due to nearness plants occurs in this sacred grove is familiar to rest of Panhala deep forest. Typical flora and fauna occurs in this grove.

3. Grove Name: Rasai Grove

Village Name: Kolik

Third sacred grove is located 16°42'9.92" N and 73° 52'55.56" E longitude and latitude respectively in Kolikvillage. Kolik village east to Padsali and North to Gothane village and 49 km away from Kolhapur. This grove occupies 3 acre area. Many years ago grove area more than 5 acre. New R.C.C. building installed 5 years ago. Superiorly carved wooden pillars and frames replaced with concrete work leads decline of beauty. With main Rasai deity statues of Vithalai and Kedarling also present in innermost part of temple. Main fuction of deity held in month of May called "Rasai'sGondhal" in every 3 years. Main trees around temple are Hela, Limbara, Mango and Jackfruit. Grove has much herbs, shrubs and vines in vast area. Area between Z.P.government school and road at front of temple are quite dense and deep. Very much reptiles, rodents and birds habitat in grove. Due to Main road passing front of temple, invasion of agricultural practices from southern direction and big campus of Primary school from western direction main threat for entire grove in future.

4. Grove Name: Laxmidevi Grove

Village Name: Washi

Fourth grove in the village of Washi, located 16°43'9.11.86" N and 73° 52'51.55" E longitude and latitude respectively. Village west to Manwad and North to Padsali and Kolik, and 48 km away from Kolhapur. The area of grove less than 1 acre. With main deity Laxmidevi, Vithalai and Kedarling also present in temple. Main religious fuction held in Dasara and Shimaga. New temple building installed about 10 years ago. Comparing satellite image of 2003 and 2019, shows destruction of grove by neighboring farmers for extra land demands. Around temple large number of big trees of Mango, Jackfruit are found. The number of peacocks is huge in entire area. Agricultural practices have been heavily encroached upon grove from village side. Social forestry has increased

forest cover near grove but proportions of foreign trees are high due to fuel demand. Fencing is done by villagers around remaining grove.

Inventory of Sacred groves in Western Panhala of Kolhapur District

Sr. No.	Name Of the Grove	Total area of the grove in Acre	Name/s of deity/s	Conser vation status Well/ Moder ately/p oorly	Tree cutting Yes/No	New Plan- tation Yes/No	Utilization pattern		Ownership Temple trust / Revenues / Panchayat / Private / Forest Dept	Main event Festival / Special event	Location of the grove on plateau / slope of the hill / Near village/ in village	Road accessibility		
							Grazi ng	Dried fuel wood				No	All season pucca	Tempo rary
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Padsali	0.5	Vithalai,Ugwai	Poorly	Yes	No	No	No	Panchayat	Dasara,S himaga	Slope of hill			Yes
2	Gothane	5	Waltai,Dakroba	Moder ately	Yes	No	Yes	Yes	Forest Dept	Navratra	Slope of hill		Yes	
3	Kolik	3	Rasai,Kedarling	Moder ately	No	Yes	No	No	Temple trust	Gondhal	Near village		Yes	
4	Washi	1	Laxmi,Vithalai	Poorly	Yes	Yes	Yes	Yes	Temple trust	Dasara,S himaga	Near village		Yes	
5	Manwad	1	Kamma, Vithalai	Moder ately	No	Yes	No	Yes	Panchayat	Kamm a Yatra	Near village		Yes	
6	Pisatri	0.7	Kedarling	Poorly	Yes	No	Yes	Yes	Temple trust	Kedarlin g,Gango ba	Near village			Yes
7	Pombare	0.5	Siddhoba	Poorly	Yes	No	Yes	Yes	Panchayat	Yatra,Shi maga	Near village			Yes
8	Patpanha la	25	Kapling	Well	No	No	Yes	Yes	Forest Dept	Mahashi vratri	Slope of hill	Yes		
9	Bajarbhogav	0.5	Bogeshwar	Poorly	Yes	No	Yes	Yes	Temple trust	Mahashi vratri	In village		Yes	
10	Pohalewadi	5	Tamjai	Well	No	No	Yes	No	Forest Dept	Yatra	Top of hill	Yes		

5. Grove Name: Kammadevi Grove

Village Name: Manwad

Fifth grove of Kammadevi near village of Manwad, located 16°43'46.55" N and 73°54'56.38" E longitude and latitude respectively. Village east to Washi, North to Pombare and west to Pisatri and 43 km away from Kolhapur. The area of grove is 1 acre. Temple situated on small hill, surrounding by little grove. Along with Kamma, statues of Vithalai and Kedarling present in internal part of temple. Temple reconstructed about 5 to 6 years ago with R.C.C., decreases beauty of ancient temple. Main religious event held in month of May. In old days grove expands over 5 acres but, area of grove reduced due to encroachment of agricultural practices by villagers. Now day's only hilly portion of grove is protected by Panchayat. Yellow outline in above satellite image shows decline of groves in slope region.

6. Grove Name: Kedarling Grove**Village Name: Pisatri**

Sixth sacred grove is located $16^{\circ}43'37.55''$ N and $73^{\circ} 55'40.37''$ E longitude and latitude respectively in Pisatri village. Pisatri village east to Manwad and south to Patpanhala village and 40 km away from Kolhapur. This grove occupies less than 1 acre area. Main deity Kedarling along with Gangoba lies little distance away. In past this grove covered 3 to 4 acre area but now days compressed much due to encroachment of agricultural practices from all sides by villagers. Comparing satellite image of 2002 and 2019 with yellow outline shows encroachment of farmers for land hungeriness. While nearer Gangoba temple covered by greenery due to plantation done by social forestry. Kedarling temple old fashion temple, covered by quite big trees of Mad and Jackfruits. Oldest Entada tree with huge circumference also present with other trees. Main event held in Mahashivratri, where hundreds of villagers come together in same day.

7. Grove Name: Siddhoba Grove**Village Name: Pombre**

At Pombre village, very small grove is dedicated to deity Siddhoba, located at $16^{\circ}42'39''$ N and $73^{\circ} 55'59''$ E longitude and latitude respectively. Pombre village east to Kolik, Gothane, south to Manwad, Piasatri, and 42 km away from Kolhapur. This grove quite away from main village and close to Kalajwadedam. Pombre lies on the way of ancient trade route from Kajirda (Ratnagiri) to Bajarbhogav (Kolhapur). West and south part of village part of "Shivarnya". The grove is very small, less than 1 acre. For construction of road to Kalajwade dam and encroachment of agricultural practices most of grove cut down. Main religious event done in Dasara and Shimaga. Big tree of Pimpal and colony of Bats easily shown near to temple.

8. Grove Name: Kapling Grove**Village Name: Patpanhala**

Kapling or Lingdev grove is biggest sacred grove in western Panhalatahsil. This grove located at $16^{\circ}44'32''$ N and $73^{\circ} 56'25''$ E longitude and latitude respectively. Nearest village Patpanhala 3 km away from grove. This

grove situated on top hill of dense protected forest around 8 to 10 acre area. Deity of Mahadev associated main event Mahashivratri. There are no pucca road to reach top of hill where temple is situated. Due to Forest department restriction cutting of trees and grazing of cattle's are not allowed. But some extend anthropological activities like grazing, poaching, jungle fire are regularly carried out. This is main habitat of Indian Gaur, which is easily spotted in summer days. These animals also cussed for farms in summer days. Typical western ghat plants are generally shown in slope of hilly region of dense forest.

9. Grove Name: Bhogeshwar Grove Village Name: Bajarbhogav

A Very small sacred grove located centre of Bajarbhogav Village, 42 km distance away from Kolhapur and western part of Panhalatahsil. Located at 16°45'40.47" N and 73° 59'0.5.44" E longitude and latitude respectively. This grove quite small, only few trees are sustained. This grove dedicated to Bhogeshwar. Bhogeshwar means god of Nag, i.e. Mahadev. Bajarbhogav name deals with bhogav village with market is held in past days. It is important ancient central Market place, where trade route from Kajirda (Ratnagiri) to Bajarbhogav (Kolhapur) ends. Up to British era importance of trade route intact, so these villages are prosperous and rich in previous time. Now day's major transport carried from Anuskura and Bavadaghat, so this route much neglected. Bhogeshwar temple situated heart of village so, due to rapid urbanization previous grove area very much reduces. Above satellite image shows once upon grove covered 5 acre but now very few plants found around temple.

10. Grove Name: Tamjai Grove Village Name: Pohalewadi

This grove located at 16°42'34.01" N and 73° 58'25" E longitude and latitude respectively. Nearest village Pohalwadi much away from grove. This grove situated on top hill of dense protected forest around 5 acre areas. Deity of Tamjai associated with Dhangar caste, which may be first settlers in this area. Along with Tamjai another deity Vithalai also present. Main religious event held in Dasara where "DevichiPalakhi" carried from Pohaklewadi by villagers. Around of Koularu temple dense protected forest is occurs, which major habitat

of Indian Gaur, which is easily spotted in summer days. These animals also cussed for farms in summer days. East side of forest demolished by anthropological practices like fire, grazing and agricultural practices. Typical western ghat plants are generally shown in slope of hilly region of dense forest.

CONCLUTION

A comprehensive list of sacred groves scattered along ancient trade route Kajirda (Ratnagiri) to Bajarbhogav (Kolhapur) geographical co-ordinates, areas, elevations and locations was prepared. Their distributions have been-mapped. These serve as the bench-mark for further studies. 50 % of them are less than 1 acre in area and are remaining as medium in size. Plantations of cash crops or intensive agro forests shall be raised adjacent to sacred groves, to avail maximum ecological utility since it is not possible to expand the groves in view of the increasing land hunger. With various medicinal plants, timber species produces sacred groves are gene-banks of economically important plants. These pieces of vegetation will help us to understand the structure and dynamics of such ecosystems and can reflect the potentiality of the soil if there are no other limiting factors. Sacred groves harbor many woody plant species as well as fauna. These groves function as genetic reservoirs of wild species. As religious beliefs and taboos weaken the pressure on these forests increases. The temples within the groves are still used as places of worship, but the forest surrounding them has become relatively unimportant. In many places strong taboos against biomass extraction no longer exist, while in other places natural resources are removed from the forest under cover of darkness. The rationale behind the reverence for nature and the protective taboo seems to have been forgotten, sometimes even where religious rituals continue to be observed.

Threats to the Sacred Groves

1) Rate of destruction of sacred grove directly depends on ownership of grove.

Inventory shown fact about it. Out of 10 sacred groves 2 groves under Forest department intact much than other groves, those owners Panchayat or Devsthan trust. For example Kapling grove (Patpanhala) and Tamjai grove (Pohalewadi) are area maintained due to restriction of Forest department .while grove in

Padsali, Pisatri, Washiposses very critical issue. Year by year area of groves decreases, it is sign of negative approach towards sacred grove.

2) Encroachment

The groves have been encroached by local communities as well as by people migrating from outside for settlements and agriculture. For example Area of grove in Padsali village and Pisatri, huge area encroached by neighbor farmers, easily spotted with satellite image.

3) Development Projects

Roads and Big dam projects, increase in the demand for land has also resulted in encroachments in the groves. Such activities have resulted in shrinkage of some of the largest groves. In grove of Pombre is best example, where big dam of Kalajwade newly constructed.

4) Fragmentation

Many of the sacred groves have been fragmented by roadways, Reclamation of land for agriculture, and illegal encroachment may lead to fragmentation of the grove and consequently loss of biodiversity and disruption of ecological functions. Groves of Kolik and Gothane affected by road passing centre of grove, near Temple.

5) Erection of new temples

Erection of new temples or rebuilds with R.C.C., the sacred groves leading to their fragmentation and destruction. Except Pisatri, Kapling and Tamjai temple all other temples rebuilds with modern technique i.e. cement mortar leads demolishes previous beauty along with destruction of some area of grove.

6) Pilgrimage and Tourism

The integrity of many groves has suffered deterioration due to the influx of large number of pilgrims and tourists. In Dasara, Shimaga, Mahashivratri or particular Yatra , thousands of pilgrimages visits grove same day in year. Large number of peoples, their vehicles and market heavily suffer entire groves ecosystem.

7) Commercial Forestry

Local people have lost their customary rights of forest management in many parts, due to government regulations. Hence, many sacred groves have been

destroyed due to commercial forestry operations. Collection of honey, medicinal plants, woods for fuel etc.

8) Removal of Biomass

In many sacred groves, anthropogenic activities like removal of biomass, firewood and cattle Grazing was permitted and continuation of these practices over generations has resulted in the Dwindling of the groves and adversely affecting the functioning of these ecosystems.

9) Cutting of trees

Cutting of trees for temple renovation and construction inside the grove is major threat to the groves. It cause adversely affected the existence of flora and fauna. Except Kapling and Tamjai grove, cutting of trees are found.

10) Natural calamities

Natural causes that are a constant threat to the groves include destruction of vegetation due to calamities such as lightning, jungle fire and windblasts etc. These accelerate the encroachment of exotic weeds and suppress the growth of original flora of the groves.

11) Socio-cultural causes

Religion had an overwhelming influence on the preservation of forest patches as sacred groves, but a cultural transformation and changing worldview of nature among the people are among the causes for the decline of the sacred groves.

12) Urbanization

The rapid intrusion of modern civilization into forest areas due to urbanization is leading to deforestation. Many years ago Bhogeshwar temple of Bajarbhogav surrounded by dense forest but now it shrinks because no area available for town planning due to river folds around village.

CONTROL MEASURES

The habitats of the sacred groves need to be preserved against their rapid disappearance and retrogression as against the common belief that they are preserved intact. Their existence is endangered due to the rapid pace of deforestation, increasingly diverse land-use pattern, exploding population

decreasing religious beliefs etc. Survival of these groves cannot be ensured unless stringent protective measures are not taken.

1. Recognizing sacred natural sites supports community autonomy, promotes effective management and gives voice, rights and action to local people.
2. Faith, spirituality and science provide different but complementary ways of knowing and understanding human-nature relationships.
3. Local commitment, wide public awareness, supportive national policies and laws, state protection and broad international support are essential for the survival of sacred natural sites.
4. It is important that people recognize the values of these remaining patches of forest and that levels of resource extraction be kept low and regulated; this would facilitate sustainable resource use.
5. Identifying the socio-economically important species of the sacred grove and raising them in buffer zones might be a viable strategy for their conservation and sustainable use.
6. Spiritual and ethical traditions no longer ensure the conservation of these forests, the public may need to be educated and informed about other reasons environmental, social and economic for conserving the forest and using it sustainably.

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