

Research Paper

Botany

A Detailed Survey on Sacred Groves of Different extends in the Coastal Belt of Thrissur District, Kerala, India

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ABSTRACT

Sacred groves represent a major effort to recognize and conserve ethnic biodiversity traditionally. As an ecosystem, they even help in soil and water conservation besides preserving the rich biological diversity and microclimatic conditions of the region. Now a day the environmental significance of the sacred groves is a matter well forgotten and

are gradually disappearing under the influence of changing socioeconomic scenario, disappearance of the tharavadu system, shift in belief systems, development projects and other anthropogenic activities, and many of them are now just relics of a once-gregarious vegetation. Under these circumstances, preservation, conservation and management of these groves warrant top priority. However no concrete steps are being initiated to protect and conserve these groves and this may be mainly due to lack of awareness regarding the environmental significance of sacred groves by the local people together with lack of proper information regarding their existence in the region by the public and concerned agencies who are entrusted to safe guard the existing groves in the region. If concrete steps are not taken to stop their deterioration, these micro cosmos will disappear from the face of earth, resulting in loss of biodiversity which may include valuable species of flora and fauna and finally cause imbalance in the ecosystem. A detailed survey of sacred groves is the first and foremost step to be carried out to inform and make aware the organizations and bodies who are supposed to protect these natural resource pockets. Thrissur is one of the districts having large number of sacred groves in Kerala which are distinct and unique in biological diversity. It is understood from people inhabiting the vicinity of groves in the coastal belt of Thrissur district that most of the groves have started gradual deterioration in terms of biological diversity, composition and extend due to various anthropogenic interventions. In the present study a detailed survey of existence of sacred groves in the coastal belt of Thrissur district has been conducted. Various information regarding sacred groves such as name, location, extend, deity, ownership and management etc were collected and documented.

Key words: Sacred groves, survey, coastal belt of Thrissur district

INTRODUCTION

Kerala has a rich tradition of nature conservation and Sacred Groves are small patches of native vegetation traditionally been protected on the grounds of spiritual and religious faith. There are many myths, legends and faith associated with the sacred groves of Kerala. In Kerala locally they are known as "Kavu" or "Sarpakkavu" or "Nagavanam" and are usually not destroyed under fear of wrath from presiding deity. The sacred groves of North Kerala are mostly associated with Goddess whereas in South Kerala they are associated mostly with snake worship. The deities in the sacred groves are at times represented by some trees and a stone slab installed at the base of the tree is the altar on which the offerings are made. So these trees are planted and protected and preserved intact from human interference. Thus, the sacred groves serve as unique example of in situ genetic resource conservation through the involvement of local people in the most economic and efficient manner.

Sacred groves are the treasure house of rare and endangered species of animals and abode of many medicinal, endemic, endangered and wild relatives of cultivated species which may have definite role to play in the future species improvement programs. They are also having rich diversity of many plant species which are very relevant to the maintenance of ecosystem balance. As an ecosystem, sacred groves help in soil and water conservation, besides preserving the biological wealth. According to Rajendraprasad (1995), sacred groves with their complex array of interaction, influence the flora and fauna of the region as well as the microclimate of that locality. The soils of sacred groves show high porosity and low bulk density compared to the soils of the vicinity. The thick litter cover and channels created by soil macro fauna together enhances water retention, root system development, gaseous exchange, and heat conductance. Sacred groves enrich the soil through its rich litter and the nutrients generated by litter decomposition are not only recycled within the sacred grove ecosystem but also find their way into the adjoining agro ecosystems (Ramachandran et al., 1991). The ponds and streams adjoining the groves serve as perennial water sources, serving as the last resort to many animals and birds for their water requirements, especially durIn the words of Dr. M. S. Swaminathan, "Unlike a botanical garden, where a wide range of trees and plants are collected and cultivated for the purpose of our education and enjoyment, the sacred groves are one method of expressing the gratitude of human families to the trees which sustain and support life under a given agro-ecological condition". Gadgil and Vartak (1975) observed that in many parts of India, sacred groves represent surviving examples of climax vegetation but these groves are also gradually disappearing under the influence of modernization. Though ancient people of India established sound socio-cultural practices epitomizing in situ conservation of biological and genetic diversity of sacred groves, in recent times this has been ignored. Sacred groves in Kerala are facing serious threats due to various reasons. One of the main reasons which is causing serious threats to the existence of sacred grove in coastal belt as well as in Thrissur district or in Kerala as a whole is the disappearance of Tharavadu system and partition of family properties. In cases where sacred grove and its premises are handed over to a family who has no faith in keeping the integrity of the Kavu, it may led to the total deterioration of natural vegetation. Other anthropogenic interventions contributing towards this include shift in belief systems, market forces and over exploitation, developmental projects, grazing and poaching and other antisocial activities. However no concrete steps are being initiated to protect and conserve these groves and this may be mainly due to lack of awareness regarding the importance of sacred groves in maintenance of ecosystem balance, biodiversity conservation and for maintaining the microclimatic conditions of the region. Under these circumstances, preservation, conservation and management of the sacred groves warrants top priority. Kerala has roughly about 1500 sacred groves and Thrissur is one of the districts having large number of sacred groves which are distinct and unique in biological diversity. It is understood from people inhabiting the vicinity of groves that most of the groves have started gradual deterioration in terms of cultural values, floristic richness, composition and diversity. The present work is being proposed in the above contest. A detailed survey of existence of sacred groves in the coastal belt of Thrissur district has not yet been conducted. The present authors believe that a detailed survey of these natural resource pockets is the first and very important step to be carried out to inform and make aware the public, concerned

organizations and government bodies regarding the existence, location, associated deities, ownership and extend of each sacred grove in the area to take necessary precautions for conservation and environmental protection as a sacred duty. Both Union and State Governments should accord high priority to identifying and managing this source of genetic wealth and need to act fast.

MATERIALS AND METHODS Area of study

The area of study is the coastal belt of Thrissur district, Kerala which is spread over 16 panchaysths and one municipality. The area lies at 10.52°N 76.21°E and has an average altitude of 2.83m. The average maximum temperature is 33°C and average minimum temperature is 20°C. Average annual rainfall is 2500mm. The soil is sandy loam to laterite and acidic with pH value ranging from 4.6 to 5.8

Survey of sacred groves

A detailed survey of sacred groves in the coastal belt of Thrissur district was carried out during the year 2014. Information on the existence of sacred groves was collected through personal contacts with villagers, temple authorities and various social organizations in the area. The information collected include location, name of sacred grove, ownership/managed by, extend or area and presiding deity of each sacred grove. Whenever any sacred grove is visited, the local people and related temple worshippers were interviewed to confirm the above facts and also to elicit information about the presence of other groves in the locality.



Figure: 1 Map of study area showing sixteen panchayaths and one municipality in the coastal belt of Thrissur district with corresponding number of sacred groves

RESULT AND DISCUSSION

The data obtained from the detailed survey of sacred groves existing in different panchayath and municipality in the coastal belt of Thrissur district is depicted in table 1-20. Sacred groves may range in their size from a group of few trees to a forest of trees (Ramakrishnan et al., 1998). The survey revealed the existence of a good number of sacred groves of different extend in the coastal belt of Thrissur district ranging from 0.00004 Sq. Km (1cent) to 0.00635 Sq. Km (157 cents). Data shows the highest number of protected area as sacred groves is recorded in the Punnayur panchayath area with a total number of 27 groves while the lowest number of groves is recorded in the Chavakkad Municipality area with a total number of 5 groves. However, considering the total area covered by sacred groves, Vatanapally panchayath occupied the highest position with a total area of 0.01052 Sq. Km (260 cents) and is about 0.080% of the entire 13.18 Sq. Km area of the panchayath while the least area is occupied by the Edathirithy panchayath with a total grove area of 0.00077 Sq. Km (19 cents) which constituted only about 0.005% of the entire 16.63 Sq. Km area of the panchayath. With respect to individual sacred groves, the highest extend is occupied by Sree Sankulangara Kavu (1) (0.00635 Sq. Km) in Sree Narayanapuram panchayath while lowest area noticed is 0.00004 Sq.Km which is found to exist in many panchavaths.

The survey further reveals a grand total of 261 groves existing in the coastal belt of Thrissur district which all together cover an area of 0.07019 Sq. Km (1734.5 cents) and constitute about 0.032% of the entire 222.38 Sq. Km area of coastal belt. The survey result shows the size of the sacred grove varies as small as 1cent to as big as 157 cents and the data further reveals (table 2) about 83.14% of the total sacred groves are smaller in size and belong to the size range of 19 cents, 15.71% belongs to the size range of 10-49 cents and 0.77% and 0.38% respectively belongs to the size range of 50-90 cents and 91 cents and above.

The survey results reveal that majority of the sacred groves in the coastal belt of Thrissur district are owned either by individual families or group of families and this constituted around 51.34% of ownership by individual families and 46.74% of ownership with group of families while the remaining 1.92% is owned and managed by temple devaswom/trust (table 3). The study also reveals that sacred groves in the coastal belt are mostly dedicated to Snake God or Goddess or both. The deities in the sacred groves are variously known as 'Nagam, Nagaraja, Sarpam, Karinagam, Anjana maninagam and Nagayakshi'. Many sacred groves have more than one deity, of which the patron deity is usually a Snake God and has one or more supporting deities like Bhagavathi, Durga, Devi, Ayyappan, Annapoorneshwari, Muthappan, Hanuman etc. However few cases of sacred groves were noted where the Snake God is not the patron deity but the supporting deity and this constituted around 11.49% of total 261 sacred groves surveyed. Other patron deity noted during the survey includes Bhagavathi, Devi, Ayyappan, Durga, Siya, Brahmarakshassu, Sasthayu, Bhadrakali, Vanabhuvaneshwari, Ganapathi, Vanadurga etc.

The data related to sacred groves derived from the present survey clearly indicates, still there is considerable number of small pockets or patches of natural vegetation in the coastal belt of Thrissur district which represent the ancient Indian way of in situ conservation of genetic diversity and they act as nursery and store house of many of the local ayurvedic, tribal and folk medicines. The protection and maintenance of these natural resources is very essential as we all know that the protection of the environment and life supporting systems are interwoven with conservation of these biological diversities. But the encroachment has resulted in the shrinkage of many of sacred groves in the coastal belt of Thrissur district during last few decades. Some of the typical examples include Sree Sankulangara Kavu belonging to Sree Narayanapuram panchayath and Adiparambil kavu belonging to Valappad panchayath which were previously reported as having an area of around 499 cents and 84 cents by Chandrashekara and Sankar (1998) and Sujana and Sivaperuman (2008) respectively. The present survey revealed both the sacred groves have undergone splitting and area considerably reduced to 187 cents and 30 cents respectively.

CONCLUSION

The authors would like to conclude that the preservation and maintenance of the existing sacred groves in this coastal area is an important necessity to prevent the relics from total depletion. The information collected in the survey may be useful for the public, NGOs and Govt organizations to locate and to take initiatives towards protection of these groves. Further the authors suggest that Government may encourage and support the conservation of these sacred groves by way of financial support and technical expertise to its owners. Further, the local bodies, NGOs and forest department may be empowered with law enforcement to safe guard the existing sacred groves in the region.

TABLE 1

Details of different panchayaths and municipality, total number of sacred groves existing and total area of sacred groves covered in the coastal belt of Thrissur district in Kerala

SI.No	Panchayath/Municipality	Total area of Panchayath/ Municipality (Sq.Kms)	Total no. of sacred groves	Total area of sacred groves (Cent)	Total area of sacred groves (Sq.Kms)	Total area of sacred groves (%)
1	Punnayurkulam	18.71	18	66	0.00267	0.014
2	Punnayur	16.60	27	109	0.00441	0.027
3	Chavakkad Municipality	12.41	5	37	0.00150	0.012
4	Kadappuram	9.63	7	38	0.00154	0.016
5	Orumanayur	5.19	12	79.5	0.00322	0.062
6	Engandiyur	15.68	20	100	0.00405	0.026
7	Vatanappally	13.18	13	260	0.01052	0.080
8	Thalikulam	10.89	8	63	0.00255	0.023
9	Nattika	9.60	25	120	0.00486	0.051
10	Edathirithy	16.63	6	19	0.00077	0.005
11	Valappad	14.33	17	146	0.00591	0.041
12	Kaipamangalam	13.70	26	145	0.00587	0.043
13	Perinjanam	9.30	14	59	0.00239	0.026
14	Mathilakam	12.92	6	41	0.00166	0.013
15	Sree Narayanapuram	19.26	14	246	0.00996	0.052
16	Edavilangu	7.60	26	159	0.00643	0.085
17	Eriyad	16.75	17	70	0.00283	0.017
Grand to	tal of coastal belt of Thrissur	222.38	261	1734.5	0.07019	0.032

TABLE 2
Details of various size ranges of sacred groves existing in the coastal belt of Thrissur district in Kerala

	Size ra	Size range of sacred					
Panchayath/ Municipality	1-9 cents	10-49 cents	50-90 cents	91 cents and above	Total no of sacred groves		
Punnayurkulam	17	1	-	-	18		
Punnayur	26	1	-	-	27		
Chavakkad Municipality	4	1	-	-	5		
Kadappuram	5	2	-	-	7		
Orumanayur	11	1	-	-	12		
Engandiyur	18	2	-	-	20		
Vatanappally	6	5	2	-	13		
Thalikulam	6	2	-	-	8		
Nattika	21	4	-	-	25		
Edathirithy	6	-	-	-	6		
Valappad	13	4	-	-	17		
Kaipamangalam	21	5	-	-	26		
Perinjanam	12	2	-	-	14		
Mathilakam	5	1	-	-	6		
Sree Narayanapuram	10	3		1	14		
Edavilangu	21	5	-	-	26		
Eriyad	15	2	-	-	17		
Total	217	41	2	1	261		

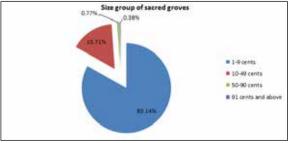


Figure: 2 Details of percentage distribution of different size range group of sacred groves in the coastal belt of Thrissur district in Kerala

TABLE 3
Details showing the ownership category of sacred groves in the coastal belt of Thrissur district in Kerala

	Danchayath/	Sacred grov	Sacred groves owned and maintained by					
Sl.No	Panchayath/ Municipality	Individual family	Group of family	temple devaswom trust				
1	Punnayurkulam	9	9	-				
2	Punnayur	13	14	-				
3	Chavakkad Municipality	0	5	-				
4	Kadappuram	0	7	-				
5	Orumanayur	10	2	-				
6	Engandiyur	7	13	-				
7	Vatanappally	5	8	-				
8	Thalikulam	4	4	-				
9	Nattika	18	7	-				
10	Edathirithy	2	3	1				
11	Valappad	11	6					
12	Kaipamangalam	15	10	1				
13	Perinjanam	8	6					
14	Mathilakam	2	4	-				
15	Sree Narayanapuram	7	5	2				
16	Edavilangu	13	12	1				
17	Eriyad	10	7	-				
Total		134	122	5				

TABLE 4
Details of sacred groves in Punnayurkulam Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality/	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Edakkara Ashari kavu	Nagaraja and Bhaghavathi	15	Individual family
	2	Padinjakkara kavu	Nagam	4	Individual family
	3	Karimbanakkal Kavu	Nagam	5	Individual family
	4	Payyarlikavu	Nagam	3	Individual family
	5	Kizhakkekara Kavu	Nagam	4	Individual family
	6	Karipayikavu	Nagam	3	Individual family
	7	Nakkola Kavu	Nagam	3	Individual family
Punnayurkulam	8	Manayil Kavu	Nagam	3	Individual family
Panchayath	9	Punnor kshethrakavu	Nagaraja	3	Group of family
,	10	Nalappattu Nagakavu	Nagam	2	Group of family
	11	Ambazhathel Kavu	Nagam	4	Group of family
	12	Pavittakulangara Kshetrakavu	Nagaraja	3	Group of family
	13	Kalarikkal Kshetrakavu	Nagam	2	Group of family
	14	Karimpanakkal Kavu	Nagam	3	Individual family
	15	Manikandeswara Kshetrakavu	Nagaraja	3	Group of family
	16	Periyambala Kshetrakavu	Nagaraja	2	Group of family
	17	Ayyappankavu	Ayyappan, Nagaraja	2	Group of family
	18	Sivalaya Kshetrakavu	Nagaraja and Nagayakshi	2	Group of family

TABLE 5
Details of sacred groves in Punnayur Panchayath_in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
. ,	1	Erancheri Durga Bhagavati Kshetra kavu	Bhagavathi, Nagaraja	4	Group of family
	2	Karuthedath Kshetrakavu	Nagam	3	Group of family
	3	Edakkara Kunnathu Kavu	Nagam	3	Group of family
	4	Patherikavu	Nagam	2	Individual family
	5	Kalathiparambil Kavu	Nagam	3	Individual family
	6	Panthayi Kshetrakavu	Nagaraja	4	Group of family
	7	Akkiparambathu Kavu	Nagam	2	Individual family
	8	Pavittakulangara Kshetrakavu	Nagaraja	6	Group of family
	9	Mambully Kshetrakavu	Nagaraja	3	Group of family
	10	Edakkattu Bhagavathi Kshetrakavu	Bhagavathi,Nagaraja and Nagayakshi	4	Group of family
	11	Periyamballa kavu	Nagam	3	Individual family
	12	Ottaini Kshetra kavu	Nagam	3	Group of family
	13	Anjarekavu	Brahmarakshassu and Nagam	4	Individual family
	14	Mathramkottu Kshetra kavu	Nagam	5	Group of family
Punnayur Panchayath	15	Ayyappan kavu	Ayyappan and Nagam	5	Group of family
,	16	Kalathil kavu	Nagam	3	Individual family
	17	Chandirathil kavu	Nagam	4	Individual family
	18	Aviyoor kalari kavu	Nagam	5	Group of family
	19	Kadampully Bhagavathi kshetra kavu	Bhagavathi, Nagaraja	6	Group of family
	20	Kunnathu kavu	Nagam	20	Individual family
	21	Kalarikkal kavu	Nagam	3	Individual family
	22	Kothamuthithara kavu	Nagam	2	Individual family
	23	Amarayil kavu	Nagam	2	Individual family
	24	Kuranjiyoor kavu	Nagam	2	Individual family
	25	Kizhapattu Kavu	Nagam	3	Individual family
	26	Ambalam kavu	Nagam	3	Group of family
	27	Panikker kavu	Nagam	2	Group of family

TABLE 6
Details of sacred groves in Chavakkad Municipality in the coastal belt of Thrissur district

Panchayath/ Municipality	Sl. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Manathala Nagayakhi kavu	Nagaraja and Nagayakshi	20	Group of family
	2	Nariyambully Kshetra kavu	Nagam	4	Group of family
Chavakkad Municipality	3	Chamundeshwari Bhagavathy kshetra kavu	Bhagavathy, Nagam	3	Group of family
	4	Nediyedath Kshetra kavu	Nagaraja	5	Group of family
	5	Kalathil Kshetra kavu	Nagaraja and Nagayakshi	5	Group of family

TABLE 7
Details of sacred groves in Kadappuram Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Mattummal chanassery Bhagavathi Kshetra kavu	Nagaraja	10	Group of family
	2	Melepurakkal kavu	Nagaraja and Nagayakshi	6	Group of family
	3	Melepurakkal Kshetra kavu	Nagaraja and Nagayakshi	5	Group of family
	4	Kanda karuna Kshetra kavu	Nagam	3	Group of family
Kadappuram Panchayath	5	Thondekkaran Kshetra kavu	Nagaraja	10	Group of family
	6	Kerachan Bhagavathi kavu	Bhagavathy,Nagam	2	Group of family
	7	Chevidan kulavan Kshetra kavu	Nagam	2	Group of family

Table 8
Details of sacred groves in Orumanayur Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
1		Chendangotu tharavadu kavu	Nagam	28	Group of family
	2	Mangottu kavu	Nagam	5	Individual family
	3	Vadakkepurakkal kavu	Nagam	3	Individual family
	4	Vattekkattu kavu	Nagam	9	Individual family
	5	Paily kavu	Devi, Nagam	2	Individual family
	6	Koonampurath kavu	Sarpam	3.5	Individual family
	7	Chenda kavu	Nagam	5	Individual family
Orumanayur Panchayat	8	Kallatt kavu	Nagam	2	Individual family
	9	Kuttikkatt kavu	Nagam	4	Individual family
	10	Valappil kavu	Nagam	2	Individual family
	11	Vadakkepurakkal kavu	Nagam	8	Individual family
	12	Chennangattu Kshetra kavu	Nagam	8	Group of family

TABLE 9
Details of sacred groves in Engandiyur Panchayath in the coastal belt of Thrissur district

Panchayath Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Ellathum kavu	Nagam	25	Individual family
	2	Ayiramkanni Kshetra kavu	Bhagavathy, Nagaraja	10	Group of family
	3	Kalari kadu kavu	Kari nagam	8	Individual family
	4	Kadavil kottukkal kavu	Nagam	2	Individual family
	5	Vadakkekavu Kshetram	Nagam	5	Group of family
	6	Kalathil kavu	Nagam	2	Individual family
	7	Kanda karna kshetra kavu	Nagaraja	5	Group of family
	8	Panayamkulangara Kshetra kavu	Nagaraja	4	Group of family
	9	Karapurath kavu	Nagam	2	Individual family
	10	Kondrappassery kavu	Nagam	3	Individual family
	11	Chanassery Kshetra kavu	Nagaraja	5	Group of family
Former discours Decorate constitu	12	Vadakkumchery Kshetra kavu	Nagaraja	4	Group of family
Engandiyur Panchayath	13	Thachapully Kshetra kavu	Nagaraja	5	Group of family
	14	Kanjirathara Kshetra kavu	Nagaraja	4	Group of family
	15	Panikkassery Kshetra kavu	Nagam	3	Group of family
	16	Puthiyedathu kavu	Nagam	4	Individual family
	17	Karuppadath Kshetra kavu	Nagam	2	Group of family
	18	Therambil Kshetra kavu	Nagaraja	3	Group of family
	19	Meledath Kshetra kavu	Nagaraja	2	Group of family
	20	Pallithazhath Kshetra kavu	Nagam	2	Group of family

TABLE 10
Details of sacred groves in Vatanapally Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Kalappurakkal kavu	Nagam	25	Individual family
	2	Kottai Chalippattu kavu	Nagaraja	25	Group of family
	3	Kozhiparambil kavu	Bhagavathy and Vishnumaya,Nagam	18	Individual family
	4	Vaalath Bhagavathy kshetra kavu	Bhagavathy, Nagaraja	6	Group of family
Vatanapally Panchayath	5	Palliyanakkadu Temple kavu	Ashtanagangal	90	Group of family
	6	Puthillathu Kavu	Nagam	50	Group of family
	7	Poyyara kavu	Nagaraja and Nagayakhi	10	Group of family
	8	Sangaramangalam Devi temple	Devi, Nagangal	20	Group of family
	9	Meprengattu Kshetra kavu	Nagangal	8	Group of family
	10	Chettikadu Kavu	Nagam	2	Individual family
	11	Vatanapally Thattan kavu	Nagam	2	Individual family
	12	Kongattil Kavu	Nagam	2	Group of family
	13	Elethu Kavu	Nagam	2	Individual family

TABLE 11
Details of sacred groves in Thalikulam Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	Sl. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Vallath sarpakavu	Anjana maninagam	3	Individual family
	2	Sree Dharmasastha kshetrakavu	Sasthavu, Nagaraja and Anjana maninagam	10	Group of family
	3	Nambiyathu kavu	Karinagam and Anjana maninagam	30	Individual family
	4	Chettikkadu Sarpakavu	Karinagam and Anjana maninagam	3	Group of family
The Black on Device the south	5	Aparambathu Sarpakavu	Nagarajavu and Nagayakshi	8	Individual family
Thalikulam Panchayath	6	Kaliparambil kavu	Nagam	3	Individual family
	7	Sree Paradevatha nagathan kavu	Devi, Nagam	4	Group of family
	8	Sree Eranezhathu Bhagavathi Kshetra kavu	Bhagavathi,Nagarajavu and Nagayakshi	2	Group of family

TABLE 12
Details of sacred groves in Nattika Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Kaliyarakkal kavu	Bhagavathi, Kali and Chithrakoodam	22	Individual family
	2	Eranezhathu kavu	Nagayakshi	2	Individual family
	3	Nhayakkatt kavu	Nagam	2	Individual family
	4	Vellanchery kavu	Nagarajavu and Nagayakhi	2	Group of family
	5	Panapparambil kavu	Nagam	2	Individual family
	6	Panakkal pulakkaparambil kavu	Karinagam and Anjana maninagam	6	Individual family
	7	Panakkal kurumbepadath sree Bhadrakali temple	Bhadrakali, Kainagam and Anjana maninagam	6	Group of family
	8	Pozhekkadavil kavu	Nagam	2	Individual family
	9	lyyani kavu	Nagam	2	Individual family
	10	Pandamparambil kavu	Nagam	2	Individual family
	11	Njayapilly illam	Nagam	2	Individual family
	12	Chembipparambil kavu	Nagam	2	Individual family
Nattika Panchayath	13	Cherthedath kavu	Nagam	3	Individual family
	14	Arayamparambil kavu	Nagam	2	Individual family
	15	Puthanparambil Kavu	Nagam	2	Individual family
	16	Vallath kavu	Nagam	2	Individual family
	17	Unniyaranpurakkal Kavu	Nagangal	10	Individual family
	18	Pannipulath Kavu	Vanabhuvaneshwari,karinagam and Maninagam	10	Group of family
	19	Kallingal kavu	Nagaraja, Karinagam, Anjana maninagam and Durga	8	Individual family
	20	Kanjirapparambil kavu	Nagam	2	Individual family
	21	Thekkepanakkal kavu	Nagam	2	Individual family

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Nattika Panchayath	22	Kongattil kavu	Nagam	5	Group of family
	23	Vattezhathu kavu	Maninagam	6	Group of family
	24	Pandankulangara Kshetra Kavu	Nagaraja, Nagayakshi, Karinagam, Maninagam	15	Group of family
	25	Kalarikkal Sree Mahadurgadevi Kshetra Kavu	Durga, Nagam	1	Group of family

TABLE 13
Details of sacred groves in Edathiruthy Panchayath in the coastal belt of Thrissur district

Panchayath/Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Kollara Ponnemparambil Yakshi kavu	Nagam	4	Group of family
	2	Choorapetti kavu	Nagam	5	Individual family
	3	Thechi kavu Ayyappan kavu	Ayyappan, Nagam	3	Group of family
Edathiruthy Panchayath	4	Kannanamkulangara Siva temple	Siva, Nagam	1	Devaswom
	5	Kollara Bhagavathi kshetra kavu	Bhagavathi, Nagam	2	Group of family
	6	Kallungal kavu	Nagam	4	Individual family

TABLE 14
Details of sacred groves inValappad Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area(cent)	Ownership/ Managed by
	1	Adiparambil kavu	Nagayakhi and Sarpam	30	Individual family
	2	Valavath Durga devi temple	Mani nagam Kari nagam and Anjana mani nagam	2	Group of family
	3	Thamburan kavu	Vairanagam, Nagayakshi and Anjana maninagam	40	Group of family
	4	Adiparambil Kshetra kavu	Nagarajavu and Nagayakshi	30	Group of family
	5	Adikarathu sarpakkavu	Nagayakshi and Bhagavathi	2	Individual family
	6	Adikarathu kavu	Nagarajavu Nagayakshi and Annapoorneshwari	15	Individual family
	7	Vazhappully kavu	Nagam	1	Individual family
	8	Kakkaparambil kavu	Nagam	2	Individual family
Valappad panchayath	9	Valiparambil kavu	Nagam	2	Individual family
vaiappau paricilayatii	10	Poyyara kavu	Nagam	2	Individual family
	11	Pazhasshi Nagadevatha kavu	Nagam	3	Group of family
	12	Nediyirippil kavu	Nagam	2	Individual family
	13	Pallathu Kavu	Nagam	3	Individual family
	14	Moonamkutty Kavu	Nagam	2	Individual family
	15	Pathattu Kavu	Nagam	2	Individual family
	16	Kozhissery KshetraKavu	Devi, Nagaraja and Nagayakshi	4	Group of family
	17	Njattuvetty Sree Kallada Bhagavathy Kshetra Kavu	Bhagavathy,Nagayakshi,Karinagam	4	Group of family

TABLE 15
Details of sacred groves in Kaipamangalam Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Daivathin kavu	Nagam	10	Group of family
	2	Kalapparambath kavu	Nagam	6	Individual family
	3	Vengaly kavu	Karinagam and Maninagam	3	Individual family
	4	Karayavattathu kavu	Nagam	2	Individual family
	5	Pattathu kavu	Nagam	2	Individual family
	6	Kuttikkattu kshetra kavu	Nagaraja	4	Group of family
	7	Malayattil Kshetra kavu	Nagaraja	30	Group of family
	8	Kottarathu Sree Dharma daiva kavu	Nagaraja	20	Group of family
	9	Kaduvetti Kshetra kavu	Nagam	18	Group of family
	10	Chonipparambil kavu	Nagam	5	Group of family
	11	Njattuvetti Kshetra kavu	Nagam	5	Group of family
	12	Agastheswara Siva Kshetra kavu	Nagam	10	Devaswom
	13	Paraparambil kavu	Nagam	2	Individual family
	14	Kalarikkal kavu	Nagam	2	Individual family
	15	Kilikkottu kavu	Nagam	2	Individual family
	16	Punnakkal kavu	Nagayakshi	5	Individual family
	17	Mundassery parambil kavu	Nagam	2	Individual family
	18	Chennamkulam kavu	Nagam	2	Individual family
Kaipamangalam Panchayath	19	Kanjiraparambil kavu	Nagam	1	Individual family
	20	Palliyil kavu	Nagam	2	Individual family
	21	Koottalaparambil kavu	Nagam	3	Individual family
	22	Kozhiparambil kavu	Karinagam and Maninagam	2	Individual family
	23	Anjarassery kavu	Nagam	1	Individual family
	24	Kozhissery kshetra kavu	Nagam	3	Group of family
	25	Chachamaram Kavu	Nagaraja, Nagayakshi, Karinagam, Anjanamani nagami	1	Group of family
	26	Karadivalavu Kavu	Nagam	2	Group of family

TABLE 16
Details of sacred groves in Perinjanam Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Kollara kavu	Nagam	2	Individual family
	2	Ayilyam kavu Kshetram	Nagaraja and Nagayakshi	2	Group of family
	3	Chemmathi kavu	Nagam	3	Group of family
	4	Choorakottu Kshetra kavu	Nagam	2	Group of family
	5	Palliyil Bhagavathi kshetra kavu	Bhagavathi, Nagam	2	Group of family
	6	Mangattu kavu	Nagam	3	Individual family
Perinjanam Panchayath	7	Peedikaparambil kavu	Nagam	5	Individual family
i cinijanam anchayati	8	Puthiyedath kavu	Nagam	2	Individual family
	9	Karayil Kshetra kavu	Nagam	2	Individual family
	10	Puthezhath kavu	Nagam	15	Individual family
	11	Tharayil kavu	Nagam	2	Individual family
	12	Tharayapurath Kshetra kavu	Nagaraja	5	Group of family
	13	Keezhillath kavu	Nagam	10	Individual family
	14	Ganesha Kshetra kavu	Ganapathi, Nagam	4	Group of family

TABLE 17
Details of sacred groves in Mathilakam Panchayath in the coastal belt of Thrissur district

Panchayath Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Killikulangara Kshetra nagakavu	Nagaraja, nagayakshi	20	Group of family
	2	Trippekulam Kshetra kavu	Nagam	8	Group of family
	3	Mannamparambil Kshetra kavu	Nagam	2	Group of family
Mathilakam Panchayath	4	Nagayakshi Kavu	Nagaraja and Nagayakshi	5	Group of family
	5	Kalatheri Kavu	Nagam	5	Individual family
	6	Maniyakavu	Nagam	1	Individual family

TABLE 18
Details of sacred groves in Sree Narayanapuram Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Ayyalathu Yakshi Kavu	Nagam	10	Individual family
	2	Kumaramangalathu kavu	Nagam	28	Individual family
	3	Sree Sankulangara Kavu(1)	Vanadurga and Nagam	157	Devaswom
	4	Sree Sankulangara Kavu(2)	Nagam	30	Devaswom
	5	Kanikkedathu Kavu	Nagam	5	Individual family
	6	Palapetti Kavu	Nagaraja and Nagayakshi	2	Group of family
Croonarayananyram nanchayath	7	Ayyappan Kavu	Ayyappan, Devi and Nagaraja	2	Group of family
Sreenarayanapuram panchayath	8	Eramangalathu Kavu	Nagaraja, Nagayakshi	2	Individual family
	9	Chanaan Veettil Kavu	Nagaraja, Nagayakshi and aninagam	2	Individual family
	10	Thaivalliyil Kavu	Sarpam	1	Individual family
	11	Kalakkatil Nagakavu	Nagaraja	2	Individual family
	12	Thottapilly Kshetra Kavu	Nagam	1	Group of family
	13	Nagayakshi Kavu	Nagayakshi, Nagaraja	2	Group of family
	14	Kazhuvilangu Kshetra Kavu	Nagam	2	Group of family

TABLE 19
Details of sacred groves in Edavilangu Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Cheeriyaparambil Kshetra kavu	Nagam	10	Group of family
	2	Karayil Maruthi kshetra kavu	Nagam and Hanuman	5	Group of family
	3	Kottekkattu kshetra kavu	Nagam	4	Group of family
	4	Edachalil ponnanchery Kshetra kavu	Nagaraja	4	Group of family
	5	Naalumakkal Kshetra kavu	Nagaraja and Nagayakshi	18	Group of family
	6	Karayil kshetra kavu	Nagaraja	5	Group of family
	7	Ponathu Tharavadu Kavu	Nagaraja	2	Individual family
	8	Sree Vishnu Kshetra kavu	Nagaraja	8	Group of family
	9	Alungal Kavu	Nagam	5	Individual family
	10	Pindiyathupadi Kshetra kavu	Nagam	8	Group of family
	11	Kunnugaparambil Kavu	Nagam	5	Individual family
	12	Arrampurakkal	Nagam	3	Individual family
	13	Thayyilkavu	Nagam	2	Individual family
	14	Karayil Kavu (1)	Nagam	3	Individual family
Edavilangu Panchayath	15	Kundiyara Kavu	Nagam	5	Individual family
	16	Mundenchery Kavu	Nagam	5	Individual family
	17	Illathumparambil Kshetra kavu	Nagaraja and Nagayakshi	15	Group of family
	18	Mullassery Nagasthana Kavu	Nagam	10	Group of family
	19	Kampilikkal Kavu	Nagam	3	Individual family
	20	Pidiyathu Kavu	Nagam	2	Individual family
	21	Karayil Kavu (2)	Nagam	4	Individual family
	22	Kunnugaparambil Kavu	Nagam	3	Individual family
	23	Edachalil Bhagavathi Kshetra Kavu	Nagam	4	Group of family
	24	Poothamveetil Sree Bhuvaneswary Kshetra kavu	Devi, Nagam	7	Group of family
	25	Vylezhathu Kshetra Kavu	Nagam	15	Devaswom
	26	Kaimaparambil Kavu	Nagam	4	Individual family

TABLE 20
Details of sacred groves in Eriyad Panchayath in the coastal belt of Thrissur district

Panchayath/ Municipality	SI. No.	Name of the Grove	Deity	Area (cent)	Ownership/ Managed by
	1	Thevali Kavu	Nagaraja	10	Individual family
	2	Ayyani Kavu	Nagam	2	Individual family
	3	Kariyezhathu Kavu	Nagam	3	Individual family
	4	Parutthi Kavu	Nagam	10	Individual family
	5	Madathiparambil Kshetra kavu	Nagaraja	3	Group of family
	6	Thottarathu Kavu	Nagam	5	Individual family
	7	Kottikkal Kshetra Kavu	Nagaraja	4	Group of family
8	8	Andirithi kavu	Nagam	3	Individual family
	9	Panaparambil Kavu	Nagam	2	Individual family
10	10	Kuttathumveetil Kavu	Nagam	3	Individual family
Eriyad Panchayath	11	Akkanveetil Kshetrakavu	Nagam	5	Group of family
	12	Kaimathuruthi Kavu	Nagam	3	Individual family
	13	Tharaparambil Kshetra Kavu	Nagaraja	5	Group of family
	14	Thadikkaparambil Nagathan Kavu	Nagaraja, Nagayakshi, Maninagam and Karinagam	3	Group of family
	15	Aluparambil Kavu	Nagam	2	Individual family
	16	Kottikkal Kshetra kavu	Nagaraja	3	Group of family
	17	Sivanaga Kshetra kavu	Nagaraja and Nagayakshi	4	Group of family

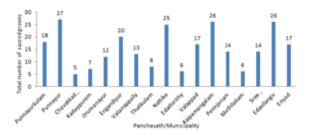


Figure: 3 Details of total number of sacred groves of different extends existing in different panchayaths and municipality along the coastal belt of Thrissur district in Kerala

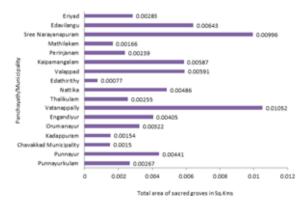


Figure: 4 Details of total area covered by sacred groves of different extends in different panchayaths and municipality along the coastal belt of Thrissur district in Kerala

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