

# Role of Community in Grove Management An Appraisal of Sacred Groves of Aravalli Hills in Haryana Sub-Region, NCR

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**Abstract:** Sacred groves are the forests which are protected under traditional practices by any ethnic group with special cultural or religious significance. While the sacred groves of the western ghats, the Himalayas and the North east, have been studied widely, the groves in the northern and central India are relatively unknown. This study is pertained to the sacred groves present in the ranges of Aravalli hills, in the Mangar village of Faridabad district, in the Ferozpur Jhirka village of Mewat district, in the Manesar village, Gurugram district of Haryana, India. The study attempts to assess the hypothesis that the higher the role of community in the grove management, the better the management of groves and More number of indigenous species in grove leads to better delivery of ecosystem services.

**Keywords:** community, conservation, sacred groves, deterioration

## 1. Introduction

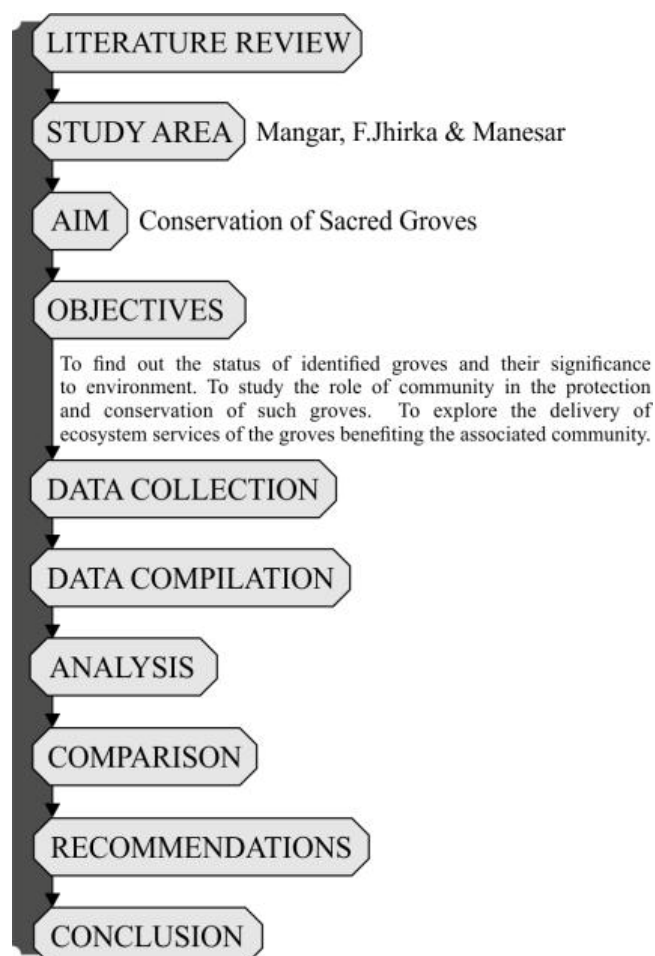
Sacred groves' are small patches of native vegetation traditionally protected and managed by local communities. In other words, sacred groves are the refuge of certain plant species preserved on religious grounds which can satisfy the aesthetic, scientific, cultural, and recreational needs of mankind (Bhakat, 1990). Hughes and Chandran (1998) defined sacred groves as "Segments of landscape containing vegetation, life forms and geographical features, delimited and protected by human societies under the belief that to keep them in a relatively undisturbed state is expression of an important relationship of humans with the divine or with nature." Sacred forests around the world represent a traditional system of community-based conservation.

The Sacred Groves found in India can basically be classified under three categories (based on analysis of studies on sacred groves): Traditional Sacred Groves – It is the place where the village deity resides, who is represented by an elementary symbol. Temple Groves – Here a grove is created around a temple and conserved and groves around the burial or cremation grounds. Sacred Groves are also culturally important. Various cultural and religious festivals are often arranged by local people within the temples of the sacred groves. (Dr. Gupta, 2013).



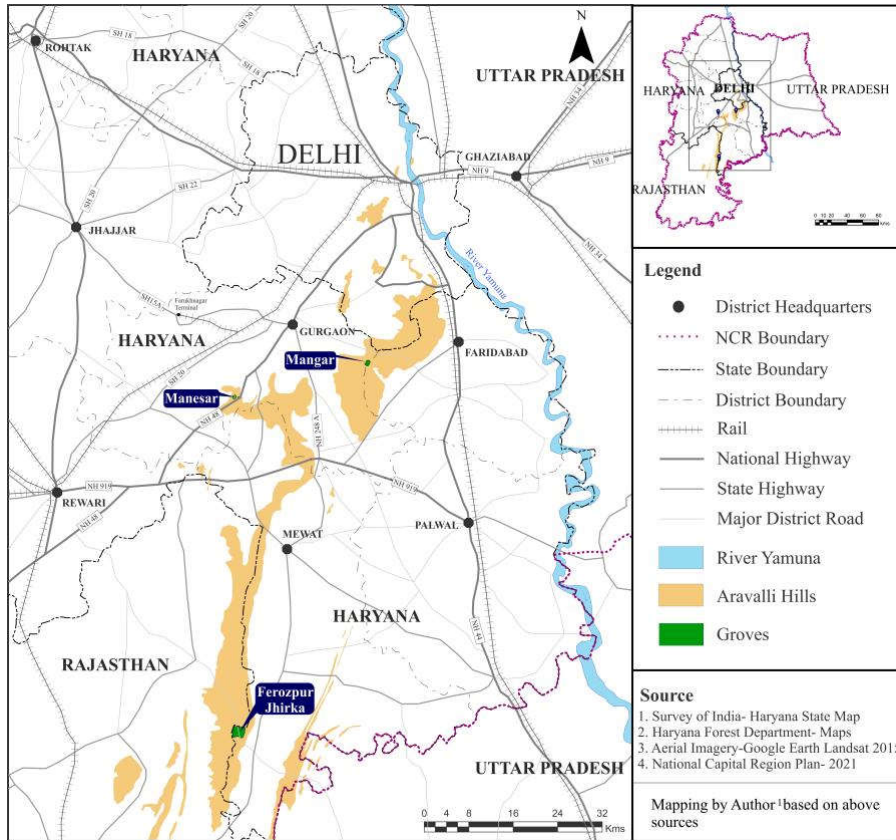
**Figure 1:** Conservation of groves by community  
Source: Primary Survey on 11/10/2018 captured by Author<sup>1</sup>

## 2. Methodology



**Flow Chart 1:** Research Methodology

### 3. Study Area



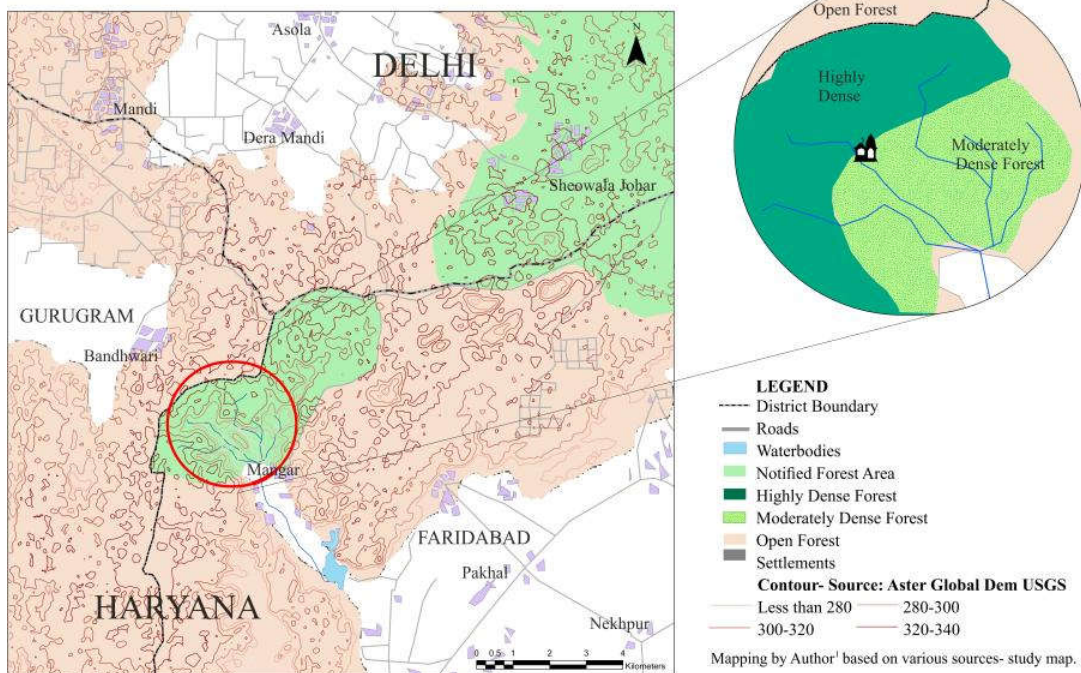
**Figure 2: Aravallis in Haryana Sub Region & NCR**

#### 3.1 Need of the Study

- a) Haryana- Least forest cover in India (3.6)
- b) Aravalli hills and its ecosystem is being depleted due to human activities.
- c) Least research/scrutiny about Aravalli hills have been done in Haryana Subregion.

- d) Native species in Aravalli ranges are vanishing.
- e) Ferozpur Jhirka and Mangar groves are traditional & Manesar grove is community protected grove in live.

#### 4. Mangar Bani Groves



Mangar Bani is a sacred grove present in the district of Faridabad, Haryana which comes under the NCR territories. It has the geographical co-ordinates of 28.40°N and 77.31°E. Mangar Bani, which harbours rare animal and plant species, is recognised by ecologists as one of the last remaining examples of natural tropical forests in NCR.[1] Apart from being a green paradise, the Mangar Bani forest is the lungs for the heavily populated national capital region.[2] It is a forested stretch that runs all the way from Asola Bhatti Wildlife Sanctuary in southeast Delhi via Gurgaon district to the Mewat region. It has a total area of 527 acres, as reported by the Forest Department of NCR in 2015.

**4.1 Evolution of the groves**

Mangar Bani sacred groves became “Sacred”, by the presence of the “Gudariya Baba” temple in Mangar. It is believed by the local community that the Baba protects the naturally grown forests of Mangar from destruction, and any misuse of forest resources by the people will lead to the wrath of the Gudariya baba. Thus, the groves are existing and still a home to many extinct and endangered varieties of plant and animal species, because of the Gudariya Baba temple.

**4.2 Maintenance of the groves**

The groves are maintained by the forest department of Haryana and also the local Gujjar community. Foresters and forest guards have been appointed by the forest department to monitor the groves. They have constructed crate wire check dams for wildlife which also helps in water conservation. The local community monitors the misuse of any forest resources and inform the forest department. People found guilty are penalized by the local Panchayat. Local melas and festivals are conducted at the Gudariya Baba temple during major

festivals like Dussehra, Diwali, and Holi, for which people from nearby regions like Gurgaon, Panchkula, Rajasthan, Delhi and Uttar Pradesh visit the temple.

**4.3 Significance of the temple**

Although the groves are protected because of the Gudariya Baba temple in Mangar, presently, the loss in belief of religious practices and human’s greedy nature have led to increased deforestation of Mangar forests for various reasons- Fuelwood and fodder, being the major reasons. The huge population arriving to the temple during local melas and festivals, hamper the movement of wildlife and cause interruption to their daily life by polluting water resources and creating lot of wastes.

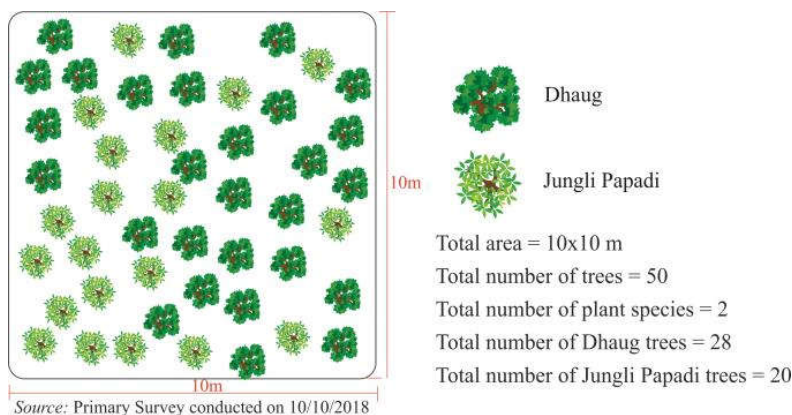
**4.4 Role of Community**

**4.4.1 Conservation practices by community**

Local people worship Gudariya Baba and believe that he protects the groves. Local people report instances of any people misusing the forest resources to the forest department. They make use of only certain species of trees like Kheekar from the groves for grazing of cattles and collecting fuelwood. The local Panchayat also punishes people violating their local customs and traditions related to groves.

**4.4.2 Intervention of community to the groves**

People have gradually begun disbelieving in the faith of Gudariya Baba, which has led to, Increased cutting of trees for fuelwood and selling, Exploitation of endangered plant species for their medicinal and other uses, Over grazing of cattles inside the groves. Maximum intervention is found during melas in the temple, intruding the wildlife movement and polluting the grove region.



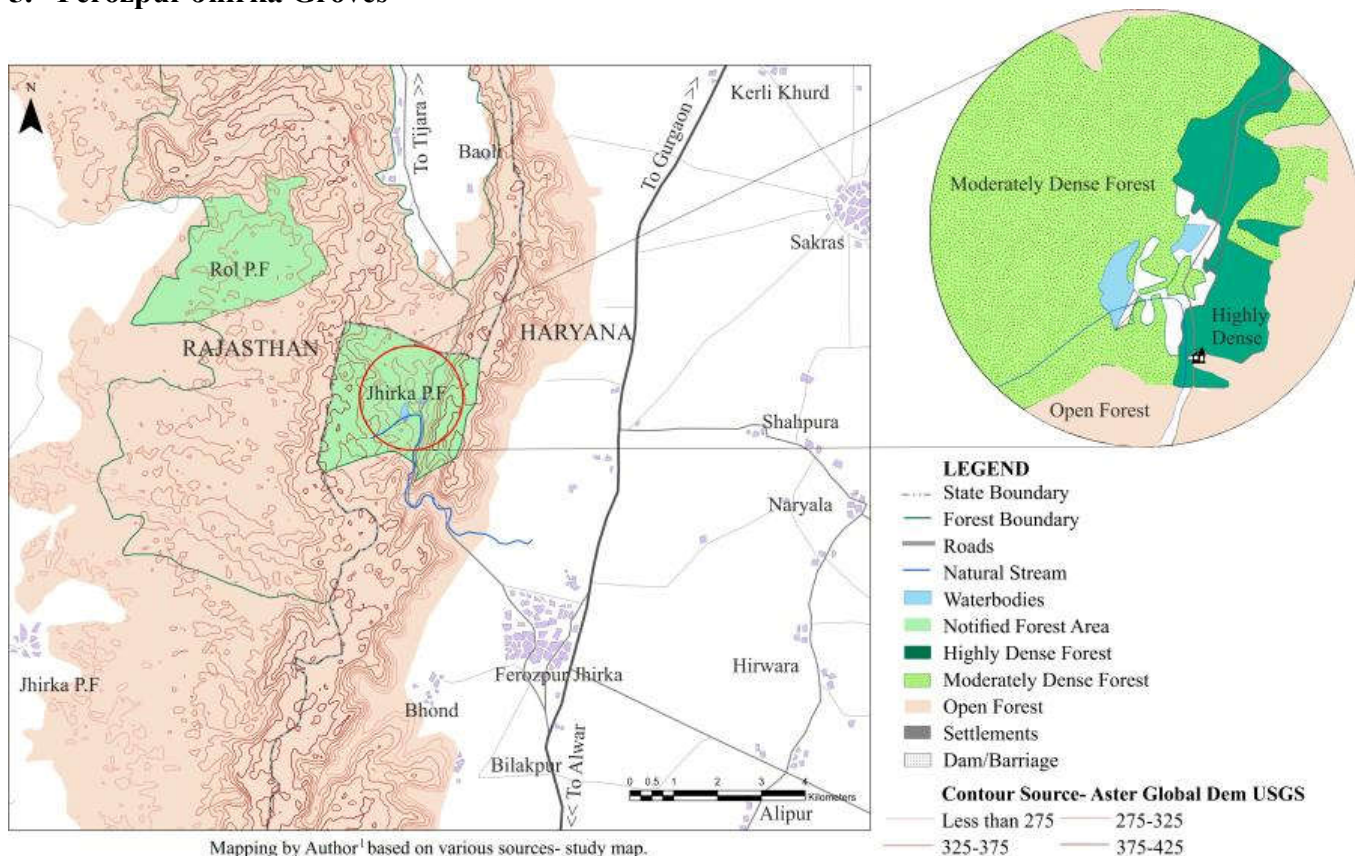
**Figure 3:** Results of Vegetation Survey

**Table 1:** Floral species in Mangar

S.No	Local name	Scientific name	Uses
1	Dhaug	Anogeissus pendula	Yields timber, fodder,gum,tannin
2	Jungli Papadi	Ehretia laeves	Treats diuretics, skin diseases, inflammations
3	Neem	Azadirachta Indica	Treats skin diseases, allergies, whooping cough and cold
4	Kadamb	Neolamarckia Cadamba	Yields timber, fodder, paper
5	Vishtendu	Diaspyros melanoxylon	Used in medicine of Malaria
6	Kirma	Manilkara hexandre	Yields timber and edible fruits
7	Salar	Shorea robusta	Yields timber and used as astringent in Ayurveda
8	Hingot	Balanites roxburghii	Treats skin diseases, cough, antifertility, jaundice, swelling snake bite and dog bite

Source:Primary Survey conducted on 10/10/2018

## 5. Ferozpur Jhirka Groves



Ferozpur Jhirka is a village in the district of Mewat, Haryana. It lies in the geographical co-ordinates of 27.78°N and 76.94°E. Ferozpur Jhirka is an undisturbed patch of natural forests lying in the Aravalli ranges that border the states of Haryana and Rajasthan. The forest patch also has a natural lake protected by a highly forested ridge around it. The region has gained importance due to the temple associated with it. Pilgrims from the nearby states of Haryana, New Delhi, Rajasthan, Uttar Pradesh visit this temple.

### 5.1 Evolution of the groves

The natural patch of the forest developed over past years without much intervention of the community. Population increase in last few years has increased the intervention of community in the forest to an extent and this is causing harm to natural flora and fauna of the forest. The trees are cut for domestic and commercial purposes. Due to this reasons the forest around the temple as well as the other area of the forest has started declining. Natural flow of the stream has been obstructed by the forest department by construction of dam and this has also led to problems for floral species.

### 5.2 Maintenance of the groves

The temple trust contributes a lot in maintenance of groves by plantation of trees around the temple every year. This plantation activity also helps in conservation of soil. Funds which are received by the temple trust are used for protection of groves. The forest department also helps in maintenance and conducts surveys to stop illegal cutting down of plants

species. Forest guards along with forest officer are responsible for regular patrolling around the forest. Regular plantation is also done in this grove to maintain the greenery. In the year 2016, a dam was built near the temple that resulted in obstruction of natural stream.

### 5.3 Significance of the temple

The history of this temple dates back to the Mahabharata. Natural kund was famous for bathing but in 2016, dam was built on the way natural flow of water. Melas are organized by temple trust in the months of February, March, July and August. Number of visitors start declining with the arrival of winter season. Pilgrimage is mostly from different parts of National Capital Region (NCR).

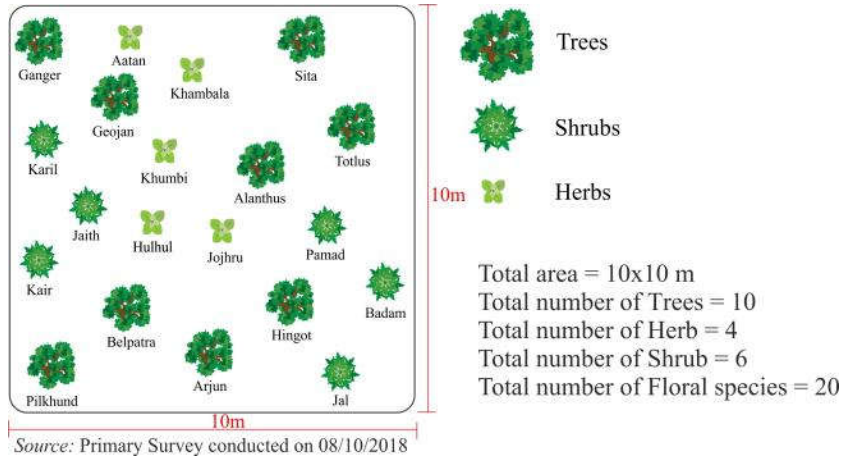
### 5.4 Role of Community

#### 5.4.1 Conservation practices by community

New plants are planted by temple trust to contribute to the environment. Nearly 100 plants are planted in a year around the temple. Plantation has also played role in conservation of soil around the temple. The trees include Pilkhan, Shisham, Neem, Badam etc. The trust also get support from the Forest department in the form of issuing plants.

#### 5.4.2 Intervention of community to the groves

Reckless cutting of trees for fuel wood and selling in the market and hotels is found. Over grazing of cattle prevails Religious believes of people is not associated with the grove.



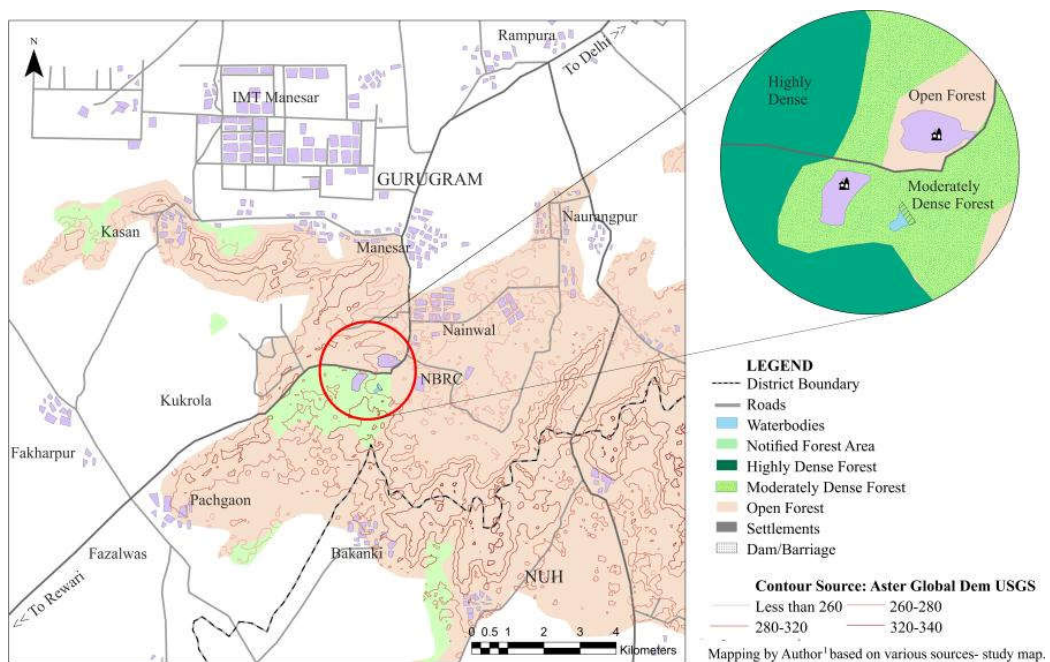
**Figure 4: Results of Vegetation Survey**

**Table 2: Floral species in Ferozpur Jhirka**

S. No	Local Name	Scientific Name	Related uses
1.	Goma	Leucas zeylancia	Applied to wounds, Skin diseases.
2.	Gangher	Cannabis	Nausea, Glaucoma, Asthma etc.
3.	Pilu	Salvadora persica	Treats poisonous bites.
4.	Gurjan	Dipterocarpus turbinatus	Treatment of ulcers, ring worms.
5.	Alanthus	Ailanthus atissima	Roots- Treat epilepsy, Asthma.
6.	Pil Khan	Ficus virens	Treatment of Leucorrhoea.
7.	Bael	Aegle marmelos	Remedy for Diarrhoea, Dysentery.
8.	Hingot	Balanites aegyptiaca	Treats Malaria, oedema etc.
9.	Totlus	Acacia tortilis	Wooden properties, fuel.
10.	Arjun	Terminilia arjuna	Used as an Cardiac tonic.
11.	Jal	Salvadora oleoides L.	Treatment of rheumatic pains.
12.	Dhaug	Butea monosperma	Antifungal, Antibacterial cream.
13.	Karil	Capparis decidua	Cures swollen joint.
14.	Nagad Bawari	Ocimum americanum L.	Stomach Disorders
15.	Jhojru	Tephrosia purpurea L.	Acne Treatment
16.	HulHul	Cleoma gyandra	Treatment for snake bites.
17.	Khip	Leptadenia pyrotechnica	Asthma and Spermotorrhea
18.	Khumbi	Agaricus bisporus	Anti-inflammation cream.

Source: Primary Survey conducted on 08/10/2018

## 6. Manesar Groves



Manesar is an industrial town in the district of Gurugram, Haryana. It lies at the geographical co-ordinates of 28.35°N and 76.93°E. The forests of Manesar come under the fragmented patches of forests in the Aravalli ranges, which are the oldest fold mountains in India. Although this area had been a dense forest earlier, now it exists as a community forest with various plantations of native species in association with three temples. The area of temples along with the forests lies on the route of National Highway-48 from New Delhi to Jaipur. The forest patch has an area of 2.5 acres.

### 6.1 Evolution of the groves

The Manesar forests have a long history even before the temples were built. It had been a dense forest with lots of peepal trees out of which very few have sustained till date. The Shani temple was the firstly built temple about 40 years ago, followed by the Hanuman temple and the Shiva temple. The forests have always had a religious significance. The villagers of Manesar maintained the groves and appointed a special guard to protect the groves. Anybody sitting, chilling in the temple premises or harming the trees were considered guilty and were punished or penalized in the panchayat meeting.

### 6.2 Maintenance of the groves

The villagers have formed a Seva committee with 6- 8 members to maintain the temple. The members comprises of people of all communities in the village along with two Brahmins, in order to take care of the rituals. The Seva committee planted about 50 saplings everyday while planting in the forests initially. These days, they are trying to eradicate the Vilayati Kheekar trees situated behind the temple premises, and gradually increase the temple plantations. The Seva committee takes help for the plantations from the Gurugram Horticulture department (Dr. Jaswinder singh).

The community forest is having an area of 2.5 acres now. Trees like Kharander, Gulmarg, Amla, Chikku, Nimbu, Gullar, Kala Bhasa (Medicinal plant for cough), are planted in the forest. These are indigenous species of the native soil

of Haryana. Wild animals like leopards, hyenas and other animals wander beyond the community plantations.

There had been a natural pond which had been used by the villagers. The villagers were traditionally aware of de- silting water structures. Any villager passing through the natural pond of the temple, pumped out some silted soil from the pond. These days, villagers don't follow this custom, due to the change in belief system. The Seva committee seeks help from Kokila van near Mathura, for the maintenance of sacred beliefs, rituals associated with God, for the temple and plantations.

### 6.3 Significance of the temple

The temple of Manesar is being the binding factor for the worning out believes of the local community in preserving the forest resources. It plays a major role in restoring the ethical values of the villagers, practiced from ancestral time to now, in conserving native species and water resources. The desiltation of sand from the traditional pond of the temple is a concrete evidence for the same.

### 6.4 Role of Community

#### 6.4.1 Conservation practices by community

The villagers have formed a Seva committee with 6- 8 members to maintain the temple. The members comprises of people of all communities in the village along with two Brahmins, in order to take care of the rituals.

If anybody involved in misuse of temple premises or harming the trees were considered guilty and were punished or penalized in the panchayat meeting. The Seva committee seeks help from Kokila van near Mathura, for the maintenance of sacred beliefs, rituals associated with God, for the temple and plantations.

#### 6.4.2 Intervention of community to the groves

Due to development activities , cutting of trees is frequent in this area. The religious beliefs of community is vanishing with time. Illegal cutting of tree for making houses and fuel woods. Religious practices associated with plans.

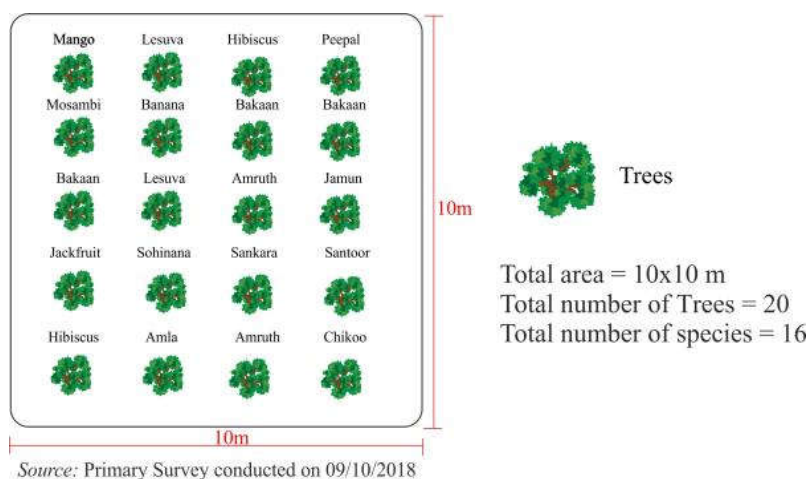


Figure 5: Results of Vegetation Survey

**Table 3: Floral species in Manesar**

S.No	Local name	Scientific name	Uses
1	Amla	Phyllanthus emblica	High in digestive fibre
2	Chiku	Manikara zapota	Strengthening of bones
3	Nimbu	Citrus limon	Rich in vitamin C
4	Gullar	Ficus racemosa	Contains tannin, wax and rubber
5	Kala basa	Cucurbita maxima	Rich in Protein
6	Neem	Azadiarachta indica	Used for leprosy, viduality
7	Kadam	Neolamarckia cadamba	Used in Furnitures
8	Babul	Acacia nilotica	Best fed dry as a supplement

*Source: Primary Survey conducted on 09/10/2018*

## 7. Findings - Common Threats Observed

- 1) **Invasion of Invasive Alien Species:** Alien species that become invasive are main drivers of biodiversity crisis throughout the world. Species like *Prosopis juliflora* have had serious depleting effects on the flora of the state.
- 2) **Floods and Drought**
- 3) **Anthropogenic pressure:**
  - a) Increase in human population adjacent to the forest have become threat for the biodiversity.
  - b) Livestock grazing causes loss to the native vegetation and leads to conflict between man and wildlife.
  - c) Mining in some parts of Haryana is destroying habitats at a faster rate.

## 8. Inferences

- a) Mangar grove, although remain the least intervened by humans, needs lot of conservation efforts from the community.
- b) Ferozpur Jhirka grove is comparatively high in human intervention due to absence of any religious sentiments on the grove.
- c) Manesar community forest is evolving to be an environment friendly initiative by the local community.
- d) It is being the most economically productive forest amongst other groves.
- e) Proper management and assistance from the forest department can uplift the Manesar forest to be a home to the native degrading species of Aravalli hills.

## 9. Recommendations

### 9.1 For the Community

- a) Sacred groves should be conserved as an important element of the bio-cultural landscape and should not be looked at as a means of generating revenue.
- b) For effective conservation it is necessary to form a federation of temple committees to strengthen the traditional management.
- c) It is essential to devise a mechanism for joint forest planning and management of sacred groves involving all the major players, such as government departments, temple committees, community leaders, researchers and nongovernment organizations.
- d) The faith in sacredness of groves should be respected and supplemented with ecological knowledge.

### 9.2 For the Forest Department & State Government

- a) The well- preserved sacred groves should be immediately brought under protected area network to ensure the protection of such species and their habitats.
- b) The state government should declare sacred groves as heritage sites and provide financial support for their upkeep including fencing, plantation.
- c) The Forest Department should resurvey and demarcate the sacred groves and provide the needed legal help for future protection and eviction of encroachments.
- d) A buffer zone between sacred groves and the surrounding man-impacted landscape elements may be created to check anthropogenic disturbances and provide conditions for regrowth of the forest.
- e) State forest department may formulate management plans for conservation of medicinal, rare and endangered species which are mostly found in the sacred groves
- f) The government may organize local communities into small co-operatives societies for scientific collection of the medicinal plants.
- g) The policy / rules should be formulated and strictly implemented for the conservation of groves.
- h) Non-government organizations and educational institutions need to participate in documenting information on sacred groves and undertake awareness-generation programs.
- i) Development of nursery technique for the native species confined to the sacred groves should be undertaken.
- j) The traditional heads / villagers who engage themselves in protection and conservation of biodiversity-rich areas need to be rewarded.
- k) The most viable strategy for the protection of sacred groves seems to lie in linking in their conservation with economic benefits. Rewards and incentives to the people may go a long way in achieving the goal.

## 10. Conclusion

### 10.1 Mangar Groves

- a) The native species are found in comparatively large numbers in Mangar, due to the local belief of the community. Thus, stronger the participation of community, better the protection of grove.
- b) Absence of invasive species has marked the account of more indigenous species accounting for better ecosystem delivery services.

### 10.2 Ferozpur Jhirka Groves

- a) The community participation is negligible in Ferozpur groves, which is evident in the mass degradation of forests and water resources.
- b) High number of invasive species (*Prosopis Juliflora*-Kheekar), has degraded the capable ecosystem delivery services of the groves.

### 10.3 Manesar Groves

- a) The community participation is maximum accounting for efficient conservation and management of the forests.
- b) Eradication of invasive alien species which is progressing in Manesar forests, and planting of more indigenous plant species, has helped in improving the ecosystem services.

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