



REVIEW ARTICLE

COMPARISON OF COMMUNITY BASED FISHERIES MANAGEMENT IN WORLD

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ABSTRACT

Community managed fisheries handovers of the management of fisheries resources to community groups and they will manage the resources sustainably and equitably. Handing over fisheries management to community groups secures access to fisheries resources for those people whose lives depend on them i.e. the poor fishers. Adopting CBFM has more advantages to the fisher communities. Fisheries management strategy varies depending on the factors such as caste specific, gear specific and species specific. This article discusses the comparisons of Padu systems in Tamil Nadu, Kerala and Sri Lanka. CBFM is the best way to protect the ecosystem and fish stocks for the future, but the main reason for the community problems is that there is no rules and regulation while going for fishing, because of individuals are going several times for fishing, likewise the communities are not maintain proper rules and regulations. It is leading to favors for few community people, so that we have to aware the community people about the managerial aspects than only we can solve these problems. A brief comparison of the approaches adopted for fisheries management in different parts of the world (presented in the following tabular form) clearly demonstrates the advantages of community managed fisheries approach.

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INTRODUCTION

Fisheries are the basic and important economic resources in many areas of the world. Like most natural resources, general management methods must be provided for the long-term interests of all group of resource users/stakeholders that might be affected by exploitation of the resources in addition to the maintaining of resource itself. Community Based Fisheries Management (CBFM) gives coastal communities and fishermen primary responsibility for managing their coastal resources. This form of management techniques can take many different forms depending on regional differences and the nuances of different fisheries. For this reason, CBFM is not defined by one approach or set of guidelines that dictate its implementation. Instead CBFM centers around the premise that community collaboration, and local participation can be an extremely productive and accurate means of managing, monitoring, and maintaining coastal resources. The basic principles, ethics, and ideas maintained by CBFM are universally applicable to many different situations.

The world fishery resources are facing severe problem due to decline in stock, decline in size, degraded ecosystem, overfishing and increasing demand for fresh fish, destructive fishing methods, use of introduced, effective and non-selective techniques, loss of inshore nursery habitat (mangroves and marshes has been reduced by reclamations, logging and drainage, cyclones), Inadequate use of fisheries management tools and regulations, Ineffective unless they have the support of the community. CBFM focus on ocean resource management to individual areas/fishing communities, rather than managing fisheries on a coast wide scale. Currently fisheries are managed in many areas by a centralized or blanket method administered by a top-down approach from external managers. This approach has little involvement of the local people, that are most affected by the managed resource. By empowering local interests, as in CBFM, local relationships may be accentuated that larger scale management strategies might not include. These older management methods also predominantly focus on "single species modeling" while newer forms of management, such as CBFM, incorporate much more of an ecosystem based management approach. CBFM CBFM proposes that resource users (fisherman) and resource communities (coastal communities), should have the primary role in deciding how the resources of that community/area are managed.

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“Fishermen and coastal communities, being the most dependent on coastal and marine resources, should have a large role in deciding how these resources should be managed. Current article compares the Padu system in Tamil Nadu, Kerala, Sri Lanka and different CBFM in the world.

### General principles of Community Based Fisheries Management Adapted from IIRR (1998)

There are about five types of principles in community based fisheries management.

- **Empowerment:** In Community based fisheries management, empowerment is the ability of local people to exercise management control over resources and institutions on which they depend.
- **Equity:** Community based fisheries management is concerned about equity. This usually means equal opportunity and fair access to the fishery among the various users and between different user groups.
- **Ecosystem-based fisheries management:** Community-based fisheries management promotes the importance of protecting and managing not only commercial species and a whole range of habitat and ecosystem functions.

**Table 1. Comparison of Padu system in Tamil Nadu, Sri Lanka and Kerala**

	Sri Lanka, (Negombo Estuary)	Tamil Nadu, (Pulicat Lake)	Kerala, (Vallarpadam)
Padu defines the group of right holders	Four rural fisheries societies (RFS) share access to the fishing grounds. Total of 345 eligible male fishers	Three villages share access to the fishing grounds. Total of 558 eligible male fishers	Three sanghams (society or association) allocate access to fishing grounds. Total of 78 eligible male fishers
Padu is caste Specific	All fishers are of the same caste and are Roman Catholic	Members of the fishing caste-pattanavar, both Christiana and Hindus	All of the fishers are Hindu and all members of the same caste-Dheevera
Padu specifies institutional basis of rights holders	The Roman catholic church facilitates sharing of fishing grounds between the four RFS. Each RFS then operates their lottery independently	Sharing of fishing grounds among the three villages is organized by the caste organization. Individual villages operate the lottery independently	Each fishing ground operates independently; no coordinating institution. lottery system run by individual sanghams
Padu defines the geographical boundaries	Fishing takes place close to the opening of the estuary into the sea	Fishing grounds are located close to the estuary opening to the sea	Cochin estuary, Kerala- India. Fishing grounds are located near the estuary
Padu defines fishing grounds and sites	Two main fishing grounds which are divided into 22 fishing sites which can accommodate 65-68 stake nets	Three main fishing grounds which are further divided into 25 sites which can accommodate 56 nets	Three main fishing grounds are divided into a total of 78 sites which can accommodate 78 stake nets
Padu is gear specific	Stake-seine net	Suthu valai (stake net)	Ooni vala (Stake net)
Padu is species specific	Shrimp-82% are sub-adults of paeneid shrimp; of these, 70% are <i>Metapenaeus dobsoni</i>	Shrimp – Primarily <i>Penaeus indicus</i>	Shrimp- <i>M. dobsoni</i> , <i>M. monoceros</i> and <i>Penaeus indicus</i>
Padu uses a lottery for site selection	The four RFS rotate access to fishing sites on a daily basis using a seven day cycle and a yearly lottery to assign starting points	The three villages rotate access to the sites on a daily basis within a monthly cycle of assigned days; yearly lottery	The three sanghams organize lotteries for allocation of access; lottery takes once per year at the annual meeting

**Table 2. Community Based Fisheries Management in Various countries**

Country	Place	Year of establishment	Major decision	Result	Reference
South Pacific countries	Niue	2004	Use traditional knowledge in fishing	Improved fishery	Aliti Vunisea, 2005
Pakistan	GANZ, Balochistan Coast	2005	Avoid use of destructive plastic gear and use ecofriendly long line	Stock recovered Better catch Reduction in discard Extended fishing season	WWF, 2005.
India	Orissa The Kalinga Traditional Marine Fishermen Association	1999	Reduce poaching by neighboring state	Prevented illegal trawling Discouraged prawn seed collection Stop catching of gravid prawn Developed a new fishing policy	Sahu and Pradhan, 2001
India	Gulf of Mannar	1989	to improve the welfare of local, regional, and national communities	Conservation and management of Gulf of Manner resources through village committees Regulated fishing	Rao, David and Shanmugaraj, (1998).
India	Kadakkody Malabar Coast	-	-	-	Ramachandran and Sathiadhas, 2006
India	Nagai	-	-	-	-
	Alapad	2009	Tsunami relief	Regulated fishery	Gavin Linday Wall,. FAO, 2005
	Nagai	2009	-	-	Gavin Linday Wall,. FAO, 2005
Malaysia	-	-	Establish fishing zones and ownership pattern	Minimal fishing conflict.	SEAFDEC (1997)
Thailand	Phang-Nga-Bay	-	Ban of trawl and push net for 3 nm Exchange of destructive net with gill nets Sea ranching	Improved fish catch	BOBP (1996).
Indonesia	-	-	Restrict the entry / closed season	Most sustainable fisheries management	-
Japan	-	1996	Fisheries co-operative initiative	Established Total allowable catch for endangered species.	Hotta (1996).
Somoan village	-	1996	Autalavou Tauaefa	-	-

**Respect for local knowledge:** Local knowledge is the body of information developed by those with a local connection to the ocean, whether through living by the sea or through earning a living from the sea. It seeks to recognize this wealth of knowledge and incorporate it into fisheries decision making and management.

- **Inclusiveness:** Community based fisheries management recognize the unique roles and contributions of many different resource users and community members, including youth, women, and others with a stake in the future of coastal communities and their resources.

### Community-Based Fisheries Management in India

In India community based fisheries management mainly based on three factors they are

- It is a caste specific
- Gear specific particularly stake nets and
- Species specific

The main categorization of these fisheries is that mainly it is rotational access; the people in this system all are accepting the equitable access and collective social responsibility. They are having their own rules for their conflict resolution; thereby the community people in this system are surviving well in the case of their livelihood. This type of community based fisheries management we can observe two localities in India. They are Pulicat Lake in Tamil Nadu and Vallarpadam in Kerala. In these two regions it is mainly a small scale fishery people are going for fishing for their livelihood and harvested by stake nets which are passive gear. The fishing rules and regulation are directed by their own access for example if the fisher is not going for fishing because of personal problems and due to sickness in that case other fishermen will go for fishing and all the harvested fishes will be given to their family members.

The main communities in this system are suppose in Sri Lanka Negombo Estuary all are same caste people are involving in this activity that is Roman catholic and in Tamil Nadu both Christian and Hindus, where as in Kerala all the member from same community that is Hindu locally known as Dheevera. The Padu system mainly comprises of catches such as *Metapenaeus dobsoni*, *Penaeus indicus* and *Metapenaeus monoceros*. Everything in this system is done by collective understanding of the community people, so that people in this region are economically well developed. Likewise every community people should do than only the communities will develop in proper manner thereby we can overcome the poverty of local people. Many countries also have long-established communally-run fisheries in which community norms often substitute for state regulation (Elinor Ostrom, 1990)

### Advantages

The advantages of CBFM have been well documented In various parts of the world (Korten 1986: Berkes 1989; McCay and Acheson 1990; Poffenberger 1990: Bromley 1992) Examples of Community Based Fisheries Management in fisheries do exist in the United States (Acheson 1975), Japan (Ruddle 1985, 1989). The South Pacific (Ruddle and Johannes 1985) and the Philippines (White 1989), Sebastian Mathew, 2007.

There are so many advantages of community based fisheries management includes,

- Sustainability of resources.
- It can support poverty alleviation strategy
- provides a sense of ownership over the resource which makes the community far more responsible for long term
- Recognize the importance of participatory regimes and ensure participatory governance
- Greater meaning and effectiveness to fisheries management measures, including the possibility of having more effective conflict resolution mechanisms
- Cost-saving
- Conserve biodiversity if it is properly access the resources, thereby it can protect the environment
- Pro-poor and ensures poor fisher's and women's access rights
- So, if properly utilization of the resources the fishermen communities will develop their livelihood and sustainable fisheries resources.

### Disadvantages

As the resource is open access for fishermen community definitely it leads to disadvantages that includes

- Overfishing – no motivation for conservation, so there is no sustainability
- Overexploitation – due to usage of multi gear to access the resources, it leads to unsustainability of the resource.
- It favors powerful and rich group of fishermen communities, hence there is no equitable access
- May not be suitable for every fishing community.
- There is no motivation for conservation, therefore not sustainable
- Site-specific conditions (Pinkerton 1989: Berkes et al. 1991).

### Conclusion

Communities must play a major role in producing important learning for the future and have all made a contribution to the survival of fishing communities. Finally the communities must follow the rules and regulations which are applicable to the survival of fisheries stock, so that the communities will empower their knowledge over the degradation of stocks; thereby communities will come forward to ensure the community development. The communities must conduct meetings to share the feeling of different minds of people, so that we can achieve whatever we want and we can overcome the problems which are facing by community organizations. The main reason for the community problems is that there is no rules and regulation while going for fishing, because of individuals are going several times for fishing, likewise the communities are not maintain proper rules and regulations. It is leading to favors for few community people, so that we have to aware the community people about the managerial aspects than only we can solve these problems.

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