



## Study of some significant sacred groves of Mangrol, Mandvi and Umarpada talukas of Surat District, Gujarat

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### Abstract

Sacred Groves are the house of indigenous ancestor plants, which are often found abundant in the area. Many local communities rely on these groves as a source of traditional knowledge, utilizing this knowledge for treating a variety of ailments. The study examines the cultural, religious, and ecological significance of sacred groves in Gujarat's Mangrol, Mandvi, and Umarpada talukas, emphasizing their crucial role in conserving forests and preserving plant biodiversity. Documenting 382 plant species and 50 ethno-medicinal plants, the research underscores the need for urgent conservation efforts and community involvement. The study highlights the importance of interdisciplinary collaboration and education initiatives for the sustainable management and preservation of these culturally and ecologically significant sacred groves.

**Keywords:** Sacred groves, plant diversity, ethno-medicinal plants, traditional medicine, conservation challenges, Gujarat

### Introduction

Sacred Groves are a place of religious importance, cultural significance, and ecological diversity. It is associated with rituals, worship, and traditional beliefs, and is known for its remarkable contribution to the health of nature. The place where the rich ecosystem includes a diverse range of plant species. These protected patches of forests are considered sacred by the local communities, serving as repositories of rich biodiversity and traditional knowledge (Amit Pandey, 2022) <sup>[1]</sup>. Sacred Groves play a great role in conserving forests and natural habitats of plant species because of the belief of local tribals of the Gods and Goddesses residing at that place. Local people consider these groves, which often contain ancient trees, plants, and wildlife, as places of worship which is been passed one for generations to generation by their parents and forefathers. The grove's deity receives offerings from the tribal people in the form of candles, coconuts, flags, clay pots, hens, goats, field products (like wheat, rice, sugarcane), etc. Sacred groves are guarded by indigenous people, as they been protected by Gods, Goddesses, or ancestral spirits who provide good yield, as well as other favors, blessings, etc. Sacred Groves protect and conserves many plant species, having medicinal properties too.

Local Communities play a greatest role in safeguarding the Sacred Groves and the Sacred ethno-medicinal plants which are used by the tribals for the various diseases and uses. Sacred Groves are fully surrounded by the ethno-medicine plants which has highly medicinal properties for which forest with the sacred groves are protected. Local communities believe on their Gods and Goddesses for the well-being of the cattle and for well-being of whole of the villages, so in return the people protect the forest and plants of the forest which plays a role in conversation and protection of gene pool of rare, threatened and endemic species. The sacred groves contribute significantly to ecosystem services by providing clean air, soil, and water, the preservation of flora and fauna, temperature control, and the preservation of traditional knowledge. (D. Gamit & B. Maitreya, 2021) <sup>[2]</sup>.

In India sacred groves are found mainly in the region where the tribal community is located, the size of the Groves can vary from big once with large numbers of plant species to small once with very few numbers of plant species. Sacred groves can be found all across India, in the pockets of preserved biodiversity of Western Ghats, Himachal Pradesh, Aravalli Hills, Meghalaya, Madhya Pradesh and Parnera Hills.

The documentation of India's sacred groves is still in progress. It is discovered that 14,000 sacred groves remain intact. Only 138 hectares have completely intact vegetation, and roughly 3318 hectares have an open canopy. Still, initial study suggests that India may have between 100,000 and 150,000 sacred groves. (Malhotra *et al.*, 1998) <sup>[3]</sup>.

### Sacred Groves in Gujarat

Sacred Groves in Gujarat have a rich historical background dating back centuries. They have been essential sites for religious and cultural practices among local communities, forming a crucial part of the region's social fabric and its unique tradition. Gujarat has recorded 556\* sacred groves from Sabarkantha, Dahod, Jh alod Banaskantha, Dediypada taluka, Tapi and Valsad districts which are authenticated. However, still many are yet to be documented. They are dedicated to deities like Khodiyar Mata, Oran Mata, Jhalai Mata, Panch Krishna, Mahadev, Kansari mavli, and many other deities. South Gujarat has 514\* Sacred Groves recorded so far. South Gujarat has 7 District (Surat, Bharuch, Narmada, Navsari, Dang, Valsad and Tapi) from which only work in 3 District has been carried.

P.K. Patel *et al.*, (2013) <sup>[4]</sup>. studied 11 sacred groves of Banaskantha District and reported 40 different species of plants. A.M Patel (2015) <sup>[5]</sup>. studied 2 sacred groves of Mahudha taluka of Kheda District and reported 21 plants. Dr. R.S. Patel (2016) <sup>[6]</sup>. studied 9 sacred groves and 51 sacred plants which are protected by local people of Ambaji forest area of Banaskantha district, Gujarat. Sameeta *et al.* had done case a study of 8 scared groves in Dahod district of Gujarat. Gamit, A. D., (2021) <sup>[2]</sup>. studied plant diversity of Kansari Mavli sacred grove of Songadh forest, Tapi

District, Gujarat with 149 plants species. Vasava *et al.* (2018)<sup>[8]</sup>. studied 33 sacred groves of Dediapada, Narmada District, Gujarat. with 158 Flowering plants. Maru R.N *et al.* (2013)<sup>[9]</sup>. studied 6 sacred groves in Jhalod and surrounding areas in Dahod District. Patel *et al.* (2022)<sup>[10]</sup>. studied 480 sacred groves in Valsad District, Gujarat. All the sacred groves were conserved and protected by the rules of their own cultural practices by the local community wherein they have been worshipping Gods and Goddess and the spirits of their ancestral.

### Study Area

The present study was conducted in Mangrol, Mandvi, and Umarpada Talukas of Surat District, Gujarat, India. Surat district has 10 talukas which are Surat city, Mandvi, Bardoli, Palsana, Mahuva, Kamrej, Mangrol, Choryasi, Olpad, Umarpada. It is bordered by the districts of Bharuch, Navsari (South), Narmada (North), and East Tapi. Surat has total area of 4.549 km<sup>2</sup> including 4.040.39 km<sup>2</sup> rural area and 508.61 km<sup>2</sup> urban area. Mandvi is the largest taluka in Surat district covering an area of 763.21 km<sup>2</sup>, while Mangrol has 620 km<sup>2</sup> area and Umarpada has 431 km<sup>2</sup> area. Surat has a total of 4,549 sq.km geography area with 5.00 sq.km very dense forests, 288.85 sq.km moderately dense forests and 206.21 sq.km open forests.

Mandvi taluka is located in Surat district which is about 56 km from Surat. It is situated alongside the Tapi River. Mandvi Taluka has 755.65 km<sup>2</sup> rural area, with 150 villages under it, which is in the tribal belt of State of Gujarat. The local tribal languages are Chaudhari, Vasavi and Gamit. Most of them are farmers and depend on forests for their daily needs. They have their own Gods and Goddess residing in the forest with their own rituals, ceremonies and beliefs.

Umarpada is a town and the taluka located 102 km away from Surat and in Surat district. The total area of Umarpada taluka is 431 km<sup>2</sup>, with 63 villages under it in the tribal belt of the State of Gujarat. Mostly people are farmers here and speak Vasavi, Vasava language. The local tribals have their own beliefs of the Gods and Goddess sitting in the deep

forest; they have their own cultural practices and worshipping ceremonies to obey their deity.

Mangrol taluka is located in Surat district and is about 64 km from Surat. The total area of Mangrol taluka is 620 km<sup>2</sup> including 596.25 km<sup>2</sup> rural area, with 91 villages under it, which is in the tribal belt of the State of Gujarat. The local tribal languages are Chaudhari, Gamit and Vasavi. Most of them are farmers and have their own Gods and Goddesses in the forest and villages whom they worship, and this practice of worshipping is carried on by them as per their fathers and forefathers.

### Materials and Methods

The Sacred Groves of three talukas in Surat district were identified and visited along with the help of villagers & Bhagats. The list of Questionnaire was made to be which were to be asked to the local people and Bhagats to find out the information. The questions were name of the grove and deity, what was the reason behind the name of the grove the history of the grove, myths associated with the grove, offerings offered to deity, which tribal community worships the grove, benefits of the groves, threats and problems faced by groves, what plants are used to treat diseases, what are the importance of plants to sacred grove. Field visits and interactions with villagers and bhagats were carried out from the 10th of November 2023 to the 6th of January 2024. During the study 13 sacred groves for the Surat district were documented which covered Three talukas Mangrol, Mandvi and Umarpada, which is in south Gujarat region of Gujarat. The location had been recorded through Google Maps. The plant species were recorded, further the plants were categorized as habits, families, its medicinal uses and its origin, plants specimens were identified with the help of Flora of Gujarat, G.L. Shah & Flora of Maharashtra, M.R. Almeida. Plant species for the herbarium were collected and were identified from the Herbarium Center at St. Xavier's College, Botany Department. Information regarding the deity and the sacred groves was recorded. From the 10<sup>th</sup> January 2024 to the 20<sup>th</sup> February 2024 data analysis and chapters were prepared.

**Table 1:** List of Sacred Groves recorded from Mangrol, Mandvi and Umarpada Talukas

Sr. No.	Village	Sacred Groves	Managed by	Talukas with Grove	Approx. Area (Sq. mt)
1	Divtan	Devghat	Village Panchayat	Umarpada	800
2	Tuked	Aamliya Dungar	Villages	Mandvi	500
3	Ognisa	Bhanbha Dungar	Village Panchayat	Mangrol	500
4	Pipalvada	Ahinda Dev Dungar	Villages	Mandvi	1000
5	Luharvad	Dudhmogra Mataji Mandir	Village Panchayat	Mandvi	300
6	Mandan	Goval Devi	Villages	Mangrol	200
7	Ghodbar	Batheji Mandir	Villages	Mangrol	50
8	Ghodbar	Phago Dungar	Villages	Mangrol	300
9	Ghodbar	Hemydo	Villages	Mangrol	20
10	Ghodbar	Kaka Badiya Dev	Villages	Mangrol	10
11	Ghodbar	Bharado Dev	Villages	Mangrol	30
12	Ghodbar	Panviwala Dev	Villages	Mangrol	50
13	Ghodbar	Gam Devti	Villages	Mangrol	20

### Results and Discussion

Sacred Groves are protected because of the cultural and religious beliefs of the tribal people who live there. The grove's deity receives offerings from the people of the tribes in the form of candles, coconuts, flags, clay pots, hens, etc. Sacred groves are guarded by indigenous people because they feel that they have been protected by gods, goddesses,

or ancestral spirits who provide good yield as well as other favors, blessings, etc.

The present study documents the existence of 13 sacred groves from the areas of Mangrol, Mandvi and Umarpada talukas of Surat District. These Sacred Groves are found in 7 villages like Tuked, Pipalvada, Ognisa, Devghat, Luharvad, Ghodbar and Mandan and these have been

documented (Table-1). The maximum number of 7 sacred groves are documented in Ghodbar village.

During the study, 382 plant species belonging to 83 families have been identified and listed. These include three species of Pteridophytes. Among the 382-plant species, 107 are

trees, 53 are shrubs, 174 are herbs, 43 are climbers, 3 are parasites, one is a semi-parasite and one is a Liana.

### Chart of dominating families of plants studied at 13 Sacred Groves

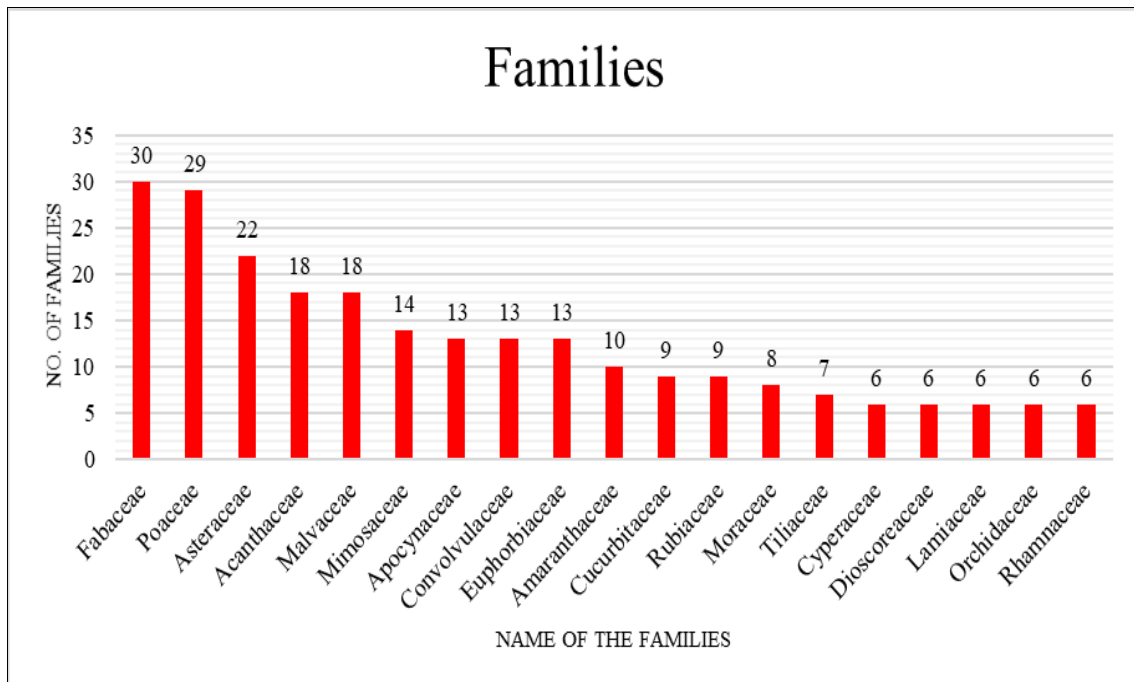


Chart 1: Representing no. of Families studied at sacred groves

Chart 1 Showing no. of dominating families recorded at 13 sacred groves. During the study, Fabaceae with (30 species), Poaceae with (29 species), Asteraceae with (22 species), Malvaceae and Acanthaceae with (18 species) and Mimosaceae with (14 species) were found to be the dominating families.

*Tectona grandis* L. f., *Dendrocalamus strictus* (Roxb.) Nees, *Butea monosperma* (Lamk.) Taub, *Hyptis suaveolens* (L.) Kuntze, *Miliusa tomentosa* (Roxb.) J. Sinclair, *Holarrhena antidysenterica* (heyne.ex.Roth.) Wall. Ex DC, *Ziziphus mauritania* Lam., *Tridax procumbens* L., *Helicteres isora* L. and *Sida acuta* Burm. F are the dominant plant species found in the 13 sacred groves.

Among the 382 plant species documented, information about 50 Ethno-medicinal plants which are used by local tribals living there to cure various diseases by using different parts of the plants, was documented. These protected areas are home to a remarkable diversity of species and may hold undiscovered plant life. A deeper understanding of ecological relationships and medicinal discoveries are just two of the many potential benefits offered by this rich variety of plant life. It is imperative to conduct additional research on these and other high-diversity groves to protect their distinct ecosystems and discover the mysteries they conceal.

During the study 18 Invasive plant species were found. These include *Acanthospermum hispidum* DC., *Ageratum conyzoides* L., *Argemone mexicana* L., *Cuscuta reflexa* Roxb., *Euphorbia heterophylla* L., *Lantana camara* L., *Ocimum americanum* L., *Tridax procumbens* L., and *Xanthium strumarium* L. which were originally from Tropical America, the Mediterranean, America, Tropical Central & South America, Tropical Africa and Brazil.

Gujarat has recorded 556\* sacred groves so far from Sabarkantha, Dahod, Jhalod, Banaskantha and Dediapada, Tapi and Valsad, districts which have been authenticated. However, many are yet to be documented. South Gujarat has 514\* Sacred Groves recorded so far as per the record.

It is significant the 13 sacred groves have been documented as a result of this brief study which covered some parts of Mangrol, Mandvi and Umapada talukas. In depth documentation of the Sacred groves in Gujarat, inclusive of their cultural and religious significance to the local tribal community along with their biodiversity and its related value and significance is urgently needed as the impact of urbanization takes its toll on sacred groves and the forests.

Sacred groves play a crucial role in preserving surrounding forests and flora, as seen in the case of Aamliya Dungar, where tribal communities believe that the deities residing there protect them from destruction. Cutting down trees or using tools within these sacred spaces is strictly forbidden, emphasizing their significance in maintaining ecological balance and biodiversity.

However, the rapid urbanization and modernization pose threats to sacred groves, exemplified by the situation at Banbha Dungar. Transformed into an ecotourism destination, the increased influx of visitors has led to the indiscriminate dumping of waste, including plastic bottles and bags, which negatively impacts the forest ecosystem. Moreover, the overshadowing of the primary deity, Banbha raja, by other Hindu gods and goddesses reflects a shift in worship practices, eroding the traditional reverence for the sacred grove's guardian deity.

Similarly, Ahinda Dev Dungar's sacred grove faces challenges due to human greed and exploitation of medicinal plants. Overharvesting of these plants for medicinal use has led to their depletion, endangering several

species and compromising the grove's ecological integrity. The loss of these valuable resources highlights the urgent need for sustainable conservation practices and community awareness to ensure the long-term viability of sacred groves and their associated ecosystems.

The study identifies three distinct categories of sacred groves based on their ecological health, cultural significance, and level of preservation. Firstly, the best-preserved groves, such as Devghat, Aamliya Hill, and Ahinda Dev Dangar, boast rich biodiversity and hold profound cultural and ecological importance. These groves, located in remote areas with minimal human interference, serve as sanctuaries for rare and endangered species. However, even these well-preserved sites face threats from ecotourism, which increases human interference and disturbs their natural habitats.

Secondly, moderately preserved groves like Dudhmogra Mataji Mandir and Panviwala Dev, while still maintaining

some traditional practices and cultural significance, exhibit signs of human activity and declining ecological health. The younger generations' detachment from traditional knowledge poses a threat to these groves' long-term preservation. Urgent action, including community involvement and restoration efforts, is needed to safeguard these groves and revitalize their cultural heritage.

Lastly, degraded groves like Hemydo and Batheji Mandir suffer from extensive damage due to urbanization, overgrazing, and conversion of forested areas into agricultural land. Despite retaining some cultural significance, these groves face severe ecological degradation and are at risk of losing their traditional practices and ecological value. Collaborative efforts involving local communities, government agencies, and NGOs are essential to address specific threats and implement conservation measures tailored to each grove's unique challenges.

#### Annexure I: List of Plants recorded in 13 Sacred Groves, Mangrol, Mandvi and Umarpada Talukas

Sr No.	Botanical Name	Common Name	Family	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<i>Abelmoschus esculentus</i> (L.) Moen.	Bhindi	Malvaceae				✓	✓	✓							✓
2	<i>Abelmoschus manihot</i> var <i>tetraphyllus</i> (Roxb ex Honem.) Bors.	Bhindi	Malvaceae					✓	✓							
3	<i>Abelmoschus moschatus</i> Medic.	Khathi bhindi	Malvaceae	✓												
4	<i>Abrus precatorius</i> L.	Rati tingni	Fabaceae				✓			✓						✓
5	<i>Abutilon indicum</i> (L.) Sweet.	Khapat	Malvaceae				✓	✓								
6	<i>Acacia auriculiformis</i> A. Cunh.	Akash-zhad	Mimosaceae	✓												
7	<i>Acacia catechu</i> (L.) Willd., Oliv.	Kher	Mimosaceae						✓							
8	<i>Acacia catechuoides</i> (Roxb.) Benth	Kher, Kogru	Mimosaceae	✓	✓	✓	✓	✓								✓
9	<i>Acacia chundra</i> (Roxb.) Willd.	Chilar	Mimosaceae	✓	✓	✓	✓									
10	<i>Acacia farnesiana</i> (L.) Wight et Am.	Kokaru	Mimosaceae	✓	✓	✓										
11	<i>Acacia intsia</i> (L.) Willd.		Mimosaceae				✓									
12	<i>Acacia leucophloea</i> Willd.		Mimosaceae	✓												
13	<i>Acacia nilotica</i> (L.) Del.	Baval	Mimosaceae				✓			✓						
14	<i>Acacia pennata</i> (L.) Willd.	Shembi	Mimosaceae	✓	✓	✓										
15	<i>Acacia sinuata</i> (Lour.) Merrill.	Shikakai	Mimosaceae					✓								
16	<i>Acacia torta</i> (Roxb.) Craib.		Mimosaceae					✓								
17	<i>Acalypha hispida</i> Burm.f.		Euphorbiaceae					✓								
18	<i>Acalypha indica</i> L.	Dadari	Euphorbiaceae				✓	✓								
19	<i>Acanthospermum hispidum</i> DC.		Asteraceae					✓								
20	<i>Achyranthes aspera</i> L.	Chiktiyo	Amaranthaceae	✓	✓	✓	✓									
21	<i>Achyranthes coyeri</i> Santapau Sant.		Amaranthaceae	✓												
22	<i>Acmella radicans</i> (Jacq.) R.K. Jansen		Asteraceae				✓	✓								
23	<i>Adiantum caudatum</i> L.		Adiantaceae				✓	✓								
24	<i>Adiantum incisum</i> Forsk.		Adiantaceae				✓									
25	<i>Adiantum philippens</i> L.	Hansraj	Adiantaceae				✓									
26	<i>Aeginetia indica</i> L.		Orobanchaceae				✓									
27	<i>Aerides maculosa</i> Lindl.		Orchidaceae				✓	✓								
28	<i>Aegle marmelos</i> (L.) Corr.	Bino	Rutaceae	✓	✓	✓	✓	✓								✓
29	<i>Aerva lanata</i> (L.) Juss.	Kapuri madhuri	Amaranthaceae	✓	✓											
30	<i>Aerva sanguinolenta</i> (L.) Blume.		Amaranthaceae				✓									
31	<i>Aeschynomene aspera</i> L.		Fabaceae	✓												
32	<i>Aeschynomene indica</i> L.		Fabaceae	✓			✓									
33	<i>Agave americana</i> L.	Sisal	Agavaceae	✓			✓	✓								✓
34	<i>Ageratum conyzoides</i> L.	Mankad mari	Asteraceae	✓	✓											
35	<i>Ailanthus excelsa</i> Roxb.	Alno kakad.	Simaroubaceae	✓	✓	✓	✓									✓
36	<i>Albizia lebbek</i> (L.) Willd.	Shirish	Fabaceae	✓	✓	✓										
37	<i>Albizia procera</i> (Roxb.) Benth.	Kinai	Mimosaceae	✓												
38	<i>Albizia odoratissima</i> (L.f.) Benth	Kala shirash	Mimosaceae				✓									
39	<i>Alstonia scholaris</i> (L.) R. Br.	Saptarni	Apocynaceae						✓							✓
40	<i>Alternanthera pulchella</i> Kunth.		Amaranthaceae				✓	✓								
41	<i>Alternanthera sessilis</i> (L.) R.Br.		Amaranthaceae				✓									
42	<i>Alysicarpus buplerifolius</i> (L.) DC.	Khadsamaer vo	Fabaceae				✓									
43	<i>Alysicarpus longifolius</i> (Rott. Ex Spr.) Wt. & Am.		Fabaceae	✓			✓									
44	<i>Alysicarpus vaginalis</i> (L.) DC.	Kui modra	Fabaceae	✓												
45	<i>Amaranthus spinosus</i> L.	Katemath	Amaranthaceae	✓	✓		✓									
46	<i>Amaranthus viridis</i> L.	Rajgira	Amaranthaceae					✓								
47	<i>Ammania baccifera</i> L.	Agya	Lythraceae				✓									
48	<i>Amorphophyllum sylvaticus</i> (Roxb.) kunth		Araceae				✓									
49	<i>Anacardium occidentale</i> L.	Kaju	Anacardiaceae				✓									
50	<i>Anisomeles indica</i> (L.) Kuntze		Lamiaceae	✓	✓											
51	<i>Anisomeles malabarica</i> (L.) R.Br. ex Sims		Lamiaceae				✓				✓					
52	<i>Annona squamosa</i> L.	Sitafal	Annonaceae	✓									✓	✓	✓	







285	<i>Neuracanthus sphaerostachyus</i> (Nees) Dalzell	Ganthera	Acanthaceae			✓	✓					✓
286	<i>Ocimum americanum</i> L.	Tulsi	Lamiaceae			✓	✓					
287	<i>Ocimum gratissimum</i> L.	Ram-tusli	Lamiaceae	✓		✓						
288	<i>Ocimum tenuiflorum</i> L.	Tulsi	Lamiaceae	✓				✓				✓
289	<i>Oldenlandia corymbosa</i> L.	Paripat	Rubiaceae	✓								
290	<i>Oldenlandia herbacea</i> (L.) Roxb.	Paripat	Rubiaceae	✓	✓							
291	<i>Oplismenus burmanii</i> (Retz.) P. Beauv		Poaceae	✓		✓						
292	<i>Oplismenus compositus</i> (L.) P. Beauv		Poaceae	✓								
293	<i>Oroxylum indicum</i> (L.) Vent	Tetvo.	Bignoniaceae	✓	✓							
294	<i>Ougenia oojenensis</i> (Roxb.) Hochrest	Tanas	Fabaceae	✓	✓	✓	✓					
295	<i>Oxalis corniculata</i> L.	Changeri, Navari	Oxalidaceae	✓								
296	<i>Panicum maximum</i> Jacq.	Zini ghas	Poaceae					✓				
297	<i>Parthenium hysterophorus</i> L.		Asteraceae	✓	✓							
298	<i>Pergularia daemia</i> (Forssk.) Chiov.		Apocynaceae			✓						
299	<i>Pergularia pallida</i> (L.) H. B. K.		Apocynaceae	✓	✓	✓						✓
300	<i>Peristrophe paniculata</i> (Fork) Brummit	Adhedi	Acanthaceae	✓	✓	✓			✓			
301	<i>Persicaria barbata</i> (L.) Hara		Polygonaceae		✓							
302	<i>Persicaria glabra</i> (Willd.) M. Gomez		Polygonaceae		✓	✓						
303	<i>Phyllanthus nodiflora</i> (L.) Greene	Ratalio.	Verbenaceae		✓							
304	<i>Phyllanthus emblica</i> L.	Aamblo	Phyllanthaceae				✓					
305	<i>Phyllanthus maderaspatana</i> L.	Kanoecha	Phyllanthaceae	✓								
306	<i>Phyllanthus reticulatus</i> Poir.		Phyllanthaceae		✓			✓				
307	<i>Phyllanthus virgatus</i> Forst. f.		Phyllanthaceae	✓								
308	<i>Physalis longifolia</i> Nutt.		Solanaceae				✓					
309	<i>Pithecolobium dulce</i> (Roxb.) Benth.	Vilayati ambli	Mimosaceae		✓							
310	<i>Plumbago zeylanica</i> L.	Chitro	Plumbaginaceae									✓
311	<i>Polyalthia longifolia</i> (Sonn.) Thw.	Ashok	Annonaceae					✓				✓
312	<i>Pongamia pinnata</i> (L.) Pierre.	Karanj	Fabaceae		✓							
313	<i>Portulaca oleraceae</i> L.	Moti luni, Lakha luni, Kutbo	Portulacaceae	✓								
314	<i>Pupalea lappacea</i> (L.) Juss.		Amaranthaceae					✓				✓
315	<i>Rhynchosia bracteata</i> Benth. ex Baker		Fabaceae	✓								
316	<i>Rivea hypocrateriformis</i> (Desv.) Choisy.	Fang	Convolvulaceae	✓								
317	<i>Rorippa indica</i> (L.) Hiern		Brassicaceae		✓							
318	<i>Ruellia prostrata</i> Lamk var. <i>dejecta</i> L.		Acanthaceae			✓	✓					
319	<i>Rungia pectinata</i> (L.) Nees in DC		Acanthaceae	✓	✓	✓	✓	✓				✓
320	<i>Sapindus trifoliatus</i> L.	Aritho	Sapindaceae	✓								
321	<i>Schleichera oleosa</i> (Lour.) Oken	Khat kosumdi	Sapindaceae		✓	✓						
322	<i>Securinea leucopyrus</i> (Willd.) Muell. Arg.	Safed shiri	Euphorbiaceae	✓								
323	<i>Senecio dalzellii</i> C.B. Clarke		Asteraceae					✓				
324	<i>Senna tora</i> (L.) Roxb		Caesalpiniaceae				✓					
325	<i>Sida acuta</i> Burm. F	Bala	Malvaceae	✓	✓	✓	✓	✓	✓			✓
326	<i>Sida cordata</i> (Burm. f.) Borssum.	Kharenti	Malvaceae	✓								
327	<i>Sida cordifolia</i> L.	Nidhidatuval	Malvaceae	✓	✓	✓	✓	✓				
328	<i>Sida rhombifolia</i> L.	Movdo bokiya	Malvaceae	✓		✓						
329	<i>Solanum americanum</i> Mill.	Dhuni	Solanaceae				✓					
330	<i>Solanum nigrum</i> L.	Piludi	Solanaceae		✓							
331	<i>Solena amplexicaulis</i> (Lamk.) Gandhi	Harivo	Cucurbitaceae	✓								
332	<i>Sorghum halepense</i> (L.) Pers.	Baru	Poaceae		✓					✓		
333	<i>Soymida febrifuga</i> (Roxb.) A. Juss	Mahanu rohino	Meliaceae		✓							
334	<i>Sphaeranthus indicus</i> L.	Bhurandi	Asteraceae		✓	✓						✓
335	<i>Spigelia anthelmia</i> L.		Loganiaceae	✓	✓							
336	<i>Spilanthes paniculata</i> DC.		Asteraceae		✓							
337	<i>Spondias pinnata</i> (L. f.) Kurz		Anacardiaceae		✓							
338	<i>Sporobolus coromandelianus</i> (Retz.) Kunth		Poaceae		✓							
339	<i>Sporobolus Diandra</i> (Ratz.) P. Beauv		Poaceae	✓	✓							
340	<i>Sterculia foetida</i> L.	Jungli Badam	Sterculiaceae	✓								
341	<i>Sterculia urens</i> Roxb.	Kadayo	Sterculiaceae	✓	✓	✓	✓	✓				✓
342	<i>Striga angustifolia</i> (D. Don.) Saldanha	Kunvario agio	Orobanchaceae		✓							
343	<i>Strobilanthes urens</i> (Roth) J.R.I. Wood		Acanthaceae	✓	✓	✓	✓	✓	✓			✓
344	<i>Synedrella nodiflora</i> (L.) Gaertn.		Asteraceae	✓	✓	✓	✓					
345	<i>Syzygium cumini</i> (L.) Skeels	Jambu	Myrtaceae									✓
346	<i>Syzygium lancifolius</i> (Miq.) Merr. & L.M. Perry	Jambu	Myrtaceae			✓						
347	<i>Tabernaemontana divaricata</i> R.Br. ex Roem. & Schult.		Apocynaceae					✓				✓
348	<i>Tacca leontopetaloides</i> (L.) O. Kuntze.		Taccaceae		✓							
349	<i>Tagetes erecta</i> L.	Makhmal	Asteraceae	✓								
350	<i>Tamarindus indica</i> L.	Kati Ambli	Fabaceae	✓	✓	✓	✓	✓				✓
351	<i>Tecoma stans</i> (L.) Juss.	Tecoma	Bignoniaceae					✓				✓
352	<i>Tecotna grandis</i> L. f.	Sag	Verbenaceae	✓	✓	✓	✓	✓	✓			✓
353	<i>Tephrosia purpurea</i> (L.) Pers.	Phukiyo	Fabaceae			✓						
354	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	Sadado	Combretaceae		✓							
355	<i>Terminalia bellerica</i> (Gaertn.) Roxb.	Behdo	Combretaceae		✓							
356	<i>Terminalia crenulata</i> Roth.	Sadad	Combretaceae	✓	✓	✓	✓					✓
357	<i>Themeda quadrivalvis</i> (L.) O. Kuntze		Poaceae		✓							
358	<i>Tinospora glabra</i> (Burm.f.) Merrill.	Kamboli, Gaduj vel	Menispermaceae	✓	✓	✓						
359	<i>Tribulus terrestris</i> L.	Bethu gokhru	Zygophyllaceae			✓						
360	<i>Trichosanthes dioica</i> Roxb.	Parval	Cucurbitaceae		✓							
361	<i>Trichosanthes tricuspidata</i> Lour.	Kaundal	Cucurbitaceae		✓	✓						





Fig 2: Devghat, Umarpada taluka



Fig 4: Goval Devi, Mangrol taluka



Fig 3: Ahinda Dev, Mandvi taluka



Fig 5: Banbha Raja, Mangrol taluka

### Conclusion

The study delves into the cultural, religious, and ecological significance of thirteen sacred groves in Gujarat's Mangrol, Mandvi, and Umapada talukas. These groves, protected by indigenous tribes like the Chaudhari, Gamit, and Vasava, serve as sanctuaries safeguarded by deities and ancestral spirits. Offerings made by these communities symbolize reverence and gratitude, reflecting a deep-rooted belief in the groves' ability to bestow prosperity, good health, and overall well-being.

In future endeavors, fostering collaboration emerges as paramount. Forest departments can forge alliances with local communities, intertwining efforts for protection and sustainable income streams. Concurrently, researchers delve into the ecology, culture, and social significance of these groves, disseminating insights extensively. Educational initiatives amplify awareness, while innovative monitoring methods and interdisciplinary collaboration, spanning social sciences and economics, pave the path towards comprehensive solutions for sacred grove conservation.

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