Annex 7

Papers and Presentations

Annex 7.1

COMMUNICATION PLANNING FOR PARTICIPATORY MANAGEMENT OF FISHERIES CONFLICTS IN CAMBODIA AND INDIA

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Fisheries are not only a means of livelihood for capital-rich investors and fishers with small gears, but also a source of food for landless families in countries trying to survive amid gnawing poverty. The fisheries sector, however, continues to struggle in the midst of conflicts, particularly in the use of aquatic resources. Fisheries conflicts are on the rise especially in Asia's developing countries and even involve such non-fishery sectors as farming, tourism and other "development" proponents. Managing such conflicts may engage the use of communication, a process that involves various actors in the management scheme and a potent tool for resolving conflicts or for establishing consensus-building procedures. A generic communication-planning matrix was devised through 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, including fishermen, fishing group leaders, farmers and community leaders; and potential conflict managers such as the military, government officers, academics and policy-makers. The process shows the importance of local participation in identifying conflicts and designing communication strategies.

Table 1. Communication planning matrix for fisheries conflict resolution involving key stakeholders in Cambodia and India, July 2004

Stakeholders (Who)	Objectives (What)	Methods / Channels (How)
1. Cambodia		
Government officials	1. Build accountability 2. Improve enforcement (institutional change)	1. Provincial level public dialogue
Media	1. Improve public awareness of causes and effects of conflicts 2. Influence government accountability on conflicts 3. Encourage conflict resolution	1. Press releases targetting government and government officials 2. Radio announcements to reach local fishers
NGOs and Fishers	1. Influence government policies 2. Train fishers on improving attitude towards conflicts and resolution (local institutional change)	1. Training materials 2. Technical advice
2. India		
Government	1. Improve enforcement of fishery laws that could resolve conflicts (institutional change)	1. Refer to media, mainly newspapers, to highlight fishers' problems, existing laws and enforcement process
Government bureau officials	1. Submit proposals on fisheries conflict resolution mechanisms to government	1. Refer to media (newspapers, television) to highlight sources and areas of conflicts
NGOs	1. Influence government 2. Train and build awareness of fishers on regulations (local institutional change) 3. Advocate for change in state laws	1. Dialogues and forums with government officials organized by NGOs 2. Develop training materials
Traditional & mechanized fishers, and Community leaders	1. Enforce use of legal gears and area restrictions to avoid/reduce conflicts	1. Dialogues between fishers, leaders, and social organizations in the presence of government officials & NGOs 2. Produce and disseminate printed information materials

Annex 7.2

An Overview of Fisheries Conflicts in South and Southeast Asia: Challenges and Directions

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1. Introduction

Conflicts are broadly defined as a situation of non-cooperation between parties with contradicting objectives. Nowadays, conflicts on such issues as ownership of properties and struggle for economic gains and opportunities are common in communities. These types of conflicts, however, should be distinguished from divergent ideologies and interests that pose a threat to national security—the source of which could be both internal and external. Conflicts and security issues have now become major concerns of governments and civil societies around the globe.

The fisheries sector is not spared from conflicts and security threats arising from escalating scarcity of resources and competition for declining opportunities in this sector. In South and Southeast Asia, where fisheries are a source of food and livelihood for majority of its population, conflicts in fisheries are often viewed in the context of allocation or access rights to limited resources. However, conflicts are often far more complex than this view as there exists an enormous range of causes, such as socioeconomic issues, institutional factors and market failures. 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).

The scenario is more worrisome amongst the economically marginalized groups of landless and capital-deprived fishers in South and Southeast Asia. The marginalization gave rise to struggle for equity and assertion of rights that are most often viewed in diverging contexts. It is a common knowledge that, to provide for subsistence fishers and other authorized fishers—and, as a whole, provide for the needs of the general public—most fishery rules and regulations enacted by national governments are intended to protect their interest and provide them access to fisheries resources. The enactment of the Cambodian community fishery laws that give rights to subsistence fishers to fish throughout the year in allocated fishing lots is one example. In reality, however, these rules and regulations are violated, and insufficient and unreliable support is given to subsistence fishers who assert for their rights. Conflicts arise as these subsistence fishers, who are most often in huge numbers in developing countries, contest other groups of fishers, regularly including authorities who do not enforce the rules and regulations; henceforth, "*fish fights over fish rights.*"

What, then, is "*fish fights over fish rights*"? "Fight", in this context, is defined as a combat, battle, a hostile encounter or engagement in a dispute while "right" is defined as a legal, equitable, or moral title or claim to the possession of property or authority, the enjoyment of privileges or immunities that which justly accrues or falls to any one. "*Fish fights over fish rights*" is about conflicts in fisheries and the associated security threats to human survival if these conflicts are not resolved or a compromise has not been enforced.

1.2 The WorldFish Center's Fisheries Conflict Projects

The factors that drive conflict issues are prevalent in developing countries, particularly those in South and Southeast Asia, and that the reliance upon fishery resources for food and socioeconomic revenue is enormous in the Region. It is recognized that research on conflicts in fisheries in the Region merits attention. The literature showed that the two types of conflicts, classified according to the forces they bring, have been identified. One type is positive while the other is negative. Positive force conflict is known to be a precursor for change while the negative

force impedes social and economic development (Bennett et al. 2001). The importance of distinguishing and managing these two conflicts has been acknowledged worldwide. Increasing numbers of research have been done to identify the factors and actors involved and the "change" needed to resolve the conflicts before they become a national, regional or international security issue. Conflicts are also a treat for sustainable management of fishery resources.

In view of the importance of understanding conflicts and the merits from rectifying the factors that drive conflicts in fisheries, the WorldFish Center engaged in research projects in collaboration with partners situated right in areas where fisheries conflicts were prevalent. In particular, the Center proposed and implemented two research projects on fisheries conflict management in Bangladesh, Cambodia, India, the Philippines and Thailand as described below.

1.2.1 Fish Fights over Fish Rights Project

In February 2003, The WorldFish Center initiated the 2.5-year project "*Fish Fights Over Fish Rights: Managing exit from the fisheries and security implications for Southeast Asia"*. The Project was funded by the Ford Foundation and was implemented in collaboration with multidisciplinary teams of scientists from three countries in Southeast Asia: Cambodia, the Philippines and Thailand.

The overall objective of the Project was to enable improved understanding of the dynamics of fishing overcapacity and identify the conflicts arising in three study sites in each of the three selected countries. Further analysis of the relationship between excess capacity and security problems in fishing communities and environments in the Southeast Asian Region was also made through case studies and stakeholder discussions during country workshops. The specific objectives of the Project were: (1) develop a broad framework for addressing approaches for reducing overcapacity in the fisheries of Southeast Asia,; (2) examine where conflicts may arise; and (3) provide plans to ameliorate these conflicts and its role in reducing conflicts, and in enhancing national and regional security.

1.2.1 Enabling Better Management of Fisheries Conflicts Project

To complement the *Fish Fights over Fish Rights Project*, the WorldFish Center led a second fisheries conflicts Project, *Enabling Better Management of Fisheries Conflicts*. This two-year research project, which started in July 2003, was aimed at determining the most appropriate ways of communicating good practice, promoting key lessons and practices from earlier projects on conflict and consensus building, and adapting and demonstrating these in three key countries with large numbers of poor people dependent on fisheries. The Project was funded by the Department for International Development of the United Kingdom (DFID-UK).

The Project goal envisioned uptaking methods for understanding and resolving/minimizing conflicts amongst government and NGO workers involved in fishery management and had the potential to bring direct benefits to poor people. Major Project activities were intended to promote institutions and practices that would help resolve and minimize conflicts that often go against the interest of poor fishers; and to promote conflict assessment and resolution tools and consensus-building methods by targeting key stakeholders. To achieve these adaptive research and communication objectives, three countries—Bangladesh, Cambodia and India—were selected to represent the developing countries in South and Southeast Asia where capture fisheries in freshwater and marine environments are characterized by poor fishers vulnerable to fisheries conflicts and violence.

2. Framework for Analysing Conflicts

2.1 Theoretical Background

Charles (1992) provided a framework for analysing conflicts in fisheries by introducing a trio of fishery paradigms. Figure 1 below features three paradigms and the policy objective at which most groups of fishery resource users operate. The three corners of the triangle represent the extreme cases of the three philosophical paradigms and their unique policy objectives. The conservation paradigm operates with a policy objective centered on resource maintenance or conservation. This paradigm is based on the premise that the primary duty of the fishery management is to take care of the fish, and fishers are viewed as "predatory fleet" that must be directly managed through restrictive fishing hours, fishing location, fishing effort and catch quota.

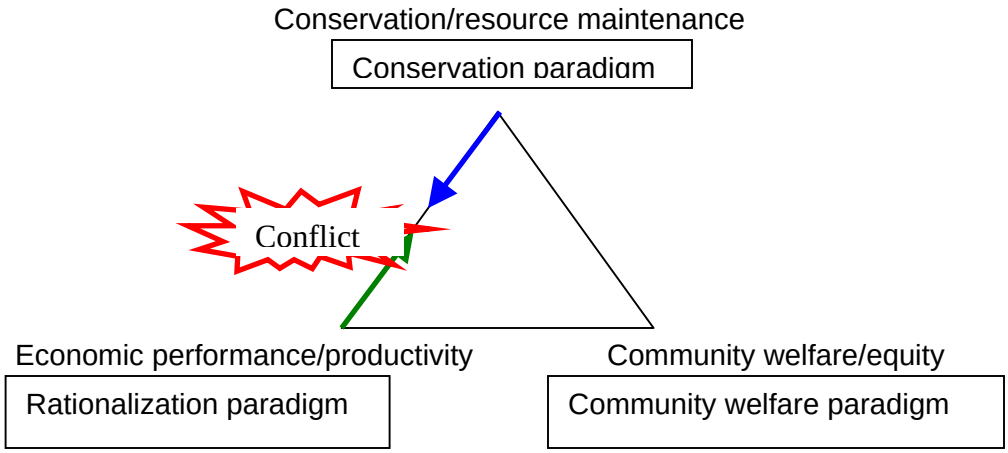

Figure 1. A framework for understanding and resolving conflicts
(Concepts adopted from Charles 1992)

The rationalization paradigm emphasizes the pursuit of economic performance and productivity. The policy context related to this paradigm is founded on the assumption that the society should seek to maximize fishery rents, compromising economic benefits over and above payments to fishers and vessels; and those fisheries that cannot attain this objective are "supposed to be rationalized."

The social or community paradigm focuses on fishers as members of coastal communities, rather than component of a fishing fleet, in contrast with the view in the conservation paradigm; or an individual fishing firm, as in the context of the rationalization paradigm. This social paradigm focuses on community welfare, distributional equity, and other social and cultural fishery benefits. Charles noted that this paradigm tends to be attractive amongst fishers' unions, fishing cooperatives, and those living in or involved with fishing communities; however, these groups remain to be under represented amongst the staff and management initiatives of many government fishery administration during the time of his research. More recently, however, there has been an overwhelming interest in this paradigm and the "advocacy" element in this paradigm has contributed to the better understanding of its policy objectives even at the lower levels of the policy-making hierarchy.

Conflicts arise when the many dynamic interactions amongst natural resources, humans and institutions contradict, arising from the underlying differences in priorities pursued by various fisheries players. Charles (1992) organized the wide range of fisheries conflicts into four interrelated headings such as: 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. In a more recent study, Bennett et al. (2002) extended the four conflict categories into five to include conflicts between fishers and those outside the fishery as shown in Table 1 below.

Table 1. Typology of conflicts and examples reported in South and Southeast Asia

	Description of conflicts	Examples
Type I	Conflicts on who controls the fishery	Access issue on who amongst the fishers can fish (e.g. ownership between concessionaires and fishermen in Cambodia)
II	Conflicts on how the fishery is controlled	Enforcement issues on how management systems are implemented (e.g. quota allocation, fishing seasons in India)
III	Conflicts between fishery users	User groups-related issues such as small- vs large-scale fishers; ethic and religious groups (zone regulation according to fisher categories in the Philippines and Thailand)
IV	Conflicts between fishers and other resource users	Conflicts arising from multiple use of resources (e.g. fishers vs farmers in Bangladesh & Cambodia; fishers vs tourism promoters in India, Philippines & Thailand; fishers vs conservationists in Cambodia; fishers vs industrial developers in India)
V	Conflicts between fishers and non-fishery issues	Conflicts external to but affecting fisheries such as corruption, politics, elite groups, environmental concerns, and economic change.

Source: Elizabeth Bennett et al. (2001)

In this *Fish Fights over Fish Rights* Project, further evaluation of conflicts observed in case study sites showed some patterns of relationship between conflict types and the nature of threats that could potentially arise from such conflicts. Type I conflicts tend to create threat to the overall health of the fishery resources. That is, the stakeholders believe that if Type I conflicts would not be addressed, then the “non-owners” or outsiders who gain access to the fishery will conduct illegal and “harmful” practices to obtain maximum benefits at intensive exploitation levels. In addition, food security concerns are evaluated to be at threat when fishing community officers sell fishing rights to fishing grounds to other “outsider” fishers. Conflicts arising from questions on how the fishery is controlled (Type II) included those that were made manifest due to lack of enforcement and implementation of regulations. The lack of clarity and purpose of regulations was listed as reasons for violations and conflicts. For example, the establishment of marine protected areas as conservation measure is a trend in the Philippines. However, the lack of well-explained purpose and effort to inform those affected created conflicts as MPAs restricted access and limited fishing areas for most fishers. Thus, uninformed fishers perceived that the security of livelihoods and food source was threatened.

For Type III conflicts, the trend showed that livelihoods of the less equipped fishers would likewise be threatened and, assuming the perception that other parties are using illegal and destructive gears, then fishery habitat and stocks are under threat if conflicts are not resolved. Type V conflicts are rooted in the relations between fishing and other non-fishery issues and not directly using the resources but is significantly affecting the fishery. These conflicts were reported in Cambodia and the Philippines where fishers ran in conflict with law enforcers, including government fishery officers, who were expected by fishers to protect the fishers’ interest as mandated by law. This breeds disrespect for the law, the lawmakers and enforcers. Furthermore, politicization of policies and lack of political determination would indeed be perceived as posing threats to livelihoods of the “unfavored” fisher groups. The destructive/illegal fishing operations of the politically favored groups are perceived as threats to the survival of the fishery. Thus, overall, the lack of confidence on law enforcers is likely to breed threat to national sovereignty.

2.2 The ‘Fish Fights over Fish Rights’ Conceptual Framework

Figure 2 illustrates the conceptual framework of the Project. The Project mainly referred to the Driver-Problem-Issue-Intervention framework of analysis to put into context the dynamics of the variables that could potentially meet the objectives of the study. With excess capacity as the main problem being addressed in this study, the main drivers were categorized into three groups identified as a) policies, institutions for governance and property rights; b) population increase and poverty; and c) markets and new/improved technology. The state of these variables with reference to the fisheries sector in each country was reviewed to identify the circumstances that drive the excess capacity problem in the fisheries sector in Southeast Asia in general. The causality relationship between the problem and the drivers was established.

The conceptual framework evolved mainly from the literature and the outcomes of the three case studies and national stakeholder consultations organized by the Project. Figure 2 features the local community and national security concerns, such as 1) fishers' livelihood, 2) food security, 3) degradation of fishery habitat and stocks, and 4) risk to lives of enforcers and fishers. The conceptual framework of the study also incorporated the management and policy interventions that could potentially address the issues and arrest the main problem.

The interventions were broadly grouped into three categories to include 1) exit strategies, 2) review of policies and institutions, and 3) information and education. Amongst these three groups of interventions, the Project focused mainly on evaluating potential exit strategies that would reduce excess capacity while not compromising the opportunities for conflict reduction and resolution amongst stakeholders, and similarly aimed at eliminating the threats to security in the fisheries sector.

3. Expected Outputs of the Two Fisheries Conflict Projects

The *Fish Fights over Fish Rights* project had the following expected outputs:

1. Details on the level of overcapacity in fisheries in Cambodia, the Philippines and Thailand, and their impact on fishing conflicts;
2. Case studies on conflicts in aquatic resources that may lead to security problems in Southeast Asia;
3. Suggested framework and guidelines for national governments and international community for managing fishing capacity and conflicts that may lead to insecurity; and
4. Review paper on managing fishing capacity and its impact on national/regional security.

Meanwhile, the *Enabling Better Management of Fisheries Conflicts* Project was expected to create developmental impacts by directly contributing towards finding useful information, education and communication (IEC) tools for better understanding of conflicts, and by communicating methods such as consensus building. Specifically, the Project envisioned gathering the following outputs:

1. Outcomes of communication strategies and plans as well as attitude surveys that enable better understanding of the conditions, values and priorities of fishers and various stakeholders in fisheries conflicts, and the methods for communicating them to other stakeholders, including policy makers;
2. A consensus-building method, piloted in India, that enables participatory approach in fisheries and conflict management, which ensures that the concerns and values of fishers and stakeholders would be incorporated in designing appropriate plans of action for implementing fisheries development programs; and
3. Promotion of findings of the study through workshops, seminars/symposia and publications to contribute to knowledge on conflict resolution and reduction amongst other applied tools in fisheries and natural resource management.

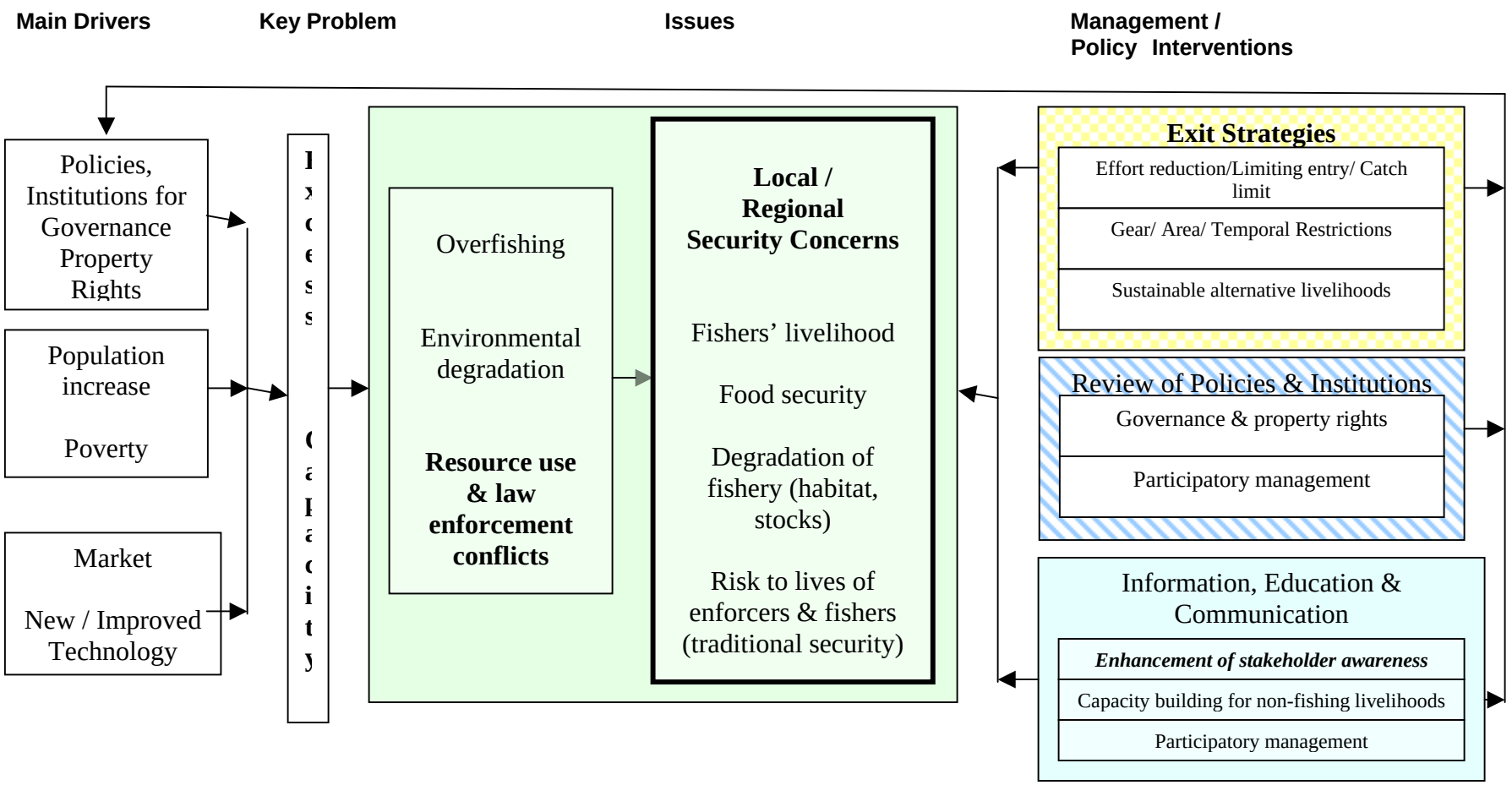

Figure 2.

A conceptual framework for addressing excess capacity in fisheries in Southeast Asia with reference to exit strategies as interventions that consider conflict mitigation and securitization measure

4. Challenges and Directions

Conflicts in capture fisheries, including inland and marine fisheries, generally emanate from: (1) the nature of the fishery itself—generally recognized as being in crises and that there is overexploitation of the resource arising from increasing fishing pressures, and (2) the complex socioeconomic conditions faced by fishers and their communities. The *Fish Fights over Fish Rights Project* considered the challenges and direction for all stakeholders vis-à-vis the management and policy interventions that could be drawn and formulated from the results of case studies and extensive national and international consultations with various stakeholders.

The management and policy interventions are mainly in terms of strategies that relate to the more important and immediate goals of, amongst others, (1) protection of fishery resources and conservation of fishery habitats, and (2) development through provision of sustainable livelihoods to marginalized groups in the fishery sector. To achieve these goals, policy and management interventions are broadly categorized into three groups of challenges and directions discussed below.

4.1 *Exit strategies as a way of managing excess capacity*

This challenge has always been easier said than done as its touches sensitive human issues of survival of the poor and marginalized fishers. Amongst large-scale commercial fishers. exit from the fisheries is also often met with objections as capital investments in fisheries are generally not easily malleable and transferable to other income-generating opportunities. Nevertheless, combined with other challenges, e.g. creation of awareness through various IEC strategies, such options as effort reduction, limiting entry and catch, and gear, area and temporal restrictions could be better understood with sufficient scientific evidences that establish the credibility of benefits arising from exit strategies. Enabling opportunities for sustainable alternative livelihoods remains to be elusive and challenging especially in generally resource-depleted and capital-deprived environments. Furthermore, capacity to shift to other skills and workstyle is often limited amongst fishers.

For example, aquaculture is often perceived as an alternative for reducing capacity and fishing pressure while making fish available, and ensures that a growing population's increasing demand for fish products is met. Nevertheless, aquaculture development is being criticized for being poorly planned creating unintended negative impacts to various sectors in another dimension. Thus, challenges also extend to the aquaculture sector.

4.2 *Review of policies and institutions*

Through institutions and governance, there is a desired order in the ways fishery activities are being conducted. In countries included in this study, the fundamental national fishery laws and regulations are already in place. However, conflicts prevail and in many cases they are rooted in the mechanisms, implementation and enforcement, or the lack of it, of most fishery laws and regulations. Thus, thorough and periodic review of policies and institutions are tasks that need involvement not only of the policy-makers and fishery managers, but more importantly, the involvement of all stakeholders in the fishery and related sectors. Participatory management, governance at various levels, and assignment of property rights are key issues that remain a challenge for managing excess capacity and conflicts in fisheries. Policies are typically centrally developed at national government agencies, yet with devolution of duties and functions taking place at least in some countries as the Philippines, co-management is in place at the community and municipality levels. However, in between these levels, some efforts are dissipated and would need further studies and collaboration.

4.3 Information, education and communication

Creation and enhancement of awareness and promotion of best practices for communicating ways for managing the fisheries, including mechanisms for consensus building in cases of conflicts, are priority areas in a comprehensive strategy for managing conflicts and exit in an overexploited fishery. As noted earlier, capacity building for developing non-fishing livelihoods, involving IEC strategies, is often an

integral component in many fishery development projects. However, this is often limited by insufficient and ill-timed release of resources for training and sustained community-organizing activities.

Innovations on IEC methods are also important challenges and directions for ensuring environmental security and sustainability of the fisheries. Expectedly, IEC innovations are demanding as issues of environmental security and sustainability involve a more complicated inter-temporal and spatial dimension. For example, our empirical results showed that various types of conflicts arising from excess capacity have long-term security implications—mainly on fishing livelihoods, food security, habitat and fish stocks. How do IEC methods ensure that environmental security, including fisheries, would truly evolve as a non-traditional security concern in the midst of real life circumstances where the rule of the state and use of military remain "visible" in the management and exploitation of the fishery, as largely reported in Cambodia's fishing lot system.

Further challenges could be gleaned from the process of disseminating management options using the best practice for communicating solutions with and amongst stakeholders involved in fisheries conflicts and those that could potentially facilitate mitigation of conflicts. The challenge is on how to involve the stakeholders and dutyholders in the chosen management options and how to sustain their participation. Furthermore, when participation is hampered by diverging concerns, what are the mechanisms suitable for eliciting consensus and conflict resolution? Tools in conflict management, such as consensus building, are instruments that could be extended or modified to incorporate securitization in non-traditional context.

Interactive governance, an option that may potentially engage participation in fisheries management, is defined as a process that comprises all the interaction amongst stakeholders involved in addressing problems and creating opportunities. It must allow pooling of specialized competencies and mutual interactive learning throughout the decision-making process. However, to be accepted by all stakeholders, and to be effective, governance must be transparent, equitable, legitimate and consistent (MARE, undated brochure). In some countries in Southeast Asia, some levels of interactive governance have taken place through devolution of power and management of fisheries to LGUs and fishery agencies.

5. Conclusions

From the three-country case studies and national workshops, hosted by country partners, and an international workshop hosted by the WorldFish Center, it became apparent amongst stakeholders that excess capacity is indeed a major problem in South and Southeast Asia. This problem persists in spite of the well-intended national fishery regulations in most countries that are supposed to give order to managing the fisheries. Excess capacity caused conflicts that could potentially elevate to security threats in the Region. The Project also looked into the necessary interventions to enable management of fishing capacity. Interventions mainly involved exit strategies, review of policies and institutions, and IEC. Under each type of intervention, activities were identified. Livelihoods and other direct methods of controlling fishing efforts were acceptable and preferred, but lacking action or implementation plans.

Through this Regional Consolidation Workshop, the two fisheries conflict management projects led by the WorldFish Center—in close collaboration with an array of partners amongst government fishery departments, academicians, researchers and NGOs; and in consultation with a variety of primary stakeholders and dutyholders relevant to conflict issues at stake—continue to validate the challenges and direction for managing conflicts arising from excess fishing capacity and exit strategies that would soon be heard project country partners.

The five workshop sessions and activities structured and spread over four days envisioned leading the Project to the right challenges and directions for managing conflicts and exit from fisheries, and to an understanding of security implications for the Region. Under the Session 1 on *Fisheries Conflicts and their Implications for Security in South and Southeast Asia*, country presentations by project partners provided the workshop with project findings and country perspectives. Session 2 on *Fisheries Management Options: Regional and National Perspectives* gathered a body of information on the experiences and outputs from ongoing and completed projects amongst the Region's relevant institutions.

Day 2 of the workshop began with Session 3 on the *Role of Political Leadership, Community Awareness and Participation of International/Donor Agencies in Fisheries Management*. Session 4 featured *Plenary and Simultaneous Discussions on Managing Exit in Fisheries and Reducing Fisheries Conflicts*. Finally, Session 5 on Day 3 involved *Plenary Discussions and Presentation of Workshop Summary and Recommendations*. Day 4 activities divided the workshop participants into two groups; one group was tasked with developing project ideas or concept notes for follow-up projects; the other group engaged in an exposure trip to Mabini, Batangas, to obtain firsthand information on Philippine experiences on managing fishing excess capacity and conflict resolution direct from LGUs, people's organizations (POs) and NGOs.

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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**

- Institutional weakness
- Problems in governance
- New/Improved technology (fishing equipment, gears, boats, etc)
- Population growth, poverty and unemployment (contributing to greater influx of non-fishers; e.g. investors, fish processors)
- Market influences and imperfections (price fluctuations, transportation, market information

→ FISHERIES CONFLICTS → MANAGING CONFLICT IN FISHERIES →

Communication strategy				
WHO	WHY	WHAT	HOW	EVALUATION / INDICATORS
Communication partner	Communication objectives	Indicative content of the communication	Trainings, workshops, stakeholder meetings & Information, education communication (IEC) materials (e.g. policy brief, manual, etc.)	1. PISCES (timeline, institutional wheel & resource map) 2. Attitude survey 3. Resurvey of attitude 4.Indicators

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.

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Annex7.4

Enabling Fisheries Conflict Management: A Case Study in Cambodia

Mak Sithirith and Te Sokkhoeun

I. Introduction

Cambodia is rich in inland fisheries. Fish are vital to many Cambodians and are important for both local and national economies. The rich in fisheries have close connection with the Mekong River and Tonle Sap Lake ecosystem. Tonle Sap Lake, with reverse flow of water from and to the Mekong River during the wet and dry seasons, is by far the most important freshwater lake for fisheries in the Mekong Region. Fish from Tonle Sap Lake migrate up and down the Mekong River. Some migratory fish species migrate up to upstream Mekong in Thailand and Laos. So, fish from Tonle Sap Lake are not important only for Cambodia, but also for the region.

At present, the lake is home to more than 500 fish species and more than 200 waterbirds. About 60% of commercial catch fish from Cambodia comes from the lake. About 11% of Cambodian population generates direct livelihoods from the lake and many others who live close to the lake depend on it for a living.

While fish are important and Cambodia's Tonle Sap Lake is rich in fisheries, the lake itself is a source of conflicts. The conflicts have occurred not just in recent times, but for many years already. Conflicts in inland fisheries could be attributed to many factors. In October 2000, the government instituted reforms in fisheries. Fisheries policies were revised as part of the reform. The reforms led to the release of 56% of commercial fishing grounds for local community use. More than 264 community fisheries have been established following the reforms and a community legal framework has been drafted (DoF 2004). Despite the reform, natural resources in the flooded plain of the Tonle Sap Region have been characterized by breathtaking inequity of resource distribution, accelerating environmental degradation from unsustainable patterns of exploitation, including loss and degradation of forests, flooded forests and other habitats, decrease in fisheries resources and fish diversity, decline in wildlife resources, change in water quality and hydrology, and an escalating level of conflicts amongst stakeholders with the highest poverty incidence in the country (FACT 2001, NEAP 1998).

This paper looks at the conflicts in inland fisheries in the Tonle Sap Lake and their impact on the community and its livelihoods, and examines how conflicts are managed at different levels of government.

Communication is important to help improve conflict resolution in Cambodia. This paper was prepared based on two case studies on enabling fisheries conflict management, conducted in Anlong Raing in Pursat Province and in Tamol Leu in Kampong Chhnang Province. The object of this study was to explore the possibility of improving fisheries conflict management. Two groups of people—conflict managers and primary stakeholders—were interviewed. Conflict managers comprised district governors, fisheries officers, commune council members, village chiefs; a total of 27 people were interviewed. Primary stakeholders interviewed comprised fishers from the two sites, totalling 111. Only the summary of the survey results from the case study was included in this paper.

This paper is structured into different sections. The first section starts with an introduction of fisheries in the Tonle Sap Lake—a freshwater lake in Cambodia. The second introduces fisheries conflicts in fisheries management system, policy and legal framework, and the decline in fisheries. In this section, conflicts in study areas are discussed. The third discusses fisheries conflicts management, the people's attitude toward the conflicts, and strategies for conflict resolution.

II. Fisheries in Cambodia

Cambodia is rich in natural resources, which include extensive forests, fertile soils and a rich inland fishery within the Tonle Sap catchment area and its floodplains. Nationally, the landings from freshwater capture fisheries have been estimated to exceed 360,000 tons[1] (valued at US$350 million) and it is estimated that 235,000 tons of this production come from the Tonle Sap Great Lake and the Tonle Sap River. This abundance of aquatic resources is driven by the annual flooding cycle, which inundates the flooded forests and flood plains of the Mekong River catchment and the Tonle Sap Great Lake, and increases the area of the lake from about 2,500km^2 to over 12,500km^2.

Cambodians do not harvest fish only, but also a wide variety of other living aquatic resources from inland waters, flooded forests, wetlands, and rice fields for consumption and commercial purposes. The harvests include frogs, prawns, insects, mollusks, bi-valves, toads, snails, turtles, snakes, tortoises and wetland birds. The annual production of animals from ricefields ranges from 25 to 300kg of aquatic organisms per hectare with a market value of approximately 40-80% of the value of national rice harvest (ADB, FAO & DoF 2003). About four million people in Cambodia depend on aquatic resources and inland fishing for their livelihoods, either as their primary or secondary source of income and employment. When associated activities are considered, this figure probably increases to more than 50% of Cambodia's 13.5 million inhabitants.

The inland fisheries shares 9.5% of Cambodia's GDP and provides food and income to the majority of rural households with access to permanent or seasonal waterbodies. Fishing and farming form the backbone of food security for many rural populations. The contribution of the freshwater fishery to the food security and nutrition is at least as important as its contribution to rural development and poverty alleviation, as fish provide 40-90% of protein intake for Cambodians. In Cambodia, the annual per capita consumption of fish is between 40 and 75kg a year. Importantly, fishing is the mainstay of the economy for more than 90% of those fishers who have little or no access to cultivatable land.

Despite these dependences, access to most fishing ground is generally not reliable and therefore, it affects the food security and livelihoods of small poor villagers living around the Lake. Apart from rich resources in Tonle Sap Lake, it is also a source of conflict and competition amongst different fishing groups, from small- to large-scale fishers. The conflict continues and differs with different fishing scales. Small-scale fishers fall into conflict for survival while their large-scale counterparts compete to maximize returns of their investment and to ensure security of their investments over the fishing grounds in the following years.

The recent decline in fisheries has further fueled the conflicts amongst the fishing groups. Coupled with weak fisheries governance, poor enforcement and fisheries policies, the conflicts put the life of small fishers in a difficult position, with large-scale fishers winning the competition, a winning game that largely benefits the corrupt.

III. Fisheries Conflicts in Cambodia

Cambodia is rich in fisheries, but it is also a source of conflicts amongst user groups. The conflict stems from various factors, most importantly weak fisheries management system, policy implication, high population growth rate, and decline in fisheries resources.

[1] Kingdom of Cambodia Statistical Year Book 2003, National Institute of Statistics, Ministry of Planning, Cambodia (see also www.nis.gov.kh)

3.1 Fisheries Conflicts Arising from a Weak Fisheries Management

Fisheries management is weak and is potential for breeding conflicts within the sector. This started from allocation of inland fishing areas into the fishing lots about 100 years ago. This fishing lot system is still practised today. The current population growth rate of 2.5% a year has put pressure on fisheries and fishing lots over an increasing demand for fish as food from an equally increasing population. As most fishing areas are under the fishing lot areas, the incidence for the occurrence of conflicts is high. The Tonle Sap Lake is home to about three million people[2], most of whom derive their livelihoods directly from its natural and fisheries resources. These people actually face problems with large-scale operators when trying access to fishing areas.

In the Tonle Sap Lake and elsewhere in inland fisheries, the current exploitation system of capture fisheries is formally divided into three types: large-scale fishing, referring to the fishing lots; middle-scale fishing or licensed fishing; and family fishing, also called subsistence fishing (Fiat-Law No. 33 KRO.CHOR, articles 10 and 11, 1997). The conflict has occurred in each of the three scales. Somehow the system has potentials for conflict creation. This depends on the type of stakeholders involved in each fishing scale.

Table 3.1. Legal Categories of the Freshwater Capture Fisheries

Categories	Condition of accessibility	Duration of fishing operations	Fishing ground
Fishing lots	Leased out through an auction Leased as a research fishing lot	Only in the open fishing season : - 1st October to 31 May for the fishing grounds located north of Phnom Penh - 1st November to 30 June for the fishing grounds located south of Phnom Penh	Inside the fishing lot area but outside the area that is set aside for open access
Middle scale	Through a license for marine fisheries	Only in the open fishing season : - 1st October to 31 May for the fishing grounds located north of Phnom Penh - 1st November to 30 June for the fishing grounds located south of Phnom Penh	Public fisheries domain (the area outside the fishing lots, fish sanctuaries, and the protected inundated forest zones)
Family scale	Free	Whole year round	Everywhere except inside the fishing lot during the open season, and inside the conservation area

Most fishing lots in Cambodia are located in the Great Lake and the rivers and are referred to large scale. The fishing lot is divided into two types: the auctioned lot and research lot. The research fishing lot is a new management strategy. The idea of the research lot[3] is to improve the management of the fishing lot through improving research on fish catch assessment, fishing operation, and the socioeconomic condition of fishing communities residing inside or nearby the fishing lot. However, as these lots are leased by private negotiation and not by public auction, there has been much suspicion about possible collusion in the arrangements for determining

[2] These people reside in five lakeside provinces; Siem Reap, Kompong Thom, Battambang, Pursat and Kampong Chhnang. The population around half of the lakeside and riverside depends on the lake and its associated wetlands for livelihood.
[3] Research fishing lots started in 1997 with seven fishing lots; recently 35 fishing lots in TSGL were included.

payments. There are currently 36 lot fisheries in TSGL, of which 35 are earmarked for development and improvement (research fishing lots) and one as an auction lot.

Map 2.2 illustrates the fishing areas, the fishing lot and the areas released from the fishing lots. Most of the areas released for local people are located in the periphery of the lake body, most of which are less productive areas, dry out in the dry season, and the fish migrate down along the water. The productive fishing areas remain kept as fishing lots. For these reasons, the conflict continues, particularly around the Tonle Sap Lake.

Lot owners and leaseholders for both auctioned and research lots actually sell fishing rights to individual fishermen or groups of fishermen with certain conditions after the end of main fishing operations. The main fishing right arrangements include: fee per boat, fee for certain fishing grounds, fee for certain fishing gears, sharing of fish catch, or catch for certain fishing grounds or certain fishing gears. In some cases, lot owners offer some part of the fishing lot to the military in exchange for protection services. In practice the informal fishing lot management is quite complicated. The lot owners, leaseholders, sub-lease holders try to maximize their income by intensively exploiting the resource beyond rules, regulations and other conditions being documented in the burden book.

The medium scale fishing operation requires permission for the use of fishing gears from the Department of Fisheries and this license is subject to system fee for the gear uses. It is allowed to fish only in open fishing season starting from 1st October to 31st May every year, and is allowed in the public fishing areas. The medium-scale fishing operator actually conflicts with small fishers who also fish in the open or public fishing areas. The medium-scale fishing industry uses large fishing gears and is subject to government fee for the use of gears, increasing fishing efforts, but to some extent, affecting small fishers who use small fishing gears.

Large-scale fishing operators are actually having problems with other fishers, particularly the small fishers. In many cases in the past, fishing lot owners extended the fishing lot boundary into the community fishing areas. This happened due to unclear boundary and weak community fisheries. There are some problems when local people travel across the lot areas.

In recent yeara, the RGC regulates the medium scale as tax free (no permission fee). Both medium- and small-scale fishers compete for the resource in the common pool resources. Small- and medium-scale fisheries actually conflict, since the small cannot compete with their medium counterparts. Oftentimes, small-scale fishers are expelled from the fishing areas due to the limited size of their gears, power relations, and small capacity for fishing.

Inasmuch as they are not subject to tax, small fishers eventually graduate into medium scale. In the Tonle Sap Lake, none of the small ones practises small-scale fishing operation. Most of them fish with gears larger than subsistence. At the same time, medium fishing gears upgrade their gears also to maximize their catch over declining fish harvests.

Apart from the three main fishing scales and people involved in their operations, there are other key stakeholders as well that are involved in fishing operation in the Tonle Sap Lake. These include the military, local authorities, fishers from within and outside the village, fishing lot owners, lease and sub-leaseholders. The Department of Fisheries, its provincial offices and its local offices, are responsible for the management of fisheries resources.

Table 3.2 Main Stakeholders and their Interests

Main stakeholder	Resource base	Function	Interest
Fisheries Department	All fishing grounds	Manage the fisheries resource	• Revenue • Management • Research

Main stakeholder	Resource base	Function	Interest
Lot owner, lease/sub-leaseholders	• The area of the fishing lot	• Concessionaires, private fishing right holders • Large-scale fishing operations	• Maximize income: - Fish exploitation - Leasing out some areas - Selling fishing rights
Military	• Common access areas	• Employees of lot owner: protection services • Control some open access • De facto lease holder	• Revenues from: - Selling open access areas - Selling fishing rights - Checkpoints in and outside the fishing lot
Local authorities	• Common access area	• Selling open access area outside the fishing lot	• Income from selling open access
Villagers	• Common access areas • Agriculture • Common property resources (CPR)	• Subsistence fishing: - Own family labor - Small-scale fishing gear	• Food security • Income generation and subsistence from: CPR (fishing, farming, firewood, vegetable and wild animal gathering)

Source: Fishing lot inventory and PRA exercise, CCF.

The Table above shows fishing operations by various stakeholders, indicating the type of gear and type of fishing ground they use. Majority of the fishing operations by these stakeholders practise use of barrage, bamboo fence fishing, seine net operations, sweeping operations, pumping out lakes, ponds and electro fishing. These practices compete with one another, marginalizing small fishers in the use of most fishing grounds.

These fishing operations are conducted in different types of fish habitats, depending on the suitability of fishing gears to the fishing ground. It has been generally observed that sweeping the fishing ground more than once with small mesh size of seine net or using the bamboo fence method is common in almost every fishing lot. In addition, poaching inside the lot occurs also in almost every fishing lot. This is because most of the common access areas inside the fishing lot that are “set aside for the people” are used by the powerful and by lot owners. Illegal fishing in public fishing area is also common, using small mesh-size net with a long, electrocution fishing gear and seine net with motorboat.

3.2 Fisheries Policies and Their Implications for Conflicts

Existing fisheries management follows three deep-rooted philosophical ideologies: colonialism, capitalism, and socialism., Each ideology has a conflict in itself. The management carries colonial ideas that favor commercial fishing, but disfavors subsistence fishing and treats local people as less important. At the same time, the existing fisheries management follows Marx's theory of the socialist state, that the large- and medium-scale fishing activities are operated by state enterprises and solidarity groups at the community level, yet promotes large-scale fishing operations that conflict with small-scale fishing.

The current Fisheries Law prohibits private property rights (ICLARM 1999). Allowable fishing gears include drop net (gillnet) of less than 5m, scoop net with an opening of less than 2m, spear, harpoon, etc., all of which have been recognized since the French Protectorate regime and at present, not viable any more for survival. Small-scale fishing is limited for subsistence purposes only, but not for sale; in practice, though, subsistence floating community around the Tonle Sap Lake completely depends on sale of fish for their day-to-day livelihood.

Conflicts in the sector are rife. Competing claims arose from commercial interests, subsistence needs of a growing population, illegal fishing, violations by the commercial operators and poor governance in general in the fisheries sector (FACT 2001). In 2000, the fisheries sector was reformed. The government handed over 56% of commercial fishing lot areas to local

communities. Community fisheries[4] were established in areas taken from the commercial fishing lots as part of the decentralization process. There are about 329 community fisheries established across Cambodia, and most of them are in or around the Tonle Sap Lake (DoF 2004). At the same time, a draft Sub-decree on Community Fisheries (SDCF) was developed to support community fisheries, while a new Fisheries Law is being elaborated by MAFF as part of the policy reform (DoF 2002). However, the areas released to local communities were the less productive fishing grounds and degraded. Even though community forestry and fisheries have been established, most of these groups are organized by the government in areas that are less valuable or degraded[5]. This aspect affects the capacity of local communities to effectively protect their resources[6].

Community fisheries suffer from lack of recognition from the Department of Fisheries. The reason is that the draft SDCF has not been passed yet. In Pursat, despite the Memorandum of Understanding (MoU) between the Provincial Authority, Provincial Department of Agriculture, and Provincial Department of Environment, the decree has been designed to be used at the provincial level and is not considered as complete legal support to the Anlong Raing community fishery at both national and provincial levels. In Kampong Chhnang, the Provincial Fisheries Office has been involved in the formation of Tamoul Leu community fisheries, but the DoF has not given them full recognition.

The draft SDCF indicates that the DoF is the only agency responsible for fisheries domain and that community fisheries development should go through them. There is need to organize community fisheries under the DoF and the MAFF. Despite the development of community fisheries following the Government Decree on Community Fisheries after the fisheries reform, none of these community fisheries has yet been recognized by DoF. The Anlong Raing Community Fishery and Tamoul Leu are two of those that have not been recognized yet.

There is recognition of the role of Commune Councils to protect "the environment and natural resources," including, perhaps, fisheries. This is stated in Article 43 of the Law on Commune Administration. However, in the draft SDCF, the Commune Councils and other local authorities are required to *facilitate* the formation of CF. Another area where Commune Councils and other local authorities could be involved in is the settlement of disputes. In its current form, the draft SDCF stipulates that resolution of conflicts should be facilitated by MAFF and DoF. Given people's high level of distrust in both administrations, one may doubt about the efficiency of this mechanism. Consequently, one may think about introducing alternative conflict resolution mechanisms involving Commune Council members and representatives of other local authorities.

3.3 Fisheries Decline Leads to Conflicts

The people have attributed decline in fisheries to several factors, including irregular flooding, damming of the Mekong, deforestation, etc. Destructive fishing activities have almost always been universally cited as the primary reason for declining fish populations. Illegal activities include electrocution, use of lights to spear breeders, use of *manh, yangkao*, zip, motorized *uon*, mosquito net gear, and pumping ponds. There has also been a lot of fishing in the closed season. New destructive gears include the use of lights to attract fish and use of chemicals ("narcotics") to

[4] Twelve *anukrets* or sub-decrees providing for the abolition or reduction of fishing lot areas were adapted from 15 December 2000 to 27 March 2001. Provinces affected by the reform included Battambang, Kompong Thom, Kandal, Kompong Chhnang, Pursat, Seam Reap, Banteaymean Chey, Kompong Cham, Phnom Penh Municipality, Kratie, Prey Veng and Takeo.

[5] See Levinson, J. 2003. An examination of the Community Fisheries Sub-Decree: Changes and Developments during the Drafting Process, Stream Cambodia

[6] Over 25 versions of the draft sub-decree were discussed (Levinson 2003). In addition, through sub-decree no. 24, dated 19th February 2001, license **fees** for middle-scale fishing gears were removed, although this category of gears was still licensed through the Provincial Fisheries Offices.

attract fish. The people likewise mentioned destruction of flooded forest to clear land for farming, cut firewood, or catch wildlife.

Several studies have shown that one fundamental determinant of fish production in TSGL is the hydrological flow in and out of the area.[7] Some studies on the long-term trend of discharge from the Mekong River suggest that around 10-12% decrease in discharge happened since the construction of major dam building started in the middle and upper basins in the 1960s (ADB, FAO &FAO 2003).[8]

There are various reasons behind the decline in fish catch. Many people in the study areas agreed that the decline occurred because of destructive fishing practices. The practice got worse due to weak enforcements of the existing Fisheries Law in which the fisheries agents are held accountable. Destructive fishing has been practised by all fishing operators—small-, medium- and large-scale operators. Large-scale operators have been viewed as having great impacts on fisheries resources as their scale is obviously bigger than those of the others. Small-scale fishers in many cases fish to feed their families, their fishing gears evidently smaller than the large-scales' gears.

Overfishing is common along with destructive fishing practices. All fishing scales, small and large, aim at maximizing fish catch. Therefore, they intend to overfish in order to sustain their incomes. Illegal gears are used to overfish, including electrocution fishing gears, small mess-size nets, collecting fingerlings, and so on.

The Fisheries Law clearly divides fishing operations into small-, medium-, and large-scale fishing. In practice, however, it found no small scale fishers. All small-scale fishers graduate to medium-scale fishers in terms of use of gears. Small fishers claimed that it was not possible to catch fish for their survival using small-scale fishing gears. They then use bigger gears for catching enough fish for their survival, putting pressures on fisheries resources.

The current fish catch has so declined, small fishers have not been able to meet their need for food and to sustain their livelihoods. They have been compelled then to do whatever they could to survive, often beefing up fishing efforts by enlarging their fishing gears or using gears that would give them quick returns. They are aware such practices are illegal, but feel helpless with declining fisheries. They key question is: Survival or respect for the law? If fisheries law on small-scale fishing is to be followed at the present state of decline in fisheries, subsistence fishing gear is no longer useful to catch enough fish to feed a fisher's family of 5-6 people. This drives many small fishers to illegal fishing and the only way is to use big gears for bigger and quicker returns. They also agreed that the existing Fisheries Law could not ensure their livelihood. In this instance, all fishing activities fall into illegal types.

Many people question the delay in updating the existing Fisheries Law, although none of the fishers follow it. Fishers who do not follow the law are considered engaging in illegal actvities, but small fishers will not survive if they fish according to the Fisheries Law. To survive and to keep their business, small fishers are forced to pay an informal fee during official crackdown on illegal fishing. By the time the new is passed, the fisheries would have already been severely depleted. The initiative to update the Fisheries Law started in 1999. It took more than five years to get the

[7] The relationship between fishery production and hydrology has been well-documented by an ongoing study of the *dai* fishery in the Tonle Sap River. Results to date indicate that the magnitude of the annual fish catch (mainly small migratory cyprinid species) is strongly correlated with the magnitude of the wet season river discharge. The key operational parameters subject to annual variation appear to be the quantity of fish seed transported into the TSGL by the Mekong River backflow, the size of area seasonally flooded in the TSGL, which is available for grow-out, the flood duration and the quantity of nutrients available in the system.

[8] There is also no apparent long-term trend in rainfall for the middle Mekong River area (ie Luang Prabang).

final draft of the law to the National Assembly. While the old law is still valid for the existing fisheries management, fishing by small fishers remains illegal.

The flooded forest, surrounding the lake, which is important for fish growth and habitat, has also declined from about one million ha in 1960 to 362,000ha in 2000 (ADB 2002). An interview with local community fisheries committee disclosed that the flooded forest within the study areas has declined. This disclosure, however, is yet an unofficial record. The flooded forest in Tamol Leu has also almost disappeared while in Anlong Raing has large areas still under the flooded forest.

Conversely, in Tonle Sap, the fisheries staff from the Provincial Office of Kampong Chhnang and Pursat reported that the fish catch had not declined and would remain the same, The reason, they said, was because the fisheries sanctuary in the Tonle Sap was well-managed and the campaign on illegal fishing was made more effective than before, and that many illegal fishing operations were prevented, which contributed to increased fishing production. Only the fisheries staff, however, provided the explanation that there was no decline in the fish catch contrary to the report of other government people, commune council and the local community who confirmed the decline. Also, amongst the fisheries officials interviewed, one officer indicated a declining fish catch.

Population growth, fish catch, and fishing technology are in different development patterns. Population and fishing technology have increasingly been in the upward trend, while fish catch has been deteriorating. Competition amongst small-, medium- and large-scale fishers in Tonle Sap has significantly intensified vis-à-vis use of influence, technology, and financial capital, which large-scale operators have in abundance. Violations from all fishers have become rampant that naturally led to conflicts. Conflicts differed between the two sites.

IV. Results and Discussion

4.1 Fisheries Conflicts in Tamol Leu and Anlogn Raing Villages

Anlong Raing, in Kampong Por Commune, Krakor District, Pursat Province, is a floating village located in the eastern shore of Tonle Sap Lake. The village is home to 93 families, most of them engaged in fishing as a primary occupation.

Tamol Leu is located in Koh Tkov Commune, Chulkiry District, Kampong Chhnang Province. This village is situated along the Tonle Sap River in Kampong Chhnang. It is home to 284 families, most of them engaged in fishing and farming. Fishing is an integral part of their livelihood and forms the basis for food security of villagers. This village is submerged by flood when it is at peak, from July to September.

Conflicts in fisheries in these areas have long been occurring, due mainly to competing claims on fisheries resources predicated by rising commercial interests, a growing subsistence population, illegal fishing, and an increasing demand for agricultural land, water, and fuel wood. Conflicts have invovled fishing lot owners, local authorities, military, police, fisheries officials and local communities.

Poor governance—reflected in the absence of formal structures for complaint resolution and a lack of transparency and participation—has excluded fishers from decision-making and resource management. The disparity in power between the various actors has compounded the escalating situation and ensured that conflicts tend to be resolved by the use of force rather than negotiation. Although conflicts are widely documented in existing literature and media reports, there is currently no central focus for the accurate collation of conflicts or for dispute resolution.

Table 4.1. Fisheries Conflicts in Anlong Raing and Tamol Leu

Type of Conflict	Anlong Raing	Tamol Leu
Conflict between small fishers and larger fishers	Conflict between community fisheries and fishing lots 7, fish sanctuary about the unclear boundary	Conflict between farmers and fishing lot owners over the use of water for agriculture and fishing
Conflict between fishers and fishers	Fishers from outside encroached the CF areas, did illegal fishing using electrocute fishing gears, small mess-size net, push boats and trawler	Fishers from outside encroached the CF areas, did illegal fishing using electrocute fishing gears, small mess-size net, collecting the fish fingerlings
Conflict between fishers and powerful people	Powerful people support illegal fishers to fish near CF areas	Powerful people confiscated the fishing grounds from public use to grow lotus
Conflict between fishers and fisheries officials	Fisheries authorities do not give clear roles and responsibility to CF to manage its areas.	Fisheries authorities did not give clear roles and responsibility to CF to manage its areas.
Conflict between fishers and local authority	CF in Anlong Rain gains strong supports from local authority	CF in Tamol Leu gained strong support from local authorities
Conflict between fishers and armed group	No	No

Source: Field Survey, 2004-2005

The Table above illustrates the types of conflict between fishers and other actors in the two studied sites. It also highlights specific cases of conflicts compared with the overall conflicts in the Tonle Sap Lake.

Table 3.4. Main Conflicts in Fisheries and Stakeholders Involved in Selected Fishing Lots

Sources of Conflicts	Parties Involved	Trade-off	Effects on Fisheries
Sale of common access areas	Lot owners, powerful people, military, community	• Benefit for lot owners and military • Reduced income of the community	• Intensive fishing activities taking place • More fishes were caught
Extending the fishing lot boundary	Lot owner, community	• Benefit for lot owners and military • Reduced income of the community	• More flooded forest protected • More fish caught
Confiscating the fishing ground for lotus planting. fishers	Fishers, fisheries officials, local authorities.	• Benefit to other fishers, • Spread of illegal fishing	• More and more fishers following those who did illegal fishing.
Poaching inside the community areas	Individual fishers	• Short-term benefits for individual fishers • Destruction of community fisheries areas	• Illegal fishing gears used • More fish and habitat destroyed
Agriculture activities in the fishing ground	Community, lot owners	• Short-term benefits of the community • Reduced fish productivity	• More flooded forest area converted to agriculture land

Source: Field Survey, 2004-2005

The wealth of fisheries resources, on the one hand, and the revenue-oriented governance mechanisms lead to high competition for the control of these resources. Conflicts occur almost everywhere. The main conflicts amongst the stakeholders are shown in the Table above. These include the sale of common access areas by lot owners or by the military, extending the fishing lot beyond its boundaries and closing waterways by the lot owner, poaching inside the community areas, and agricultural activities in the fishing areas.

4.1.1 Illegal Fishing Practice and Poor Governance in Fisheries

It is acknowledged that enforcement is very inadequate in fisheries, and identified collusion as a major problem. Authorities end up charging fees, but not actually stopping illegal activities. This was tied to inadequate rewards for people making arrests, lack of motivation, low salaries, lack of equipment. In Kompong Chhnang, various authorities charge fees for mosquito-net gear, based on the length of the gear (protection fees). People said that the illegal gears were often given back to the offenders rather than being destroyed. They also said that rich people would always get away with illegal activities.

Communities claimed that when they reported on illegal activities, there was often no response; or when illegal fishers found out they were reported, they would stop their illegal activities before authorities could even come. In Pursat, the communities said the authorities would show the communities's report to the illegal fishers who would then blame the communities, not officials, for trying to stop them. Businessmen were said to buy electrocution gears for people and buy fish back from them at a cheaper price. The problem was that people who produce or sell illegal gears (like electrocution gears) aren't arrested. In two provinces there were recent cases on illegal activities, but when fisheries officials did not take any action, the communities intervened and brought the illegal gear to fisheries offices. The illegal fishers sued the communities but the courts sided with illegal fishers. Fisheries officials were also accused of giving permits for large gears like *manh*, *neam*, and *uon*. These activities are not supposed to be pulled by motor, but inevitably are.

Definitions of family-scale gears in Fiat Law 33 were described as too restrictive and unrealistic, leading people to engage in illegal fishing. On the other hand, in Pursat, people said that c*huch* should be made illegal; currently it is defined as a family-scale gear.

4.1.2 Sale of Common Access Grounds

This happens when fishing grounds are taken away by powerful people, military and other people. The benefits go to the individual lot owners and the military. The livelihood of the community is affected. There was this case in Tamol Leu where public fishing areas were taken by the powerful people for lotus planting. The rest of the community was not given access to this area.

4.1.3 Illegal Extension of the Fishing Lot Boundaries

Extending the fishing lot boundary commonly occurs in lots located around the Great Lake. This happens when the fishing lot boundaries are not clearly marked. For example, an open side of the fishing lot boundary allows the lot owner to extend his lot. Extending the fishing lot boundary brings more benefit to the lot owner. This happened in Anlong Raing village in 2003 and 2004 due to unclear boundary between community areas and fishing lot No.7 in Pursat.

In Anlong Raing, one of the major conflicts is between community fisheries (CFs) and lot owners over the boundaries of their respective areas. The CFs were established in 2001 in fishing areas released for community use, but there was no clear boundary demarcation for community. This conflict led to a series of re-demarcation efforts over the boundary areas with the involvement of different stakeholders in overseeing the issue and deploying boundary poles, but these were removed again and again. The boundaries of the CF areas remained unclear.

4.1.4 Poaching inside the Community Fisheries areas

This happens almost everywhere, especially in areas where the CFs were established. Both Anlong Raing and Tamol CFs faced these problems. In Tamol Leu, CF areas were poached by illegal fishers for fingerling collection. The CF Committee (CFC) tried to stopp illegal poachers, but was charged by illegal fishers for violating their rights as individuals. The case was brought to court that scared the CFC in performing future roles. In most cases, poachers had the backing of

powerful people and sometimes were the green light by the powerful. The CFC remained undaunted and took the risk to stop illegal fishing.

In Anlong Raing, despite the establishment of the CFs, fishers from outside the community came to fish, using different fishing gears, including small mess-size net with motorboats to push and trawl near the community areas. The CFC also reported that electrocution fishing was also commonly practised by neighboring communities into the CF areas. Efforts from CF members to stop these activities were futile. Sometimes villagers would arrest the poachers and bring them to fisheries office nearby, but they would soon be released, would commit the same illegal practice again and hold enmity against CF members who arrested them. The CFC likewise reported that these poachers were supported by unidentified powerful groups. This posed risk to CF members to arrest them. The CFC was accused by fisheries officials of usurping their roles and responsibilities. According to Fisheries Law and Draft Sub-decree on CF, the CF people could not make any arrest but could only report to the nearest fisheries office. This has made way for more illegal fishing activities inside the CF areas, making the poachers more daring in their illegal fishing activities.

Once the CFC allows these people in and fish with gears, other community members would learn to do the same. If the CFC continues banning illegal poachers, they would be bold enough to strike back as they are supported by some powerful people.

4.1.5 Agriculture versus Fishing Activities

This conflict relates to the differences between lot owners and farmers over the use of water for irrigation and fisheries. In Tamol Leu, fishing lot owners limited local fishers from using water from their lot areas for irrigating their rice field. The issue in contention was that ricelands belong to local people, but these lands are within the fishing lots. During wet season, ricelands are under water and fishing lot owners manage the water. When the dry season comes, farmers have a need for the land for agriculture purposes. They would then need to irrigate their ricefield with water from the Tonle Sap River. Conflict ensues when farmers are prohibited from using the water for irrigation because fishing lot owners believe it would disturb the fish. A similar conflict occurred in fishing lot numbers 13 and 14 of Kampong Chhnang Province near the study areas, when fishing lot owners and residents within the lot had a row over the use of water for different purposes.

Sometimes, fishing lot owners demand the community to pay them for the use of water. There had been instances when lot owners would pump the water out of the lake to catch fish, inundating and spoiling rice crops of farmers.

In Anlong Raing village, due to shortage of water for upland agriculture and decline in fish catch, some flooded forest near the villages were burned down and cleared. Villagers opted to grow paddy rice during low fish harvest. Given this situation, it was believed that farming inside fishing areas could be made.

4.1.6 Conflict between Community Fisheries and Fisheries Officers

The CFs were established involving different stakeholders from Pursat and Kampong Chhnang Province, but they have not been legally recognized yet. The draft SDCF has not been approved after it first draft in 2001, leaving the CFs volatile.

Local authorities, such as the Commune Councils and District Authority, provide a strong support and recognize the CFs from the start. Despite this support, however, the CFs have not been fully recognized by the national government, especially the DoF and the MAFF, making the CFs uncertain of their fate.

In Tamol Leu, despite the CFs, illegal fishing activity continues. A case involving the CFC and illegal fishers is still pending at the provincial court of Kampong Chhnang. Illegal fishers accused the CFC of attempting to hurt them; the CFC accused them of illegal fishing inside the CF areas. There is no support from Fisheries Office or other agencies for the CFC. As a result, two CFC members were taken in custody for about a week after accusations were filed. Investigations on the alleged illegal fishing activities have not been made, and offenders have remained free from legal action.

As a result, the CFC became less active in preventing illegal fishing activities inside the CF areas. Illegal fishing activity continues, mainly through electrocute fishing, small mess-size net and catching fingerlings, which was quite common in the area. The CFs had difficulty confronting the illegals because of the support they get from the powerful in government.

Anlong Raing and Tamol Leu CFs have not been given any responsibility; however, they take it upon themselves the responsibility of protecting the resources, which, ironically, the fisheries administration considers illegal. Because the administration did not allow the CFs to act on illegal fishing, the activities went on as usual. The CFs struggled to stop them, but received retaliation instead and were blamed by the administration for doing things without legal basis. The local community, in turn, blames the authorities for being lax in their enforcement duty, on the pretext that the place is quite remote and that they lack the needed resources to come for enforcement. When, in their absence, the CF members act against illegal fishing, they fault the members instead of being commended for doing the duty that is duly theirs. The CF reports on illegal activities have often been ignored by the fisheries officials and whenever they complied to come, they would be late, such that by the time they arrive at the place, illegal fishers have already escaped. Moreover, the CF reports revealed, illegal fishers are not afraid of meeting the officials, since no action has been meted on the offenders. This has emboldened the illegal fishers to continue with their business despite their blatant violation of the law.

4.2 Enabling Fisheries Conflict Management

The DoF is responsible for fisheries management. The Fisheries Law gives DoF the legal basis to oversee the fishing areas. The Law focuses more on fisheries management and enforcement, but less on people who use fisheries resources. The Law provides no clear conflict resolution mechanism.

On fisheries conflicts, about 81% of the conflict managers interviewed believed that powerful groups of fishers would be able to win their conflicts over their less powerful counterparts. There is small chance for small fishers to win due to weak legal system, weak juridical system, and low level of understanding the legal framework. Their being politically weak and financially poor makes the small fishers' relations with other government officials equally weak and poor. There is also the lack of a legal framework over such conflicts in the absence of the SDCF.

This legal discrepancy has affected the community fisheries in the study areas in that they were not able to cope with illegal fishing activities and, more importantly, became unable to manage fisheries conflicts. Fifty-six percent of conflict managers (CMs) and 90% of primary stakeholders (PSs) (Table 4.3) agreed that the CFs could not manage fisheries conflict themselves. Quite the contrary, 33% of CMs and 10% of PSs (Table 4.3) disagreed, indicating that the CFs could manage conflicts in their community given a clear role and responsibility, and if they have ownership of the fishing areas as guaranteed by law.

In general, about 30% of CMs and 82% of PSs believed that fisheries conflicts could be resolved, while 67% of CMs and 14% of PSs disagreed (Table 4.3). Some of the conflicts are deep-seated and involve many stakeholders. Evidently, they could not be resolved by a single party. In addition, 41% of CMs and 77% of PSs indicated that conflicts could be resolved by the government only; 55% of CMs and 19% of PSs (Table 4.3) disagreed, indicating that the CF

members themselves could also manage conflicts if they are given proper support. The NGOs could also help the community to manage conflicts effectively.

Conflicts could not be resolved by DoF alone because its focus is more on fisheries resource, not on people, even if these resources are located in areas of their particular administrative boundary and local people in these areas use these resources. It is imperative, therefore, to involve the institutions responsible for the administration, resources management, and fisheries together. The provincial authorities should be participating in conflict management as they co-exist with those causing conflicts and those using the resources.

Amongst those interviewed, 93% of CMs and 95% of PSs (Table 4.4) indicated that fisheries conflicts could be resolved, if relevant parties get involved and are willing to contribute to conflict resolution. They believed that conflicts could not be addressed by fisheries administration alone. It should involve commune councils, the provincial authorities, environment departments, and other relevant agencies. NGOs can play an important role in conflict resolution as an independent body.

Conflict managers, such as commune council leaders, village chiefs, CF leaders, district governors, provincial governors, and fisheries officials could initiate problem-solving exercises for fisheries conflicts, rather than waiting for solution from the top and outside the area. Communities often approach local authorities, particularly the commune councils for conflict resolution, because they have voted for them and because they trust that, since commune council members live with them. they could represent them during conflict resolution. They should start solving the conflicts, which 96% of CMS and 99% of PSs (Table 4.4) believed they could do so effectively what with local people also trusting them, particularly if they could engage different stakeholders.

In conflict management, understanding the legal framework is important, especially when discussing legal and non-legal matters and issues pertaining to the conflicts. Twenty-six percent of CMs and 99% of PSs (Table 4.4) thought it was important to understand existing and policy-related issues on fisheries. However, in local Cambodian context, informal and out-of-court system of conflict resolution works better and people often prefer this as it costs less, involves less time, and maintains cordial relationships between conflicting parties. This arrangement, however, requires third, independent and powerful party that both sides trust only from their locality. The third party needs to build communication between conflicting parties and through meetings that could sometimes improve conflict situation. Thirty-three percent of CMs (Table 4.4) agreed that an informal legal system work more effectively than the formal system. The reason is that local communities have simple traditional conflict-resolution mechanisms, most of which have not been used for conflict resolution. Oftentimes laws and policies are imposed on people, but are unacceptable to most of them, who are, in return, feel victimized.

This does not mean that communities do not need government. On the contrary, the CFs need the government and government could influence conflict resolution, help reduce conflicts in fisheries and, more importantly, encourage use of indigenous practices for fisheries conflict resolution. The CMs (89%) and PSs (92%) (Table 4.4) believe that the community needs government influence to reduce conflicts in fisheries and that community is part of the solution. While the government's role is essential in conflict resolution, government institutions must understand local contexts, needs and practices if real solutions are desired. Better understanding of the needs of conflicting parties could help resolve conflicts much easier; 55% of CMs and 80% of PSs agreed with that. However, other factors may need to be considered if the conflict is complex, which 41% of CMs and 20% of PSs (Table 4.4) agreed, such as involvement of different agencies, and a policy and legal framework to guarantee sustainability.

Fisheries conflicts could not be resolved by a single party and by the Fisheries Administration alone. The Commune Council should be involved in conflict resolution. It has been a mistake in the past to ignore the Council's role in this aspect. Actually local people trust the Council more than anyone else because they elect its members to work for local people. Besides, the CFs are

under the Council's jurisdiction and, in the event of a conflict occurring, the Council's administrative boundary makes it responsible to take any action leading to arrest and detention of offenders. Although the Council has fewer roles in fisheries management, the fisheries resources under their jurisdiction are by no means their responsibility. Ninety-six percent of CMs and 99% PSs support the idea that the Council and village leaders should work together to solve fisheries conflicts (Table 4.4). Only 26% of CMs and 58% of PSs (Table 4.5) felt that the lower level of local authorities could not resolve conflicts by bringing conflicting parties together to discuss the issues.

It is not only the Council that should be involved in conflict resolution, but also the local fishing community. The community can be organized as CFs, an alternative way of building capacities to manage fisheries resources at the local level. Given the CFs' important role and responsibility, guaranteed by laws and decrees, they will be able to manage fisheries to avoid conflict. This is part of decentralization strategies of the RGC. About 70% of CMs and 97% of PSs (Table 4.5) agreed that conflicts could be resolved by building the capacity of community fishers, which could be more effective than waiting for enforcement from a distant fisheries officer. Another 74% of CMs and 99% of PSs (Table 4.5) indicated that if the Community Fisheries Committee could institute its own by-laws, respected by all stakeholders, conflicts would be minimized and at the same time help empower the CFC. Despite this, however, conflicts in the study still prevailed.

Nineteen percent (out of 70%) of CMs and 1% of PSs felt that it is easier said than done, because in reality, although the CFs' capacity has improved, the politics and interests of different stakeholders over fisheries resources are the ones that often cause the conflicts. And another 15% (out of 74%) (Table 4.5) of CMs did not feel the importance of the CFC by-laws because they have not been prepared to serve the people needs, but to satisfy the approval of the Fisheries Administration, and have only been set for subsistence. The fact is, subsistence is only on paper, but nobody hardly found its use. Not all people in the community have also joined the CFs; therefore, there are still other people who do not follow the CF by-laws.

The existing fisheries management is believed to be weak. Enforcement is also weak. This gives rise to conflicts. Strict enforcement of regulations can certainly improve fisheries management, leading to reduction of fisheries conflicts. About 85% of the people interviewed agreed with this. , However, this is not that simple in the Cambodian setting, where strict enforcement could jeopardize the small fishers' livelihoods as most regulations cannot ensure meeting their basic needs.

Fisheries conflicts could not be resolved by force because fish is food, which the community cannot live without. The poor would much rather suffer under conflict than wait dying without food. There must be a simple way though to end fisheries conflicts and the best way possible is through dialogue and negotiation, which could be done through open communication between conflicting parties, facilitated by an independent party or group that both parties could trust. Seventy-eight percent of CMs and 98% PSs shared this view (Table 4.5). Negotiation and dialogue should not be held just once or twice, but many times. Apart this technique, fishing could be resolved through a public forum and building consensus building, which 85% of CMs and 95% PSs agreed (Table 4.5) are the key to end fisheries conflicts. On the other hand, 11% of CMS and 5% PSs (Table 4.6) did not agree that these techniques would always work, saying that it would require time for conflicting parties to consider and it would also have to consider laws pertinent to this.

Conflict resolution should be a government responsibility, yet the key here remains to be the community. Government must work with the community in finding solutions favourable to the conflicting parties. Both CMs (52%) and PSs (83%) agreed that the government is the only agency that could manage conflict as opposed to 41% and 15% of CMs and PSs, respectively, who considered otherwise (Table 4.6). The community should actively participate to ensure that the resolution benefits them. During the old regime, government-prescribed solutions were not

what the community desired. A democratic society guarantees community involvement in conflict resolution.

The community considered it necessary to assist government agencies in reducing/resolving conflicts. since it is to their interest to protect their fisheries resources not only for their livelihood, but more importantly for the future generation. The CFs felt it is their responsibility to enforce pertinent laws to help reduce conflict, which the CMs (67%) and PSs (99%) agreed (Table 4.6). Both groups of respondents (CMs, 89% and PSs, 98%) likewise agreed that community leaders should take the initiative to resolve the fisheries conflicts (Table 4.6).

Some sector of the community felt quite apprehensive about the capacity of the community to deal with conflicts, primarily those conflicts that involve armed group and powerful people. Confronting these offenders poses a threat to the life of CFs members, since the existing legal framework does not delineate their role and responsibility to act on conflict resolution. This was primarily the reason why 26% of CMs and 1% of PSs were particularly cautious about giving suggestion(Table 4.6). Yet another sector felt that if community the does this, it would lessen the benefits they were poise to get from fisheries management.

It is a must that all stakeholders and institutions join with the community in managing fisheries conflicts, a decentralization effort that could help improve and make the CFs effective. Even an individual CF member can do something to help resolve conflicts, which 78% of CMs and 33% PSs agreed (Table 4.6). Individual members could likewise join any social group or join force with other members of the community to help reduce conflicts, or so 92% of CMs and 95% PSs agreed (Table 4.6).

Fisheries conflicts, therefore, need to be resolved through multistakeholder participation. Communication amongst stakeholders is important along this line. Communication should pervade at all levels; specifically, the best communication strategies should be implemented at the level close to the areas in conflict. At the study sites, the most ideal strategies were organized at the provincial level.

Use of communication can be through such means as phone calls, tri-media (radio, TV, and such print media as newspapers and popular magazines), meetings, seminars, and workshops. Effective use of these channels of communication varies, depending on the capacity and level of stakeholders' literacy level and participation in the communication process. For conflicts involving many stakeholders, communication works best through meetings, seminars and workshops. These allow for a wider participation of involved stakeholders. For the locals, these provide them a feeling of togetherness and encourage them to express themselves freely without any threats from a hostile environment.

The study identified different meetings at different levels to illustrate how communication took place between parties. Some conflicts need to be resolved at the commune level, some at districts, and still others at provincial level. There were suggestions to set up committees for conflicts over the boundary between fishing lots and community fisheries areas.

The Commune Council is responsible for resource management at commune level and, therefore, could be involved in resolving conflicts between fishers and fishers within the commune. Conflicts between fishers and powerful people could be resolved at the commune, district and provincial levels, depending on the capacity of the powerful.

Type of Conflict	Conflict Solution	Level of Resolution	Tool Used for Resolution	Actors involved
Conflict between small- and large-scale fishers	Compromise through dialogue in provincial or district meetings facilitated by third independent party, particularly the provincial governor. Set up working mechanism to monitor conflicts and the ground	Provincial level	Maps, decrees, laws. Setting the committee to follow up on the issues	All stakeholders including the fishers, larger-scale fishing operators, Commune Council, provincial fisheries and provincial authorities
Conflict between fishers	Organizing meetings between fishers facilitated by trusted independent party, particularly commune council in collaboration with fisheries officials	Commune level	Laws, legal framework, punishment or education or awareness, making agreement against the problem	Commune Council, fisheries officers from *sangka*t, local fishers and the police
Conflict between fishers and powerful people	Organizing meetings at district level, facilitated by district or provincial authorities in collaboration with the Provincial Fisheries Department	This problem could be resolved at commune, district and provincial levels.	Maps of the areas. Organizing the CF in the areas to avoid individual control. Legal framework	Fishers, Commune Council, fisheries people, provincial authorities, police and NGOs
Conflict between fishers and fisheries officials	Organizing between fishers facilitated by third trusted, independent and influential party, such as district and provincial governors in collaboration with the Provincial Fisheries Department. Organize meetings regularly	Provincial level	Decentralized management of CF areas to community. Defining clear roles and responsibilities under the Fisheries Law and Decrees for CF. Enforcing the Fisheries Law. Setting the provincial committee to investigate the issues.	Provincial authority, District and commune councils, police and NGOs
Conflict between fishers and local authorities	Meetings, dialogues or forums facilitated by District or provincial authorities in collaboration with the Provincial Fisheries Department	District and provincial levels	Including in the legal framework roles and responsibilities. Setting a committee to investigate the issues and resolve it if it continued.	Fishers, commune authorities, district, fisheries officials, provincial authorities, police and NGOs
Conflict between fishers and armed group	Meetings or forums organized at any level by government in collaboration with the Provincial Fisheries Department and Provincial Army Group	Commune, district and provincial levels	Legal framework, maps, setting a committee for follow-up if the conflict is serious	Fishers, commune authorities, district, fisheries officials, orovincial authorities, police and NGOs

V. Conclusion

Community fisheries in Cambodia are in need of reform, particularly in governance, by instituting appropriate legal framework, putting in place accountability of public officials, and removing barriers to the economic viability of CF management. Communication is crucial in the country's fisheries management and improving the system in support to fisheries conflict management should address consensus-building and conflict-resolution processes.

There are gaps in communication, especially between and amongst stakeholders in fisheries, which make fisheries conflicts remain poorly resolved and recurring. These communication gaps include:

- Miscommunication amongst stakeholders
- Sub-decree/regulations have to be passed
- Weak dissemination of information on regulations/laws from national to local levels, and most fisheries polices on paper only
- No working group nor legal institution in place to coordinate any urgent fishery conflicts or hear complaints/take message from stakeholders on fisheries conflicts
- Fisherfolk/community members so poor has to take interest in improving communication or are not able to communicate with higher government officials
- Centralized management system within the government, allowing for one-way flow and top-down communication only
- Increasing fishers population
- News coverage in fisheries is limited and costly.

Nonetheless, communication amongst various stakeholders is essential in fisheries conflict management, more especially in promoting uptake of research findings both within and outside the areas where the research was conducted. Communication in this context takes much more than sending messages to people: it includes dialogues and negotiations leading to improvements/changes in understanding and perceptions. It is a process that takes place through social and political structures.

Communication is a normal, everyday human activity amongst people within a given social unit or network, such as family, group of friends, or colleagues at work. Communication between organizations, particularly those with different interests, does not happen automatically, and when it does it is not necessarily constructive. Such communication needs to be planned.

There are two tools to help in planning communication. They can be used for both purposes above: in managing fisheries conflicts and in making sure research findings are promoted so that they have a good chance of being taken up by relevant people and organizations.

The mass media can be harnessed for disseminating information on fisheries conflict management. For instance, Pursat Province has its TV and Radio stations that carry programmes on various development activities. The public is made aware of such progammes have become familiar with them. Radio, considerably a cheaper and more accessible medium, reaches the poor community members in far-flung villages. A live radio broadcast that invites listeners' comments or any messages, for that matter, would be a great help in feeding these messages back to policy-makers and relevant institutions. One classic example was when a listener from Pursat called a radio broadcast live, using his mobile phone, complaining about his village's very bad road condition. The call prompted the governor to appoint officers to attend to the problem until the bad road was repaired.

Another good example is the radio and TV coverage of provincial and national workshops, an effective means to convey messages developed from research findings. Workshops bring together policy-makers, government officers and relevant institutions to meet with researchers and communities. Workshops and some such activities, like regular meetings, are good venues

for communicating and fostering better understanding of research findings, issues, etc. In Pursat, there is a three-month regular meeting to update on all development projects. The meeting soon became a forum and an opportunity for local communities and authorities to mutually understand community issues and concerns.

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Appendixes

Table 4.2 Understanding Conflicts from Conflict Managers and Primary Stakeholders

	Conflict Manager								Primary Stakeholder							
	Agree		Disagree		Neutral		Total		Agree		Disagree		Neutral		Total	
1. Too many people trying to catch a limited quantity of fish is not a major cause of fisheries conflicts	22	81%	4	15%	1	4%	27	100%	111	100	0	0	0	0	111	100
2, The people's job is fishing and know have no choice other than fishing, so it causes fisheries conflict	12	44%	14	52%	1	4%	27	100%	103	93%	8	7	0	0	111	100
3. Fisheries conflicts lead to serious hardship for fishing families	12	44%	14	52%	1	4%	27	100%	87	78%	18	16%	6	5%	111	100
4. Fisheries conflicts reduces fishers' daily fishing activity	17	63%	8	30%	2	7%	27	100%	94	85%	16	14%	1	1%	111	100
5. If government agencies did their job properly, there would be very few conflicts over fisheries	24	89%	2	7%	1	4%	27	100%	110	99%	1	1%	0	0	111	100
6. Without supporting from the community fisheries, the government could not reduce fisheries conflict effectively	21	78%	3	11%	3	11%	27	100%	111	100	0	0	0	0	111	100

Source: Field Survey, 2004-2005

Table 4.3 Manageability of Conflicts

	Conflict Manager								Primary Stakeholder							
	Agree		Disagree		Neutral		Total		Agree		Disagree		Neutral		Total	
Powerful groups will always be able to win their conflicts over less powerful groups of fishers	22	81%	4	15%	1	4%	27	100%	97	87%	14	13%	0	0	111	100
Community fisheries could not manage fisheries conflict by themselves	15	56%	9	33%	3	11%	27	100%	100	90%	11	10%	0	0	111	100
All fisheries conflicts can be resolved	8	30%	18	67%	1	4%	27	100%	91	82%	16	14%	4	4%	111	100
It's only the government official who could manage fisheries conflict	11	41%	15	55%	1	4%	27	100%	85	77%	21	19%	5	5%	111	100

Source: Field Survey, 2004-2005

Table 4.4 Prerequisites for Resolution

	Conflict Manager								Primary Stakeholder							
	Agree		Disagree		Neutral		Total		Agree		Disagree		Neutral		Total	
If all parties are willing to compromise, solutions to conflict can be found	25	93%	0	0	2	7%	27	100%	105	95%	1	1%	5	4%	111	100
Conflict managers can initiate solving fisheries conflict	26	96%	0	0	1	4%	27%	100%	110	99%	0	0	1	1%	111	100
All parties need to understand existing policies and regulations before conflict resolution process can begin	17	26%	9	33%	1	4%	27	100%	110	99%	1	1%	0	0	111	100
Community fisheries require government influence to contribute to reduction of fisheries conflicts	24	89%	1	4%	2	7%	27	100%	102	92%	6	5%	3	3%	111	100
Better understanding of one another's' needs and points of view will make it easier to resolve conflicts	15	55%	11	41%	1	4%	27	100%	89	80%	22	20%	0	0	111	100
Common understanding on the use of natural resources	25	92%	1	4%	1	4%	27	100%	109	98%	2	2%	0	0	111	100

	Conflict Manager								Primary Stakeholder							
	Agree		Disagree		Neutral		Total		Agree		Disagree		Neutral		Total	
can sufficienly contribute to resolving fisheries conflicts																

Source: Field Survey, 2004-2005

Table 4.5 Process of resolution

	Conflict Manager								Primary Stakeholder							
	Agree		Disagree		Neutral		Total		Agree		Disagree		Neutral		Total	
Conflicts amongst fishers cannot be resolved by village leaders bringing the parties together to discuss the issues	7	26%	19	70%	1	4%	27	100%	65	58%	31	28%	5	4%	111	100
Fisheries conflicts can be resolved more effectively by building the capacity of community fishers	19	70%	5	19%	3	11%	27	100%	108	97%	1	1%	2	25	111	100
Conflicts can be resolved easily by strict enforcement of regulations	23	85%	3	11%	1	4%	27	100%	109	98%	0	0	2	2%	111	100
The by-laws of community fisheries can be respected by stakeholders along with community fisheries	20	74%	4	15%	3	11%	27	100%	110	99%	0	0	1	1%	111	100
All conflicts can be resolved through dialogue and negotiation	21	78%	6	22%	0		27	100%	109	98%	1	1%	1	1%	111	100
Fisheries conflicts caused by not sure the fishing ground and encroach fishing from the outside fisher to community fisheries ground can be resolved by chatting and consensus building	23	85%	3	11%	1	4%	27	100%	106	95%	5	5%	0	0	111	100

Source: Field Survey, 2004-2005

Table 4.6 Responsibility for resolution

	Conflict Manager								Primary Stakeholder							
	Agree		Disagree		Neutral		Total		Agree		Disagree		Neutral		Total	
Government is the only agency that can manage conflicts	14	52%	11	41%	2	7%	27	100%	92	83%	17	15%	2	2%	111	100
Local community such as community fisheries, associations and other groups which organized unofficially can also help to manage the fishery conflicts	18	67%	7	26%	2	7%	27	100%	110	99%	1	1%	0	0	111	100
Fishers and their leaders should take the initiative to resolve disputes and conflicts	26	96%	0	0	1	4%	27	100%	111	100%	0	0	0	0	111	100
All stakeholder and institution also jointed to manage fishery conflicts	24	89%	2	7%	1	4%	27	100%	109	98%	0	0	2	2%	111	100
I can not do anything to help to resolve conflicts over fisheries	5	18%	21	78%	1	4%	27	100%	72	65%	37	33%	2	2%	111	100
I have ability to joint in social work which a part that can support to resolve a fishery conflicts	25	92%	1	4%	1	4%	27	100%	105	95%	0	0	6	5%	111	100

Source: Field Survey, 2004-2005

Annex 7.5

Enabling Better Management of Fisheries Conflicts: A Case Study in India

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Mitraniketan, India

1. Introduction

India is blessed with a vast coastal line harbouring rich marine and non-marine living resources. Millions of people are dependent on these resources for sustenance and commercial exploitation. India has a long coastal line of about 8,119km; a continental shelf of 0.5 million sq km; an extensive Exclusive Economic Zone (EEZ) of 2.02 million sq km; 1.24 million ha of brackishwater area, 1,91,024km length of rivers and canals; 3.15 million ha of reservoirs; 2.25 million ha of ponds and tanks; 0.82 million ha of *beels*, oxbow lakes and derelict waterbodies; 0.24 million ha of flood plain wetlands; 0.29 million ha of estuaries, 1.65 million ha of mangroves; swamps, lagoons, etc. (Ayyappan and Diwan 2004).

India has 3,638 marine fishing villages, 2251 traditional landing centres,1,400 small-fish landing centres, six major fishing harbours and 41 minor fishing harbours. Based on the infrastructure and facilities the different fishing crafts land their catches. The country has 138 fish landing centres with modern facilities established with support from the Union and State governments. The fisher population of India is currently 5.96 million, which includes full-time, part-time and occasional fishers.

The marine fishing sector can be classified into: 1) non-motorized artisanal sector using country craft with traditional gear, 2) motorized sector, 3) mechanized sector using inboard engines of 50 to 120 HP, and 4) deep-sea fishing with bigger boats (25m and above) and engines of 120 HP and above. In 1996, India had a total fishing fleet of 238,125 units comprising 160,000 traditional crafts, 31,726 motorized crafts (converted from traditional) and 46,918 mechanized vessels operating with different gear combinations.

Vivekanandan et al. (2003) infers that the major problem in Indian marine fisheries is inadequate fisheries management system. Considering the country's diverse and vast coastline, efforts must be specific to the fisheries' situation in each coastal zone. Though the sector has several problems, management of resources is considered as the most important. Several reports inform that the inshore fishery is stagnant and there is no further scope for exploitation. The weak extension system with inadequate manpower and other resources have made public sector incompetent to satisfy the needs and restore peace amongst the community.

1.a Policies

Fisheries conflicts were the primary reasons for the creation of the Marine Fisheries Regulations Acts (MFRAs) in India. To manage marine fisheries, the government of India has issued guidelines to all maritime states to formulate rules and regulations to be passed by the respective state legislatures. These guidelines are intended mainly to avoid confrontation between the mechanized and artisanal sectors rather than as suitable regulatory measures for the sustainable exploitation of fisheries resources. The guidelines were first issued in 1978 and modified in 1980. Tamil Nadu and Orissa are amongst the maritime states bordering the Bay of Bengal to have passed Marine Fishing Regulation Acts. Other states follow ad hoc measures to prevent or tackle conflicts between artisanal and mechanized sectors. These Acts entail (i) registration of all fishing vessels, including non-mechanized country craft at their respective base ports; (ii) licensing fishing vessels for fishing in specified areas; (iii) regulation, restriction or prohibition of fishing in any specific area by such class or classes of fishing vessels that may be used for fishing in any specified areas; and (iv) regulation, restriction or prohibition of catching in any specified area of such species of fish and in such periods as may be specified.

These acts have thus equipped state governments with the authority to regulate and control fishing activities in their respective states according to specific local needs. The area of operation of mechanized vessels in different states ranges from 10 to 23km. The fisheries sector in India is classified into three major groups: mechanized, motorized and artisanal sectors. Conflicts arise within these sectors due to the inequalities existing amongst and between them. Demarcation of fishing areas for the three groups is

defined. Conflicts result within the sector mainly because of fishing in areas assigned to other groups. Other conflicts arise due to social and economic factors.

Acceptance and implementation of fisheries management ideas are a slow and gradual process. It is not realistic to be too ambitious and optimistic. Nevertheless a socioeconomic approach coupled with a bioeconomic approach, handled with understanding, tact and foresight may ensure sustainability of the resources. However, it is essential to inform that the communities themselves have been in the forefront to conserve their valuable resources with social methodologies in certain parts of coastal India. Prominent fisheries management techniques, such as co-management and community-based fisheries management practices, exist in certain parts of the country.

1.b Institutions and Governance

Almost always stakeholders of the fishing industry differ in their views about the management failures with respect to resource sharing and conflicts. This is due to weaknesses of the institutional design and approach. Institutions working on development of the sector, resource and conflict management are of two types: formal and informal.

The institution that takes care of the fisheries sector is mostly vested under the government in most of the Southeast Asian nations, and India is not an exception. Many countries expect to draft policies by which governance is decentralized at the community level. Apparently, informal institutions that worked effectively on fisheries management have declined in many parts of the world. Examples support for the statements that fisheries resources often managed by the community-based fisheries organizations (CBFO) supersede than the public initiatives. Often there are cases in India where the public institutions seek the help of informal institutions to work on fisheries management. With the existing weak infrastructure, manpower and economics, several nations have to plan in using the informal institutions and CBFOs in managing fisheries resources and other issues pertaining to the sector as discussed above. However, the tragedy on the loss of traditional institutions has created a great vacuum. In several nations the policy-makers are in the process of rethinking about reviving the traditional institutions for effective management of resources and conflicts.

At the grassroots level, the people's initiatives, including those by NGOs, trade unions and affected stakeholders raised up against weak implementation of rules by governments (Kurien 1978 and 1995, Kurien and Achari 1998, and Shajahan 1996).

1.c Objectives of the Project

The *Enabling Better Management of Fisheries Conflicts Project* envisioned promoting institutions and practices towards resolution of conflicts that are disadvantageous to poor fishers. The project likewise intended to promote conflict assessment and resolution tools as well as consensus-building methods, targeting key stakeholders. Specifically, the project also aimed at:

a. determining the best ways of communicating good practices in managing conflicts;
b. promoting key lessons and practices from earlier projects on conflict resolution and consensus building, including Participatory Institutional Survey Conflict Evaluation Exercise (PISCES) and Participatory Action Plan Development (PAPD) developed by the Bangladesh-based Center for Natural Resources Study; and
c. adapting and demonstrating results to three key countries with large number of poor people dependent on fisheries.

2. Project Sites (India)

Three sites were selected in India; they were the villages of Pedajalaripetta and Bheemunipatinam in Visakhapatinam District, Andra Pradesh State; and Sakthikulangara Village, Kollam District, Kerala State. Sakthikulangara was also the site identified by the Project for the PAPD field trial. The fishery profile and other details of the three sites are presented below.

Site 1. Pedajalaripeta Village in Visakhapatinam

More than 90% of the Pedajalaripetta villagers depend on fisheries resources, which are mainly marine, for their livelihood. The village has a total of 2,136 households and a total population of 8,128, where are 3,184 males, 2,691 females and 2,253 children. Of this number, 6,459 are fishers. Fishing crafts used are of these types: non-motorized and motorized fiber boats, and wooden crafts, which describe the village's traditional and motorized types of fishing, operating in in-shore and off-shore fishing areas. Fishers often use gill nets, trammel nets, hook and line, and shore seines. The important fish species include tuna, seer fish, shark and sailfish. The village has good infrastructure facilities. There are social welfare organizations in the village. Socioeconomic problems range from social backwardness, economic stagnation, low catch/income, no gainful subsidiary occupation to lack of access to institutional finance.

Site 2. Bheemunipatinam Village in Visakhapatinam

Bheemunipatinam is also a marine fishing community near Visakhapatinam Municipality. The village has 8,763 households with a total population of about 42,000. The main occupation of the people in the area is related to fishing, animal rearing, fruit and vegetable vending and rural artisanal work. The landing center at Bheemunipatinam has traditional boats, mainly the stitched type. Bheemunipatinam's literacy level is 29.6% and the average income is as low as 1,205 rupees a month. The village has one primary health center, 15 primary schools, one under primary school, three upper primary school, one higher secondary school, one junior college, one girls polytechnic and one teacher training centre. Traditional and motorized boats operate in the area. The catches include seer fishes, shark and sail fish.

Site-3. Sakthikulangara

Sakthikulangara is an important coastal fishing village in Kollam District of Kerala. Fishers comprise the major population of the village. The introduction of mechanized boats has brought major changes in its fisheries sector, particularly in the development in infrastructures. All types of fishermen operate from this landing centre. A study indicates, however, that 64% of 1,209 families in Sakthikulangara are in debt. The total debt incurred by Sakthikulangara's fisher families amounts to Rs229.2 *lakhs*, with an average debt of Rs 29,766 per household (1 US$=Rs46).

3. Methodology

3.1 Application of PISCES

The Project made use of PISCES methodology developed by Bennett and Jolly (2000) and employed timelines, institutional wheel and semi-structured interview schedule to collect information useful for evaluating fisheries conflicts.

Timelines. Timelines are used to get a clear idea of what events in the past are considered important and how they occur in sequence. In the study sites, conflicts that occurred during the British period to the present were recalled. Such conflicts were drawn over the timeline. The inferences on the timelines indicated that the conflicts in fisheries resources date back to 1970 and were mostly between the traditional and mechanized fishers. Conflicts involved burning of boats and over the rights of traditional fishers. The inferences were used in the later part of Project activities, specifically in analysing conflicts at different parameters.

Institutional Wheels. Institutional wheels were used to identify the relationships amongst different stakeholders within the community. The stakeholders and institutions identified through the institutional wheels were used to collect data on attitudes related to fisheries conflicts. The interrelations amongst institutions working in the area were identified. Key stakeholders identified were the government, local government bodies, voluntary action groups, NGOs, community-based fisheries organizations, fishermen's associations, etc.

Semi-structured Interview Schedule. The semi-structured interview schedule was administered to collect information regarding the fisheries conflicts in the sites. The tool helped the team in identifying these conflicts and in cross-checking identified conflicts with other social methodologies of the project.

3.2 Stakeholder Consultations through Country Planning Workshop

Through stakeholder consultations in a national workshop, the Project designed communication planning matrices for the two most important conflicts identified in Sites 1 and 2, reflected as follows:

Table 1. Communication planning matrix on conflicts between traditional and mechanized fishers in Project Site 1

Communication Partners (Who?)	Objectives (Why?)	Content (What?)	Communication Channels (How?)
Traditional fishers	Improve knowledge	Non-availability of resources	Face-to-face contacts Village meetings
Mechanized fishers	Change behaviour	Adherence to mesh regulation code and to MFR act	Village meetings Forming committees Group discussions
Village head	Facilitate mediation	Amicable solution	Personal meetings
State Department of Fisheries	Enforce policies	Better policies and their enactment	Circulars Mass media Training Programmes
NGOs	Create awareness	Educate on the policies	Discussions Printed literature
Researchers	Conduct study	Better insights on the conflict	Workshops Training programmes
Media	Create awareness	Unbiased reports on the conflict	Print and electronic media

Table 2. Communication planning matrix on the conflicts between traditional fishers and promoters of tourism in Site 1

Communication Partners (Who?)	Objectives (Why?)	Content (What?)	Communication Channels (How?)
Traditional fishers	To create awareness, increase their knowledge level and understanding	Their rights and the provisions of the law	Interpersonal Village-level meetings/forums
Promoters of tourism	To understand their problem and change their behaviour	The reality and impact on coastal fishers	Meetings Committees Common forums
Shore Area Development Authority	To take appropriate decisions and enforcement	Statutes and provision of the law	Letters Circulars Telephone Press releases
Pollution Control Board	To take appropriate decisions and vigilance	Statutes and provision of the law	Letters Circulars Telephone Press releases
Village head/leader	To facilitate mediation	The rights and privileges and provision in the law	Interpersonal Meetings
NGOs	To create awareness and educate fishers	The rights and privileges and provision in the law	Printed literature Circulars
Researchers	To study the problem in detail	Present situation and future outcome	Workshops, seminars and meetings
Media	To create awareness	On regulatory rules and regulations	Print and electronic

Table 3. Communication planning matrix on the conflicts between mechanized boat operators and traditional fishers in Site 2

Conflicts	Stakeholders	Objectives (Why?)	Content (How?)	Method
Mechanized boat venturing in 8km inshore waters	1.Traditional fishers 2.Mechanized boat owners 3.Government	1.To fish beyond 8km and 30m-depth zone 2.To stick to inshore waters and is united 3.To strictly impose exiting laws	1. Strictly follow the law and restrict beyond 8km zone 2. Be united and oppose violation of the law 3. Punish violators	1. To approach the boat operator association with written complaints 2. To inform the department about the various violations with written complaints 3. To strengthen unity through community gathering 4. To inform higher authorities about government negligence
Collection of prawn brooders	1. Traditional fishers 2. Mechanized boat owners 3. Hatchery operators	1.To increase catch 2. To refrain from treating brooders as target catch 3. To refrain from buying wild brooders	1. Collective effort to avoid brooder catch transportation by traditional boats 2. Not to target brooders 3. Use captive brooders	1. Community meetings 2. Stop transporting the live brooders 3. Government to encourage captive brooder production
Mesh-size regulation	1. Fishers 2. Government	1. To stop juvenile fishing 2. To pass relevant law	1. Self- awareness 2. Optimize mesh size for all gears	1. Community meetings, mass media 2. Research to optimize mesh size
Use of ring seines	1. Fishers	1. To pass relevant law	Self-awareness	Banning by the community, mass media
Discharge of effluents	1. Fishers 2. Industries 3. Government	1.To deplete catch 2. To treat the effluents 3. To monitor the ETPs	1. Filing complaints against the industries 2. Discharge of treated effluents 3. Strict monitoring	1. Protect rallies, written complaints 2. Meetings, mass media 3. Written complaints, penalties

*Mechanized boats encroaching into the area within the 8km zone earmarked for traditional fishers is one of the most important conflicts. Mechanized boats fishing in these areas, primarily to reduce cost of their operation, cash in on the rich resource of inshore waters. To help prevent this exploitation, the government should strictly enforce existing laws and punish law violators. Apart from this, written complaints should be sent to the boat operators associations, copy furnished to the State Department of Fisheries to inform them of such violations. There should also be calls for unity amongst community members and if there is any negligence on the part of the local government, stakeholders should inform higher officials on the matter.

*Collecting prawn brooders by traditional as well as mechanized fishers also causes conflicts in the study sites. To stop this conflict from recurring the people must be made aware of the conflict by organizing community meetings on the need to avoid brooders as target catch and also to avoid buying wild brooders. Collective effort should be then be made to avoid capture of brooders and to stop transport of live brooders. The government should also discourage captive brooder production.

* Fishers' indiscriminate use of mesh-size nets is also reason for conflicts. The object for preventing this practice is to stop juvenile fishing. The fishers themselves should be made aware of the ills of using these nets. Pertinent laws must also be enforced. Community meetings and mass media and can help prevent this conflict.

*Use of ring seines is another reason. Fishers should likewise be made aware of this problem through community meetings and through the use of mass media with information from stakeholders on the ways and means to avoid such conflict.

*Discharge of effluents from industries is certainly a source of conflicts. Pollutants caused by these discharges deplete fisheries resources, especially potential fish catch. It is imperative then to conduct strict monitoring on the discharge of treated effluents and also to lodge complaints against the industries guilty of discharging effluents. Mass rallies, written complaints, meetings, mass media and penalties were some of the means perceived by the stakeholders to keep the conflict in check.

4. Nature, Types and Causes of Conflict

The nature of fisheries conflicts was identified through the country planning workshop held in Visakhapatinam, Andrapradesh. Major conflicts identified in the study area were due to resource sharing and indiscriminate fishing practices of certain groups of fishers. Specifically, the conflicts were due to the use of small mesh-size nets, trawling in breeding grounds, and weak marketing structure. Intrusion of mechanized boats into the traditional fishers' area was one of the most common conflicts in the study site and part of adjoining fisheries. Pollution due to effluents and oil spills from different types industries naturally caused conflicts. Conflicts between promoters of tourism and traditional fishers also prevailed in the study sites.

Conflicts occurred when there were prohibitions on juvenile fishing, catching brooders, buying wild brooders, and on restricting mechanized boats to fish in inshore waters, amongst other prohibitions. Concerns on the death of living resources and decrease in catches due to oil spills and discharges of effluents led to conflicts. Tourism promoters and traditional fishers were in conflict as the latter argued that tourism led to displacement of fisheries from the coastal areas.

There had been discussion on the methods to avoid these conflicts. One such method, as suggested by the stakeholders, was to submit written complaints to the boat operators' association as well as to inform the state fisheries department. Another method suggested by the stakeholders was to restore peace through community gathering. Traditional fishers and mechanized groups should exert efforts together to avoid brooder catches. The stakeholders suggested that preventing these conflicts should be through community meeting, by stopping the transport of live brooders and with the government discouraging captive brooders. Fishers should be self-motivated and laws should be enforced properly. Holding community meetings, using mass media and conducting research were considered important in instituting preventive measures to avoid conflicts. The stakeholders likewise considered mass rallies, written complaints, and imposing penalties as some of viable methods to help avoid conflicts. There should be strict monitoring of the discharge of effluents.

The workshop consolidated the fisheries conflicts based on the following typologies:

Type I	Access to designated fishing zones
Type II	Poor enforcement
Type III	Gears and advance technology, and encroachment of fishing grounds for traditional fishers by commercial fishers
Type IV	Traditional fishers and prawn broodstock fishers
Type V	Lack of proper management and enforcement by authorities

* Typologies are based on Bennett (2002).

5. Attitudes towards Conflict Resolution

Attitudes vis-à-vis fisheries conflicts were identified according to the types of stakeholders, such as:

1. Primary stakeholders (who are directly related to fisheries sector, exploiting the resources)
2. Fisheries managers (who have the stake in the fisheries sector and responsible in managing fisheries conflicts)

The attitude statements were selected based on the five frames of references discussed during the international workshop held at Mitraniketan. Pilot testing was conducted to test the interview schedule for its validity and reliability. The tool was modified based on the inferences of the pilot survey. The data on the attitude on fisheries conflicts were analyzed with simple percent analysis

The Team selected two important topics for interventions based on the project objectives after conducting the attitude survey. Two community workshops were held at the sites, covering such topics as Marine Fisheries Regulation Acts (MFRA) and the FAO Code for Responsible Fisheries (CCRF). The MFRA of

Andrapradesh had important information that required dissemination but the diffusion process was rather slow, which was found to be one of the reasons for the incidence of fisheries conflicts. The contents of the MFRA discussed were:

1. Zoning of fishing areas for different groups of fishermen
2. Banning different illegal fishing practices
3. Registering of the boats
4. Utilizing institutional and other facilities for peace restoration

The second intervention was with the CCRF. The information dealt in detail included the following:

1. Overcapacity and overfishing issues
2. Ban on different illegal fishing practices
3. Importance of the Marine Protection Areas
4. Industrial pollution and its impact on fisheries
5. Destruction of mangroves and other breeding grounds
6. Use of chemicals and antibiotics in aquaculture
7. Impact of tourism on fisheries
8. Use of research data on fisheries
9. Save sea for your future generation

6. Communication plan

Identification of the best communication strategy for resolving conflicts in the project sites was analysed through community workshops. The best communication strategy for resolving conflicts was identified using the communication channel identified by the stakeholders themselves with the developed communication planning matrix**.**

The main communication channels identified in the national workshop were face-to-face meetings at the village level, informing through circulars, mass media, training programmes, workshops, written complaints, community assemblies,etc.

The various communication channels through which the conflicts were to be resolved were discussed and analysed through a participatory mode. The ranking method was used to collect information related to the best communication channels used, as reflected below:

Communication Channel	**Ranking**
Face-to-face meeting	3
Circulars	4
Mass media	5
Trianing programmes	2
Workshops	2
Written complaints	1
Community gathering	3

The communication channels suggested by the stakeholders were ranked based on their preference, with written complaints in the top rank. The reason for suggesting this channel could be due to their earlier successful attempts in combating conflicts by writing complaints to the relevant authorities.

The second most prioritized communication channel was training programmes and workshops. The experiences of the stakeholders in acquiring knowledge and skills through training and workshops would have been due to their participation in these activities. The third best communication channel identified by the stakeholders was community gathering. The other channels perceived by the stakeholders in the process were media and circulars.

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Annex 7.6

Communication and Public Awareness Strategies[9]

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Introduction

Fisheries conflicts are not just conflicts between people with different interests or different "stakes" in the fish resource. They are also conflicts of ideas, between different sets of knowledge, different interpretations of the world around us. Ideas, knowledge, interpretations—it is through communication that these are promoted, shared, exchanged and developed.

In the first day of the workshop, presenters used many words and phrases which had "communication" written all over them:

- developing a constituency of *informed stakeholders*
- need for *community information* and cooperation
- *convince* the fishers that entry must be limited
- build a constituency for *information and training*
- *local dialogue* to resolve conflicts
- *increase awareness*
- community *awareness* of what will happen if they do not participate in resource management and conservation
- support the movement to *protest*
- seeking *agreements*
- *dialogue* and negotiation

We cannot escape the fact that communication is an essential ingredient in the management of conflicts over fisheries, as it is in any arena of collective human endeavour. This is not to give communication a privileged position over other interventions and processes: communication can achieve very little if there is no political will to see conflicts managed effectively, or the economic incentives to contravene regulations and agreements are too high for some stakeholders to resist. However, it can play a part in generating political will, or in strengthening legal and social sanctions against infringement.

Communication between various stakeholders is important not only in fisheries conflict management, but also in promoting the uptake of research findings both within and outside the areas in which the research was conducted. Communication in this context means much more than sending messages to people: it includes dialogue and negotiation leading to changes in understanding and perceptions. It is a process that takes place through social and political structures as well as through institutions such as the mass media.

Communication is a normal, everyday human activity amongst people within a given social unit or network such as a family, a group of friends or a set of close work colleagues. But communication by and between organizations, particularly those with different interests, does not happen automatically, and when it does it is not necessarily constructive. Such communication needs to be planned.

[9] Paper presented at the Regional Consolidation Workshop on Fish Fights over Fish Rights: Managing conflicts and exit from the fisheries and security implications for South and Southeast Asia, 16-20 May 2005, IRRI Complex, Los Baños, Laguna, Philippines organized by the WorldFish Center.

Public awareness and communication

The “public” who we want to become more “aware” may be a relatively small set of people, or the whole population of a country depending on the issue at hand. They may be those directly involved in fisheries management, or those directly affected by a particular conflict. Where the objective is to build popular political support for action to address conflicts or to create new policy tools for natural resource management, the audience might encompass everyone in the country. This might involve getting the issue of conflicts on the “public interest” agenda in the mass media in such a way that politicians have to take notice. More generally, the aim could be to encourage citizens to act responsibly in a context of scarce resources and downward pressure on poor families livelihoods. In most cases, when we talk of “public awareness” we can identify specific categories within the population who we feel we need to share some ideas or information with.

But let’s be careful. Awareness is not something we can simply “spread”. We cannot “make people aware”. Awareness is something that grows within a person. So, although an essential aspect of communication is to make information available to people, to confront them with facts and interpretations of which they were not previously aware, “becoming aware” is a process that occurs through the interaction between new information and what the individual already knows, thinks, believes and wants to believe. So particularly in situations of conflict, where different interpretations of the same situation are creating and sustaining tension, we need to be working with a model of communication that allows for this interaction: for example, a model based on ideas of “convergence” (Rogers and Kincaid) rather than the familiar linear models in which a Source seeks to pass a Message to a Receiver. Our working model of communication should involve dialogue, the working out of solutions, processes, which take place over time through a series of interactions, the nature and extent that cannot be determined precisely beforehand but take shape as the process unfolds.

And what is the role of researchers and research institutes in these processes of communication? Part of our professional job is to inform the debate; to help to make sure that the parties to dialogue have available objective, robust information on the current state of knowledge—e.g. of the level of fish stocks, seasonal and long-term trends, ecological dynamics—in forms and through channels that are both physically and intellectually accessible. Being an objective “honest broker” of information is a big responsibility in situations where local stakeholders and the mass media often promote a highly emotive and partisan discourse. In a sense, the task of researchers is to provide other actors with the means to communicate effectively.

Communication strategies

A communication strategy belongs to someone, or an organization, or a group of people. It is specific to its sponsor. A strategy drawn up by a network of NGOs, for example, will look very different from one drawn up by a government Department of Fisheries. The former may include ideas about how to influence government policy, while the latter may focus on ensuring that the current regulations are widely known, and that all stakeholders understand that current rates of exploitation are unsustainable.

A communication strategy is also specific to the particular context in which it was drawn up. That context includes the channels of communication (face-to-face, mass media, organizations) that are accessible to and used by the various sets of people that one wants to engage in communication. It also includes the nature of conflicts that are being addressed, and the current knowledge, attitudes and behaviour of the people involved. This context specificity is the reason why, in the “Enabling better management of fisheries conflicts” project, separate communication strategies were prepared in each of the three partner countries—Bangladesh, Cambodia and India. At a project workshop early in the project we developed together a generic communication planning matrix, on the basis of which each national research team built a strategy and a communication action plan to fit its own national and institutional context.

There are four basic elements to a communication strategy:

- A set of communication partners—a term that is preferable to “audiences” because it makes clear the interactive nature of the process—with which the sponsors of the strategy recognize it is important to communicate with. In the context of fisheries conflicts, the communication partners might include fishers and their families, policy-makers (politicians, government officials), mass media (who can be seen as

both communication partners and channels for reaching various parts of “the public”), community-based organizations, NGOs, researchers, donors, local government and the private sector;

- One or more communication objectives attached to each of these partners, which can be expressed in terms of the changes (in knowledge, behaviour, attitudes towards the resource base and towards other stakeholders) that the sponsor would like to see as a result of the communication process;
- Ideas on what content and treatment of ideas within the communication process are likely to contribute to those objectives being achieved. Information is often the main ingredient here, but what information to include and how to present and treat needs careful thought. Stories of “real lives” can be very powerful ways of putting across information in a way that engages people’s emotions as well as intellect; they can be stories of individuals, families, communities and can be designed to highlight a problem, raise awareness of an issue, promote a solution or suggest a way forward. In other cases, it may be inappropriate to specify content, but rather outline a process—of dialogue, or negotiation. Appeals can be based on fear or rational argument, be negative or positive, involve humour, be one-sided or two-sided: which is most appropriate depends on the objectives and the characteristics of the communication partner or audience;
- Methods—what communication channels and processes does it make sense to use, in order to engage each of the identified partners with the specified content. For communicating with the general public, options include radio, television, newspapers, posters, meetings, local organizations. For policy-makers, short briefing papers and short face-to-face encounters may be effective. For NGOs, appropriate methods might include conferences, reports, engaging in joint activities. It is all a question of what makes sense in the particular context.

The elements of the strategy can be presented in a planning matrix, as in the papers presented yesterday by the Bangladesh and Indian research teams, which can then be used as a basis for prioritizing and scheduling communication activities. In Bangladesh, for example, priority activities have included workshops and meetings for interaction with CBOs and NGOs with the objective of enabling these partners to advocate policy change and effective implementation by local and central government. In India, written complaints were identified by fishers as an effective way of putting pressure on local administration to enforce regulations.

Conclusion

Developing a communication strategy requires good information about the context in which it will be implemented. This includes information about the potential communication partners—their knowledge, attitudes and current behaviour, and their access to, use of and perceptions of available communication channels and opportunities. As part of its commitment to “intelligent communication”, the “Enabling better management of fisheries conflicts” project has included research on the attitudes of different categories of fishers and other actors towards conflicts and their management. The data from this research has been used to prioritize objectives and content for communication activities, and also provides a baseline against which any changes in attitude over time can be assessed.

Annex 7.7

Communication Strategies for Fisheries Conflict Management:

Mak Sithirith , Vann Piseth and Te Sokkhoeun

Fisheries in Cambodia

- Cambodia has a wealth of natural resources, including inland fisheries.
- Tonle Sap Lake is rich in fisheries.
- Fish production:
  - Inland fisheries produce between 290,000-430,000 tons per year
  - Fish contributes 5-10% of the GDP

Revenue from fish exports

- Revenue generated from inland fisheries is estimated at US$150-US$200 million a year. The retailed value could be around US$500 million, and about US$30-50 million from the marine fish.
- The value of preserved, processed and exported fish, both inland and marine is estimated between $34, 300,000 and $40, 400,000.
- This abundance of aquatic resources is driven by the water from the Mekong River, which inundates the Mekong River catchments and the Tonle Sap Great Lake and increases the area of the lake from about 2,500sq km to over 12,500sq km.
- Four million people in Cambodia depend directly on inland fishing for their livelihoods and represent more than 50% of Cambodia's 13.5 million.
- Fish provides 40-90% of total protein intake in fishing villages. The annual per capita consumption is 13kg in upland areas and over 75kg around the Great Lake.
- Unlike many other countries where fish is a luxury affordable only to the rich, Cambodian fishery products are still accessible to even to the poorest sector of the country.
- Tonle Sap Lake is the biggest freshwater lake in Southeast Asia and is rich in fisheries. Around the lake there are fishing grounds allocated as fishing lots. The fishing lots have been in existence for more than 100 years now.
- The Great Lake/Tonle Sap fish catch accounts for 60% of inland fish production.
- In 2000, RGC reformed fisheries sector and released up to 56% of the existing lot areas for the purposes of community management.

Fishing Categories in Cambodia

Categories	Condition of Accessibility	Duration of Fishing Operations	Fishing Ground
Fishing lots	Leased out through an auction Leased as a research fishing lot	Only in the open fishing season : - 1 October to 31 May for the fishing grounds located north of Phnom Penh- 1 November to 30 June for the fishing grounds located south of Phnom Penh	Inside the fishing lot area but outside the area that is set aside for open access
Middle Scale	Through a license for marine fisheries	Only in the open fishing season : - 1 October to 31 May for the fishing grounds located north of Phnom Penh- 1 November to 30 June for the fishing grounds located south of Phnom Penh	Public fisheries domain (The area outside the fishing lots, fish sanctuaries, and the protected inundated forest zones)
Family scale	Free	Whole year round.	Everywhere except inside the fishing lot during the open season, and inside the conservation area

Main Stakeholders and Their Interests

Main Stakeholders	Resource Base	Function	Interests
Fisheries Department	All fishing grounds	Manage the fisheries resource	• Revenue • Management • Research
Lot owner, Lease/sub-leaseholders	• The area of the fishing lot	• Concessionaire, private fishing right holders • Large-scale fishing operations	• Maximize income: - Fish exploitation - Leasing out some areas - Selling fishing rights
Military	• Common access areas	• Employees of lot owner: protection services • Control some open access • De facto leaseholders	• Revenue from: - Selling open access areas - Selling fishing rights - Check points in and outside the fishing lot
Local authorities	• Common access area	• Selling open access area outside the fishing lot	• Income from selling open access
Villagers	• Common access areas • Agriculture • Common property resources (CPR)	• Subsistence fishing: - Own family labor - Small scale fishing gear	• Food security • Income generation and subsistence from: CPR (fishing, farming, firewood, vegetable and wild animal gathering)

Main Sources of Conflicts from Resource Use amongst Stakeholders

Sources of Conflicts	Parties Involved	Trade-off	Effects on Fisheries
Sale of common access areas	Lot owners, military, community	• Benefit for lot owners and military • Reduced income of the community	• Intensive fishing activities taking place • More fish caught
Extending the fishing lot boundary	Lot owners, community	• Benefit for lot owner and military • Reduced income of the community	• More flooded forest protected • More fish caught
Closing water way	Lot owners, community	• Improve fishing operation by lot owners • Disturb socioeconomic aspects of community	• More fish caught
Poaching inside the fishing lot	Individual fishermen , lot owners	• Short-term benefit for the individual fishermen • Reduced catch of lot owners	• Illegal fishing gears used • More fish and habitat destroyed
Agriculture activities inside the fishing lot	Community, lot owners	• Short-term benefits of the community • Reduced fish productivity	• More flooded forest area converted as agriculture land

Case Studied Areas

Anlong Raing

Socioeconomic profile of the fisheries involved

- Anlong Raing is a floating village in Kg. Por Commune, Krakor District located in the west shore of the Tonle Sap lake.
- At present, Anglong Raing is home to 93 families with a total population of 431(202 males and 229 females), of which 36 families are Vietnamese consist of 186 people (100 males and 86 females).
- All villagers are small-scale fishers.
- Villagers in Anglong Raing have no farmland. Fishing is their primary occupation

Infrastructure facilities

- This is a remote village No electricity in such a flooded forest
- Traveling by boat

Socioeconomic constraints

- Ninety-three families have only one occupation, affected by declining fisheries.

Institutional and legal framework

- DoF and PoF are enforcers at the local level

Tamou Leu

Socioeconomic profile of the fisheries involved

- The Community Fisheries Committee of Tamol Leu, of 270 families, were established on 28 July 2002 with the help of the Australian Catholic Relief (ACR) in collaboration with the Provincial Fisheries Office of Kg. Chhnang, local authorities, and their fishers.
- Fishers comprise 80% of the villagers.
- All villagers have rice farmlands during dry season and catch fish in the stream, pond, etc.
- Canal/Dike Committee versus Community Fisheries
- Illegal fishers versus Community Fisheries
- Lotus fields/Plantations owners versus Community Fisheries
- Fishing ground conflicts

Fisheries Conflicts in the Study Areas

Types of conflicts perceived by fishers

- Utilization of the natural resources
- Technology (illegal fishing gears)
- Institutions involved in fisheries management
- Environmental issue

Anlong Raing village

- Fishing ground conflicts
- Outside fishers versus Community Fisheries
- Fishing lot operation versus Community Fisheries
- Illegal fishers versus Community Fisheries

Tamou Leu village

- Canal/dike committee vs Community Fisheries
- Illegal fisher vs Community Fisheries
- Lotus fields/ plantations ownership vs Community Fisheries
- Fishing ground conflict

Stakeholders involved in fisheries conflicts

- Police, fisheries officers, etc.
- Authorities
- NGOs
- Fishers, both rich and poor
- Fishers (insiders and outsiders)
- Fishing lot owners
- Canal/dike committee
- Farmers (lotus planters)
- Flooded forest cutters
- Fisheries officers, relevant government institutions

Highlights of the Communication Strategies for Fisheries Conflict Management from the International Workshop

Who?	Why?	What?	How?
NGOs	• Help to provide training and technical support and advice • Help to push for regulations/laws related to fishery passed. • Advocating for local community	• The concepts of Community Fishers not yet clearly understood • Community Fisheries not yet recognized fully by National Fisheries Department	• Search for NGOs operating in the fishery to help on the fisheries • Through mass media • Networking
Family Fishers	• Reduce illegal fishing activities • Solicit understanding on the importance of community fisheries	• Zoning fishing ground • Limit the use of fishing tools • Why illegal fishing gears • Why forest cutting, burning, and hunting • Population increasing • Decreasing natural resources • Establishment of Community Fishers	• Workshops at grass-roots, provincial and national level • Leaflets/brochures/flyers
Gov't officials	• Be more accountable and responsible • Enact laws and regulations, and enforce existing ones, supportive of community fishers and long-term sustainability	• Need for laws/ regulations • Need to implement the law more effectively	• Workshop at provincial and national levels • Radio/ TV and newspapers • NGO support
Media	• Disseminate information widely that encourages conflict resolution and hold government accountable to the problems	• Fishery laws • Importance of natural resources • "Success stories" in conflict management • Examples of illegal activities	• Direct contact • Through national and international NGOs • Parliamentary members' meeting • Relevant institutions

Lessons Learned

- More than 60% of local people in Pursat Province and Kampong Chhnang have to radio.
- Access to TV has increased in the communities.
- Use of call phone has increased in urban and rural areas. There was this case where a member of the local community made a phone call to a radio station to call government attention on the bad road in the village; a few months later, the Prime Minister sent a mission to study the problem until the rehabilitation of the road.
- Fisheries reform in 2000 was made due to increased media coverage on fisheries issues provided by local people, NGOs and local government.
- NGOs organized provincial meetings to provide a forum for local authorities, government officials, local community and NGOs to meet and discuss fisheries issues.
- The fisheries laws are in place, but enforcement is weak.
- The fisheries reform happened due to political interests, not out of well-planned policies.
- Lack of political will led to poor reform in fisheries and put the CF in a dilemma. Some government officials had a conflict of interest with CF, were unwilling to institute full reform, and often blamed the CF for not doing a good job.
- Some government officials were behind illegal fishers and even confronted the communities.

Conclusions and Recommendations

- Develop a policy for CF and other policies for improving fisheries management
- Provide more forums to fisheries stakeholders through meetings, workshops and seminars at the provincial and national levels.
- Promote fisheries issues in media, newspapers and other communication means.
- Strengthen law enforcement in fisheries management to prevent fisheries conflicts.
- Share information on fisheries conflict with stakeholders in fisheries.