

**കേരള സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡ്, തിരുവനന്തപുരം**

**തുശ്ശൂർ ജില്ലയിലെ ‘കലശമല’ പ്രദേശം ജൈവവൈവിധ്യ പൈതൃക കേന്ദ്രമാക്കുന്നത് സംബന്ധിച്ച അറിയിപ്പ്**

2002-ലെ ജൈവവൈവിധ്യ നിയമം (വകുപ്പ് 37) പ്രകാരം സംസ്ഥാന സർക്കാരിന് തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങളുമായി കൂടിയാലോചിച്ച് സംരക്ഷിത വന മേഖലയ്ക്ക് പുറത്തുള്ള ജൈവവൈവിധ്യ പ്രാധാന്യമുള്ള പ്രദേശങ്ങളെ ‘ജൈവവൈവിധ്യ പൈതൃക കേന്ദ്രമായി’ പ്രഖ്യാപിക്കാവുന്നതാണ്. ഇതിൻപ്രകാരം ദേശീയ ജൈവവൈവിധ്യ അതോറിറ്റിയുടെ മാർഗ്ഗനിർദ്ദേശമനുസരിച്ച് തുശ്ശൂർ ജില്ലയിലെ, പോർക്കുളം ഗ്രാമപഞ്ചായത്തിലെ അകത്തിയൂർ വില്ലേജിന്റെ ഭാഗമായ കലശമല ചിറയിൽ ശിവ- വിഷ്ണു ക്ഷേത്രത്തിനോട് ചേർന്ന വംശനാശ ഭീഷണി നേരിടുന്ന ‘കുളവെട്ടി’ (*Syzygium travancoricum*) മരക്കൂട്ടങ്ങൾ ഉൾപ്പെടുന്ന പ്രദേശത്തെ ജൈവവൈവിധ്യ പൈതൃകകേന്ദ്രമായി പ്രഖ്യാപിക്കുവാൻ ഗ്രാമപഞ്ചായത്ത് ഭരണസമിതി ഐക്യകണ്ഠേന - 12/03/2012ൽ ചേർന്ന യോഗതീരുമാനപ്രകാരം കേരള സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡിനോട് ആവശ്യപ്പെടുകയുണ്ടായി. ലോകത്ത് തന്നെ വളരെ കുറച്ചുമാത്രം കാണപ്പെടുന്ന ഈ വൃക്ഷത്തിന്റെ ഒരു നല്ല ആവാസ വ്യവസ്ഥ ഇവിടെ സംരക്ഷിക്കപ്പെടുന്നുണ്ട്. ഈ പ്രദേശത്ത് ഏകദേശം 400ൽ അധികം വലുതും ചെറുതുമായ ‘കുളവെട്ടി’ മരങ്ങൾ വളരുന്നുണ്ട്. ആയതിനാൽ കലശമല പ്രദേശത്തെ ‘കുളവെട്ടി’ മരക്കൂട്ടങ്ങൾ ഉൾപ്പെടുന്ന 3.5 ഏക്കർ (ബ്ലോക്ക് നം. 13-ൽ സർവ്വേ നം. 144/4) തനതു ജൈവവൈവിധ്യ സമ്പത്തിനെ ജൈവവൈവിധ്യ പൈതൃക കേന്ദ്രമായി പ്രഖ്യാപിച്ചു സംരക്ഷിക്കുവാൻ കേരള സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡ് തീരുമാനിച്ചിരിക്കുകയാണ്. ഇതു സംബന്ധിച്ച മാർഗ്ഗ നിർദ്ദേശങ്ങൾ [www.keralabiodiversity.org](http://www.keralabiodiversity.org) എന്ന വെബ്സൈറ്റിൽ ലഭ്യമാണ്. പ്രസ്തുത വിഷയത്തിൽ പൊതുജനങ്ങൾക്കോ മറ്റു തൽപരകക്ഷികൾക്കോ എന്തെങ്കിലും അഭിപ്രായങ്ങളോ നിർദ്ദേശങ്ങളോ അറിയിക്കുവാനുണ്ടെങ്കിൽ കേരള സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡിന്റെ [keralabiodiversity@gmail.com](mailto:keralabiodiversity@gmail.com) എന്ന ഇ-മെയിലിലോ കേരള സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡ്, L-14, ജയ്നഗർ, മെഡിക്കൽ കോളേജ് പി.ഒ., തിരുവനന്തപുരം-695 011 എന്ന വിലാസത്തിലോ അറിയിക്കാവുന്നതാണ്.

**മെമ്പർ സെക്രട്ടറി  
കേരള സംസ്ഥാന ജൈവവൈവിധ്യ ബോർഡ്**

# DRAFT PROPOSAL ON KALASAMALA BIODIVERSITY HERITAGE SITE

## **Background**

As per section 37 of Biological Diversity Act, 2002 the State Government can notify biological diversity rich areas as Biodiversity Heritage Site (BHS) in consultation with the concerned local bodies. The National Biodiversity Authority (NBA) has formulated guidelines for the selection and management of the BHS. Accordingly, the Biodiversity Management Committee (BMC) of Porkulam Grama panchayat, Thrissur district, put forward a proposal to conserve the unique population of the plant species *Syzygium travancoricum* (Local Name: *Kulavetti*), an IUCN 2000 Red listed plant having critically endangered status, growing luxuriously in the courtyard of Chirayil Siva-Vishnu Temple, as a Biodiversity Heritage Site.

## **Introduction**

Biodiversity heritage sites are well defined areas that are unique, ecologically fragile ecosystem having rich biodiversity. Kalasamala Chirayil Temple and its premises are one among such biodiversity rich area of Kerala State in Thrissur District, which was recommended by the Porkulam Grama panchayat BMC as a Biodiversity Heritage Site. The area is unique due to the presence of *Syzygium travancoricum* (Local Name: *Kulavetti*, *Vathamkollimaram*), a critically endangered species under IUCN 2000 Red List Category. As per IUCN records the total number of plants that exist in the World is very less. But in Kalasamala region alone its population is recorded to be more than 400 number of plants. Hence, the role of Kalasamala sacred groves is immense and immeasurable as this is the only place in the world where such a large population of critically endangered plants are nurtured from the verge of extinction.

## **History**

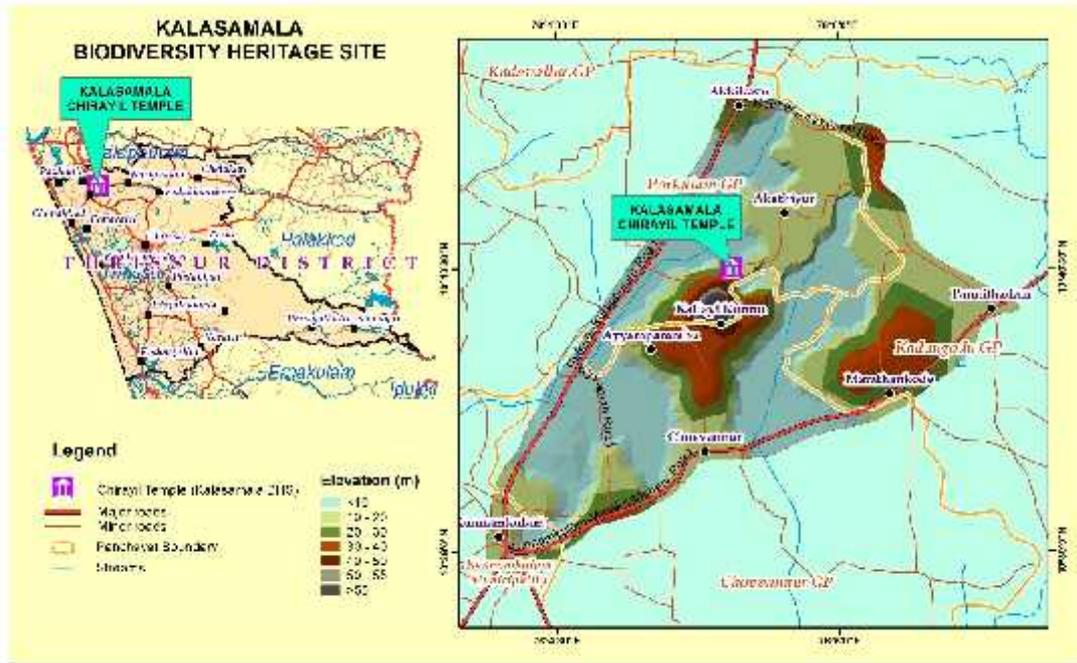
The Chirayil Temple is an ancient temple worshipping the idols of both Siva and Mahavishnu. The temple is under the trusteeship of Killimangalam Mana, since its construction. This temple is situated in a well cut terrain of the Kalasamala Hillocks (The name Kalasamala is due to the presence of a plant species *Lannea coromandelica* which is locally known as Kalasu). This temple and its premises are maintaining a unique ecosystem of a critically endangered *Syzygium travancoricum* (local name: *Kulavetti*, *Vathamkollimaram*). A well-drained spring is originated from

the adjacent hillocks flowing through the area providing a peculiar swampy condition which provides the ideal climate for the proliferation of the plant. At present more than 400 number of plants are growing there and such a group of plants is not reported elsewhere in the world.

### **Demarcation of proposed Kalasamala Biodiversity Heritage Site**

The Kalasamala Biodiversity Heritage site is a unique niche of the plant *Syzygium travancoricum*, an IUCN reported critically endangered species, growing luxuriously in the premises of Chirayil Temple. This temple is situated in a hillocks named Kalasamala, approximately 4 km. away from Kunnamangalam Town, on the eastern side of Thrissur-Kuttippuam road (NH-66) close to place Akathiyur (Figure 1). The proposed site administratively falls within the Akathiyur village of Thalapilly Taluk and Porkulam Grama panchayat of Chovannur Block.

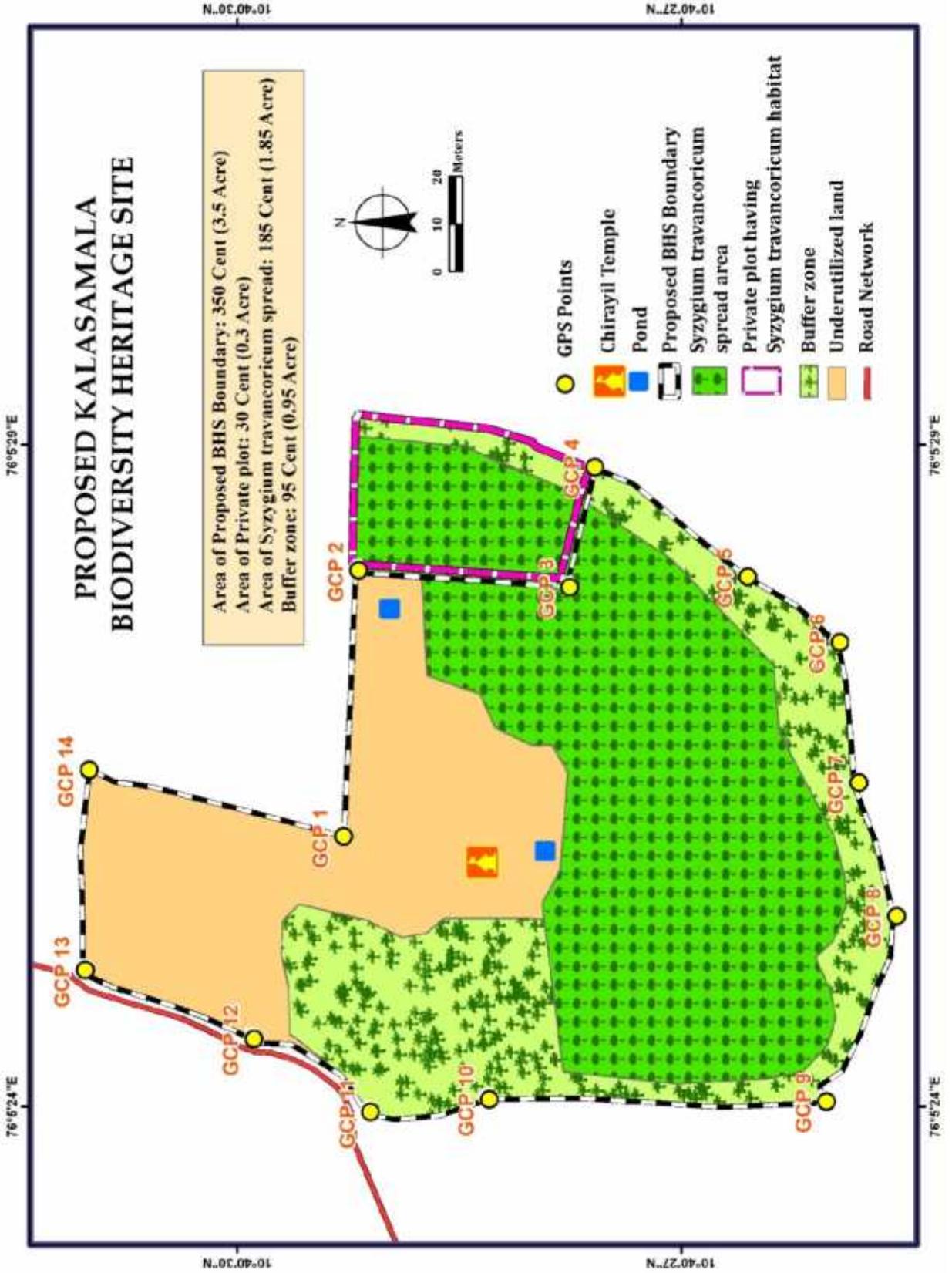
The recommended land for BHS is the property of Chirayil Siva-Vishnu Temple trust within survey no. 444/4 of block No.13. At present, the daily worships in the temple were done by the priests of Kallimangalm Mana, who were holding the trusteeship of the Chirayil Temple. The area of the proposed site is approximately 3.5 Acre (350 Cent; Survey no: 444/4) in which the plant is spread over an area of 1.85 Acre (185 Cent). So the draft demarcation of the proposed BHS is done by including the temple also because these falls within a single land parcel (Survey No: 444/4). In the area, about 400 number of small and large trees are growing and this seems to be the largest collection of *Syzygium travancoricum* at a place in the world. The demarcated area of proposed BHS geographically falls with the coordinates 76° 5'23.52"E - 76° 5'30.16"E Longitude and 10°40'25.12"N - 10°40'31.55"N Latitude. In an exception, the habitat of *Syzygium travancoricum* is extended to a private property close the proposed BHS with an approximate area of 30 cent (0.3 Acre). For the useful conservation, it is necessary to acquire this private property also. The land details of Kalasamala BHS is given in given table 1 and the GPS points taken along the boundary of the Proposed BHS is also given in Table 2.



**Figure 1:** The location of Kalasamala Biodiversity Heritage Site



**Figure 2:** Ariel view of Kalasamala BHS showing land details (Survey number)  
(Source: Google earth)



<b>Sl. No</b>	<b>Description</b>	<b>Details</b>	
1	Location details	Akathiyur Village of Thalapally Taluk and Porkulam Grama panchayat of Chovvannur Block	
2	Geographical location of Chirayil temple	76° 5'25.77" East Longitude and 10°40'28.32" North latitude	
3	Geographical extent of proposed BHS Boundary	Between 76° 5'23.52"E - 76° 5'30.16"E Longitude and 10°40'25.12"N - 10°40'31.55"N Latitude	
4	Land details	Survey Number No. 444/4 of Block no. 13	
5	Area	Approximately 350 Cent (3.5 Acre)	
6	Boundaries	South	Survey No: 437
		West	Survey No: 439, 440, 443
		North	Survey No: 449
		East	Survey No: 436, 445

<b>Sl. No</b>	<b>GPS Point Index</b>	<b>Longitude</b>	<b>Latitude</b>
1	GCP 1	76° 5' 25.839" E	10° 40' 29.278" N
2	GCP 2	76° 5' 27.648" E	10° 40' 29.176" N
3	GCP 3	76° 5' 27.535" E	10° 40' 27.752" N
4	GCP 4	76° 5' 28.349" E	10° 40' 27.582" N
5	GCP 5	76° 5' 27.606" E	10° 40' 26.548" N
6	GCP 6	76° 5' 27.160" E	10° 40' 25.925" N
7	GCP 7	76° 5' 26.204" E	10° 40' 25.798" N
8	GCP 8	76° 5' 25.297" E	10° 40' 25.543" N
9	GCP 9	76° 5' 24.036" E	10° 40' 26.017" N
10	GCP 10	76° 5' 24.050" E	10° 40' 28.294" N
11	GCP 11	76° 5' 23.966" E	10° 40' 29.098" N
12	GCP 12	76° 5' 24.461" E	10° 40' 29.884" N
13	GCP 13	76° 5' 24.929" E	10° 40' 31.024" N
14	GCP 14	76° 5' 26.292" E	10° 40' 30.997" N

### *Syzygium travancoricum*- a short note

*Syzygium travancoricum* (Gamble) is a critically endangered tree reported endemic to the South Western Ghats, India (IUCN, 2015). It is found in Karnataka, Tamil Nadu and Kerala states. It has been associated with *Myristica* swamps of Western Ghats, a naturally fragmented, restricted endemic ecosystem with anthropogenic threats to its existence (Roby et al., 2013). The total population of plant species recorded are very small with approximately 200 numbers in the Western Ghats region. The general habitat of the plant is the swampy areas of evergreen and semi-evergreen forests in higher elevation between 500-1200m (Vinodkumar, 2003). In an exemption, some are reported in the swampy areas of the sacred groves (*Myristica* swamps) of Thiruvanthapuram, Kollam, Pathananhitta, Alappuzha and Thrissur districts (Sasidharan, 2006). The general description of *Syzygium travancoricum* is listed in table 3.

No.	Description	Remarks
1	Scientific Name	<i>Syzygium travancoricum</i> Gamble
2	Family	Myrtaceae
3	Local Name	<i>Kulavetti, Vathamkollimaram, Poriya</i> etc.
4	Status	Endangered (IUCN Red List)
5	General Habitat	Semi-evergreen, evergreen forest and mangrove forests
6	Taxonomical description	Evergreen trees, to 25 m high, bark surface greyish-brown, longitudinally fissured, peeling off in thin irregular flakes. Leaves simple, opposite, estipulate; petiole 10-20 mm long, stout, grooved above, glabrous; lamina 8-16.5 x 5-8.5 cm, ovate or ovate-oblong, base narrowed and decurrent on petiole, apex acuminate, acumen folded, obtuse, margin entire, chartaceous, glabrous; lateral nerves 10-15 pairs, parallel but very irregular, distant, prominent, looped near the margin forming indistinct intramarginal nerve, intercostae reticulate, faint. Flowers bisexual, white, mostly in axillary lax cymosecorymbose; peduncle 4.5-5 (8) cm long, their branches also long, ascending; calyx tube short, 1 mm across, lobes 4, very short; no

		thickened staminal disc; petals white, calyptrate; stamens numerous, free, bent inwards at middle when in bud; ovary inferior, 2-celled, ovules many; style 1; stigma simple. Fruit a berry, oblong-obtuse on both sides, 1 x 0.5 cm, deep violet, pericarp juicy; seed one.
7	Flowering and fruiting	February - April (May varies)
8	Medicinal properties	Anti-diabetic, Astringent, bactericidal, hypoglycemic, and neuropsychopharmacological effects and for their significant odors (Jirovetz et al. 2001; Radha et al. 2002)
8	Uses	Fruits are edible, Mainly used as timber.

### **Environmental issues and threats to the ecosystem**

The Kalasamala region and adjacent hillocks is undergoing severe environmental degradation over the years. With the pace of developmental activities, the lateritic hillocks were cut down tremendously which will ultimately affect the nearby marshy land and thereby the population of Kulavetti. Moreover, the population of the plant species is declaiming day-by-day because of poor regeneration and non-availability of healthy sapling. The spring which nourishes the plants by providing a swampy habitat now seems to be passive and the availability of water is diminishing in an alarming rate.

### **Recommendations**

In accordance with all the meeting conducted in connection with the declaration of Kalasamala Biodiversity Heritage Site, the following recommendations are suggested:

1. A committee will be constituted for the conservation and protection of Kalasamala BHS. The committee includes Temple trustees, staffs, representatives of State Biodiversity Board, Members of Gramapanchayats, members of BMC, Agricultural officer, local peoples, conservationists, scientist and whoever interested in nature conservation etc.

2. The committee will undertake all necessary steps for the protection, conservation and timely rejuvenation and proliferation of *Kulavetti* and associated ecosystem.
3. The committee will formulate a master plan for the conservation of Kalasamala BHS and it will submitted to the Govt. of Kerala through Gramapanchayats and State Biodiversity Board.
4. The marshy land associated with the proposed site will also be conserved and maintained along the BHS.



**Kalasamala Chirayil Siva-Vishnu Temple and premises**



**The natural habitat of *Syzygium travancoricum* conserved in the vicinity of Chirayil Temple**



**The pring originated from the nearby hillocks nourishes the *Syzygium travancoricum* diversity**

**Habitat loss due to land diversion and reclamation is the main threat to this unique ecosystem**