NATURAL RESOURCES SYSTEMS PROGRAMME

PROJECT REPORT

DFID Project Number

R8294

Project Title

Enabling conflict resolution for better fisheries management: Experience from the inland fisheries of Bangladesh.

Annex 7:3 of the Final Technical Report of project R8294.

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Organisation

WorldFish Center

Date

2005

NRSP Production System

Land Water Interface

Enabling Conflict Resolution for Better Fisheries Management: Experience from the Inland Fisheries of Bangladesh

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Abstract

Increasing population, ineffective management, competition between gears over resource access, and proliferation of destructive fishing practices are not only putting severe stress on aquatic resources of Bangladesh, but are also threatening the livelihoods of millions of people who depend on fisheries. Although it is widely reported that conflict is endemic in the fisheries of Bangladesh, there are very few studies that analysed those conflicts and how these conflicts could be solved. This study aimed to identify such conflicts and to design a strategy to resolve conflicts in two Community-Based Fisheries Management-2 (CBFM-2) Waterbodies, namely the Titas Cluster and Beel Shapla in Brahamanbaria district of Bangladesh. A generic communication planning matrix was made from consultations with key informants and stakeholders. Using participatory approaches applied in fisheries management, country-specific communication planning matrices evolved from the generic model during country workshops participated by primary stakeholders—fishermen, fishing group leaders and community leaders—together with potential conflict managers, such as the police, government officers, academics, researchers and policy-makers. The process shows the significance of a communication strategy for conflict identification and resolution.

Introduction

Increasing population, ineffective management, lack of institutional structure to organize fishers, increasing effort yet decreasing catches primarily cause conflicts in fisheries throughout the world. Conflict likewise occurs when the activity of a group or individual interferes, either in reality or in perception, with the activities of another group or individual to such an extent that one party seeks dominance over the other. Conflict is present in all fishing communities, but in the developing world where the reliance upon fishing as a source of food and income is critical, the consequence of conflict may be profound. Conflict can be a serious impediment to economic and social development because it erodes the institutions needed to promote development.

Conflict is a common characteristic of tropical fisheries. Anecdotal evidence suggests that it is on the increase in developing countries. It is important to note here that conflict is not always negative, it can be positive and attempts should never be made to eradicate it completely. Conflict encourages government to become more effective, corrects flaws in the setup of institutions, and allows society to function efficiently by resolving small conflicts often. To understand whether conflict is positive or negative it is often helpful to look at what the conflict is about and how it is affecting the society and natural resource base. However, relatively little is known about the process that leads to conflict in the fisheries. The success of responsible fisheries management under the auspices of the Food and Agriculture Organization could be attributed largely to the efforts at reducing and managing conflicts between different resource users. Such an effort, however, could not be achieved without management strategies to resolve fisheries conflicts. Identifying the causes of conflicts and promoting conflict resolution are thus crucial in the sustainable management of fisheries resources.

The WorldFish Center, then, in collaboration with WorldFish Center- Bangladesh, the Fisheries Action Coalition Team (FACT) in Cambodia, Mitraniketan in India, academic institutions with a reputation for communication science such as the Reading University in the United Kingdom, and local stakeholders in fisheries—with financial assistance from the Natural Resource Systems Program (NRSP) of the Department for International Development (DFID)—initiated a project towards increasing the level of understanding conflicts and developing appropriate ways to reduce them. The present study made an attempt to look at these issues involving inland fisheries of Bangladesh. It is expected that by

understanding and analysing causes of conflicts, more appropriate management system might be identified or developed.

Objectives of the Project in Bangladesh

- Assess the nature and types of conflicts prevailing in the inland fisheries of Bangladesh
- Develop appropriate ways of communicating good practice and reducing conflicts in the fisheries of Bangladesh
- Promote the adoption of institutions and practices to resolve and minimize conflicts

Fisheries of Bangladesh

Bangladesh is ideally suited for fish production, having one of the highest man-water ratios in the world, at 20 persons per ha of water area (Task Force 1991). The fisheries subsector plays a significant role in nutrition, employment and foreign exchange earnings for the country's economy. About 1.3 million people are directly employed in this subsector and over 12 million rural people indirectly earn their livelihood from fisheries-related activities. It is estimated that 55% of the fisheries personnel are involved in freshwater fisheries, 36% in marine fisheries. Shrimp culture absorbs 6.2%;, fish processing plants and fish hatcheries employ 0.4% and 2.2%, respectively (Islam 2001). Frozen shrimps, fish and fishery products occupy the second position in the country's exports. The sector contributes about 5.5% of GDP, 18% of Gross Agricultural Product, and 6.28% of export earnings. Fish provides about 60% of the total animal protein intake.

Fisheries in Bangladesh comprise three distinct areas: i) the inland capture (fresh openwater) constituting rivers and estuaries, *sundarban*, *beels*, *kaptai* lake and flood land; ii) the inland culture (fresh closed water) comprises ponds and ditches, *baors*, and coastal shrimp and fish farms; and iii) marine capture (saline open waters of the Bay of Bengal). The water areas and production are presented in Table 1. Fish production for 2002-2003 was estimated at 1.99 million metric tons, 78.39% of which comes from inland waters (constituting 35.50% and 42.89%, respectively, from inland openwater and inland closed water). The rest, 21.61%, is contributed by marine openwaters. Floodlands (including the regulated polders and enclosures) contribute the most to inland capture fisheries. Rivers and estuaries, although constituting large areas, contribute very little to the total fish production. On the other hand, ponds provide the most (about 37.64%) to the total production although water areas are much lower compared with the open waters. In the marine waters, artisanal fisheries contribute the most (20.22%) and industrial trawl fisheries provide only 1.40% of the total production.

Table 1. Water Area and Catch Statistics of Bangladesh Fisheries, 2002-2003

Type of water body	Water areas (ha)	Fish production (metric ton)	Fish production (%)
A. Inland Fisheries			
I. *Capture*:			
1. Rivers and estuaries	1,031,563	137,848	6.90
2. Sundarban*		13,884	0.69
3. Beels	114,161	75,460	3.78
4. Kaptai Lake	68,800	7,025	0.35
5. Flood Lands	2,832,792	475,116	23.78
Capture Total	**4,047,316**	**709,333**	**35.50**
II. *Culture:*			
1. Ponds and Ditches	265,500	752,054	37.64
2. Baors	5,488	4,098	0.21
3. Coastal shrimp & fish farms	141,353	100,804	5.04
Culture Total	**412,341**	**856,956**	**42.89**
Total inland waters (I+II)	**4,459,657**	**1,566,289**	**78.39**
B. Marine Fisheries:			
1. Industrial Fisheries (Trawl)		27,954	1.40
2. Artisanal Fisheries		403,954	20.22
Marine Total		**431,908**	**21.61**
Country Total (A+B)		**1,998,197**	**100.00**

*Source: Department of Fisheries (DOF, 2003). * area included in the figure of river & estuaries*

Fish production patterns in Bangladesh have undergone significant change. Production from inland openwaters started declining in 1975-1976, continued roughly in similar fashion up to 1980-1981, slightly increased thereafter for two years, and declined consistently up to 1990-1991. It gradually showed improvement in 1999-2000. Marine fisheries mark gradual increased in 1971-1972. Aquaculture (inland closedwater) showed spectacular improvement in 1983-1984 (before this period there were no statistics available for aquaculture). Estimates show that while aquaculture, from 1983-1984 to 1999-2000, grew at 10.94% per annum, inland capture and marine production grew, respectively, at only 2.88% and 3.08%. Production from rivers and estuaries, in fact, declined by 2.34% during the period.

Traditionally, inland fisheries have been one of the major sources of food and livelihoods of millions of Bangladesh people. Increasing population, ineffective management, conflicts and competition amongst users of different fishing gears, and proliferation of destructive fishing practices put severe pressure on aquatic resources. Although regulations have been imposed to manage fisheries, in practice non-compliance of the rules and regulations is common. Non-compliance with regulations causes overfishing, resource depletion, habitat degradation, and social and economic conflicts amongst various segments of the population over the share of resources. Conflict amongst the different resource users is a serious problem that undermines the effectiveness of fisheries management in inland fisheries. There is the potential for increasing inland captures but this should be complemented by identifying various impediments in the fisheries sector and implementing a sound management policy. It is, therefore, imperative to study the ways of promoting better management practice to help resolve conflicts for sustainable management of inland resources.

Fisheries Management

Fisheries resources of Bangladesh operate under complex biological, technological, climatic, social, economic, political and institutional conditions. There are several government departments and ministries, such as Ministry of Land (MOL), Ministry of Fisheries and Livestock (MoFL), Ministry of Agriculture, Ministry of Communication, Department of Fisheries (DOF), Department of Forest, Bangladesh Water Development Board (BWDB), that are either directly or indirectly involved in fisheries management. Diversified interests of different ministries (stakeholders) and lack of coordination cause considerable amount of rivalry and conflicts amongst these ministries/departments. Two ministries play a major role in fisheries management. These are the MOL, which owns all inland fisheries resources except the privately owned waterbody, such as pond, and is responsible for the administration of leases and access to these fisheries resources; and the MoFL, which is responsible for the conservation, protection and management of fish stocks.

Until 1986 the basic mechanism for managing the fisheries in inland water had been based on the allocation of fishery rights through periodic leasing (one to three years). Usually, the lessee was a middleman who owned the exclusive rights to harvest fish in a waterbody, upon payment of a leasing fee to the government. The process was replicated through subleasing. The middleman hired fishers to catch fish. Fishers in need of fishing grounds were required to pay these subleasing chain members to obtain their access. The system, however, failed to serve the national interest of conserving the fisheries and protecting the economic fortune of the fishers (Aguero 1989). Middlemen and wealthy private financiers were driven by self-interest to exploit the fishers at the cost of resource sustainability as well as the misery of the fishing community. As a consequence, resource productivity had been reduced and the economic conditions of the fishers deteriorated (Ahsanullah 1989).

Taking cognizance of these problems, the Bangladesh government issued the New Fisheries Management Policy (NFMP) in 1986 that opened up fisheries only to those directly engaged in fishing. The strategy of NFMP was to gradually abolish the system of leasing waterbodies to middlemen and to replace it with a licensing system to establish access rights of genuine fishers. Furthermore, it was expected that this system would help establish direct relations between the government and fishers, aimed at ultimately forging partnership arrangements for resource management. However, the licensing system proved costly to implement and was abolished in some areas, such as rivers, that were declared open access in 1995. The argument in favor of the open access was that fishers would be better off

because the river fisheries in particular would be open to all. However, during the survey it was reported that the open access virtually opened the fisheries to non-fishers, which has since become a major source of conflicts in fisheries of Bangladesh.

Although the licensing system was introduced under NFMP, the revenue-oriented traditional leasing system is still the dominant management mechanism in Bangladesh. At present, government ownership of water resources falls into two categories: openwater access and close water access. All waterbodies with continuous flow of water throughout the year are managed as open access resources: government collects no revenues and anyone can fish in those waterbodies. Another type of waterbody seasonally connected to rivers and canals is managed through the leasing system. However, to improve fisheries production and to ensure the welfare of fishers, the MOL handed over certain fisheries to the MoFL for the CBFM Program.

Conflicts in Fisheries: Concepts and some important issues

Conflicts are broadly defined as a situation of non-cooperation between parties with contradicting objectives. In a developing country, fisheries conflicts are often viewed in the context of resource allocation or access rights. However, they are often far more complex than that view, considering the wide range of socioeconomic issues as well as institutional and market failures exacerbating the conflicts. Many conflicts in fisheries over gear use, landing-site use or market behavior are not primarily about resource allocation but are rooted in more complex institutional issues, such as cultural differences and political power struggles (Bennett 2002). Not all conflicts result in violence and they could be part of an iterative process of institutional change and evolution that. in the end, is a positive outcome. However, conflicts have costs and these costs should not outcast the potential contribution to a positive iterative process mentioned earlier, else conflicts become negative costly forces that impact on policy and management operations.

Conflicts in fisheries are diverse and complex. A typology of conflict is, therefore, important in finding answers to policy problems. Charles (1992) organized a wide range of fisheries conflicts into four interrelated headings: 1) fishery jurisdiction, 2) management mechanisms, 3) internal allocation, and 4) external allocation. These four typologies are intended to be comprehensive but not mutually exclusive. Bennett et al. (2001) introduced a fifth category to include those that involve conflicts between fishers and those outside the fishery. The present study classifies the conflicts in the study area following Bennett et al.'s typology used.

Conflicts can be classified into five types (Bennett et al. 2001). Type I is about controlling the fishery (who controls the fishery). Type II is about how it is controlled where either lack or over enforcement is seen as the primary reason of conflict. Type III is the relation amongst users of the resource. Differences in ethnic groups, religion and scale of fishing are the factors that define Type III conflict. Type IV conflict is the relationship amongst other users of aquatic resources; e.g. relationship between fishery and non-fishery users. Type V conflict is related to non-fishery issues, such as economy, environment, corruption, etc. These typologies were further analyzed during the surveys by Project teams.

FACTORS **KEY PROBLEM ISSUES** **INTERVENTIONS / ACTIONS**

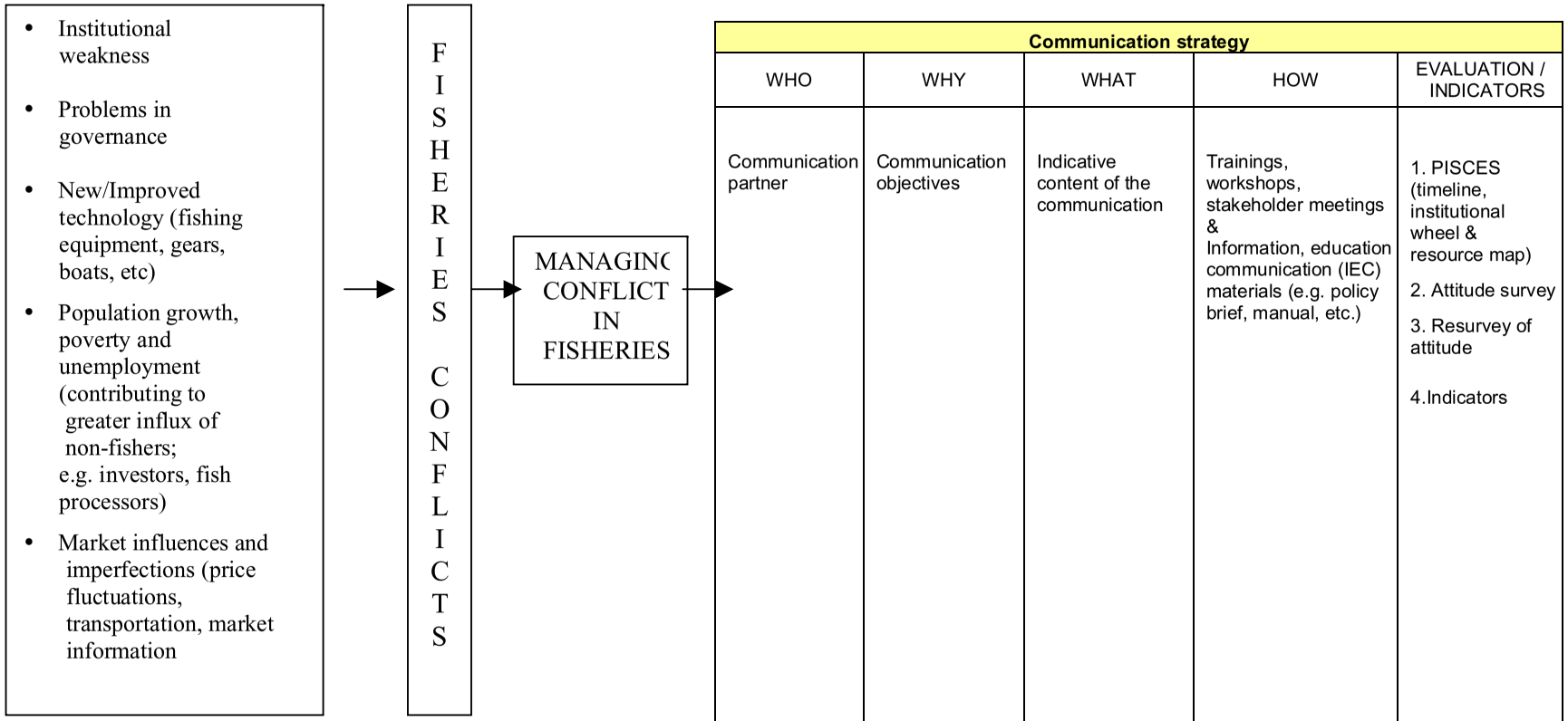

Figure 1: Analytical Framework for Enabling Better Management of Fisheries Conflicts in Bangladesh

FRAMEWORK FOR ANALYSING CONFLICTS

The study referred to the Driver-Problem-Issue-Intervention paradigm to put into context the dynamics of the variables that would potentially address the objectives of the study (Figure 1). Conflict in fisheries is a very complex issue in Bangladesh. Ineffective property rights, population growth, poverty and unemployment as a result of the influx of new people into fisheries, control over fisheries resource, institutional weakness, politics are the main factors underlying the country's fisheries conflicts. These variables, with reference to the fisheries sector, were reviewed to identify the circumstances responsible for such conflicts. The causality relationship between the problems and the drivers was established.

Institutional weakness and poor governance in resource management constrain the development of the fisheries sector in Bangladesh. The DOF is the government organization mainly responsible for developing this sector. However, DOF's performance in executing and enforcing existing fisheries rules and regulation has been very poor. The sector further suffers due to lack of interagency coordination amongst relevant ministries, such as land, agriculture, water, local government; and departments, etc. Such failure opened opportunities for the violation of management rules and regulations, engendering conflicts in the sector. Unfair allocation of fishing grounds to some vested interests (non-fishers) by corrupt government officials further aggravated the problem. Also due to poor governance, CBFM arrangements failed to establish the poor fishers' rights.

Population, unemployment and poverty rate is very high in Bangladesh, which has consequently added more pressure on the resources. Stiff competition for the use of resources has also opened opportunities for the violation of rules and regulation because enforcement in such highly populated fisheries has not been so effective.

More recently market conditions, including changes in demand and preferences of various consumer groups, created economic motivations for some groups of fishers to enter into fisheries. Innovations in the use of efficient, yet destructive, fishing gears and equipment that likewise made fishing more cost-efficient also led to extra fishing capacity and to conflicts with traditional gear users.

The conceptual framework of the study incorporated a communication strategy that drew in different stakeholders who were either directly involved or had the potentials to contribute to conflict resolution. Attitude survey and Participatory Institutional Survey and Conflict Evaluation Exercise (PISCES) were used to determine the impact of interventions on conflict resolution.

RESEARCH METHODOLOGY

This section discusses the procedures designed and tested in the Project towards improving management of conflicts. The overall process was categorized into three components; (1) conflict identification, (2) communication planning, and (3) attitude survey.

PIECES Workshop

PISCES was conducted in ten different locations of the research sites to identify the nature and types of conflicts prevailing in those waterbodies. PISCES is the combination of different tools, such as participatory geographic information exercise, timeline exercise, communication partners' identification, and semi-structured interview (conflict issues, cause, affected group and recommendation for conflict resolution). PISCES worked well in the research sites.

Communication Planning Matrix (CPM)

This tool is specifically used for developing a communication strategy, where a strategy is seen as a planned set of communication activities designed to meet specific objectives amongst specified communication partners or stakeholders. The CPM has four columns. The first identifies the communication partners with whom a particular organization or project wants to communicate. The second lists the objectives of communicating with each set of partners. The third suggests what the content of the communication might be in order to reach the objectives. The fourth column indicates the methods or channels through which the communication with each partner could be conducted most effectively. To develop the communication strategy, the Project organized a national workshop with the participation of different stakeholders who were tasked with developing the strategy for conflict resolution. Some communication methods were later on tested to refine the communication strategy.

Attitude Measurement
The attitude survey was conducted to better understand the conditions, values and priorities of fishers and various stakeholders in fisheries conflicts. The plans and policies emerging from this Project were then based on the results of the attitude survey, involving 261 primary stakeholders from Beel Shapla and Titas Cluster and 30 conflict managers (community leaders -8; fisher leaders -15; fishery officers -5; NGO staff -1; school teacher -1), whom the fishers felt could help minimize conflicts.

Study area

Two CBFM project sites, Titas River and Beel Shapla, were selected for the study. Both sites were under the CBFM project–2, which was being implemented jointly by the WorldFish Center-Bangladesh and the DOF,, with financial assistance from the Department for International Development (DFID). A brief description of the project sites is given below:

Shapla Beel

Shapla Beel is situated in Gokorno union of Nasirnagor Upazila of Brahman Baria District, though a small portion of the beel is extended to Shabajpur Union of Sarail Upazila of the same district. The beel is surrounded by Titas River in the east, west and south sides. Hurul Beel is situated next to the beel at north, and they get connected during wet season. Official record describes the waterbody as a closed beel of 161ha; however, during the rainy season it covers over 2032ha. Shapla Beel was covered by the CBFM project in 2001. Previously it was under the control of leaseholders and fishers worked there as day laborers. The total number of fishers of Shapla Beel was 195 then. A Beel Management Committee (BMC), which comprised major stakeholders, was formed to manage the fisheries under CBFM-2.

Titas Cluster

Titas Cluster is situated in the eastern part of Brahmanbari Sadar and Nabinagar Upazila of Brahmanbaria District. Titas is a cluster of ten waterbodies. Under the CBFM-2 project, these ten waterbody components were jointly named as Titas cluster. These were: 1) Titas River (Nodi) 'ka' 2) Beel Shakla Jalmahal JB, 3) Kurulia Canal (Khal) West (WAPDA to west part), 4) Kurulia Canal (Khal) East (WAPDA to Titas 'Ka' River), 5) Titas River (Nodi) (Gokorno-Gosaipur) "JR", 6) Titas River (Nodi) "Block B" (Shitarampur Ferighat-Dirgarampur), 7i) Beel Alaikhali Fishery JB, 8) Titas River (Nodi) "Block Ka" (Gosaipur-Shitarampur), 9) Pagla River (Nodi) (Titas Nodi-Meghna river), and 10) Titas River (Nodi) (Urkhulia- Bijoy Nodi). Under the CBFM-2 project, River Management and Beel Management committees were formed involving all the major stakeholders. The total number of fishers in the Titas was 1,453.

Results and Discussion

Conflict

Inland fisheries resources are profuse and diverse, producing numerous products in Bangladesh and attracting numerous users and stakeholders. This led to severe conflicts over the years when inland fisheries resources started to decline, with different users sharing the resources, with competition between traditional and the new fishers over the control of fisheries, and with weakening institutional support. The prevalent major conflicts in those two waterbodies are given below

Khata (Fixed Engine)

Katha is an aggregating device for attracting fish, usually made from branches of bamboo, mango tree, raintree, jackfruit tree and others. The size of *katha* varies from 0.8 to 1.3ha. Generally, pure seine net is used to encircle the whole area to catch fish. The net's mesh size enables catching all types of fish. In the Titas River, conflicts between *khata* (fixed gear engine) operators and general fishers were common. *Katha* fishing was normally done by the rich and the powerful (generally non-fishers), since *katha* construction is costly. General fishers mostly worked there as daily laborers. In most cases, *katha* occupied most of the space of traditional fishing grounds, depriving general fishers their normal catch. Conflict between *katha* operators and general fishers occurred when *katha* owners refused to allow general fishers to fish around the *katha*, thinking that it would damage their traps and disturb safe shelter of the fish. The 1985 Protection and Conservation of Fish Rules prohibits *khata*, which stipulates that no persons shall erect or use *khatas* in rivers, canals, *khals* and *beels*. Due to lack of enforcement of such rules, however, *katha* remains in many waterbodies of Bangladesh.

Use of illegal gears

During the PICSES workshop, all the fishers emphasized the need for strong enforcement of laws against the use of illegal fishing gears, such as current net (monofilament net), mosquito net, etc. The indiscriminate use of these types of nets not only has negative impact on fisheries, but also causes immense harm to other aquatic flora and fauna and creates conflicts between illegal net users and non-users. Although the use of these nets is banned by law, they are often used by operators because they have been proven very effective for catching fish with less labor. The fishers further said that, although there were few instances when the police and fishery officials arrested some illegal gear operators, illegal fishing continued because these officers took bribes from these operators in order to catch fish.

Rising competition for resources in the river

Bangladesh fishers used to be predominantly Hindus, due to demographic changes and decline in agriculture, Muslims started to engage in fishing. It was strongly felt that the crop of neo-fishers gave rise to conflicts in river fisheries. These new fishers took the open access of the river as an opportunity to take up fishing as an occupation. Inasmuch as fishing was not their traditional occupation, neo-fishers often used destructive gears, which allowed them to fish with less work and which came into conflict with traditional fishing. Traditional fishers strongly favored a licensing system that would stop new fishers from fishing.

Conflict due to the pseudo property rights

Fishers of the Titas River "Block GS" (Gokorno-Shitarampur) reported that they were often restricted from fishing in the Titas River "Block GG" (Gokorno–Gosaipur). These pseudo property rights were claimed by fishers of the locality although the river is an open access where anybody can fish.

Conflict with *kua* (depression) owners

The *kua* is a natural depression or ditch near the *beel*. It is privately owned; hence, access is restricted in the area. *Beel* Shakla and *Beel* Shapla of the study sites are surrounded by hundreds of private owned *kuas*. During monsoon, when water is spread, fish cross the boundary of the *beel* and take shelter in these *kuas. Kua* owners claim ownership of these migratory fishes then and do not allow others to fish in waters surrounding these *kuas*. These owners practise this either through violence or by stealing fishers' gears and boats. Fishing is prevented around kuas to ensure that sufficient fish take shelter in the *kuas*. Dewatering, the method used for *kua* fishing, is another source of conflict. Through the method, water is pumped out from the *kuas*. This is a very thorough method of fishing, which not only kills all the fish but also the fry, fingerlings and brood stock. *Beel* Shakla fishers complained during the survey that due to this method of fishing, fish production decreased considerably. Moreover, the *Beel* Management Committee (BMC) incurred losses for consecutive three years and was not able to pay its lease.

Conflict with general fishers and BMC

CBFM fishers were organized by the BMC for the management of the waterbody. Fishers elected BMC members. However, conflict between general fishers and BMC members was reported during a workshop at *Beel* Shapla. General fishers alleged that from the start of the project, BMC members were already violating the CBFM objectives and their rights as general fishers. Without informing fellow fishers some BMC members subleased the waterbody to local influentials, depriving general fishers their right to fish. BMC members denied such allegation. However, the CBFM project team—comprising the DoF, WorldFish Center and NGO—revealed that the waterbody was subleased without depositing the annual government revenues. BMC members misappropriated huge amount of money. It is worth mentioning here that a number of steps were taken by the project team to minimize the conflict, but nothing has so far been achieved. Beel Shapla could be dropped from the CBFM project if the fishers failed to remit payments to the government.

Conflicts cited in the study sites are discussed above. Based on the typology of conflicts provided by Bennett et al. (2001), the conflicts in the study sites are categorized in Table 2.

Attitude is a predisposition to act in a certain way. It is the state of readiness that influences a person to act in a given manner (Barnard 1965). It is said that the attitude of a person is the reflection of his real feeling about something, either a person, system, object or institution (Rahman et al. 1999). The present study tried to reveal the attitude of the fishers and conflict managers on conflict issues.

Table 2. Typology of Fisheries Conflicts in Bangladesh

Typology of conflict	Parties involved and specific conflict issue in Bangladesh
Type I Who controls the fishery (access issues)	• Rivalry between general fishers and *katha* owners for fishing access • Rivalry between general fishers and *kua* owners for fishing access • Reduced access due to the pseudo property rights
Type II How the fisheries are controlled (enforcement, allocation, management)	• Conflict as a result of lack of enforcement
Type III Relations between the fishery users (linguistic, religion, ethnic, scale of fishing)	• Rivalry between traditional and neo- fishers (Titas River) • Rivalry between traditional and local influential (Titas River) • Conflict between general fishers and BMC members
Type IV Relations between fishers and other users of the aquatic environment (fishing vs tourism, similar water resource-based industries)	None reported
Type V Relationship between fishers and no–fishery issues	• Conflict due to the corruption in the government

* Typologies based on Bennett et al. (2001)

Attitude statements of fishers on conflict resolution

In the category of understanding conflicts, the results showed that both fishers and conflict managers believed that government agencies should do their job properly to reduce conflicts in fisheries. Fishers and conflict managers expressed that the existing rules and regulations are beneficial for the resources. However, they felt that the government should take the necessary step to enforce them.

Use of destructive fishing gears, influx of neo-fishers, and too many fishers trying to catch an already limited number of fish were identified as a major source of conflicts in fisheries.

In the manageability of conflicts category, the attitude statement showed that although conflicts were getting worse every year, fishers and conflict managers strongly believed that all types of conflict could be resolved. They expressed that the community could not solve the problems alone by themselves and that conflict management would only be possible if government agencies participate with local communities to resolve conflicts.

In the prerequisites for conflict resolution category, the attitude statement indicated that willingness of all parties to compromise, strict enforcement of rules and regulation, awareness on existing rules and regulations, and effective cooperation between government and communities are the main prerequisites for conflict resolution. Moreover, the fishing communities should be organized for the resolution of conflicts. Strict enforcement of rules and regulations, strengthening the local institution, organizing the community in a community-based approach, village leader initiative to bring all parties together to discuss conflicting issues are important components in conflict-resolution process.

In the responsibility of conflict resolution category, the attitude statement emphasized that fishers and their leaders, village leaders, NGOs, government as well as all the stakeholders should bear the responsibility for conflict resolution

Table 3, Attitude Statements of Primary Stakeholders and Conflict Managers on Fisheries Conflicts

Attitude statements	Fishers Mean (STD)	Conflict Manager Mean (STD)
Understanding of Conflicts		
Too many people trying to catch a limited quantity of fish is a major cause of fisheries conflicts	1.93 (1.08)	1.83 (0.79)
Non-cooperation between fishers and BMC/RMC leaders is a major cause of fisheries conflicts	2.75 (1.29)	3.17 (0.87)
Fisheries conflicts lead to serious hardship for fishing families	1.32 (0.49)	1.47 (0.86)
Influx of new people (non-traditional fishers) into fishing leads to severe conflicts in fisheries	2.05 (1.04)	1.60 (0.67)
If government agencies did their job properly, there would be very few conflicts over fisheries	1.31 (0.53)	1.40 (0.81)
Use of destructive fishing gears/practices (*katha* fishing, use of current nets) are the reasons for fisheries conflicts	1.47 (0.53)	1.43 (0.63)
Manageability of conflicts		
Powerful groups will always be able to win their conflicts with less powerful groups of fishers	2.11 (1.16)	1.53 (0.57)
Local cooperation of conflict resolution will be effective if the government agencies participates	1.74 (0.86)	1.73 (0.64)
Conflicts are getting worse every year	1.60 (0.63)	1.97 (1.00)
All fisheries conflicts can be resolved	1.57 (0.65)	1.70 (0.60)
Community can manage fisheries conflicts themselves	4.34 (0.70)	2.83 (1.15)
Prerequisites for resolution		
If all parties are willing to compromise, solutions to conflict can be found	1.15 (0.91)	1.60 (0.50)
All parties need to understand existing policy and regulations before a process of conflict resolution can begin	1.40 (0.56)	1.80 (0.41)
Conflicts can be resolved if the fishing communities organized	2.88 (0.88)	2.13 (0.86)
Fisheries conflicts can be resolved if the fisheries rules are strictly enforced	1.15 (0.40)	1.90 (0.55)
Effective solutions of conflicts can be found if the communities and government work together	1.48 (0.52)	1.47 (0.51)
Better understanding of one another's' needs and points of view will not make it easier to resolve conflicts	2.03 (0.93)	2.00 (0.64)
Process of resolution		
Conflicts between fishers cannot be resolved by village leaders bringing the parties together to discuss the issues	2.44 (1.26)	1.90 (0.31)
By strengthening the capacity of local institutions conflicts can be resolved	2.05 (1.14)	1.73 (0.52)
All conflicts can be resolved through dialogue and negotiation	4.13 (0.76)	1.70 (0.84)
Strict enforcement of rules and regulations can help to manage conflicts	1.17 (0.40)	1.60 (0.56)
Community based fisheries management (CBFM)/ co-management approach can help to resolve conflicts	2.22 (0.81)	1.23 (0.43)
Responsibility for resolution		
Government is the only agency that can manage conflicts	2.48 (1.37)	3.83 (0.83)
The NGOs can play an important role to influence the communities to manage conflicts	2.07 (1.01)	1.80 (0.89)
The village leaders can play an important role for conflict resolution	2.47 (1.13)	1.67 (0.55)
Fishers and their leaders should take the initiative to resolve disputes and conflicts	1.49 (0.54)	1.80 (0.41)
I cannot do anything to help to resolve conflicts over fisheries (or: It is not my job to help to resolve conflicts over fisheries)	2.93 (1.31)	4.37 (0.72)

II. PLANNING THE COMMUNICATION STRATEGY

Communication planning for managing conflicts is perceived as a tool for resolving conflicts or for establishing consensus-building procedures. The communication partner for conflict resolution was identified during the PISCES exercise. Discussion was also held with the concerned government and NGO officials to identify the partners for conflict resolution. A country-specific communication planning matrix was prepared after consultation with key informants and stakeholders

Table 4. Communication Planning Matrix for Fisheries Conflict Resolution

Partners	Objectives/Why	Contents/What	Channel / How
Fisher	- To identify the source and cause of conflicts	- Awareness on fishing rules/CBFM - Conflict resolution method	- Direct dialogue - Meeting/Workshop - Leaflet - Folk drama
CBO	- To identify the source and cause of conflicts - To be more accountable to the general fishers for institutional activities - To influence the government through local administration/DOF for policy change	- Awareness on fishing rules and regulations/CBFM - Conflict resolution method - Capacity building of the institutions	- Meeting - Workshop - Training - Rallies
DOF	- To improve enforcement of rules and regulations - To change and prepare appropriate policy for conflict resolution	- Policy issues - Conflict resolution	- Direct contact - Meeting
Local Administration	- To provide legal support	- Conflict resolution	- Direct contact - Meeting
Police	- To stop illegal activities	- Illegal gear users - Illegal encroachers of river/beel area	- Direct contact - Meeting - Media (TV, radio)
Local Influential	- To cooperate with the communities in fisheries conflict management	- Conflict resolution method - CBFM	- Meeting/Workshop at the local level - Discussion in local administration meetings
NGO	- To create awareness of fishers on conflict resolution - To help the capacity building of institutions through training support - To give legal support to the fishers to establish their rights - Influence government to change policy for conflict resolution	- Consensus-building mechanism - Institutional issues - About CBFM - Legal issues	- Seminar/Meeting/ Workshop - Training - Direct contact - Group discussion - Leaflets
Government	- Ask for policy support of existing rules and regulations - Proper enforcement	- Fisheries rules and regulations - Conflict resolution	- Direct contact - Meeting - Mobile court to arrest violators
Media	- To disseminate issues on fisheries conflicts in a broader arena - To highlight the advantage of CBFM to the fishing communities for conflict resolution - To reach policy-makers and give proper feedback about the fishing rules	- Violator of Fisheries laws - Conflict issues - CBFM	- Through Press release - TV/Radio - Newspaper

Partners	Objectives/Why	Contents/What	Channel / How
	and regulations		
Researcher	- To identify source of conflict - To effect of conflict	- Fisheries conflicts issues - Conflict resolution/ consensus building	- Workshop/Meeting at local and national level

Revised Communication Planning Model

Monitoring and evaluation should be integral to the communication strategy. As increasing importance is given in this project to develop a communication strategy, so measuring its effectiveness on conflict resolution is required.

In this is study on a variety of communication methods, meeting and workshops were tested to determine their effectiveness for conflict resolution. These were tested vis-à-vis such conflict issues as *katha* (fixed gear) conflict, *kua* (depression) conflict, and illegal-gear conflict.

The stakeholders emphasized the importance of meetings and workshops in conflict resolution. They were in favor of these methods because they felt that they create opportunities for different stakeholders to share their views and help them prepare an effective problem-solution action plan. They recommended the need for their adequate representation in workshops and meetings to get the desired result. During the intervention meeting and workshop, the stakeholders, after consultations, prepared an action plan to reduce conflicts on the use of destructive gears. However, they felt the need for a strong monitoring team that should include representatives from different stakeholders to monitor the implementation of the decision. The workshop accepted the decision and the NGO-Proshika took the responsibility to form the team.

During the workshop, the participants were asked to judge the effectiveness of the communication method proposed in the communication strategy (Table 4). They felt that all the communication methods proposed in the communication strategy were very important. However, they proposed to include "*miking*" (announcement by loud speaker) as communication channel in informing a large number of people in the locality about any decision within a very short time.

Table 5. Intervention Work to Minimize Conflicts in the Project Area

Conflict Issue	Communication Method Used	Participant	Objective	Decision taken
Khata (Fixed Engine)	Meeting	• CBO Members • General fishers • *Katha* owners • Other gear owners • Local elites • NGO staff • WorldFish staff • GoB staff	• Identify Problem • Probable solution • Action plan	• Complete ban of *katha* fishing during the breeding months • Reduce number of *kathas* • No new *katha* will be constructed • Committee will be formed to monitor the execution of action plan • Create awareness by "*miking*" (announcement by loud speaker)
Kua (depression)	Meeting	• CBO Members • General fishers • *Kua* owners • Other gear owners • Local elites • NGO staff • WorldFish staff • GoB staff	• Identify Problem • Probable solution • Action plan	• *Kua* number will be reduced • Avoid destructive method to harvest fish • No new *kua* will be constructed • Committee will be formed to monitor the execution of action plan • Create awareness by *miking* (announcement by loud speaker)
Destructive gear use	Workshop	• CBO Members • Local administration	• To inform other stakeholders on the	• Strict enforcement of rules and regulations

Conflict Issue	Communication Method Used	Participant	Objective	Decision taken
(*katha*, *kua* and other illegal gears)		administration • Police • General fishers • *Katha*/*kua* owner • Gear owner • Local elites/Local Govt. • NGO staff • WorldFish staff • GoB staff	problems and action plan taken to minimize conflicts • To provide legal support to stop illegal activities	• Local level initiative to stop illegal fishing • Create public awareness through posters, leaflets, "*miking*")

Conclusion:

Conflicts over the use and management of fisheries resources are widespread, yet the cause, impact and management of such conflicts were poorly understood. The objective of this study was to develop greater understanding of the nature and extent of conflicts and to develop a communication planning matrix helpful in reducing conflicts in the fisheries. The results demonstrate that institutional weakness, influx of new fishers,, control over fisheries resources, and politics are the main source of conflicts in the fisheries of Bangladesh. The attitude statements of fishers and conflict manager indicate that the CBFM approach cannot solely solve fisheries conflicts. This requires cooperation between amongst all the stakeholders involved in fisheries management. A communication planning matrix was designed after consultations with key project stakeholders. The communication planning matrix was found useful in reducing conflicts in fisheries.

Reference

Aguero, M. 1989. Inland Fisheries in Bangladesh: Management Options and National Interventions. Proceedings of the ICLARM/DOF/BCAS Workshop on Experiments in New Approaches to the Improved Management of Openwater Fisheries in Bangladesh, Dhaka, Bangladesh

Ahsanullah, M. 1989. Inland Fisheries in Bangladesh: Welcome Address. Proceedings of the ICLARM/DOF/BCAS Workshop on Experiments in New Approaches to the Improved Management of Openwater Fisheries in Bangladesh, Dhaka, Bangladesh

Barnard, H. W. 1965. *Psychology of Learning and Teaching*. N. Y: McGraw-Hill Book Com Inc.

Bennett, E., A. Neiland, E. Anang, P. Bannerman, A. Atiq Rahman, S. Huq, S. Bhuiya, M. Day, M. Fulford-Gardiner, W. Clerveaux. 2001. Towards a Better Understanding of Conflict Management in Tropical Fisheries: Evidence from Ghana, Bangladesh and the Caribbean, *Marine Policy*, 25:365-376.

Charles, A. T. 1992. Fishery Conflicts: A Unified Framework. *Marine Policy,* 16: 379 -93

DOF 2003. Fishery Statistical Yearbook of Bangladesh: Various Issues. Matshya Bhaban, Dhaka.

Islam, M.A. 2001. Recent Trend in Fisheries Sector of Bangladesh. *In*: M.A.S Mandal (ed.) Changing Rural Economy of Bangladesh. Bangladesh Economic Association, Dhaka

Task Force. 1991. *Managing the Development Process*: Bangladesh Development Strategies, vol. 2. University Press Limited, Dhaka, Bangladesh

Rahman, M. Z., H. Mikuni, M.M. Rahman. 1999. Towards Sustainable Farming Development: The Attitude of Farmers in a Selected Area of Shimane Prefecture, Japan. *Journal of Sustainable Agriculture,* 14 (4): 19 - 33