



## POVERTY ALLEVIATION THROUGH FISHERIES MANAGEMENT IN BANGLADESH: A RETROSPECTIVE SEARCH

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**Abstract:** Development initiators in Bangladesh often focus on poverty as well as its alleviation strategies. But merely new initiatives recognize the alleviation strategies in retrospect. As a result, progress of poverty alleviation in Bangladesh is questionable. The existing and previous fisheries management strategies were reviewed with special emphasis on poverty issue. In Bangladesh, fisheries rhymes with poverty with the reflection of a complex phenomenon like low income, illness and lack of education, social exclusion, entitlement failure, vulnerability to shocks and political powerlessness. Poverty in the fisheries sector may still exist even in the situation of increase in production of fish. Moreover, disaggregating the poor into economically excluded, politically disempowered and class exploited groups reveals a range of different mechanisms working through an intra-sectoral fisheries dynamics and leading to the impoverishment of a part of the community. Strategically, Government tuned their approach from solely revenue collection with a top down approach to revenue collection with poverty alleviation approach through co-management and community based management practices. But in practice Government rarely ensures the marginal poor fishers' involvement on the fisheries development activities that ultimately does not influence the poverty eradication level of the poor fishers. In addition to institutional legacy/complexity to disburse allocated fund in time is also an obstacle to achieve success in poverty focused fisheries development initiatives in Bangladesh.

**Key words:** Poverty, management, socio-institutional mechanisms, and fishermen

### Introduction

In the last few years' national and international commitments to poverty-reduction have reached a level that could barely have been imagined 10 years ago. Most world leaders have committed to reduce global poverty. National governments are drafting Poverty Reduction Strategy Papers (PRSP) and international agencies are focusing their attention on mobilizing resources and influencing policies to provide pro-poor growth and alleviate poverty. But, both experts in development planning and academicians interested in poverty issues have ignored small-scale fishing communities. Through out the world the fishermen are considered as the poorest of the poor. In Bangladesh, approximately 80 percent of rural people get their income from fisheries. Around 13 million labour force is employed in the fisheries sector in Bangladesh. Capture fisheries is still of particular importance in the livelihoods of poorer people. The poor spend more time on capture fisheries (in rivers, lakes and coastal areas) than on aquaculture in Bangladesh.

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The small-scale fisheries sector in Bangladesh, being the major economic activity in rural areas with hardly any alternative source of employment, seems to have played a crucial role in employment creation, income generation and poverty alleviation.

During last thirty years, numerous concepts of poverty were emerged. According to Sen (1981), 'Poverty means the inability to fulfill the demand of food that is required to restore the physical skill'. This definition depicts that poverty does not depend on a single factor or determinant. It depends on many factors like economic, social, cultural, psychological determinants. Currently, poverty is embodied within a multidimensional model recognizing a wide range of factors including social and physical isolation, lacking political voice, low social status, and health in addition to low income. However, lack of understanding of poverty in the fishing community resulted in the failure of countless efforts, strategies, policies and projects undertaken by the Government, NGOs, Donors, and funding organizations to eradicate poverty from the fishing communities. Bene (2003) presented two contrasting views regarding poverty in fisheries, which he called the two pillars of old paradigm 'Poverty rhymes with fisheries'. One pillar is based on the view that 'They are poor because they are fishermen'. And the other pillar is based on just reversed view that 'They are fishermen because they are poor'. These two perceptions are in fact the two sides of the same coin and they represent the two complimentary pillars of the poverty in fisheries. Why do the people dependent on the resource so rich and economically rewarding live at the absolute poverty? The objective of this study was to find answer to this question. For this, the paper is articulated to describe and analyze the perception of poverty in fisheries from a review of the available literature.

## **Materials and methods**

The issues discussed in this article were gathered through an extensive literature review. For description and analysis of the perception of poverty in fisheries, published articles, discussion papers and reports of international institution (e.g., FAO, World Bank etc) concerning fisheries from all over the world were examined. Later, policy documents and management strategies related to fisheries sector of Bangladesh Government were analyzed.

## **Results and discussion**

Efforts made by different GOs, NGOs, donors and funding organizations to implement different strategies to eradicate poverty from the fisheries communities were reviewed and discussed under the following headings:

***Fisheries resource is a safety valve for poor people:*** Fisheries management in Bangladesh is based on broadly two types of water body namely open water and closed water. Open water includes rivers, channels, creeks, lakes (*haors, beels*), lagoons, pools, swamps, estuaries and marine waters where closed water includes ponds, ditches, *dighis*, oxbow lakes, etc. Traditionally aquatic resources provide a valuable source of income and nutrition for large number of poor households that direct the diverse and dynamic livelihood strategies in the country. The landless poor households in the villages of Bangladesh depend mostly on the open water fishery resources, as they are the common property resources. This resource is their last resort for survival. As a result, degradation of these fishery resources is posing to exert a major negative impact on the lives of such people. As open water fisheries constitute an important safety net providing a source of income for landless poor, any further degradation of fishery resources will further render their limited opportunities. While discussing coastal fisheries management and community livelihood in

the *Sundarbans*, Rouf and Jensen, (2001) indicated that conservation of the resources aiming at preventing further degradation might result in a conflict with the livelihood of the communities whose primary source of income was fishing. These landless laborers have a limited alternative employment opportunities and lack of alternative incomes drives fishermen's incomes to lower levels. Although conservation of the fishery resources is essential for poverty alleviation, its apparent conflict with the livelihood of the fishermen has forced the researchers to look into the other elements of poverty such as socio-institutional mechanisms.

***Socio institutional mechanisms responsible for poverty in fisheries:*** Conventionally, poverty in fisheries was related to the exploitation level of fisheries resources overlooking other elements such as good governance, socio-institutional mechanisms etc. In particular, the social and institutional mechanisms those take place within and around the fisheries play a vital role in the maintenance, alleviation, or aggravation of poverty to fisheries-dependent communities. Socio-institutional mechanisms are the set of rules, norms, conventions, institutional arrangements, forms of co-ordination or social organization, and decision-making processes through which the social actors (individuals and collectives) interact to gain and maintain their command (access, use and control) over the resources and the benefits extracted from them. To distinguish different elements that may constrain or limit individuals' or groups' command over resources, Bene (2003) suggest a typology that distinguishes four impoverishment processes: social marginalization, economic exclusion, class exploitation, and political disempowerment. In the following sections, attempts are made to discuss how this typology fits with the poverty of the fishermen in Bangladesh.

***Social marginalization of minority community:*** Traditionally, the low caste Hindus are engaged in the fishing profession, the *jaladas*, the *malos*, and the *malla burmans* all commonly known as the *jele*. These fisher folk are very caste bound people. They live in segregated villages or in *paras* that are localities within a village. Most of the fishermen live below the poverty line (Thompson and Hossain, 1998). Their community is an outcast of the main stream. The Hindu fishing communities represents an ethnic minority live in isolation from the rest of the mainstream population and thereby, has a psychological sense of insecurity vis-à-vis lack of confidence to involve in new income and employment generating activities. Moreover, in some parts of Bangladesh, individuals or communities were reported to be marginalized due to their religion and caste. For instance, Kremer (1994) reported that in the northeast part of the country the Muslim communities specialized in fishing activities (called the *maimal* or *motshojibi*, i.e., fishermen) often acted collectively to prevent fishermen from other villagers from fishing over certain areas of 'open-access' flooded agricultural lands. They maintain their territory by physical violence and stealing gears, generally at the expense of Hindu *nomosudras* (untouchable caste of Hindu fishermen). Social marginalization was also evident in the *Dubla char* winter fishery in the *Sundarbans*. This fishing community consists of two main groups, namely, *bahaddars* and *shahebs*. The *bahaddars* are hindu fishermen from Chittagong region, whereas *shahebs* are muslim fishermen from the local area of Khulna, Barguna, and Pirojpur. In recent years, the numbers of *bahaddars* were declining whereas the numbers of *shahebs* are increasing. The diminishing numbers of Hindu *bahaddars* are perceived as an outcome of social marginalization (Bernacsek, 2000).

***Class exploitation of poor fishermen through leasing system:*** Leasing system that was in vogue until 1985, known as Past Management Strategy in the literature, would be criticized severely for encouraging degradation of fishery resources. According to this strategy, the lease holders was the exclusive owner of the *Jalmohals* and was free to engage as many fishing units and as many different types of fishing gears as he liked to catch as much of fish as possible. This practice put hefty pressure on the resources and took its toll through over fishing and subsequent depletion of

resources. In general, tensions, threatening, conflicts, commercial partnership of subleasing and partnerships in fishing operation characterized the relation between the fishermen and the lot owners. The weakness of the leasing system was not that it did not work or might be inefficient, but rather it was as arbitrary as in ancient times and allowed for abuses on the stronger side of the relationship. For example, the leasing system that operated on a national scale in the floodplains of Bangladesh was an example of an institutional arrangement relatively propitious to the establishment of exploitation relationships between social classes (Bene, 2003). Under this leasing system, the water-bodies, which were the property of the government, were compartmentalized into individual 'fishing lots' or *Jalmohals*. These water estates were then leased, typically for one to three years, through an auctioning system—which was thought to yield very substantial revenues to the government. But, because the lease values were huge amounts of money, fishermen themselves (either individually or even through co-operatives) could rarely raise the necessary funds. Consequently the leaseholders were usually the rich investors/entrepreneurs, typically from the rural elites. Toufique (1997), for instance, reported that in most of the lessees are past or present members or chairmen of local institutions of the state. In the rural context they are the most affluent and powerful people who compete for such posts. So, the lessees usually come from more powerful section of the rural population.' These lessees also called 'water-lords' hired fishermen as daily labour to carry out fishing operations on their behalf. Daily labourers were paid in cash and/or receive a small share of the catch while most of the sale values accrued to the leaseholders. Quite a few literature described in detail the ways these leasing systems had led to the institutionalized exploitation of the fishermen by the rural elite class (Bene, 2003). Bernacsek (1994) emphasized that 'The *Jalmohal* lease system is oriented towards generating revenue for government and substantial income for leaseholders. However, it exacerbates exploitations of fishermen (who do not own their own produce and therefore realise only a small part of this full economic benefits) . . . the share of profits yielded to labour . . . is minimized to the extent possible, within the constraints of labour's opportunity costs and its awareness of fishing as a profit rich economic activity'.

***Exclusion of poor fishermen economically through NFMP:*** Realizing the problems associated with the so-called fisheries management in the past, the Ministry of Fisheries and Livestock (MOFL) initiated a new concept of fisheries management – the New Fisheries Management Policy (NFMP) in 1986. The objectives of this new policy were 'to divert maximum benefits arising out of inland fisheries to the actual fishers and away from the middlemen and leaseholders who had hitherto been appropriating the greatest proportion of the benefits from these resources for themselves; and to take measures to ensure the sustainability of fish production in the inland open waters'. It was agreed that the MOL would handover to the MOFL possession of such *Jalmohals* as would be selected by the national NFMP committee for implementation of the NFMP on condition that the MOFL would pay that amount of revenue to the MOL which the MOL would otherwise have earned from the handed over *Jalmohals* (i.e., a 10% per annum increase in revenue). The Ministry of fisheries and Livestock would then implement the new management through the DOF. The main provision of this new policy was that the 'genuine fishers' living on the banks of the *Jalmohals* would be given annually renewable individual licenses and licenses for each fishing unit by the *upazila* Fisheries Officers after the list of each fisherman was certified and approved by the *Jalmohal* management committee at the *upazilla* level and at the district level. The *Jalmohal* management committees consisted of representatives of the National Fisheries Association (NFA), Department of Fisheries (DOF), Ministry of Land (MOL), and Bangladesh Krishi Bank (BKB) from the representative *upazilla* and district levels. The *Upazilla Nirbahi Officer* or the deputy commissioner headed the committees at *upazilla* and district level, respectively. Bangladesh Krishi Bank was assigned to extend credit to the listed genuine fishers. As a strategic modification of the NFMP, Government of Bangladesh abolished the leasing system

of open *Jalmohal* during 1995. Although *beels*, *haors* and similar other open water bodies are part and parcel of the river ecosystem, the MOL treated them as closed water bodies. Consequently, there was no specific management policy or activity in the river *Jalmohals*. Some have been declared closed so that leaseholders could continue to control them but most remain as open access resources and currently lack any limits on fishing effort or number of fishers.

In spite of the good intentions as mentioned in the objectives of the NFMP, the fate of adjacent local poor fishers is now at the mercy and control of local power brokers and elites. Actually, the NFMP resulted in economic exclusion of the poor fishermen. Because, this strategy involve some entry costs such as purchase of fishing gear and/or license, bribes to the local government officials and/or traditional authorities who control the access to the fisheries, etc. It is difficult for the fishermen to possess the most profitable gears because they are most expensive to purchase to maintain and to operate. Moreover, their access to the productive fishing spots (e.g., receding channels in floodplain fisheries) is denied through imposing illegal bribes and/or fees. Kremer (1994) observed that the poorest section of the population in *Hail Hoar* (River Meghna's catchment) did not have access to fishing during the driest (receding) season when the entry premiums, which mirrored the expected yields, were at their highest values. He also showed that the gears that generated a higher surplus, i.e., brush pile and pump embankment, required the most capital (including bribes and tolls). There was consequently a tendency for poorer households to be excluded from the profitable floodplain fisheries. Kremer (1994) concluded 'Once again fishing is an activity from which the disadvantaged find themselves excluded. One immediate cause of the poor fishing households' relatively low participation in fishing is their tendency to be excluded from the dry season fishery. Unsurprisingly, richer fishing households catch 155% more fish by weight per household than their poorer counterparts. Since richer households are not only more likely to have dry-season access, but also more likely to be able to afford brush-piles, a much higher proportion of their catch consists of the larger stocked species. The poorest people are not those who fish but those who are excluded from the fishery'. While the richest and medium strata of the population have access to the same types of water-bodies, the poorest households only have access to a marginal part of the water-bodies exploited by the community. This difference reflects 'direct' (financial) and 'indirect' (technical) constraints faced by the poor. The direct restrictions result from various legal and/or illegal taxes that are imposed for the access to the water-bodies. These different fees (which overlap each other) represent multiple financial barriers that affect most severely the poorest and prevent them from entering the fisheries. In addition, these poorest households also face indirect (or technical) restrictions of access resulting from their lack of adequate fishing gears and boats necessary to fish in particular water-bodies.

In the situation where the poor fishermen are becoming economically excluded, access to finance and credit facilities can be the central element to poverty alleviation in fisheries. Micro-credit may indeed be part of the answer. But Ali and Islam (1998) stated that in practice the NFMP made little change as government relied on fishermen leaders in implementing licenses and DOF staffs were diverted to an administrative task that was divorced from determination of sustainable level of fishing. Islam (1989) raised the issue of poor fishers access in the system and mentioned 'selected representative (of the NFA, who played the key role in identification and registration of genuine fishermen) himself is either a leaseholder or moneylender or their agent and at the time of preparation of the list, the fake fishermen get an opportunity to include themselves in the list.' Thus even under the NFMP the emphasis of management again reverted to revenue collection instead of considering the fate of poor fishers as well as their livelihood. In addition, the middle men such as *Mahajan*, *Dadandar*, *Aratdar*, *Shaheb* and *Bahaddar* in the fisheries have established a new marketing chain based on the extreme exploitation of the fishing communities by setting up an artificial pricing chain through intermediaries at different levels (Thompson *et al.*, 1993). The source of capital for the poor coastal people is the informal credit market mostly operated by the

*Dadandars* and the moneylenders. Their primary intention is to exploit these poor fishermen. These intermediaries and moneylenders through advance payment against the catch have made the fishermen inaccessible to the competitive open market and thereby in most cases the fishermen are becoming *de facto* wage/bonded labourers to the traders (Kleigh *et al.*, 2001). Moreover, the fishermen does not have trustworthy spokesman for their community and the people who seem to represent them are actually the agents of the local power brokers, fish dealer and traders (Rouf and Jensen, 2001). The factors that weaken the bargaining position of the fishermen are his physical isolation from the market, inability to get information about the market, his dependency on credit and illiteracy.

***Redistribution failure of Fisheries Enhancement Program (FEP):*** In Bangladesh, over the last two decades, a large number of Fisheries Enhancement Programs (FEPs) have been implemented, with a double objective. The first one was ecological, as a mitigation measure for losses to fisheries due to flood control and overexploitation. The second one was social, as a way to improve the livelihood of the poorest (landless) households which largely dependent on fishing activities. The technical principle of these FEPs is the release of massive quantities of fingerlings in open water-bodies with the hope that the artificial introduction of young fish will result in larger adult populations and subsequent catch levels. A majority of these FEPs have been technically successful and there is little discussion about the impact of increases in fish production. There is, however, increasing evidence that these FEPs have partially or even totally failed to improve the food security and welfare of the poorest people living in the nearby areas. Bene (2003) revealed that mechanisms such as those of economic exclusion and class exploitation had played a major role in the redistributive failure of FEPs. The constraint or lack of access to formal credit for poor fishers was ignored and no alternative to the service provided by moneylenders was offered. Consequently, the distribution of benefits derived from these new FEPs merely reflects the patterns of original ownership of the means of production, leading to economic exclusion and class exploitation. The poorest, who could not invest in adequate fishing gears and fishing licenses (required to access the newly enhanced water-bodies) were totally excluded or only benefited from a very limited portion of the increased fish production. However, a more careful reading of the literature reveals that underneath these evident mechanisms, a more subtle effect resulting from the disempowerment of the poorest was also at work. As human inputs increased through FEPs, the control of the aquatic environment and the access to the floodplain resources tended to be transferred from the public/common to the private domain (a sort of enclosure), so that those investing in the FEP activities could protect their future interests. This change induced an assignment of ownership or use-rights to individuals or groups of individuals of what was previously an open access resource.

This transfer of rights mirrored the local power structure of the Bangladeshi rural society and the poorest (i.e., most disempowered) were usually left out from this 'redistributional' process. In case of FEP in the Oxbow Lake Project II, Thompson and Hossain (1998; quoting Anon, 1995) reported that, 44% of the local population whose access was denied to the new enhanced fishery were initially poor and landless households deriving the main part of their livelihoods from the different baors (oxbow lakes) included in the project. Tactfully, Thompson and Hossain (1998) concluded 'Hence for various reasons there was some inequity in the extent of participation and benefits from the project'. Moreover, with reference FEP of the Third Fisheries Programme (TFP), Ahmad *et al.* (1998) asserted 'Power structure and fishing patterns that have been in place for many years cannot be changed overnight. Indeed, increasing the value of the resource through FEP can lead to poor fishers being forced out of their usual fishing grounds by more influential groups in the community. This was shown in one *beel* included in the TFP where support from an NGO, Prodipan, was necessary to ensure that poor fishermen gained access to the enhanced fisheries resource. In fact, in total, no less than 18 nongovernmental organizations (NGOs) had to be

involved during the last year of the Third Fisheries Programme, partially to ensure that poor were not further excluded'. These different observations suggest that FEPs might have *de facto* led to an increase in inequity through the transfer of access and benefits of the common resources from the poor landless to the rich rural elite. Although part of the unequal appropriation of FEP benefits resulted from the pre-existing economic and social inequities characterizing rural Bangladeshi society, unbalanced power relationships further aggravated this phenomenon through exclusion of the poorest from different stages of the decision-making process and implementation of the FEPs.

**Lessons learned from Fourth Fisheries Project:** Recently, Bangladesh Fourth Fisheries Project was undertaken to support sustainable and equitable growth in the benefits generated from increased fish and shrimp production. The long-term goal was to ensure sustained access to fish for food and income. The involvement of resource users, and the establishment of local level institutions were at its center to facilitate conflict resolution and resource allocation. One of the special emphases of the project was rural poverty alleviation. However, it was recognized that increased production alone does not necessarily guarantee a reduction in poverty. Thus, the project design put a great deal of emphasis on access to fisheries resources by the poor. Therefore, project design, implementation, and operation followed a collaborative management, also referred to as co-management, system that integrated all key stakeholders in the project activities. A co-management system was the key tool for project delivery. This system integrated all key stakeholders in the project through several relationships that were based upon an assessment of comparative advantages. There were three fundamental relationships in the system: (i) internal to the community; (ii) between the community and a local agent, usually an NGO; and, (iii) between the community and/or the NGO on the one hand, and the regional and national level on the other hand. These relationships consisted of different kinds of resources including knowledge, information, funds, training, etc having one or both way flow. The major criticism of the project was that the institutional support was integrated into the DOF structure. While the project Management Unit (PMU) provided a focus for donor interaction and for project monitoring and co-ordination, implementation channeled through existing structures of DOF. These resulted in bureaucratic red tape in different stages of the project. For example, in this project up-front cost sharing of investments replaced the failed cost recovery strategy attempted under the TFP. The proposed credit supposed to finance up to 90% of the stocking costs in the first year of the operation of a specific floodplain, 60% in the second year, and 30% in the third year, with the balance financed by the communities. Communities would finance 100% of the stocking costs from the fourth year of operation onwards. However, in most cases the proposed credit did not reach to the target group in time due to bureaucracy in the DOF. Even the salary of the personnel was due for several months.

## Conclusion

In order to alleviate poverty in fisheries through improvement of socio-institutional mechanisms there are several steps to be undertaken. Firstly, the Fisheries Development Plan (FDP) needs to be made as an integral component of the Government's Rural Development Plan (RDP). The development plan should be based on existing local resources and the priority needs of the local people. Moreover, access, right and responsibility of stakeholders should be clearly defined. Secondly, emphasis needs to be placed on capacity building in order to strengthen agencies and organizations which provide assistance to the poor. Policies and plans should be devised to respond to the needs of poor households in the locality, to build their capacity, and to enable them to participate in the planning, implementation, monitoring and evaluating processes. Thirdly, it is necessary to set up a widespread, nationwide network among poor farmers, paying special attention to differences in the levels of education and experience and, at the same time, enhancing

equity and harmony among members. The network should also include stakeholders such as service and equipment suppliers, manufacturers, brokers, credit providers, government organizations in farming extension, research, training and education, NGOs and donors.

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