

# BIODIVERSITY AND COMMUNITY BASED INSTITUTIONS—A CASE STUDY ON KADALKODATHY OF MALABAR COAST

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## Introduction

The health of marine ecosystems and associated biodiversity are a fundamental basis not only for the livelihoods security of the coastal fisherfolk but also for the capacity of the sector to contribute to its well being (FAO,2014). A durable fishery depends on a well-functioning ecosystem which in turn calls for effective management systems that ensure its conservation. There is no need to reiterate the fact that there can not be fish without the ecosystem that produce them. There is increasing recognition that fisheries management should integrate the Convention on Biodiversity. Article 7.2.2 of the Code of Conduct for Responsible Fisheries demands that the management measures should provide *inter alia* that the biodiversity of aquatic habitats and ecosystems is conserved and endangered species are protected. It is also true that without a socio-political context capable of nurturing an ethos of responsible stewardship there can not be a resilient fisheries. The notion of community as agents for fisheries management is gaining currency (Kooiman et al 2005.). In this context it would be of interest to find that a very unique traditional community based fisheries management institution called Kadalkodathy has stood the test of time along the Malabar coast of Kerala.

Revisiting an earlier study (Ramachandran and Sathiadhas,2006) this paper traces the structure and functioning of this unique institution in order to make a normative assessment on its present political –ecological meaning in the context of institutionalizing biodiversity conservation. Focused group interactions and Key Informant interviews and triangulation were the methodological filed tools used for the study.

## Kadalkodathy- a linguistic preamble

Kadakkody and Kadalkodathy are cognate words. Gundert (1872) in the first Malayalam-English dictionary has an entry on Kadakkody with the meaning given as “Customs of fisherfolk”. He also uses it as a word for fisherfolk which is followed in Sabdatharavavali (Pillai 1923) but with a slight difference in usage as Kadalkody instead of Kadakkody. The Malayalam lexicon (Pillai 2009) has given the meaning for kadalkody as mariners, also using the term kadalodi (those who wander about the sea). The point to note here is the lexicographical absence of the word “kadalkodathy”. Thus it could be argued that the usage of “kadalkodathy” meaning “sea court” is a colonial accretion given the suspicion that the word “kodathy” meaning court could not have come into Malayalam before the colonial period. During our recent interviews with the fisherfolk the enquiries using the word kadakkody did not evince response and we had to use the word kadalkodathy to get a response. They also refer to it as “koottam koodal” (holding a meeting). Thus using the two terms as synonyms need to be done with a word of caution though there won't be any apparent contradiction as the institution is part of a customary tradition of the fisherfolk now confined to in certain parts of Kasargodu. We, however, prefer to use the term kadalkodathy in this paper.

## Location and major features

The institution called kadalkodathy is believed to have been prevalent in almost all the fishing villages of Malabar coast. But currently it actively exists in five places located south of Kasargodu. They are, respectively, Kasaragod, Keezhur (about 8km), Kottikkulam (11 km), Bekkalam or Bekal (13km) and Ajanur (33 km). It is geographically confined to Kasargod (Fig.1). Some of the features of this institution can be summarized as given below:

1. Kadalkodathy is prevalent only among the Hindu fisherfolk which consists of Araya, Mogaya and Mukkuva sub castes.
2. It is centered around a temple deity called Sri Kurumba and can be described as a divinely ordained primordial form of participatory jurisprudence within a Hindu fisherfolk community.
3. The temple priests who form the jury are supposed to maintain a reclusive life with minimum public contact.
4. The jury or other constituent bodies do not have female members.

## Constitution and functions of Kadalkodathy

Kadalkodathy functions as an adjuvant to the Sri Kurumba temple. It has two functional houses- a hereditarily constituted Sthanikans (permanently authorized ones) and a democratically elected temple trust. The Sthanikans, which is the most powerful group is made of four Karanavanmar, six Achanmar, two anthithiriyans and one kodakkarar. This 13 member group has authority over temple affairs as well as jurisprudence when the court is in session. There is another group of assistants known as "irupathinalukar" which literally means 24 members, but actually it consists of about 12-15 members.

The four Karanavanmar (head priests or matriarchic heads) form the supreme body who take the final decision in any dispute. Each Karanavan represents each of the four illams (root/ancestral clan). Illam is an ancestral house, the members of which are expected to maintain clan purity. Each Karanavan has separate honorary designation which can not be interchanged. Once the title is conferred he will be known only by that designation, not by his original name. It is a hereditary position restricted to these four illams which are considered as the original houses or primordial cosmological causes of the clan from which other families have taken origin. They are given below:

Name of the Illam	Designated name
Karillam (House of Iron)	Kannan Karanavar
Chempillam (House of Copper)	Karya Karanavar
Ponnillam (House of Gold)	Panan Karanavar
Katchillam (House of Bronze?)	Kuppa Karanavar

The Achanmar (father figures or oracles) consists of six members who invariably are to be from the four illams.

Their designations (titles) are as given below;

1. Moothodiyathar
2. Ilayodyathar
3. Dandothiyathar
4. Khandothiyathar
5. Vishnu Velichappadan
6. Gulikan Velichappadan



The achanmar function as oracles representing different deities namely Kurumba Moothaval ( elder Kurumba) Ilayaval ( younger Kurumba),Dandan ( one who wields the combat baton), Khanda Karnan (one with a bell as ear ring), Vishnu and Gulikan (an important warrior of lord Siva)respectively. The first four oracles are together known as "Aayathanmar". All the six members together are known as Achanmar. (See Fig2 for some of the members, belonging to the Kadalkodathy of Keezhur ,in their traditional attire).

Then comes one Kodakkaran (who holds the ceremonial umbrella during temple festival)and two anthithiryanmar ( whose duty is to light the lamps in the temple) whose titles are Valiya Kadavan and Cheriya Kadavan. Kadavanmar functions as assistant priest who also act as messengers or those carrying errands. During the court is in progress they act as "police men" who accost the plaintive or defendants at the command of the jury. It is their duty to announce the holding of the court by hoisting red flags along the beach ( known as Kodivalikkal) or hanging fresh coconut leaves on the boats (called tholuvekkal). No boats will venture for fishing once such announcements are made.

The temple committee is a democratically elected body consisting of President, secretary and a treasurer. They oversee the administrative activities of the temple.

- i. Our thanks to Dr Gopinathan Nair, former Head Dept of Linguistics, Kerala University for these insights. He opines that this should attract more scientific attention of linguists in Kerala.
- ii. Not much historical evidence is available apart from legends. This is an area worthy further historical research.
- iii. Kurumba is worshipped as a guardian goddess having power to cure small pox from medieval times. Also known as Chirumba or Cheerma. Kuruppa in Malayalam is small pox.

## Temporal assessment of the functionality dimensions

Based on the previous study a normative attempt was made to assess the changes in the functions of the institution as perceived since the last study. The changes in perception were subjectively assessed on the identified seven dimensions (Ritualistic, Community solidarity, Conflict resolution, Cultural heritage, Fisheries Management, Biodiversity conservation and Livelihood security) by selected key informants who were part of the earlier study. The assessment and remarks are depicted in Table 1.

Table 1. Perceived Changes in Functionality

Sl. No.	Attributed Functions	Perception status	Remarks
1	Ritualistic	Not much change	It is essential for the rituals of the temple and especially the holding of the annual festivals.
2	Community solidarity	Weaker sway	The elders perceive that the institution is the sine qua non of their community identity and should
3	Conflict resolution	Weaker sway	Though perceived to be of reduced dependency, the faith in the institution as a platform for amicable settlement of civil disputes is still intact.
4	Cultural Heritage	Not much change	They feel proud about the continuation of the institution as a unique symbol of their cultural landscape.
5	Fisheries Management	Weaker sway	Changes brought by the temporal and Spatial expansion as well as Capital penetration have
6	Biodiversity Conservation	Perceived as important	The concern over the loss of biodiversity can be used as a handle for conservation awareness
7	Livelihood security	Perceived as important	The perceived decline of sardine fishery can be addressed using ALOs like community owned Open sea cage farming technologies.

ALO= Alternative Livelihood Options



## The fishery in the study area- a Glimpse

A description of the fishery is depicted, as a pre-requisite to commend on the role of Kadalkodathy in fishery management and biodiversity conservation, in Table 2 as given below.

Table2. Major gears used by the fisherfolk in the region

Gear details				Major fish caught	Time of use
Name	Mesh size mm	Length m	Cost Rs million		
1. Rani vala (ring seine)	18-20	400-500	0.50	Sardines,prawns	Any time
2. Ayila vala (mackerel net)	58-60	500-600	0.20	Mackerel	Monsoon
3. Manji vala	100-110	800-900	0.030	Pomp fret	Early morning or evening
4. Drift net	100-110	1000-1200	0.3	Seer fish	Night fishing
5. Kanatha vala	52-54	900-1000	0.035	White fish, small sharks, prawns	Any time

It can be seen that there are five major types of gear used by the fishers. Though Rambani gear (a type shore seine) was banned by the Kadalkodathy years back it is in vogue by another community in some locations. There are about 80 ring seine units, 30 mechanized boats, 60 drift netters and 80 dinghis in operation along the coast where Kadal kodathis are located. There are about 9000 active fisherfolk in the region.

## Perceptions on the Status of the Fishery and Biodiversity

Fishes in the study locale expressed having experienced severe depletion of sardines during the last six months. It has adversely affected the livelihood of the fisherfolk. According to a Key Informant Karanavar, a similar episode was experienced 30 years back. Fishers alleged that the decline was due to the unfettered offshore fishing by foreign vessels. A few blamed it on the night fishing done by Mangalore based (Karnataka state) vessels in these waters. They found the Kadal kodathy helpless in resolving such issues since the Mangalore coast has no such institutions.

There was a general perception that the marine biodiversity along the coast has been badly affected in recent times. Some of the fishes were perceived to have gone even extinct. The table 3 depicts the perception of the fishers regarding the status of the biodiversity.

The erosion in the marine biodiversity, according to the fishers, is mainly due to the indiscriminate fishing facilitated by modern gadgets/vessels and climate change.

Table 3 . Perceived Biodiversity loss

	Name of the fish (vernacular)	Common name
<b>Perceived as very rare</b>		
1	Kologne	
2	Bautha	
3	Koythala	
4	Etta	Cat fish
<b>Perceived as Rare</b>		
1	Chempan	Decapterus spp
2	Mullan	Pony fish
3	Kaakkathirandy	Rays
<b>Perceived as declining</b>		
1	Chaala	Sardine
2	Nanku	Soles
3	Vella avoli	White Pomfret
4	vekity	
5	Cheekka para	Croakers

### Role in Biodiversity conservation and fisheries management

Ramachandran and Sathiadhas (2006) had examined the question "Whether Kadalkodathy could be considered as a community based fisheries management institution or not" in detail. They reported the following fisheries management oriented regulations mediated through the Kadalkodathy among the fishing community.

1. Banning of night fishing during June-August
2. Gillnet fishing is allowed only after 5th of Kanni month ( 20-21 September) . Before the advent of motorization it was not allowed until October.
3. Fishing is not sanctioned during a) the annual temple festival ( in the Month of March) b) death of a member of the community c) when kadal kodathy is summoned d) during auspicious days as decided by the temple committee.
4. That the fisheries related disputes should be brought to the kadal kodathy first is a norm.

In addition to the above the following regulatory interventions were also noted

5. Rambani net banned.
6. When ring seine units go for fishing, small crafts carrying three to four fishers are banned to avoid conflicts as well as labour shortage.

Though the Kadal kodathy still holds a sway over the fisherfolk along these regulatory measures, the opinion of the community was that the institution has been losing its normative grip over the years. Fisheries related conflicts were reportedly very less these days. It was three years back that such a case was brought to the attention of the Kadal kodathy in Keezhur. Similar sentiments were echoed in other study locales also. Detailed investigations among the Key Informants revealed that there were interlinked factors behind this phenomenon.

1. The institution of Kadalkodathy is undergoing a crisis of credibility as the Sthanikans are perceived by the younger generation as having lost relevance especially in dealing with civil cases. The Sthanikans themselves opined that the compliance to the decision of the court is not assured as was the case in earlier times.
2. Even the number of civil cases like dowry issues, thefts, domestic violence that come before the Kadal kodathy has been registering a down ward trend according to the Key Informants.
3. The punishment meted out was perceived to be not having enough deterrence . ( The usual mode of punishment is demanding supply of oil for lighting the temple lamps). More than the severity of punishment, the peer pressure coupled with the public act of naming and shaming were found to be the drivers behind compliance. It was felt that such coercive power vested with the community has undergone erosion in recent times.
4. Alcoholism was perceived to be a major social evil affecting the fishers especially the younger ones. In fact Kadal Kodathy tried to intervene in this issue with the active support of women. But they failed to maintain the tempo of the campaign for long. It was pointed out that the inability of some of the Sthanikans themselves in keeping the temptation at bay could have lead to the debacle.
5. The younger generation of the "Illams" were reportedly exhibiting a reluctance to take the mantle of the honorary titles in the Kadal kodathy due to want of time. Many of them opined that the traditional community based institution has lost much of the relevance in the present day context. Of late, the practice of paying a sizeable amount by some of the designated families to get rid of the honorary titles has also been observed.

The overall impression was that the Kadal kodathy is getting relegated to its role in managing the Temple rituals as well as attending community customs like funeral rights and marriage solemnizations.

### **Some thoughts on Reviving Kadalkodathy**

The changes happening in the surrounding environment- socio-political, economic and ecological-do adversely affect the effectiveness of implementing the regulatory functions by Kadalkodathy. The rituals and other mandatory functions including the dress code of the designated sthanikans and others in the Kadalkodathy are so traditional that they stand out in the community in stark contrast to the present day trends and probably their archaic nature has



something to do with the younger generation showing less than encouraging attitude towards this community based institution. Basically Kadalkodathy as a community based institution used to perform the regulatory role in conflict resolution and to a small extent fishery resource management though in the present day context it is unable to impose any regulatory mechanism, except for minor interventions. In the emerging scenario of night fishing by vessels from other regions and also vessels owned by people belonging to other communities in the nearby localities, normative role of kadalkodathy may not have much impact in preventing fishery resource depletion. But the institution can act as a mediatory mechanism between the state and the community in ensuring an embedded ethos of responsible fisheries.

In spite of all the limitations, it is necessary to revive the institution as it can still hold together the community and also has the potential to implement location specific interventions for fishery resource management.

Sustainable technologies in fishing are to be introduced in the community with patronage of kadalkodathy so as to strengthen the livelihood options of the resource poor families in the community. This assumes special significance in the perceived decline in sardine fishery which is the major livelihood as well as food security resource the community has been depending. The economic and social distress unleashed by the catch fluctuation, irrespective of the attributed reasons, need to be addressed through alternative livelihood options. The technologies developed by CMFRI like Open Sea Cage farming and Marine ornamental fish breeding and culture are suitable candidates. Poaching and hindrance in free passage of the fishing vessels were the major threats perceived by the fisherfolk while discussing the possibilities of introducing Open sea cage technology. The Kadalkodathy as a community based institution can effectively resolve these issues with suitable social engineering interventions. Kasargod has the potential to become a front line demonstration area for this innovative and sustainable technology in Kerala. The Krishi Vigayn Kendras (KVKs) of CMFRI and CPCRI can undertake this as a collaborative On Farm Trial before engaging in scaling up of this technology with the administrative support from the Fisheries Department and funding support from agencies like NFDB or NABARD. The cages can be suitably re-modified for in vitro biodiversity conservation of indigenous species on an experimental basis also.

To realize this, probably innovative approaches are required which involve measures to raise the status of the people involved in the institution by linking them with efforts of public sector agencies and assigning them specific roles.

The institution and people associated with it should be provided with monetary incentives by the government/Devaswom department to keep them linked with the public sector interventions and proactively engage them in fishery resource management through their regulatory functions.

Kadalkodathy as a community based institution need to be reckoned with as an important stakeholder in the interventions for location specific fishery resource management and implementation of welfare schemes to benefit fishermen. Apart from the traditional norms for its functioning, some forms of affiliation to governmental agencies can also be introduced.

The Government may also think to declare Kadalkodathy as a State cultural heritage and serious efforts need to be undertaken in video documentation of this unique institution.

### **Concluding remarks**

Community based institutions like Kadalkodathy prevalent in villages of Kasaragod district can play an important role to enhance the effectiveness of interventions for fishery resource management and conservation of biodiversity in marine fishery.

The regulatory role performed by such institutions is gradually getting weakened due to the changes in the society.

It is necessary to revive the functioning of institutions like Kadalkodathy to make use of them in implementing location specific interventions for fishery resource management and conservation of biodiversity in marine fishery which are essential for sustainable livelihoods of large number of people who depend on fishing.

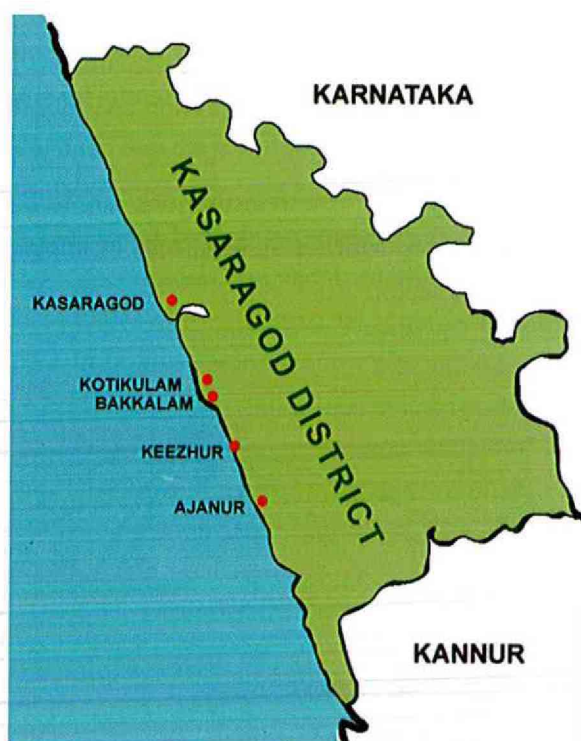
Apart from community recognition, these institutions are to be bestowed with some kind of official status and are to be involved as a partner in implementing initiatives for biodiversity conservation in fishery sector.



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Locale of the study





(Left to Right) 1. Gulikan Velichapadu 2. Vishnu Velichapadu 3. Moothodiyathar 4. Panan Karanavar 5. Karya Karanavar 6. Ilayodhithyar 7. Paricharakan (Kadalkodathy, Keezhur)

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