

CULTURAL FACTORS IN MANAGEMENT OF (NEW) COMMON PROPERTY RESOURCE: A STUDY FROM MADHYA PRADESH IN INDIA

**Amitabh Pandey¹
KS Mukhopadhyay²**

Abstract

The diverse issues of common property management have led to the generation of a great amount of thinking into their management strategies for old and newly created CPR. Different management models have suggested for optimum output from CPR, so that the benefit flows to the communities and the resource equally. Various studies have dealt on institutional management of CPR, but the cultural factor plays a dominant role in institutions formations. Traditional communities' economic institutions are origin of long time association with some resource, and changing the resources use pattern hampers the old institution and create cultural barriers in new institutions formation. This particular study looks into this dimension, where a displaced group actively utilising land for their economic activities are made to change their mode of production to fishing. The acceptability and adaptation of new occupation is showing different pattern of cultural factors in common property resource management.

The resource in question is man-made, built as part of the Narmada Valley Development Project in 1975. This project led to the submergence of large tracts of forest and rendered the local tribals homeless. Since the project was a multipurpose one, fishing was a regular activity in the reservoir since 1979, and was initially controlled by the Madhya Pradesh Fisheries Development Corporation. However the dam was leased out to a private party in 1995, though only for a year. A local organisation Kisan Adivasi Sangathan fought for the fishing rights to the project affected people and the local people. It also mobilised the local tribals to form a federation, Tawa Matsya Sangh registered as a co-operative federation in October 96. This federation succeeded in securing the fishing rights to the reservoir for a five years starting from December 96. The Sangh has with it 38 primary co-operative societies, in the study area has been managing profitably ever since.

Three different types of management regimes are experimented on it i.e. private, public and collective management. The latest experiment is of collective management and the local organisation mobilised for collective management option. The villages have predominantly tribal communities of Gonds, Korkus, later on traditional fishing communities of Dhimals and Kahars were also brought in to fishing co-operatives.

Though the federation is making profit from the fishing activities, the institution functioning and the fishing activities among the user group show different cultural patterns. Like the Gond predominantly agriculturalist look of land around the reservoir after the water reduces for agricultural purpose. The age, sex, ethnic factor plays a significant role in institution formation. The younger generation (members of co-operatives)

¹ Faculty of Social Anthropology, Indian Institute of Forest Management, Bhopal, India.

² Student of Post Graduate in Forestry Management, Indian Institute of Forest Management, Bhopal, India

contributes to fishing activities and federation work, but older generation prefers traditional way of life style. At the community level traditional fishing communities (Kahar) were quick to exploit the benefit of collective management, were as Gond do fishing activities as a hobby and prefer traditional agricultural and forestry work as economic activities for their group.

These factors influence the collective management of the federation. Since this resource is leased out for five-year duration, the period is too short of institutionization of the fishing activities among the co-operatives.

I

Introduction

The diverse issues of common property management have led to the generation of a great amount of thinking into their management strategies for old and newly created CPR. Different management models have suggested for optimum output from CPR, so that the benefit flows to the communities and the resource equally. Various studies have dealt on institutional management of CPR (Ostrom.V, Fenny & Harmut, 1988, Ostrom.E 1990, Ostrom .E 1995) but the cultural factor plays a dominant role in institutions formations.

The management role of the user community has been demonstrated in numerous studies of common property resources, such as grazing land (Orlove 1976), lobsters (Acheson 1988), and irrigation system (Ostrom 1990). Because natural substance or phenomena only become natural resources when someone attaches a value to them (Zimmerman 1951, Rees, 1990), the role of the community is essential at the initial definitional stage. While a community may define resources in economic term, they could also define them in cultural terms.

The role of culture in CPR management has been emphasised by scholars studying on it from time to time. McCay and Acheson (1987) emphasis the role of culture in CPR by signifying presence and or absence of rules about uses of commons, alternative to exploitation of common resources, ways of monitoring and controlling the behaviour of this in a commons, and so forth. Many anthropologists see the CPR problems from the theories of embeddedness perspectives. Karl Polanyi (1957) argued that man's economy as a rule is enmeshed in his social relationship. While Granovetter and Swedberg (1992) argues that economic action is socially situated; enmeshed in economic and non-economic institutions and network of on going social relations. In their work "embedded" has two often confused but distinct and valuable meanings. One is the methodological prescription that analyses of seemingly economic behaviours should focus on the social dimensions of those behaviours. This position reflects the facts that all economics are in some way embedded in other and larger structure. The second is the ontological claims that cultural systems differ in the extent to which economics transactions are embedded in social life and constructs of culture (in McCay and Jentoft, 1998).

McCay and Jentoft (1998), embedded analytical perspective brings dimensions of social life and community into the analytical framework concerned with both causes and consequences of problem in the use and management of common resources. Gisli Palson proposes a model which emphasis the act of fishing or any other extractive activity as inevitably embedded in social relations (1991). Robert Paine (1994) study of Sami reindeer pastoralism in Scandinavia argues the disregard of cultural factors (kinship) can be enormous even in economic terms.

In general, the earlier studies in CPR highlighted about a community-managing common's with which, it has been interacting for a long period. This interaction has led to evolve culture and social institutions associated with commons, within the community. Which every individual member of the community, through socialisation and enculturation gradually imbibe it. The management of it is imparted through oral tradition. The social system also adapts these regimes into its ambit and creates social

relationship accordingly. Traditional mode of organisation are not only adapted to economic activities of a particular kind but also have constraints of their own. But in case where the community makes a shift in to manage a new resource, with which earlier it was not associated may lead to cultural conflict and conflict within the existing value system. Thus when an attempt is made to generate new economic activities, there may be restricted by pre-established modes of organisation or the organisation themselves may have to be replaced. To the extent that major changes in economic activities also involve changes in social organisation, a correct understanding of the social framework is essential for an assessment of the prospect for economic change.

Social organisation of resources use and allocation is linked to a number of institutions ranging from family to state. Resource management regimes, as socially constructed practices, are found upon cultural knowledge, which is often constructed and renegotiated, in response to changing material condition and technology (Li Tania 1991).

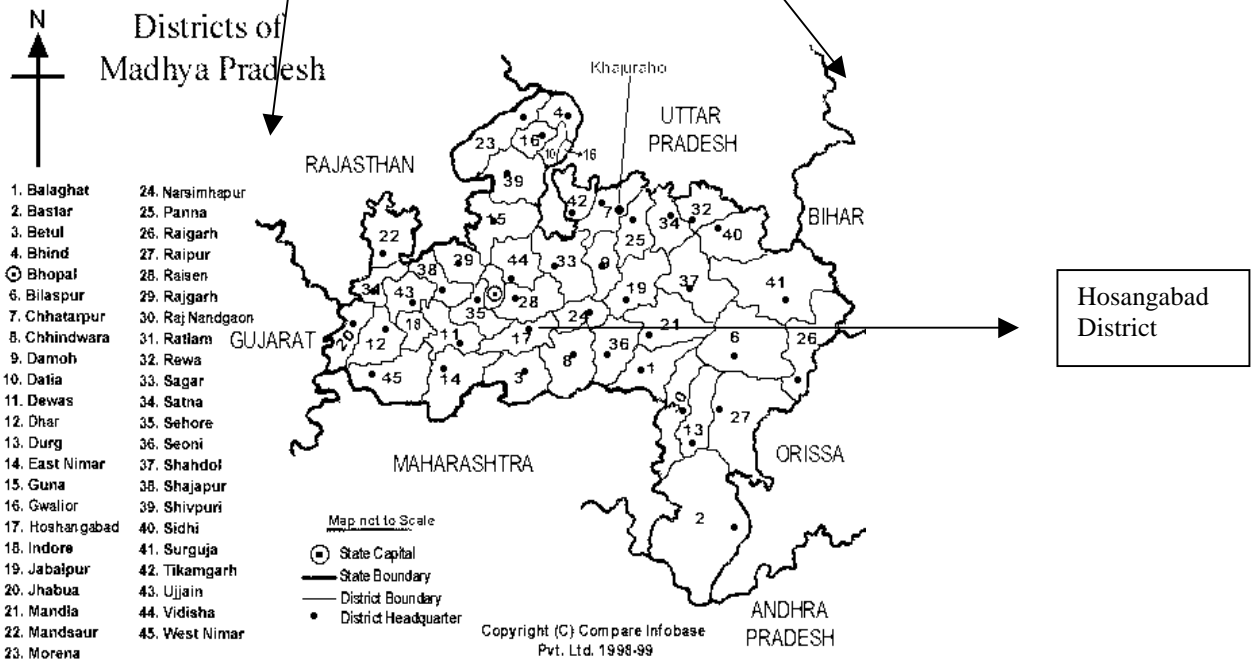
Traditional communities' economic institutions are origin of long time association with some resource, and changing the resources use pattern hampers the old institution and create cultural barriers in new institutions formation. This particular study looks into this dimension, were a displaced group actively utilising land for their economic activities are made to change their mode of production to fishing. The acceptability and adaptation of new occupation is showing different pattern of cultural factors in common property resource management. This paper is divided into five sections. Section I consist of introduction to the subject and discussion on the role of cultural factor in CPR. Section II is about the natural as well as human resources and its various management model applied for the management of the resource. Section III discusses the methodology and IV the result and discussion. Section V consists of conclusion.

II History of Resource

The area of study is Tawa reservoir, situated in Kesla block of Hosangabad district of Madhya Pradesh in India (Map 1). The Narmada Valley Development authority was set up to harvest the gains from Narmada river and its tributaries by constructing dams and canals networks and giving it a shape, of a multi-purpose river valley project. Tawa, the left bank tributary of Narmada river, was also used for this purpose. Two dams, is build one near Sarni and another near Kesla, in Hosangabad district of Madhya Pradesh.

This dam was completed in 1975, but the reservoir was filled to its full capacity, only in 1979. Earlier it was primarily conceived as an irrigation project, but later on it is also used for generation of minor power and pisci-culture. The total submergence area of the dam is 20,055 ha and however on an average reservoir area is 12,145 ha. The reservoir falls under the administrative area of the Hoshangabad district, within the Kesla and Sohagpur development blocks.

Map 1-India profile & Study Area



Displacement and Rehabilitation of project Affected People

Forty-four villages were affected or displaced in the process of dam construction, out of which twenty-seven of them being forests villages (the administration of these villages is carried out by the forest department) and the rest were Revenue village (the administration of these villages is with the revenue department). The displaced forest villagers either moved to higher elevated areas or shifted to the adjoining villages in and around the reservoir. Resettlement packages provided by the government of Madhya Pradesh, like compensation for land lost due to submergence, or providing area to built their houses, was largely restricted to the revenue villages. The people thus lost their homes or lands or both, due to the project. In general most of the displaced population, settled along the reservoir bank, which formed part of the reserved forest area in and around the reservoir bank, which made it difficult for them to get a piece of land for agriculture. This made possible for them to make use of the irrigation facilities for their crops for one or two times in dry areas. The area is predominantly tribal, consist of mostly *Gond* and *Korkus*. These people have always been in the heart of nature with abundance of resource. With the dam taking away a major chunk of their sources of subsistence agriculture, they were permanently turned into an insecure group. This coupled with their contact with the mainstream and urban life brought cultural dissociation with the resources uses.

Pattern of Management of Tawa Reservoir

A) Government Controlled management of the Resource

In 1979 fishing activities started, under the control of Madhya Pradesh Fisheries Development Corporation (MPFDC). It was under taken on a regular basis, and Dhimars and Kahars were brought in, to practice fishing, in the dam. These communities were the permanent inhabitants of the areas around the Narmada river and have traditionally fishing as their primary economy. This was due to the fact that the other local tribal (*Gond* and *Korkus*) population living around the reservoir area was traditionally and predominantly a agriculturist in nature, and practised fishing as a pass time and casual activities. The government could not develop a sound system of assimilation package, for the local people in general and the displaced in particular, so that the tribals can use the natural resources efficiently and make a sustainable living for themselves. Instead, the repatriates of Bangladesh (a adjoining country of India) were settled in and around these areas, this community also easily adapted itself to fishing as they are also traditionally fishing community. The expertise of these *Kahars*, *Dhimars*, and migrated Bangladesh ruled the roost in fishing in this dam. The MPFDC carried out fishing, till 1994 for a period of fifteen years. The results were far from satisfactory.

B) Private management

The dam was leased out to a contractor, for a period of one year, from 1994-1995. The leasee was a known fish businessman, who belonged to Bhopal (Capital City of MP State). He used to employ the local people along with fishermen brought from Bihar State of India, who are known to be among the best in catching small fishes. The protection of the reservoir was done by hired musclemen who prevented the local from their rights in and around the reservoir. This as stated produces a frightful picture and diverted tribals to agricultural labour and exploitation of natural vegetation.

One year after that, government did not create any management regime for the reservoir. During this period, the local people around the reservoir were freely engaged in fishing activities. Fishermen from adjoining area also came to fish in this dam. This was a period of no legal control to exclude them or an open access like situation

prevailed during this time. This went on for two years, which resulted in depletion and irresponsible harvesting of the resources. But for the community members who, where to take care of the resource, through mass protection by strictly adhering to the legally binding close season of monsoon, from 15th June to 15th August.

C) Collective Management

The Tawa reservoir, area being predominantly a tribal dominated belt, Kisan Adivasi Saganthan (Tribal Farmers Association), a local level political organisation has been active in the area, for a long time. This organisation is backed by the Samajwadi Jan Parishad (Socialistic inclined group), an organisation, which has a linkage with national parties and acts a pressure group. The Sangathan has provided a platform for mobilisation of the local tribals to fight for their right to use the natural resources i.e. for tribal right to lands, water and forest. It also fights against corruption in the local bureaucracy like police, forest and other department in order to see that development programme benefits reaches the poor masses.

The demand for fishing rights in the Tawa reservoir, for the displaced tribals were one of the goals of this organisation. The struggle to provide the right to displaced population has been going on for a long time. In 1994, came the government decision to lease out the Bargi dam in Jabalpur district of Madhya Pradesh, to local co-operative federation. Taking clue from this the Kisan Adivasi Sangathan, demanded for similar right to people of Kesla area. In order to achieve this goal, the organisation carried out strong agitation.

In 1995, the lease right to use the reservoir for fishing purpose was given to 31 co-operative societies of the Tawa Displaced tribal population, which were registered, with the registrar at Hosangabad. These societies, along with, the three affiliated societies of the traditional fishermen, formed a co-operative federation in Oct. 1996. It was christened as *Tawa Visthapith Adivasi Matsya Utpadan Evam Sahkari Sangh Maryadit* (Tawa Displaced Tribals Fish Production and Co-operative Federation Registered). The fishing rights were handed over to the Federation, for a period of five years. The fishing activity started from Jan.1997. The federation, besides engaging in the activity, has involved itself in allied activities. They train local tribal people in seed rearing, use of nets, maintenance of accounts, and transportation of catch. The federation has also arranged loans through government schemes and internal sources, to fund the requirements of nets and boats of the fishermen. The infrastructure required, consisting of landing sites, a depot, an office, vehicles etc. have been brought or leased by the federation.

Being registered under the Madhya Pradesh Co-operatives Act 1960, the Federation was to adhere to the legal consideration and bye-laws, as in force, from time to time. The responsibility such as of stocking, fish seeds, preservation of catch, marketing rested on the Federation. The Federation had the responsibility of protection of the resource from poachers and degrading synthetic and natural elements. The federation fixes minimum catch price and yearly target of catch in quantity, which needs to be fulfilled. The government charged a royalty of Rs.6 per kg on 80 percent of the catch.

Federation : Structure and Functions

The structure of the federation is inherent to the work it had undertaken. At the village level, there are primary co-operative societies, with fishermen as members. A body of 13 members, under a President (inclusive), heads each society. All decisions are taken and implemented collectively. Any conflicts that arise within the society are resolved internally. The committee also recommends the loans to fishermen and also stands guarantee to the loans recommended. The committee recovers the loans through catch price, within a pre-defined time frame. Thus, the societies are self-contained with their own funding and rules.

A 13-member board of directors, headed by a president governs the Sangh as it is a federation. The directors on the board are presidents of their respective societies, who are elected to that office, with each society being allotted one vote. At the time of the study, the Sangh had nominated board of directors. Apart from this, there were managers to manage the office and depot.

The payments to the fishermen were made on a weekly basis. The prices are set up in consultation with the fishermen during the annual meeting. The Sangh pays Rs.1 on every kilogram of catch, in parts viz. 26 paise, 26 paise and 48 paise. The first 26 paise is deposited with the Sangh as the society's equity. On completion of Rs 1000/- or multiple thereof, an annual award of one equity share of Rs1000/- is given to the fisherman. The remainder is carried forward to the next year. The second 26 paise is also treated in a similar fashion, the difference in this case being, the equity amount is Rs.100/- and it is issued to the fisherman. The last part of the rupee i.e. 48 paise, is used toward the running cost of the society and the commission of the president.

The Sangh has been making profit for three years period under its operations. The functionaries cite procurement of funds as a major problem. This is ascribed to the short leasing periods, because of which such borrowing do not materialise. These funds are essentials to establish an ice plant, a hatchery, boats and some vehicles. This would increase the profits and also ensure a smoother running of the federation.

All in all, till the time of study, the federation had adopted semi-centralised structure and function to meeting its goal of social development and passing on the right to the son of soil. This ensured a proper participatory structure, without hampering the scope for effective leadership. This has also helped in overcoming the bane of illiteracy in big way.

III Methodology

This study was sponsored by Eklavya, a NGO based at Bhopal. The duration of the study was for three months. The thirty-six societies in the federation were from thirty-four villages located near and around the reservoir. The villages under similar topographical conditions and demography were selected in clusters. A multi-layered clustered sampling technique was used to sample the villages. Of which 30% of villages were sampled for the study. Thus, in all, seven villages were sampled. One third of the members from each society were interviewed. This formed 10% sample of all the population chosen for the study. The sample included one society out of the three affiliated societies, which have been working with the Sangh or federation since its inception. A semi-structured questionnaire was used to interview the selected sample of federation members and functionaries of the sangh. Local fishmongers were also

interviewed to understand their perception about the trade and the sangh. The help of the sangh's technical expert's help was sought to grasp the technicalities of pisciculture.

IV Discussion & Results

After long struggle, in Oct. 1996, the displaced tribals got the lease right secured, to fish in the reservoir on a co-operative basis by forming the Tawa Matsya Sangh, Kesala (M.P),. Basically these displaced tribals (Gond, Korkus) were earlier working as agriculturist, agricultural labourer and wage labourer in the forestry programmes. Fishing activities was for subsistence living and was done in leisure period. The formation of societies for fishing right was an attempt to have control over the water resource and to carry out fishing on collective basis, as main economic activity for the community.

There were altogether 36 societies (Table 1) in function, of which, the population composition of 33 societies are of *Gond* and *Korkus* , intermixed as discrete settlement has taken place, after displacement. These two communities depend on land resource for subsistence living on it, by doing agriculture work. Their economic needs are mostly fulfilled by agricultural work, collection of NTFP, and working as labourer. Three societies have been affiliated to the federation, as they are not displaced therefore they only qualify to have affiliated membership. These three societies have homogeneous *Kahar* population. *Kahar* (fishing communities) traditional occupation is fishing, prior to construction of dam and fishing right to societies for collective management, this community were fishing in *Narmada* water.

Active members Vs Overall Membership

According to the annual report 1999, of the Tawa Matsya Sangh, the overall membership from all the societies is 1000 in 34 villages, whereas the active members are only 400, who practise fishing regularly (Annual Report of TDTFPCF1999). The lease right to fishing only pertains to the members of the societies (Table 2).

The membership is given on the individual basis. The individual member has the right to hire or provide a pass issued by the society to its family members of even to any other individuals who can fish for him at a paid rate. The mode of payment is both in cash as well as kind. At present the rates are Rs.40/- or 25% of the catch.

Another criteria for being a member of the society is that member should be literate enough to manage the society records. Therefore only those displaced tribals could join the societies who are literate. The younger generation has more literate population in comparison to older ones, therefore the older generation got lesser representation in the society and therefore they still practise their age-old tradition of agriculture. The majority of the members of the society are of age group 26-35 years (Table3).

Table 1 Rank of societies based on per capita catches of 98-99

S.No.	Name of Society	Member	Community	Per capita Catch	Rank
-------	-----------------	--------	-----------	------------------	------

1	Bardha	58	Gond, Korkus	188.2	21
2	Barhchapra	26	"	264.9	17
3	Bhargada*	21	"	265.5	16
4	Chakpura	57	"	192.5	20
5	Chaugarh*	31	"	789.1	4
6	Chatua*	30	"	78.4	27
7	Chicha	22	"	162.4	23
8	Dowri	39	"	556.2	9
9	Goghri	38	"	41.9	30
10	Jhunkar	24	"	816.1	3
11	Khamda	20	"	45.4	29
12	Khapa	29	"	123.2	25
13	Kharpawar	31	"	176.4	22
14	Kotmi*	38	"	391.1	11
15	Kukra	23	"	8.6	33
16	Madikhoh	46	"	703.5	5
17	Mallpura	20	"	618.3	7
18	Malni	26	"	259.7	18
19	Mana	28	"	554	10
20	Maruapura	57	"	79.4	26
21	Morpani*	20	"	1082.9	2
22	Nayachicha	20	"	<1.1	36
23	Ojhapura	25	"	363.7	13
24	Pathai	27	"	22	32
25	Pipalpura	51	"	388.2	12
26	Pipariyakala	28	"	340.8	15
27	Raisalpata*	23	"	48.1	28
28	Sakai	22	"	2.4	35
29	Sarangpur	29	"	124	24
30	Sehra	36	"	247	19
31	Shankar	22	Kahar	694.2	6
32	Sulpai	20	Gond, Korkus	3.9	34
33	Sukkarwara*	21	Kahar	1122.1	1
34	Tekapar	24	Gond, Korkus	570.1	8
35	Tulsiram	35	Kahar	359.7	14
36	Urdoun	25	Gond, Korkus	26.8	31

Source: Tawa matsya sangh

* Sampled villages for study

Table 2 Comparative details of the membership and fishing working in the year 1997-99

Details	1997-98	1998-99
---------	---------	---------

Membership and Work days		
No. of Member societies	33	33
No. Affiliated societies	3	5
No Of functional societies	33	34
Total members in societies	1000 approx.	1042 approx.
Max. Active members	393	400
Total fishing man days	45,750	52,749
Av. Fishing man days	171	205
Work days	267	257

Source: Tawa matsya sangh Annual report 1998-99

Table 3. Sample study of Age-Literacy of the members of the societies

Society's name	No. of members in age groups				No. of literate members		Age group	
	20-25	26-30	31-35	>35	Before Sangh	After Sangh	<30	>30
Kotmi	6	4	3	0	6	6	6	0
Chanagarh	1	2	2	4	7	7	4	3
Bharagada	2	1	4	1	4	4	2	2
Sukkarwara	1	1	1	3	6	6	2	4
Morpani	0	2	2	2	4	4	2	2
Chatua	4	3	1	0	5	5	4	1
Raisalpatha	1	2	2	1	4	4	3	1
Total	15	15	15	11	36	36	23	13

Agriculture Vs Fishing: Main Economic pursuit

The social organisation of *Gond* and *Korkus* is tuned for agricultural management, like land ownership, land based family and community rituals etc. Social orientation and traditional knowledge of the population of these societies was of agricultural work and fishing, there's social organisation and cultural orientation was done accordingly.

Prior to displacement most of *Gond* and *Korkus* communities were practising agriculture and meeting their subsistence need from forest resources in the adjoining areas, where availability of it is in abundance. After displacement, in rehabilitation package given by Government of Madhya Pradesh, these tribals got some land (maximum upto 5 acres to a family) as compensation for the submerged land. Besides this some even encroached on the adjoining forestland for agricultural purpose. These communities after resettling in their new environment began to practise their traditional occupation of agriculture as well as NTFP collection and some worked as wage labourer in nearby places.

In general the management of economic activities of these societies are that a section of family looks after the agricultural activities, which still forms the main occupation of the community. The reservoir has enhanced irrigation facilities and also provided opportunity to do agriculture on rich silt deposit created after the retreat of the reservoir during late winter and early summer season. The land created after retreat of water in winter season is taken by the people of co-operative society for agriculture purpose, as it needs minimum preparation work and manure for cropping. Basically this seasonal cropping land provides readymade agricultural fields for cropping *Rabi* crops and return from it is

rich. The details of families using such types of land is given in table 4&5. The older generation in family mainly looks after the agriculture work, and others members try to maximise the family earning from fishing activities. The fishing done as secondary economic activity, by *Gond* and *Korkus*, while *Kahar* it is their primary activity and making good earning out of it.

These communities do different economic activities in different season. During rainy season the whole community devotes its time for cultivation of *Kharif* (July-Sept.) crops. These is also the season for fish breeding and seeding of these reservoir, because of which the fishing grounds are closed for fishing.

In September, the fishing activities are opened to society members. In the same season the NTFP are also available in plenty, which provides additional employment opportunity to the people of villages. The NTFP available in this season are Mahua (*Madhuca indica*), Amla (*Embllica officinalis*), Musli (*Chlorophytum tuberosum*) , Kulu Gum (*Sterculia urens*), Achar or Chironji (*Bucchanania lanzan*) etc., and men, women and children collect these items. Which provides extra income to every household. Next is the Rabi season (Nov.-Feb.) of agriculture, where the villagers spent time in preparation of fields and carry out the agriculture work of sowing wheat and grams etc. It is followed by summer season, when the availability of NTFP and Tendu Patta. Tendu patta collection is done on large scale in the state, it provides about 45 days of consistent employment to villagers and subsistence income also. During intensive agricultural season or NTFP collection season the fishing work takes the back seat and the entire community is engaged in these economic activities.

The income out of NTFP collection forms another major sources of earning for the villagers. The table 6 gives the collection NTFP and it shows that all the members of the family ranging from children, women and men contribute equally in the collection process. Generally the income is invested maximum in agricultural work and maintenance and less for fishing work. Mahua flower and seeds (Guli) are collected on large scale, as the flowers are used in preparation of local liquor, which consumed on many social and ritual occasions and dried fruits of its also acts as substitute for sugar in tribal areas. Achar is nationalised produce and provides good earning to the household (Table7).

Fishing works were carried out when communities, were free from their main economic pursuit i.e., agriculture. For a regular fishing work, the cycle of member of the societies is that they have to mostly work in-group, as individual cannot handle the boat and net simultaneously. Therefore working in tandem is an essential criterion for fishing. Apart from this, one complete cycle for fishing venture remain for three to seven days, which also include the marketing of the catch. Taking out time for duration mostly is a difficult task in peak agriculture seasons and NTFP collection seasons. Some members per sue fishing activities, in the night. The general fishing practice is that the member goes for fishing in night and spread the net and pulls the net in early morning hours. Therefore it does not disturbs their day schedule. Some even hire the *Bangladeshi* refugees settled in these area, who are adept in fishing and work on hired basis.

Table 4 Details of agricultural lands in the studied societies

Name of the societies	No. of families			
	< 1 acres	1-3 acres	3-5 acres	> 5 acres
Kotmi	3	6	2	0
Chanagarh	0	4	3	1
Bharagada	0	2	4	1
Sukkuwara	0	0	0	0
Morpani	0	1	3	2
Chatua	0	0	3	4
Raisalpatha	0	3	3	0
Total	3	16	18	8

Table 5. Reservoir bed cultivation by the society members

Name of the societies	No. of families			
	< 1 acres	1-3 acres	3-5 acres	> 5 acres
Kotmi	3	5	3	0
Chanagarh	0	5	3	0
Bharagada	1	6	0	0
Sukkuwara	0	0	0	0
Morpani	0	2	4	0
Chatua	0	5	2	0
Raisalpatha	1	3	2	0
Total	5	26	14	0

Table 6 Collection of NTFP by the society members

Name of Society	No. of families			Collectors			
	Mahua	Guli	Achar	Male	Female	Child	Together
Kotmi	10	10	8	1	2	0	8
Chanagar	8	8	4	0	3	0	5
Bharagada	8	8	8	2	3	0	3
Sukkawara	0	0	0	0	0	0	0
Morpani	5	6	4	1	1	0	4
Chatua	8	8	6	0	0	0	4
Raisalpatha	6	6	6	0	0	2	4
Total	45	46	36	4	9	2	32

Table 7: Earning of families from NTFP

NTFP Name	No of families			
	0- 200 (Rs)	200-300 (Rs)	300-400 (Rs)	> Rs 400
Guli	25	13	6	2
Mahua	7	10	21	7
Achar	16	12	8	0
Total	48	35	35	9

Knowledge of Fishing and availability of resources to the members

The experience of fishing among the *Gonds* groups members is very low, as prior to the right to fish, these communities hardly did fishing. Where as the members from *Kahar* community is traditional fishermen. The *Kahar* villages (*Sukkuwara* village in table 8) have highly experienced people in fishing activities, while in other village the experience in fish vary for less than one years to five years for *Gond* and *Korkus* villages.

Apart from experience in fishing activities, the ownership of material like nets and boat vary among the members, which curtail the consistency in fishing (table 9). The assistance of boats and nets is provided through loan facilities. The other members of society hire these facilities from the owner. The rate of hire is both in cash as well as in kind.

Table 8: Members experience in fishing.

Name of society	No. of Members			
	1yr	2-3 yr	4-5 yr	>5 yr
Kotmi	3	6	3	0
Chanagarh	2	3	0	4
Sukkarwara	0	0	0	6
Morpani	0	0	3	3
Chatua	2	6	0	0
Bhargada	1	2	3	2
Raisalpatha	1	4	1	0
Total	9	21	10	15

Table 9: Ownership of nets and boats

Society Of Name	No. of boats	
	Boats	Nets
Kotmi	7	11
Chanagarh	6	8
Bharagada	6	8
Sukkarwar	6	6

Cultural factors in CPR management

Karl Polanyi (1957) argued that man's economy as a rule is enmeshed in his social relationship. In traditional societies the cultural systems and economic system overlaps. Most of the economic activities are correlated with rituals and religious function, which are associated with it at the start of the season and in between the season as well as at the time of completion of the season. The Gond Villages follow all the rituals associated with agriculture but do not have any water resources based rituals in practices. Secondly their society is patriarchal, patrilocal and organisation of society is based on clan, which is identified by one totem and here also no totem is associated with water, but most of them are either land, animal or forest related species of thing. The agriculture management is governed by the norms and rule designed for this pattern. The transmission of knowledge is also through these institutions and some other created to orally transmit the knowledge of the society. The members in the group of co-owners is typically related to membership in a social group such as a village or tribe (Ostrom, 1990, Bromley, 1992)

The traditional institutions provided good platform for continuity of agriculture work, where knowledge on the period of sowing, the nature of rain, harvesting time etc are shared. The various aspect of social organisation assist in sharing of labour on collective basis and the produce in also shared on non- monetary exchange basis (reciprocity), which leads to continuity of society and the value system associated with it. These communities also have norms and values to manage the conflict and deviant behaviour internally in built in the social structure.

After being organised in to fishing societies and knowing that the fishing pursuit is a profit-earning venture. Apart from that it has secured their right to resource, yet the institution to manage it is differs from the traditional social norms, therefore it is weak, which evident from the comparison between the total members verses actively involved members. Another aspect is that there is large-scale proliferation of fish. Which is not traded through the society created means of marketing, rather than these villagers covertly, sell away the catch to the near by market and as their is difference in the rate paid by the society to the rate available in the open market. The society norms and values are not strongly followed, as there is weak controlling mechanism of controlling deviant behaviour. Secondly the members do not find same binding association with fishing as the find with agriculture institution. The values of controlling deviant behaviours in the *Gond* and *Kokus* society are not applicable in management of fishery activities. In other economic activities which is embedded in cultural stems, the deviant behaviour, which alienates the person socially. Where as the deviant behaviour in federation is punished by removing the person from the membership of the society, which hardly effect their social life and economic activities, therefore the local population is not afraid of breaking the fishing rules.

Korkus also have similar living pattern as of *Gonds*, and they also have their totem and taboos associated with land and forest resources but not with the water resources. The social organisation is well managed by cultural norms and rules.

As *Gond* in India where involved in process of sanskritization (Srinivas, 1966), they also considered the occupation pattern from purity and pollution concept (Dumont, 1988) also. Some consider fishing as inferior activities, to be done by lower caste or tribal groups. This factor also causes hindrance in spread of fishing activities.

Kahar are basically fishing communities and have long association with the water resources both economically as well as ritually. Prior to be associated in the web of co-operative society they begin their New Year with worship of water and end the season with paying reverence to water. Secondly their co-operative society is organised on patriarchal, patri-local basis. As this community has traditional knowledge about fishing and they transmitted the knowledge continuously to their subsequent generation, they could adapt the fishing work through societies quickly. This society totem and taboos is associated with the management of water resources.

The performance of fishing work varies on these parameters based on the composition of village population. As it is evident from table 1 that the performance of *Kahar* village is better for two reason, one for their traditional link with this activity. Secondly by being a homogeneous group provide a good platform for being governed by the traditional norms and value system. Where as *Gond* and *Korkus* live in heterogeneous villages, which makes difficult for implementation of the societal norms and values in fishing activities. *Kahar* do fishing individually, or self, therefore all the income from fishing goes to the

household. Secondly they are not landowners which make them solely depended on the Tawa Reservoir for economic activities. While *Gonds* and *Korkus* mostly use hired labourer (*Kahar* or *Bangladeshi* refugees to do fishing) for fishing, therefore the income in their household from fishing is reduced in form of payment to these labourer.

In regards to mending the net and taking care of it, the *Kahar* communities properly cleans the nets and mend them when ever they are broken as they are traditionally trained and taught to do so. While the *Gond* and *Korkus*, throw away the net ones it is broken, as they lack the basic knowledge to mend it. Neither their cultural tradition (agriculturist) had provided them with the opportunity to know about fishing. These communities know how to mend agricultural implement, as for ages they have been doing that work. Secondly the villages of *Gond* and *Korkus* have services caste population (Black smith, Iron Smith, Barber, Potter etc) to provide different services to the village ecosystem, these also does not consist of any person who provides fishing net mending services.

As the areas, in and around the reservoir consist of plenty of tree stump let over after submergence, the *Kahar* community's population has cleaned the stump and secured fishing right of those areas to fish, while the *Gond* and *Korkus* do not care for such things. Even most of them do not have basic knowledge of swimming. The knowledge regarding availability of fish, , in varying seasons, location, time, quality of fish etc is very high in *Kahar* and *Bangladeshis* compared to *Gond* and *Korkus*.

Gender Role in fishing work

The women folks of *Gond's* and *Korkus's* have no relation with the fishing activities, where as they provided equal proportion of labour in agriculture and NTFP collection work, apart from taking care of the domestic core. At the co-operative society level, no women is members of any *Gond* and *Korkus* societies, while *Kahar* women are members of societies in their villages and actively take part in the activities like process and cleaning the catch.

In general the culture of *Gond* and *Korkus* reflects its inter-relationship with its economy of agriculture. Their social organisation, rituals, festivals and institution are around the land management and agriculture. No cultural trait reflects the water resources. Therefore bring them with a new set up needs a definite time frame to adjust it. Unless the present younger generation, which had shown inclination to take to collective water management, trained its forth-coming generation acceptability and sustainability of this institution is doubtful. Secondly the government policy is also inconsistent and myopic sighted, which does not built trust in local population of it, future approach. There fore the consistency in better management of federations needs long time and endurance for making fishing the main occupation of the local population.

V

Conclusion

Creation of appropriate institutional design (Ostrom 1995) it self does not fulfil the necessary condition for participation of the community in the management of common. Along with the local involvement, their cultural orientation is also necessary, particularly in case of the simple societies or ecosystem communities. Though a philosophically (socialist) motivated group organised the displaced population into a movement and

secures the right to the resources, the community in general is not ready to accept the responsibility to manage the resources or imbibe the use of the resources for its primary living.

Culturally for ages these societies have tuned their social organisation to cater to the needs from land and forest resources. This interaction led to evolve various values and norms. Which transmitted from generation to generation orally, through myth, legends, and folklore. They have created totem to identify one another, taboos to protect the resources as well as the human beings.

Tawa Matsya Sangh is formed into a federation for collective management of the water resources for the community benefit. A specific parameter is kept to be its member, like literate person who could handle the records etc. These criteria eliminate the non-literate section of population. This is reflected in its comparison of the active Vs non-active members, in the societies. The non-literate people are still associated with their traditional occupation and they are also the traditional leaders of the social organisation, who hamper the participation of younger ones in fishing works.

In this particular study, of Kesla it is found that members of societies are participating in federation activities, after meeting their agricultural needs first. Secondly the federation is facing problems of checking proliferation and misuse of the water resources. The younger generation as at present does not have employment avenues outside, are inclined to take up fishing in such case. The women involvement is least in case of Gond women, while Kahar women are actively participating in the federation activities.

The ethnic variation in accepting the fishing work is visible from the level of benefit and per capita catches from different societies with respect to the community in the society. The cultural influences in accepting these work also in ritually linked. As *Gond* in India where involved in process of sanskritization, they also considered the occupation pattern from purity and pollution concept also. Therefore the role of culture should be also associated with the CPR management and its signification should also be taken care of.

Acknowledgement

We would like thanks the societies of Tawa Visthapith Adivasi Matsya Utpadan Evam Sahkari Sangh Maryadit, Kesla, and people of the villages, for providing us with opportunity to work with them through a Bhopal based NGO named Eklavaya. We would like to thank Eklavaya for providing fund for this project. We would also like thanking our Institute and the Director for encouraging us for this research pursuit.

References

- Acheson James M., (1988), *The Lobster Gangs of Maine*, University Press of New England, Hanover.
- Annual Report of *Tawa Visthapith Adivasi Matsya Utpadan Evam Sahkari Sangh Maryadit*, (1999), Kesla, Madhya Pradesh.
- Bromley, Daniel W, (Ed) 1992 *Making the Commons Work: Theory, Practice, and Policy*, San Francisco, CA: Institute for Contemporary Studies
- Dumont, Louis, (1988), *Homo Hierarchicus: The Caste System and Its Implication*, Oxford University Press, Delhi.
- Granovetter M and Swedberg R, (1992), *The Sociology of Economics Life*, Westview Press, Boulder.

McCay B J, and Jentoft, S, (1998), *Market Or Community Failure? Critical Perspective on Common Property Research*, in Human organisation, vol. 57, No.1.

McCay B J, and Acheson, J.M, (1987), *Human Ecology of the Commons*, in (Ed) The Questions of the Commons. B.J.McCay and JM Acheson, Tucson, university of Arizona Press.

Orlove, BS, (1976), *The Tragedy of Commons Revisited: Land Use and Environmental Quality in High Altitude of Andean Grasslands*, in Luchole, J (Ed) Hill Lands, Proceeding of an International symposium, Morgantown WVA, University of Virginia.

Ostrom Elinor (1990), *Governing The Commons: The Evolution of Institutions for Collective action*. New York: Cambridge University Press.

Ostrom Elinor (1995), *Incentives, Rules of the Game, and Development*, Annual World Bank Conference on Development Economics.

Ostrom Vincent, Feeny David, Picht Harmut, (1988) *Institutional Analysis and Development: Rethinking the terms of choice* in (eds) Rethinking institutional analysis and development: Issues alternatives and Choices. International centre for Economic Growth, ICS press, California.

Paine, Robert, (1994), *Herders of the Tundra: A portrait of Saami Reindeer Pastoralism*, Washington, Smithsonian Institute Press.

Palson Gisli, (1991), *Coastal Economics, Cultural Accounts: Human Ecology and Icelandic Discourse*, Manchester, Manchester University Press.

Polanyi Karl (1957) *The Great Transformation*, Boston, Beacon Press.

Rees J, (1990), *Natural Resources: Allocation, Economics and Policy*, Routledge, New York.

Srinivas, M. N, (1966), *social Change In Modern India*, California, University of California Press.

Tina Li (1991), *Process of Agrarian Transformation; Renegotiating Land Use and tenure in the Indonesian upland*, in proceeding of International association for the Study of Common property (IASCP), Common property Conference, Second Meeting of IASCP, Sept. Natural resource Institute, University of Manitoba, Winnipeg.

Zimmerman, E.W (1951), *World Resources and Industries*, Harper and Collins Press, New York.