



Progress Report

(01.03.2019 to 31.08.2019)

Ref. letter No.: SCSTE/SBB-6242 Dated 22-11-2016

Identification and Data gathering of Sacred Groves in Himachal Pradesh

Submitted to

State Council for Science technology and Environment

Submitted by

Project Staff:

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WORLD WIDE FUND FOR NATURE

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APPENDIX- I

1. Project title: Documentation of sacred groves of Himachal Pradesh

2. Name of Principal Investigator and Project Staff:

- **Ms. Arti Gupta** (Principal Investigator)
- **Mr. Gurudev Singh Rana** (Field Assistant)
- **Ms. Savtri** (office Attendant)

3. HIMCOSTE project sanction letter No. date of sanction :SCSTE/SBB-6242

Dated 22-11-2016

4. Total outlay sanctioned: Rs. 14,000005, (rupees fourteen lac only)

5. Approved objectives of the project

- To understand the underlying principals behind the age old tradition of sacred groves.
- Identification and making an inventory of the key biological resources of the sacred groves
- Assessing dependence of local communities on this common community resource and indigenous management strategies.
- Identification of the possible causes of their deterioration and monitoring the existing sacred groves from biological and socio cultural perspective.
- Producing a comprehensive directory of sacred groves of all the districts of Himachal Pradesh.

6. Methodology

- ✓ Conceptualization and recruitment of staff to take up the work of verification of existing inventory of sacred groves documentation in a networking mode Primary data collected that included location, biodiversity, land use and land cover verification

- ✓ Field visits were made across the state to collect the present status of the existing sacred groves. Structured questionnaires were prepared in discussion with the State Biodiversity team and used to collect the data.
- ✓ Consultation of literature: Literature review was done to know the methods and status of sacred groves.
- ✓ Surveys: Literature surveys and contact with senior people of village, temple committee and other village people was established and thereafter field visits were done. Wherever conditions permitted; photographic documentation was done. A paramount objective was to highlight the nature of the groves and their broad status with a view to further understand the groves and help in its conservation.
- ✓ Identification of flora and fauna: Floral survey was done by photographic evidence while faunal survey was done on visual survey and on the basis of observation of the local community.
- ✓ Evaluation and analysis: The report was summarized to ensure that all districts of the state of Himachal Pradesh are covered.
- ✓ Compilation and documentation.

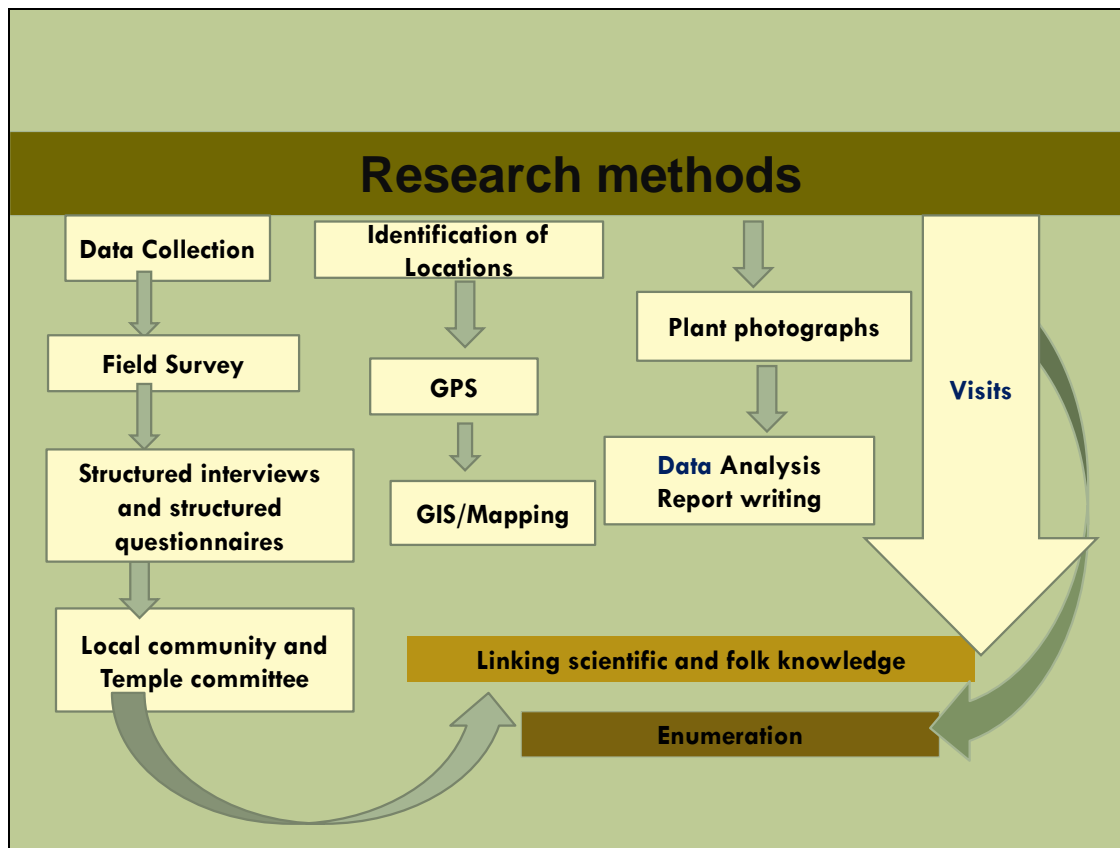


Fig.1. Research methods used for documentation of Sacred Groves in Himachal Pradesh

7. Salient research achievements as per work plan/objectives covered during the period of the project. The followings are the major research achievements during the study period:
- Detailed documentation of the sacred groves was done by field survey with the local communities in the State of Himachal Pradesh.
 - The study shows that biodiversity in the sacred groves is more conserved by the local communities as compared to the other area due to the religious sanctity.
 - In Himachal Pradesh, the local myths and legends associated with the sacred groves go a long way in preserving the forests from destruction.

- Predominant floral and faunal survey of the sacred groves was also completed in these sacred groves.
- Ninety three of total sacred groves were documented in the remaining four districts of Himachal Pradesh. Out of these **38 in Solan, 29 in Sirmour, 7 in Lahul Spiti, and 19 in Kangra** sacred groves have been identified and documented. Field survey and GIS mapping was completed in the remaining six districts. Overall 12 districts in the state have been documented so far.
- It has been observed that no cutting or extraction of forest wealth is allowed in the sacred groves

Table: 1 Number of Sacred Groves in each district

S.No	District	No of sacred groves
1.	Sirmour	29
2.	Solan	38
3.	Lahual	7
4.	Kangra	19

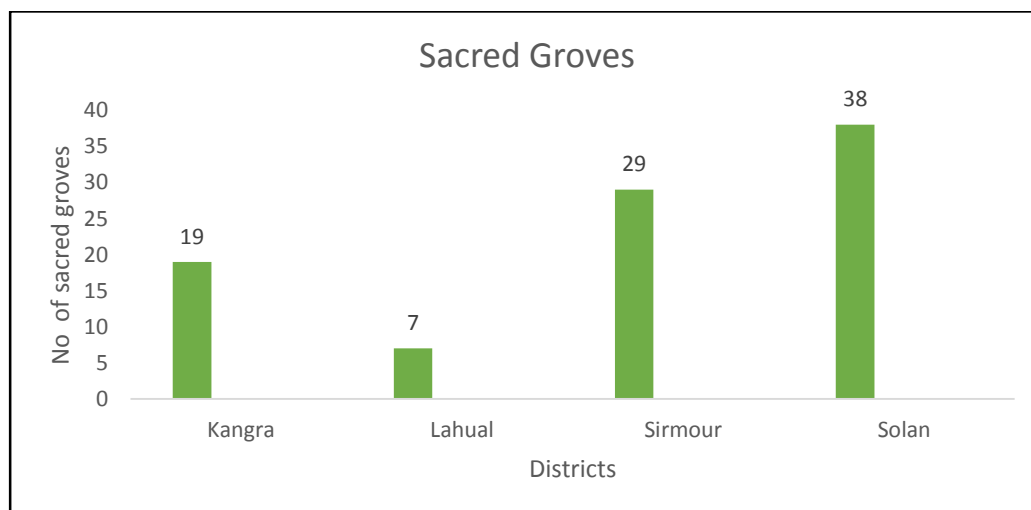


Fig. 2 Sacred groves documented in Himachal Pradesh

8. Summary of progress

In Himachal Pradesh most of the snow draped peaks, hill tops, banks of lakes and rivers and natural caves have been considered as sacred, as the Abode of Gods. Devine Rishi's like Manu, Vyas, Kapil, Vashisht, Yamdagni, Augastya, Gautam, Kartik, Markandeya, Narad, Shandilya, Shringi and many others came here and their roots can be traced here. Even Pandavas visited this land during their exile. With the ancient background which provided the cultural ethos, it is also essential to know the geographical background of Himachal Pradesh to understand the customs of the state. The communities have considered biodiversity as one of the important aspect of sustainability of mankind and have marked landscapes with mythological importance as sacred groves. These patches of dense vegetation or natural areas which have ethnic and religious values are known as sacred groves. Traditionally, wild species were protected and conserved in the sacred groves with often strict penalties for breaking customary laws on the use of resources within the groves.

The local myths and legends of Himachal Pradesh associated with the sacred groves go a long way in preserving the forests from destruction. There are several groves dedicated to a particular deity and is called *Dev Van* or *Devta Ka Jungle*. The sacred groves have climax vegetation and are repository of floral and faunal wealth. No one is allowed to cut trees and in some places even dry leaves or any part of a tree is not allowed to take out side of the grove. Many plants and animals are considered to be sacred. In higher altitude most of the sacred groves have *Cedrus deodara* and *Pinus roxburghii* as dominant species with some associated species viz. *Ficus religiosa*, *Quercus semicarpifolia*, *Poplar ciliata*, *Salix disperma*, *Juniperus* sp., *Cedrellatoona*, *Eucalyptus* etc. in lower area the dominant species is *Shorea robusta* with some associated species viz. *Populus ciliata*, *Acacia catechu*, *Cassia fistula*, *Tectona grandis* etc. The ground flora consists of numerous herbs and shrubs. The thick forests provide good habitat for leopard, barking deer, ghoral, black bear, hare, wolf etc. The sacred groves are associated with local deity. No cutting or extraction of forest wealth is allowed. Even collection of dry leaves and wood is not allowed. The wood is only used for temple or religious purpose. The sacred groves play significant role *insitu* conservation of biodiversity. They are natural gene pool and are repository of rare and endemic species. They harbour plants of ethno botanical importance and are habitat of fauna. The high density of higher

plants helps in soil and water conservation. Sacred groves and sacred plants are considered as an important component in all societies of Himachal Pradesh.

8.1 Ecological services of sacred groves.

Biodiversity keeps the ecological processes in a balanced state, which is necessary for human survival. Therefore the biodiversity rich sacred groves are of immense ecological significance. They also play an important role in the conservation of flora and fauna. Besides, several rare and threatened species are found only in the sacred groves, which are perhaps the last refuge for these vulnerable species. Sacred groves are a good source of a variety of medicinal plants fruits fodder and fuel wood spices. The study of interrelationship between the human beings, plants and animals in their surrounding environment is very revealing.

8.2 Degradation of sacred groves.

Belief and taboos are the constructive tools for conserving the sacred groves, and erosion of belief and taboos has led to deterioration of groves (*Vartak and Gadgil 1981, Tiwari et al. 1998b 1999*). It has been seen that religious beliefs and taboos that were central to the protection of sacred groves are being eroded over the years due to various reasons and thus the present status of sacred groves is rather precarious. Various anthropogenic pressures due to developmental activities, urbanization exploitation of resources and increase in human population have threatened many sacred groves. A study further indicated that the economic and traditional forces are influencing the traditional communities to discard the community oriented protection to these groves and they are now being exploited (*Saxena et al. 1998, Singh et al 1998*).

Traditional ways of resource management are becoming nonfunctional due to direct conflict between ever increasing human population and limited natural resources (*Sinha and Maikhuri 1998*). It has also been found that cultural changes among the young people are so rapid that they no longer believe in the methods their ancestors followed to maintain the fragile ecosystem.

- It is very important to uphold traditions and beliefs in order to protect and conserve these unique forest patches which represent the relict vegetation of concerned area.
- These forest patches are no longer free from anthropogenic pressure. The disappearance or degradation of sacred groves not only symbolize the loss of rich flora and fauna but also the rich culture associated with it.
- Management of sacred groves and sacred sites through traditional local systems is now being challenged by a number of social and economic issues, and thus traditional methods are less effective.
- Ecological services rendered by sacred groves needs to be highlighted and people should be made to realize that the conservation of groves is crucial for their sustenance.

9. New observations

- Sacred groves play significant role in *situ* conservation of biodiversity. They are natural gene pool and are repository of rare and endemic species.
- Local communities play a very important role to conserve forest in the sacred groves by community's conservation.
- Local community lived in harmony with nature and conserved bio-diversity of the surrounding area.
- Indigenous cultural and rituals practices of the local people in sacred groves serve as a tool for conserving biodiversity.

10. Innovations :

- GIS plotting of sacred groves
- Meetings with temple committee members
- Photography of sacred groves and important flora.
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11. Threats and Challenges

Religious traditions teach us that the Earth is sacred, the fact that traditionally helps to exert control over how people interact with the natural world. Religions around the world have worshipped all forms of nature believing that it emanated the spirit of God and respect the fact that all things coexist in intricate and regulated harmony.

The institution of sacred groves is dwindling due to the following reasons:

- Diminishing traditional beliefs due to modernization.
- The major cause of biodiversity loss is the fragmentation, degradation and destruction of ecosystems and habitats through conversion of land to economically productive uses, especially agriculture, horticulture and urban development.
- Constructions of roads, dams' highways and tourist resorts have lessened the ethnic values of sacred groves.
- Temples inside the sacred groves lead to clearance of the area and therefore disturb the biodiversity, by shifting focus from nature worship to stone and marble idol worship.
- Heavy tourist influx deteriorates the values and the nature.
- Families owning sacred groves are shifting their interest towards other priorities and therefore

12. Discussion and Analysis:

In Himachal Pradesh the sacred groves are maintained through *in situ* conservation and natural regeneration. No afforestation, enrichment or extension of sacred grove has been noticed during the study. No legal status is given to the sacred grove. The ecology in the study area is adversely affected due to anthropogenic and development activities. The dominant species is *Cedrus deodara* which has economic and religious importance. Sacred groves also serves good habitat for faunal diversity. The practice of conservation of plant species in the form of sacred grove represents the ancient ethos of the community of Himachal Pradesh. These sacred groves are showcase of indigenous cultural and religious practices.

Many sacred groves are of small size but have religious and aesthetic importance. The sacred groves with vast area have vital influence on biodiversity and local climate and they fall in reserve forests, demarcated forests, unclassified forests and common lands. Deterioration due to various threats and processes of development has changed the scenario. Loss in faith in general has further increased the magnitude of the issue of revival of this institution and conservation of valuable diversity. This has resulted in minimizing the density in many of the sacred groves. Forest fires and landslides are some other threats to these pristine landscapes.

Despite the fact that real, history does exist in written form while folklore exists in oral, they are not alternative from the view point of the present day. Tales, legends, and beliefs often serve as plantations of specific place names marking the sacred groves. From the aspects of folklore, the panorama of sacred groves is significantly wider. Pieces of folklore, such as mythological tales and place legends, suggest the mythological aspects of sacred groves which have never been recorded. In the mythological sense these manifestations were closely related to the gods and deities. Moreover we cannot rule out the possibility that such folklores have too played an integral part in partly conserving the sacred groves till date.

There are rules and sanctions, laid down to access and usage of the sacred grove. No forest produce can be removed from the sacred grove. Use of any iron tools in the grove is strictly prohibited. Leather shoes or goods are not allowed inside the grove. Only rubber, canvas or wooden shoes can be worn inside the grove, some sacred groves transgression of women is forbidden, normally nobody stays in the grove at night, in some cases shepherds are given special permission, hunting of wild animals in the grove is strictly prohibited

Today, the ecology in the study area is adversely affected due to anthropogenic and development activities. The sacred groves serve as gene pool. These sacred groves are repository of rare and endemic species and harbor plants of ethno botanical importance. Plant species of religious importance are found in the sacred groves which are worshipped by the local inhabitants. They have a high potential of trapping water received from precipitation

which helps in recharging water sources. The woodlands help in binding soil and prevent soil erosion. The dead and decay leaves help in increase the humus of soil which in turn increases the soil porosity and helps water retention, prevent top soil from erosion and increases growth of ground flora.

Sacred grove is a unique example of conservation achieved by cultural practices. The widespread nature of this sentiment and the role of people in safeguarding nature makes it an ideal model to be adopted in future socio – religious aspects of conservation

RESULTS:

A total of 67 sacred groves have been documented in namely Solan and Sirmour two districts of Himachal Pradesh, considering biodiversity, culture, religion and history of the landscapes.

The size of the sacred groves documented varies from 2 biswa to 99 bigha. The sacred grove associated with **Chiru ka Pani in Kuthar Village in Solan District with 99 Bigha and 9 biswa** district has the largest area while the sacred grove associated with **Nagar Koti Mata, Village saroga, District Sirmour with 2 bighas and Manglakai in Banalgi Village in Solan District with also 2 biswa** have lowest area. The largest Sacred grove is Lahaul has an area of **150 bigha**, whereas the smallest of **Mrikula Mata in Udaipur has only 12 biswa** land attached to it. Kangra district has the largest grove belonging to **Jwala Mata with an area of 80 bigha** and the smallest with an area of **1 biswa of Vaishoo Mata**.

The management of sacred grove lies either with temple committee or with Forest Department. There are sacred groves owned by the local deity and managed by the temple committee. Some sacred groves are partly in the name of the Forest Department and partly in the name of the deity but are managed jointly. It has been found that all the species within the sacred groves are not considered sacred. The sacred grove may have or may not have sacred species of plants. *Pinus roxburghii*, *Ficus religiosa*, *Ficus benghalensis*, *Cedrus deodara* etc., are considered to be sacred.

The dense vegetation of sacred groves trap rain water and replenish ponds, springs, wells, streams and *bowaris*.

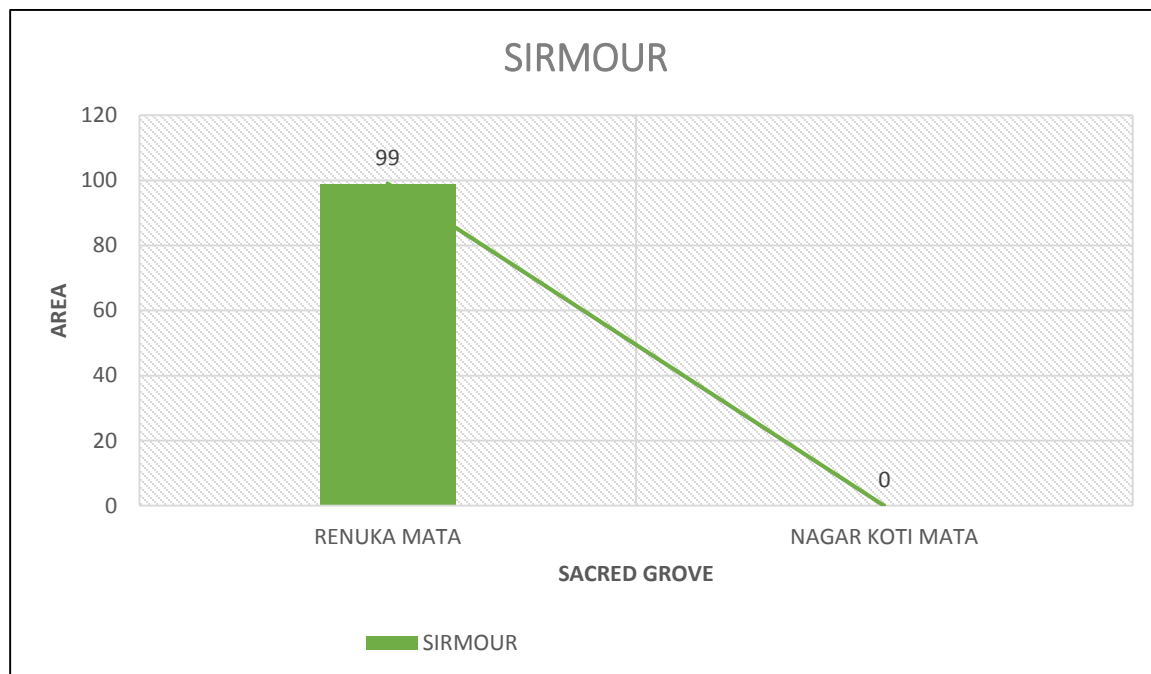
Table and Charts:

SIRMOUR

Table: 2

Largest Sacred Grove (Village) Area	Smallest Sacred Grove(Village) Area
Renuka Mata, (RenukaJi), 99 Bigha	Nagar Koti Mata, (Saroga) ,-2 biswa

Fig: 3

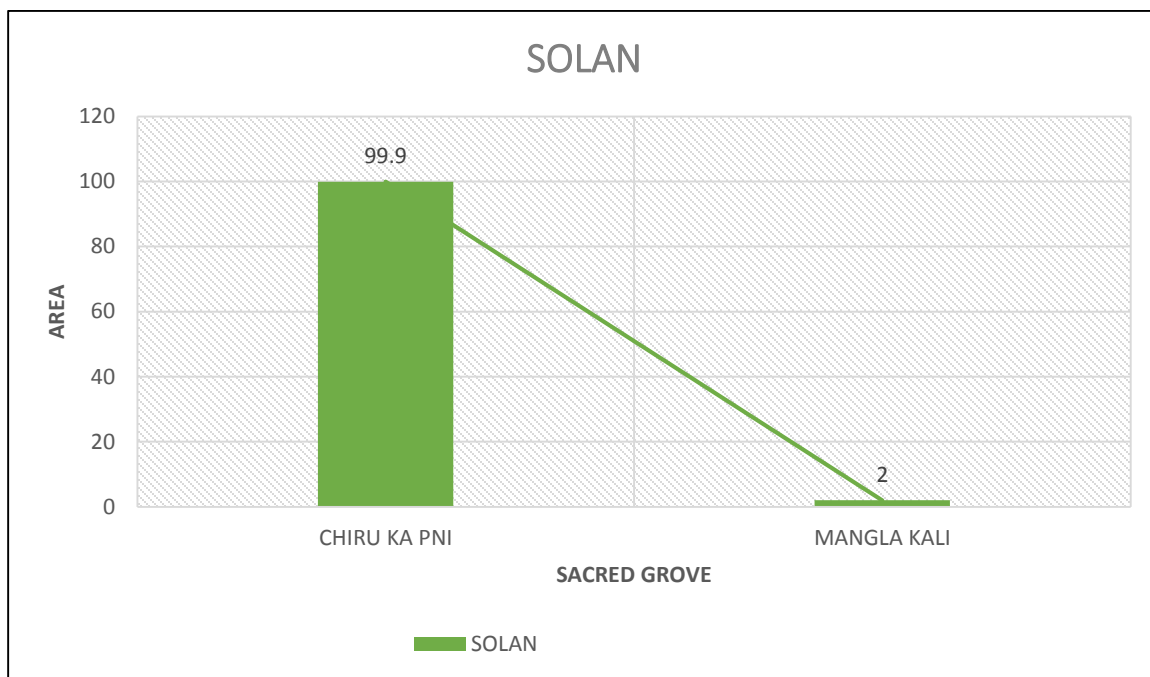


SOLAN

Table : 3

Largest Sacred grove(Village) Area	Smallest Sacred Grove(Village)Area
Chiru Ka Pani,(Kuthad), 99Bigha9 biswa	Mangla Kali,(Banalgi), 2 biswa.

Fig: 4

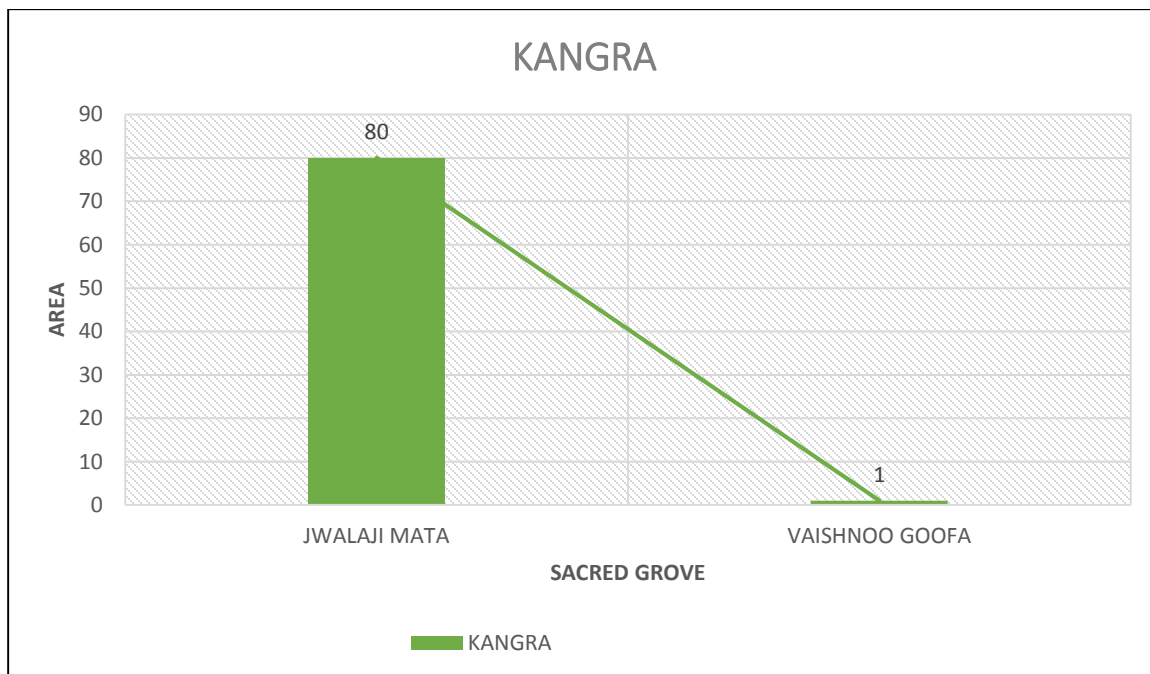


KANGRA

TABLE: 4

Largest Sacred grove(Village) Area	Smallest Sacred Grove(Village)Area
Jwala Mata,(Jwalaji), 80 Bigha	Vaishnoo Goofa,(Malli),1 biswa

Fig: 5

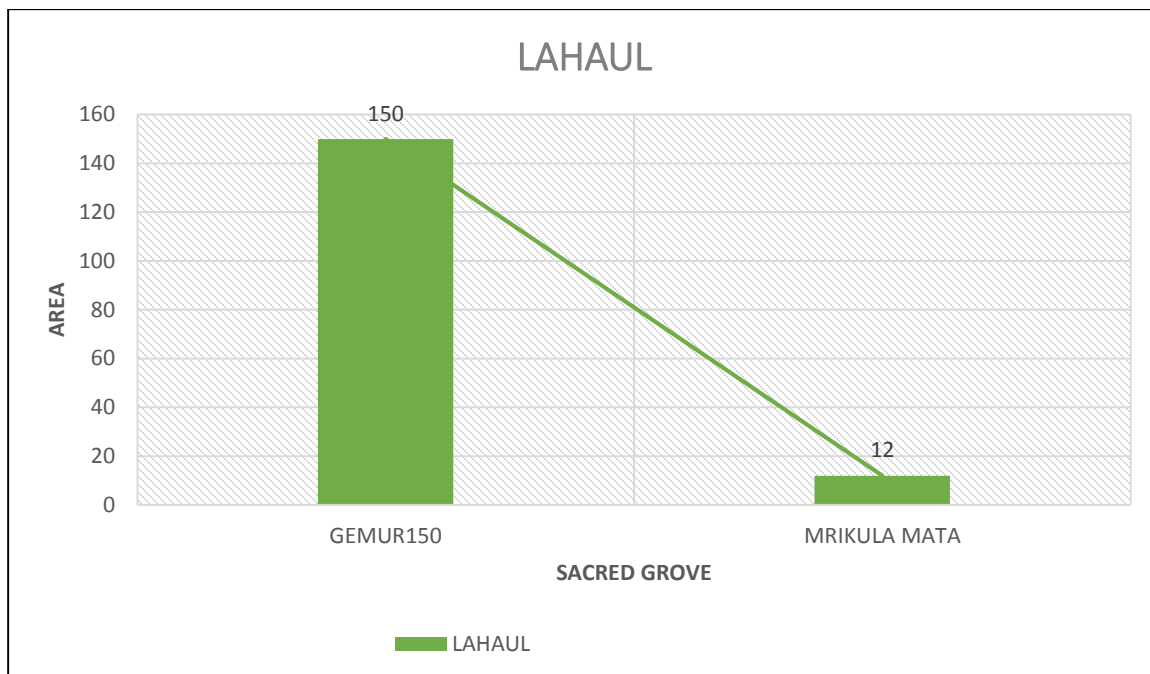


LAHAUL

TABLE : 5

Largest Sacred grove(Village) Area	Smallest Sacred Grove(Village)Area
Gemur,(Gemur)150 bigha	Mrikula mata,(Udaipur), 12 biswa.

Fig: 6



SIRMOUR

Sl. No	Village	SG	Panchayat	Altitude (M)	Area	Lat.	Long.
1	Andheri	ShirgulMaharaj	Andheri	1815	2 bigha	30 □ 57.98	77 □ 04.45
2	Bandal	VijatMaharaj	Chokar	1983	31 bigha	30 □ 49.12	77 □ 23.38
3	Bhajiana	Naina Mata	Naina Tikkar	1677	1 bigha	30 □ 47.18	77 □ 07.41
4	Bharari	ShirgulMaharaj	Bharadi	2015	14 bigha	30 □ 44.44	77 □ 26.42
5	BharaPur	Shiv Devta	Rampur	368	4 bigha	30 □ 31.01	77 □ 39.49
6	Kathar	Bhoor Singh	Kathad	1874	50 bigha	30 □ 45.41	77 □ 27.51
7	Byas	Byas Rishi	Byas	1441	6 bigha	30 □ 30.34	77 □ 33.13
8	Chandpur	La Devi	Byas	461	1 bigha	30 □ 29.29	77 □ 32.30
9	Saroga	Devi Bhargi Mata	BanahChakali	1397	2 bigha	30 □ 40.14	77 □ 12.03
10	Dhameli	Sudeshwar Devta	Naina Tikkar	1493	5 bigha	30 □ 47.52	77 □ 07.54
11	Phagu	ShirgulMaharaj	Bhanat	1538	5 bigha	30 □ 52.13	77 □ 17.45
12	Thanga	ShirgulMaharaj	Devna	2015	6 bigha	30 □ 48.51	77 □ 26.13
13	Gorkhwala	BhadraKali	Gorkhwala	455	5 bigha	30 □ 59.54	77 □ 41.50
14	Haban	Kali MataTokruTimba	Haban	2028	10 bigha (100 bigha)	30 □ 53.13	77 □ 17.41
15	Dungi	Bhangayani Mata	TikriDaskana	2473	10 bigha	30 □ 45.58	77 □ 33.44
16	Juhana	Mahaveer	Sarahan	1530	2 bigha	30 □ 42.44	77 □ 11.51
17	NabgarhKharana	Sirmouri Devta	BanahaDhini	1441	4 bigha	30 □ 43.44	77 □ 10.49
18	UttamWalaBadaban	Mata katasani	Satiwala	458	4 bigha	30 □ 30.46	77 □ 43.51

.19	Trilokpur	Lalitamata	Trilokpur	580	5 bigha (whole beat)	30 □ 31.29	77 □ 12.56
20	KangriGurasa	Math Sidh	Shiva	1340	10 bigha	30 □ 33.08	77 □ 43.59
21	Ambwala	Nag Devta	Salwala	461	6 bigha	30 □ 30.56	77 □ 41.12
22	Pallu	Pallu Devta	Habban	2022	21 bigha	30 □ 52.12	77 □ 20.09
23	Ambwala	Shiv Devta Poudiwala	Nahan	468	6 bigha	30 □ 32.12	77 □ 17.01
24	Renukaji	Renuka Mata	KhalaKiyar	661	99 bigha	30 □ 36.27	77 □ 26.55
25	SehseterDhara	Baglamukhi Mata	Killor	497	5 bigha	30 □ 31.17	77 □ 49.07
26	Saroga	Nagarkoti Mata	Kyari	1404	2 biswa	30 □ 40.31	77 □ 11.18
27	Shaya	ShirgulMaharaj	NeriKotli	1757	8 bigha	30 □ 53.08	77 □ 20.53
28	Shivpur	Sidh baba GaribNath	Shivpur	468	12	30 □ 28.30	77 □ 39.49
29	TokaNagla	La Devi	Kundiyan	482	2 bigha	30 □ 30.15	77 □ 34.59

SOLAN

Sl. No	Village	SG	Panchayat	Altitude (M)	Area	Lat.	Long.
1	Anji	Sheetla Mata	Dharot	1232	1 bigha	30 ° 57.098	77 ° 04.45
2	Badidhar	BadeshwarMahadev	Saryanj	2035	10 bigha	31 ° 08.930	76 ° 58.108
3	Banlagi	Mangla Kali	Dadua	1202	2 biswa	30 ° 57.098	76 ° 56.450
4	Bhaogri	Kali Mata	Bhaogri	1332	1 bigha 7 biswa	30 ° 56.053	76 ° 55.134
5	Darwa	Bhimakali Mata	Darwa	1286		31 ° 00.244	76 ° 56.513
6	Bariyan	BhalewasharMahadev	Bariyan	495	4 bigha	31 ° 02.301	46 ° 43.302
7	Balera	RadhaKrishan	Balera	2035	7 biswa	31 ° 08.108	76 ° 52.799
8	Gharno	Baniya Devi	Bakhalag	1172	1.4 (12)	31 ° 09.059	76 ° 56.015
9	Chandi	Chandi Mata	Chandi	1140	9 bigha	31 ° 01.130	76 ° 55.002
10	Kuthad	Chidu Ka Pani	Kishnagarh	1284	99 bigha 9 biswa	30 ° 58.074	76 ° 57.174
11	Shilmod	Durga Mata	Danoghat	1528	2 bigha	31 ° 12.045	77 ° 57.980
12	Durga Gat	Durga Mata	Kotali	1412	15 bigha	31 ° 11.800	76 ° 58.957
13	sayarighat	Durga Mata	Sayari	1521	5 bigha	31 ° 02.648	76 ° 02.402
14	Solan	Durga Mata	MC Solan	1465	2 bigha	30 ° 54.099	77 ° 09.043
15	MalaunKilla	Kali Mata	Malonswash	1340	4 bigha	31 ° 13.118	76 ° 48.307
16	Ghanagughat	Mansa mata	Ghanagughat	1735	4 bigha	31 ° 11.446	76 ° 56.688
17	Chail	Gurudwara	Chail	2101	10 bigha	30 ° 58.041	77 ° 11.058
18	Katala	jalpa Mata	Materani	1082	2 bigha	31 ° 10.186	76 ° 51.096
19	Shaktighat	Kali Mata	Chamiya	1661	8 bigha	30 ° 56.278	76 ° 57.725
20	Soawa	kalpaJalpa Mata	Badog	1105	4 bigha	31 ° 08.090	76 ° 53.506

Sl . No	Village	SG	Panchyat	Altitude	Lat.	Long.	Area
21	Kararaghat	Dhar Bale Devta	Danoghat	1661	8 bigha	31 □ 12.452	76 □ 57.581
22	Karol Goofa	Sidh baba	Mahi	1232	5 bigha	30 □ 54.098	76 □ 57.045
23	Kothi	Kurgan Devta	Kothi	1005	5 bigha	31 □ 04.590	76 □ 57.370
24	Loharghat	Kali Mata	KyarKanaita	1128	2 bigha	31 □ 12.210	76 □ 49.665
25	LutaruMahadev	LutaruMahadev	Arki	1152	11 bigha	31 □ 09.540	76 □ 57.858
26	Namol	Mangla kali	Kothi	1005	4 bigha	31 □ 04.157	76 □ 57.710
27	Arki	MatruMahadev	Arki	1057	2 bigha 2 biswa	31 □ 08.930	76 □ 58.188
28	DuddalPukhar	Pahad Devta	Saryanj	1881		31 □ 12.03	76 □ 53.01
29	Kunihar	ShaivMahadev	Kothi	913	14 bigha	31 □ 05.58	76 □ 57.077
30	Shiv Ghati	Jwala Mata	Sanan	2966	25 biswa	31 □ 08.225	76 □ 56.218
31	Garkhal	Sidh baba	Garkhal	1678	2bigha	30 □ 54.141	76 □ 58.952
32	Chail	Baba BalakNath	Chail	2248	6 bigha 14 biswa	30 □ 57.045	77 □ 12.011
33	Manlokala	Sidh baba	Manlokala	839	7 bigha	31 □ 06.040	76 □ 52.026
34	Solan	Sidheshawari Mata	MC Solan	1457	85 bigha	30 □ 54.036	77 □ 09.028
35	Bariyan	Tara Devi	Bariyan	495	4 bigha	31 □ 02.327	76 □ 43.367
36	Ukhoo	UkhooSidh	Nand	1407	1 bigha	31 □ 12.036	76 □ 44.128
37	Vikrampur	Dhar Bale Devta	Dumehar	980	5 bigha	31 □ 07.005	76 □ 56.637
38	Bhatian	Vishwakarmaji	Bhatian	461	6 bigha	31 □ 03.074	76 □ 40.237

1	Ashapuri	Ashapuri Mata	Ashapuri	1380 M	31 □ 58.20	76 □ 34.36	2 bigha
2	BasaBajeera	kalakhe Bali mata	Basa	545 M	32 □ 15.51	75 □ 53.29	
3	Bijapur	Sita Ram	Bijapur	620 M	31 □ 54.16	76 □ 36.38	5 bigha
4	Chamunda	Chamunda Mata	Chamunda	1050 M	32 □ 08.52	76 □ 25.06	
5	ChakwanMojjiyar	Gadh Mata	Pathiyar	1815 M	32 □ 07.19	76 □ 26.22	Whole beat
6	Jachh	Bankhandi Mata	Jachh	517 M	32 □ 16.50	75 □ 52.18	2 bigha
7	Dugh	Jakhan Mata	Chandpur	1682 M	32 □ 08.01	76 □ 34.04	40 bigha
8	Jawalaji	Jawala Mata	Jwalaji	594 M	31 □ 52.31	76 □ 19.27	80 bigha
9	Kandwal	Nagani Mata	Kandwal	415 M	32 □ 16.37	75 □ 47.01	6 bigha
10	Gurhel	Kote Bali Mata	Dahab	744 M	32 □ 13.58	75 □ 55.57	3 bigha
11	Sarah	Kapaleswari Mata	Sarah	1177 M	32 □ 12.00	76 □ 18.36	20 bigha
12	Noshera	Laheshwari Mata	Noushera	676 M	32 □ 11.27	76 □ 15.24	4 bigha
13	Mungal	Nag Devta	Mungal	708 M	31 □ 59.21	76 □ 39.06	14 bigha
14	Nerti	Gadh Mata	Nerti	788 M	32 □ 10.04	76 □ 12.11	
15	Chakwan pass	Rateghar Bali Mata	Khodya	660 M	32 □ 19.04	75 □ 49.45	1 bigha
16	Salaol	Kathala Mata	Salol	829	32 □ 07.27	76 □ 12.15	7 bigha
17	SudiLanjot	Chowki Bali Mata	Basnoor	747 M	32 □ 11.49	76 □ 13.27	5 bigha
18	Malli	Vaishno Goofa	Draman	1064M	31 □ 59.36	76 □ 34.56	10 biswa
19	Virni	Virni Mata	Chandpur	1730 M	32 □ 08.23	76 □ 35.41	

LAHAUL -SPITI

Sl. No	Village	SG	Panchayat	Altitude (M)	Area	Lat.	Long.
1	Jholing	Buhari Mata	Thirot	3054	1bigha	32 ⁰ 39,17	76 ⁰ 46,7
2	Keylong	Deva Gyatso	Keylong	3480.80	20 bigha	32 ⁰ 34,45	77 ⁰ 1,32
3	Gemour	Gemour	Padma Sambhav&MarichiVajravara hi Gemour	3405	150 bigha	32 ⁰ 36,35	77 ⁰ 8,47
4	Kardang	KardangMonast ry	Kardang		10 bigha		
5	Udaipur	MrikulaDevi	Udaipur	2673	12 biswa	31 ⁰ 36,49	76 ⁰ 54,46
6	Tupchilling	Tshedag	Tandi	2953	60 bigha	32 ⁰ 32,56	76 ⁰ 58,41
7	Jobrang	Vasuki Nag	Jobrang	2945	1 bigha	32 ⁰ 36,59	76 ⁰ 52,22

LIST OF IDENTIFIED SPECIES;

Sr. No.	HERBS
1	<i>Achyranthesbidentata</i>
2	<i>Aconitum heterophyllum</i>
3	<i>Acoruscalamus</i>
4	<i>Adiantumvenustum</i>
5	<i>Agreeratinaadenophora</i>
6	<i>Agrimoniapilosa</i>
7	<i>Agrimoniapilosa</i>
8	<i>Ajugabracteosa</i>
9	<i>Alkannatinctoria</i>
10	<i>Anaphaliscontorta</i>
11	<i>Androsace lanuginose</i>
12	<i>Anemone vitifolia</i>
13	<i>Arisaemajacquemonii</i>
14	<i>Arisaematortuosum</i>
15	<i>Artemisia indica</i>
16	<i>Asparagus filicinus</i>
17	<i>Asparagus recemosus</i>
18	<i>Asplenium Dalhousie</i>
19	<i>Aspleniumtrichomanes</i>
20	<i>Bergenia ciliate</i>
21	<i>Bidensebiteenata</i>
22	<i>Bistortaamplexicaule</i>
23	<i>Boenninghauseniaalbiflora</i>
24	<i>Bryonopsislaciniosa</i>
25	<i>Buddlejacrispa</i>

26	<i>Bupleurumcandollei</i>
27	<i>Bupleurumfalcatum</i>
28	<i>Cheilanthesomentosa</i>
29	<i>Chenopodium album</i>
30	<i>Chrysanthemum leucanthemum</i>
31	<i>Cirsiumverutum</i>
32	<i>Clematis buchananiana</i>
33	<i>Clinopodiumvulgare</i>
34	<i>Commelinapaludosa</i>
35	<i>Conzyastricta</i>
36	<i>Cyathulatomentosa</i>
37	<i>Daturastramonium</i>
38	<i>Diclipterachinensis</i>
39	<i>Diclipteraroxburghiana</i>
40	<i>Dioscoreadeltoidea</i>
41	<i>Diplazium maximum</i>
42	<i>Duchesneaindica</i>
43	<i>Dysphaniaambrosioides</i>
44	<i>Elsholtziafruticosa</i>
45	<i>Erigeron annuus</i>
46	<i>Erigeron multiradiatus</i>
47	<i>Euphorbia helioscopia</i>
48	<i>Fagopyrumdibotrys</i>
49	<i>Fragarianubicola</i>
50	<i>Fragariavesca</i>
51	<i>Fumariaindica</i>
52	<i>Gageaelegans</i>
53	<i>Galinsogaparviflora</i>

54	<i>Galiumaparine</i>
55	<i>Geranium nepalensis</i>
56	<i>Geranium wallichianum</i>
57	<i>Gerbera gossypina</i>
58	<i>Gnaphalium affine</i>
59	<i>Hederanepalensis</i>
60	<i>Hedychiumspicatum</i>
61	<i>Impatiens bicolor</i>
62	<i>Impatiens edgeworthii</i>
63	<i>Impatiens urticifolia</i>
64	<i>Ipomoea purpurea</i>
65	<i>Iris spp</i>
66	<i>Isodonrugosus</i>
67	<i>Jurineadolomiaea</i>
68	<i>Justiciaadhatoda</i>
69	<i>Koenigiapolystachya</i>
70	<i>Lactucadissecta</i>
71	<i>Lecanthuspeduncularis</i>
72	<i>Leucanthemumvulgare</i>
73	<i>Malvaparviflora</i>
74	<i>Melothriaheterophylla</i>
75	<i>Menthalongifolia</i>
76	<i>Micromeriabiflora</i>
77	<i>Mirabilis jalapa</i>
78	<i>Myosotisalpestris</i>
79	<i>Myriactisnepalensis</i>
80	<i>Neptalaevigata</i>
81	<i>Nicotianatabacum</i>

82	<i>Ocimumbasilicum</i>
83	<i>Onychiumjaponicum</i>
84	<i>Oplismenusundulatifolius</i>
85	<i>Origanumvulgare</i>
86	<i>Osbeckianepalensis</i>
87	<i>Oxalis corniculata</i>
88	<i>Papaversomniferum</i>
89	<i>Persicariaamplexicaulis</i>
90	<i>Persicariacapitata</i>
91	<i>Persicarianepalensis</i>
92	<i>Physalisperuviana</i>
93	<i>Phytolaccaacinososa</i>
94	<i>Picrorhizakurrooa</i>
95	<i>Pileaumbrosa</i>
96	<i>Plantagoasiatica</i>
97	<i>Plantagoerosa</i>
98	<i>Plantagohimalaica</i>
99	<i>Polygonatumverticillatum</i>
100	<i>Polygonumhydropiper</i>
101	<i>Potentillagerardiana</i>
102	<i>Potentillanepalensis</i>
103	<i>Prunella vulgaris</i>
104	<i>Pteriscretica</i>
105	<i>Ranunculus diffuses</i>
106	<i>Reinwardtiaindica</i>
107	<i>Roscoea alpine</i>
108	<i>Rosulariarosulata</i>
109	<i>Rubiaccordifolia</i>

110	<i>Rubusnubicola</i>
111	<i>Rumexcrispus</i>
112	<i>Rumexhastatus</i>
113	<i>Salvia nubicola</i>
114	<i>Scrophulariapolyantha</i>
115	<i>Solanumnigrum</i>
116	<i>Solanumpseudocapsicum</i>
117	<i>Solanumxanthocarpum</i>
118	<i>Strobilanthesglutinosus</i>
119	<i>Taraxacumofficinale</i>
120	<i>Thlaspiarvense</i>
121	<i>Trifolium pretense</i>
122	<i>Trifoliumrepens</i>
123	<i>Urticadioica</i>
124	<i>Valerianajatamansi</i>
125	<i>Veronica persica</i>
126	<i>Viola canescens</i>
127	<i>Viola odorata</i>
128	<i>Xanthium strumarium</i>

Sr. No.	SHRUBS
1	<i>Agave sisalana</i>
2	<i>Astragaluschlorostachys</i>
3	<i>Bambusaarundinacea</i>
4	<i>Berberisasiatica</i>
5	<i>Berberis lyceum</i>
6	<i>Boehmeriaplatyphylla</i>

7	<i>Bougainvillea spectabilis</i>
8	<i>Buddlejaasitica</i>
9	<i>Calotropisprocera</i>
10	<i>Cannabis sativa</i>
11	<i>Carissa spinarum</i>
12	<i>Cassia tora</i>
13	<i>Cassia tora</i>
14	<i>Cirsiumwallichii</i>
15	<i>Clematis grata</i>
16	<i>Colebrookeaoppositifolia</i>
17	<i>Coriarianepalensis</i>
18	<i>Cotoneaster affinis</i>
19	<i>Cotoneaster bacillaris</i>
20	<i>Cotoneaster microphyllus</i>
21	<i>Daphne papyracea</i>
22	<i>Debregeasiasaeneb</i>
23	<i>Debregeasiasalicifolia</i>
24	<i>Desmodiumelegans</i>
25	<i>Desmodiummultiflorum</i>
26	<i>Deutzia staminea</i>
27	<i>Dodonaeaviscosa</i>
28	<i>Elaeagnusparvifolia</i>
29	<i>Euonymus spp.</i>
30	<i>Ficuspumila</i>
31	<i>Gaultheria trichophylla</i>
32	<i>Hederanepalensis</i>
33	<i>Himalrandiatetrasperma</i>
34	<i>Hypericumperforatum</i>

35	<i>Hypericumoblongifolium</i>
36	<i>Indigoferagerardiana</i>
37	<i>Indigoferaheterantha</i>
38	<i>Indigoferapulchella</i>
39	<i>Jasminumdispermum</i>
40	<i>Jasminumhumile</i>
41	<i>Lantana camera</i>
42	<i>Murrayakoenigii</i>
43	<i>Parthenocissussemicordata</i>
44	<i>Phoenix dactylifera</i>
45	<i>Plectranthusrugosus</i>
46	<i>Poranaracemosa</i>
47	<i>Prinsepiautilis</i>
48	<i>Pyracanthacrenulata</i>
49	<i>Reinwardtiaindica</i>
50	<i>Rhamnuspurpureus</i>
51	<i>Rhamnustriqueter</i>
52	<i>Rhododendron anthopogon</i>
53	<i>Rhododendron campanulatum</i>
54	<i>Rhododendron lepidotum</i>
55	<i>Ribesalpestre</i>
56	<i>Ricinuscommunis</i>
57	<i>Rosa brunonii</i>
58	<i>Rosa macrophylla</i>
59	<i>Rosa moschata</i>
60	<i>Rosa webbiana</i>
61	<i>Rubusellipticus</i>
62	<i>Rubusfoliolosus</i>

63	<i>Rubusfruiticosus</i>
64	<i>Rubusmacilentus</i>
65	<i>Rubusniveus</i>
66	<i>Rubuspaniculatus</i>
67	<i>Sarcococcasaligna</i>
68	<i>Skimmialaureola</i>
69	<i>Smilax aspera</i>
70	<i>solanumviarum</i>
71	<i>Sorbariatomentosa</i>
72	<i>Spiraeabella</i>
73	<i>Spiraeacanesens</i>
74	<i>Spiraeavaccinifolia</i>
75	<i>Tinosporacordifolia</i>
76	<i>Viburnum cotinifolium</i>
77	<i>Viburnum grandiflorum</i>
78	<i>Vitexnegundo</i>
79	<i>woodfordiafruticosa</i>
80	<i>Zanthoxylumarmatum</i>

Sr. No.	TREES
1	<i>Abiespindrow</i>
2	<i>Acer acuminatum</i>
3	<i>Acer caesium</i>
4	<i>Acer cappadocicum</i>
5	<i>Aeglemarmelos</i>
6	<i>Aesculusindica</i>
7	<i>Albiziajulibrissin</i>
8	<i>Allianthusaltissima</i>

9	<i>Alnusnepalense</i>
10	<i>Alnusnitida</i>
11	<i>Azadirachtaindica</i>
12	<i>Bauhinia purpurea</i>
13	<i>Bauhinia vahlii</i>
14	<i>Bauhinia variegata</i>
15	<i>Betulaalnoides</i>
16	<i>Betulautilis</i>
17	<i>Buteamonosperma</i>
18	<i>Buxuswallichiana</i>
19	<i>Callistemon citrinus</i>
20	<i>Callistemon lanceolatus</i>
21	<i>Cedrelatoona</i>
22	<i>Cedrus deodara</i>
23	<i>Celtisaustralis</i>
24	<i>Cornuscapita</i>
25	<i>Corylusjacquemontii</i>
26	<i>Cupressustorulosa</i>
27	<i>Dalbergiasiasso</i>
28	<i>Elaeagnus umbellata</i>
29	<i>Eucalyptus citriodora</i>
30	<i>Ficusbenghalensis</i>
31	<i>Ficus palmata</i>
32	<i>Ficus religiosa</i>
33	<i>Ficus roxburghii</i>
34	<i>Fraxinus floribunda</i>
35	<i>Fraxinus micrantha</i>
36	<i>Grevillea robusta</i>

37	<i>Grewiaglabra</i>
38	<i>Grewiaoptiva</i>
39	<i>Ilex dipyrena</i>
40	<i>Juglansregia</i>
41	<i>Juniperusmacropoda</i>
42	<i>Juniperussquamata</i>
43	<i>Lyoniaavalifolia</i>
44	<i>Mallotusphilippensis</i>
45	<i>Maluspumila</i>
46	<i>Morus alba</i>
47	<i>Morusrubra</i>
48	<i>Myricaesculenta</i>
49	<i>Olea ferruginea</i>
50	<i>Piceasmithiana</i>
51	<i>Pinusgerardiana</i>
52	<i>Pinusroxburghii</i>
53	<i>Pinuswallichiana</i>
54	<i>Pistaciakhinjuk</i>
55	<i>Platanusoccidentalis</i>
56	<i>Populus ciliate</i>
57	<i>Prunusamygdalus</i>
58	<i>Prunusarmeniaca</i>
59	<i>Prunuscerasoides</i>
60	<i>Prunuscornuta</i>
61	<i>Prunuspersica</i>
62	<i>Prunussalicina</i>
63	<i>Psidiumguajava</i>
64	<i>Punicagranatum</i>

65	<i>Pyruspashia</i>
66	<i>Quercusdilatata</i>
67	<i>Quercusleucotrichophora</i>
68	<i>Quercussemecarpifolia</i>
69	<i>Rhododendron arboretum</i>
70	<i>Rhuswallichii</i>
71	<i>Robiniapseudacacia</i>
72	<i>Salix alba</i>
73	<i>Salix denticulate</i>
74	<i>Salix tetrasperma</i>
75	<i>Sapium insigne</i>
76	<i>Sorbusfoliolosa</i>
77	<i>Sorbuslanata</i>
78	<i>Symplocospaniculata</i>
79	<i>Taxusbaccata</i>
80	<i>Taxuswallichiana</i>
81	<i>Terminaliabelirica</i>
82	<i>Terminaliachebula</i>
83	<i>Ulmusvillosa</i>
84	<i>Ulmuswallichiana</i>
85	<i>Ziziphusoxyphylla</i>

