

Evaluation and Uptake Promotion of Data Collection Guidelines for Co-Managed Fisheries (R8462).

Draft Evaluation Report with Fourth Fisheries Project, Bangladesh



**Prepared by Dr. Parvin Sultana
Consultant**

In association with

**Masood Siddique
Department of Fisheries
and
Zahirul Islam
Fourth Fisheries Project**

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1. Background

1.1 Fourth Fisheries Project

The Fourth Fisheries Project (FFP) is currently the largest fisheries project of the Government of Bangladesh. It started during 1999-2000 and is scheduled to terminate in 2006. The Project is being implemented by the Department of Fisheries, Ministry of Fisheries and Livestock, with assistance from the Bangladesh Water Development Board and the Local Government Engineering Department.

The FFP receives financial support from the Government of Bangladesh, the International Development Agency of the World Bank, the Department for International Development (DFID) of the United Kingdom, and the Global Environmental Facility (GEF).

The Project's aims are higher fish and shrimp production, better nutrition, and poverty alleviation. The Project has five major components:

- i. Improving community-based inland open-water fisheries management.
- ii. Developing and applying an effective strategy for freshwater aquaculture extension and training.
- iii. Developing environmentally friendly smallholder shrimp production and improving the sustainability of shrimp fry collection.
- iv. Studying key issues in aquatic resource development and management. Developing a socially feasible and ecologically sound management plan for the conservation of hilsa fisheries.
- v. Strengthening the institutional capacity of DoF to manage and support the fisheries sector.

The inland capture fisheries component is the largest and the most challenging of the Project's components. It included putting in place a system for community-based fisheries management (CBFM) through local committees at village and site levels in 50-odd water bodies, NGOs assist in social mobilization and day-to-day support to the communities; activities include setting up fish sanctuaries, restoring habitats at some sites by re-excavating canals and beels to mitigate the effects of siltation, and organising supply of fingerlings of three varieties of carp (catla, rohu and mrigal) and management by stocking those fingerlings in about 12 water bodies, and monitoring the entire spectrum of activities.

The project started activities in 68 water bodies, 49 water bodies are currently active in 50 upazilas under 31 districts.

Villages dependent on fishing in the selected sites were identified, and Fisheries Sub Committees (FSC) were formed in each village consisting of fishers and other stakeholders (initially open to all as village development committees, later changed with aim of 80% of members being fisher representatives). Fisheries Management Committees (FMC) were formed comprising representatives of all FSCs in each site. The FMC is the main organisation of fishers and users responsible for community based management of the water body. Each FMC has a Memorandum of

Understanding with the Senior Upazila Fisheries Officer (SUFO)/Upazila Fisheries Officer (UFO) covering its access and roles and responsibilities of both parties, and has a constitution and by-laws that it abides by, and is registered with social welfare or cooperatives department (most with social welfare). Each FMC with the agreed consensus of other stakeholders implements appropriate management measures in the water body.

Each FMC prepares each year a Fisheries Management Plan (FMP) for that water body. The local DoF office and the partner NGO assist FMC in this regard. The FMP details the management measures and access rules for the resource with the aim of ensuring high but sustainable production. Management measures adopted in the water bodies are: fish sanctuaries (all sites), gear restrictions (all sites), closed seasons (most sites), stocking of carp fingerlings, restoration of fish habitat by excavation.

The primary beneficiaries of this component are the fishers: professional fishers (full-time and part-time), and many subsistence fishers. Most of the fishers own less than 0.5 acres (0.2 ha) of land. The original village based community wide institutions tended to be dominated by local better off and influential people. The approach was revised with the aim that in all water bodies under this project appropriate decisions would be made by fishers and that the organisations would be accountable to the fishers and not exploit them. The FMCs in all the sites have fishers in their membership.

Fishers mostly benefit according to effort and the gears they own/use. In general, restrictions on harmful gears and short closed seasons bring some short-term losses to some fishers but this is compensated for by higher catches later or with other gears. In a few sites the FMC limits and coordinates fishing access, for example by seine nets or brush piles, with the aim of sharing access and benefits more equally. In the smaller stocked waterbodies the FMC coordinate harvesting of fish and share the returns equally among the participants.

Table 1: Profile of the five sites where data sharing for co-management is being piloted.

Site (waterbody name):	Tangaon River	Masankura Mora River	BSKB-Kalia	Old Brahmaputra	Borobila Beel
Background data					
District	Thakurgaon	Rangpur	Khulna	Mymensingh	Rangpur
Upazila	Pirgonj	Pirgacha	Digolia	Trishal	Pirganj
NGO	BRAC	ESDO	BRAC	BRAC	GSK
Type of waterbody	Well managed river with sanctuary	Small closed waterbody with stocking by community	Large seasonal beel with sanctuary	Open river with sanctuary	Beel with excavation, sanctuary and stocking
Fisheries Management Committee (FMC) name	Tangon Nadi Matsya Babosthapana Unnayan Sangathon	Masankura Matshya Babastaphara Samaj Unnayan Sangstha	Matsyajibi Kallan Sommittee BSKB Beel Gajirhat Digolia, Khulna	Old Brahmaputra River Fishery Management Welfare Society	Borobila Matsha Babosthapona Samity
FMC chairman	Mr Fazle Haque	Sri Prema Chandra Das	Md Tuku Mollah	Md Ahamed Ali Sarder	Sree Bipul Ch. Sarker
If stocked in 2001-2004 (Y, N)	No stocking	Fishers stocked	Stocked by the project in 2001-2003 but no stocking in 2004	No stocking	Stocked by the project
No. Sanctuaries	3	1	2	2	2
Sanctuary area (ha)	16	1.6	8	100	30
Water area (ha) max	105	9	1500	500	700
Water area (ha) min	70	4	400	50	100
Jalmohal area (ha)	105	9	37.19	100	21.97
Lease in current year (Tk) if any	0	19,520	10,000	0	232,929
If current lease paid (if any)	Na	Yes	No	na	No
NGO start date	01-Jan-01	15-Jan-02	01-Jan-01	01-Jan-01	12-Jan-01
Handover date DC to DOF	24-May-01	23-Jul-02	04-Sep-02	20-Nov-01	24-Jun-02
Expiry date of present access right	24-May-11	as long as MOL-MOFL MOU is valid	March 2004, lease paid for 2004	No official document on site, over for 10 years	23-Jun-11
Date of DOF-FMC MOU	02/09/2001 [30 Dec 04]	19-Oct-02	14-Aug-02	08/12/2001, 14 Apr 05	4 July 2001
Number of villages involved	8	2	17	7	22
Number of professional fisher households	75	126	125	85	153
Number of occasional fisher households	58	10	226	58	184

Site (waterbody name):	Tangaon River	Masankura Mora River	BSKB-Kalia	Old Brahmaputra	Borobila Beel
Number of households that fish for an income	133	136	351	143	337
Number of subsistence fishers	37	9	104	54	20
Number of kata owned by fishers	0	1	0	0	2
Number of kata owned by non-fishers	0	0	0	0 (before 40)	0
Number of kuas	0	0	153	0	0
Number of Fishery Sub Committees (FSC)	0 [no FSCs, all fishers are members of GB and elect EC = FMC]	6	14	7 (reformed from VDC in June'04)	14
Resource management					
Number of fishing rules in Fishery Management Plan (FMP) and operational in present year	7	5	6	6	6 but 3 complied
FMP compliance (rule breaking) by people of area	Good	Good	Good	Average - sanctuary functioning, but some banned gears still used at night	Poor - Some fishers don't comply with rules for e.g. use of current jal, nonpayment of gear fees, catch fish at sanctuary proper
FMP compliance (rule breaking) by outsiders	Good (as participants are mainly from outside "project" villages)	Good	Good	Good	Average, outsider fishers invited in to fish sometimes by non-FMC influentials
Conflict of FMC with insiders from project villages	Previous with elites who control with katas at end of leasing '96, sanctuary poisoned '03, now solved	None	1 (someone on behalf of madrasa controlled a khal excluding fishers)	None	several, internal over control of FMC, also over gear fee payment
Conflict of FMC with outsiders not from project villages	None	None	None	None	No conflict
Conflicts and threats overcome up to now	2, resolved with local admin help	None	1 (village makes payment to FMC for fishing in khal)	None	1, Conflicts for office bearer posts resolved through election

Site (waterbody name):	Tangaon River	Masankura Mora River	BSKB-Kalia	Old Brahmaputra	Borobila Beel
Pro-poor/ targeting					
% of FSC members who are professional or occasional fisher	na, but 70% of GB are fishers	84	82%	43% (in 2 fisher villages 100%)	90
Number of key FMC office bearers who are professional fishers	All	3	2	2	2
Regularity of FSC meetings	GB regular	regular	Regularly	regular	Regular (some irregular)
AGM last held (within last 12 months)	30-Mar-05	Feb-05	05-May-05	28-Jun-04	08-Aug-04
FMC registered	Y, Jun 04 and bylaw changes approved	Y changed and bylaws approved, but no copy in PMU file	Y 2004, not clear if revised, some changes still	Yes	Y. with SSD on 2.2.2005, no copy with PMU
Governance					
FMC includes elites or ex-lessee?	N	N	No	Yes (2 off bearers fishers, non-fisher president donated land for guard shed, but controls sand extraction)	N, but 2 key posts held by long-term lessees (fishing family) with good political contacts
Date office bearers last changed	18-Jun-04	Oct-03	15-Dec-04	30-Jan-05	18-Sep-04
How office bearers were decided	by all general members show of hands	by all general members lining up behind candidates	secret ballot by FMC members	general participants selected them	secret ballot by 355 fishers for each position 2 candidates.
Financial management					
Financial plan exists	Yes	Yes	Yes	Yes	Yes
Is this year's financial plan/ budget realistic/appropriate (sufficient but not excess for reasonable activities)	Good	Good	Poor- aims to collect too much, has significant bank balance, may have changed	Good	P, not enough for plan, previous malpractice
Quality of accounts and records	G	Av some fund gap	G	G (now by FMC)	P - by FMC now, fee collection not transparent

1.2 Stakeholders

The key stakeholders and beneficiaries involved in the piloting, their interest, abilities, numbers and types are presented in Table 2.

Table 2: Details of the stakeholders and beneficiaries involved in the data sharing activities.

Waterbodies	Stakeholders and beneficiaries	Abilities	Number	Types
Old Brahmaputra, Trisal, Mymensingh	District Fisheries Officer (DFO) Mymensingh, Statistical Officer, Mymensingh, Senior Upazila Fisheries Officer(SUFO), Assistant Fisheries Officer (AFO) and Field Assistants (FA) Trishal	Local policy implementation, conflict resolution, supervision, data analysis Field monitoring, data collection	6	District level fishery administrator (Government) Local administrator (Government)
	Upazila Nirbahi Officer (UNO)	Local policy implementation, conflict resolution		
	Deputy Assistant Director (DAD), Open water Fisheries section, Department of Fisheries, Dhaka	Influence in open water fisheries management	1	Central policy influencer (Government)
	Fisheries Management Specialist (FMS) and Community Management Specialist (CMP) FFP	Fourth Fisheries project inland fisheries project management component work designing and monitoring	2	Project personnel (advising on DOF strategy)
	Community (FMC and fishers)	Fisheries management, monitoring of own and group fishing	16	Fishers and office bearers of Fisheries Management Committee
	NGO staff (BRAC)	Implementation and facilitation	3	Coordinator and field assistants
Tangon River, Pirganj, Thakurgaon	UFO	Local policy implementation, conflict resolution	4	
	AFO and FA	Field monitoring, data collection		
	Fisheries Management Specialist (FMS) and Community Management Specialist (CMP) FFP	Fourth Fisheries Project inland fisheries management component work designing and monitoring	2	Project personnel
	Community	Fisheries management, monitoring of own and group fishing	13	Fishers and office bearers of Fisheries Management Committee
	NGO staff (BRAC)	Implementation and facilitation	3	Coordinator and field assistants
BKSB-Kalia, Narail	Upazila Fisheries Officer(UFO),	Local policy implementation, conflict	3	Local Fishery Administrator

Waterbodies	Stakeholders and beneficiaries	Abilities	Number	Types
	AFO and FA Trishal	resolution, supervision, data analysis Field monitoring, data collection		Field monitor
	DAD, Open water Fisheries section, Department of Fisheries, Dhaka	Influence in open water fisheries management	1	As before
	Community Management Specialist FFP	Fourth Fisheries project inland fisheries project management component work designing	1	As before
	Community	Fisheries management, monitoring of own and group fishing	16	Fishes and office bearers of Fisheries Management Committee
	NGO staff (BRAC)	Implementation and facilitation	4	Area manager, Coordinator and field assistants
Masankura Mora Nadi-Pirgacha, Rangpur	SUFO	Local policy implementation, conflict resolution, supervision, data analysis Field monitoring, data collection	3	Local Fishery Administrator
	AFO and FA			Field monitor
	Fisheries Management Specialist(FMS)	Fourth Fisheries project inland fisheries project management component work designing	1	As before
	Community	Fisheries management, monitoring of own and group fishing	15	Fishers and office bearers of Fisheries Management Committee
	NGO staff ()	Implementation and facilitation	3	Area manager, Coordinator and field assistants
Bobobila - Pirganj, Rangpur	Upazila Fisheries Officer(UFO),	Local policy implementation, conflict resolution, supervision, data analysis Field monitoring, data collection	3	Local Fishery Administrator
	AFO and FA			Field monitor
	Fisheries Management Specialist(FMS)	Fourth Fisheries project inland fisheries project management component work designing	1	As before
	Community	Fisheries management, monitoring of own and group fishing	18	Fishers and office bearers of Fisheries Management Committee
	NGO staff (GSK)	Implementation and facilitation	3	Area manager, Coordinator and field assistants

Table 3: The current status and content of local management plans

Content of local management plan	Current status of local management plan				
	Tangaon River	Masankura Mora River	BSKB-Kalia	Old Brahmaputra	Borobila Beel
Establish/rehabilitate sanctuary	Planned & done	Planned & done	New sanctuaries planned but not done	On-going	Planned & done
Repairing signboard	Not planned	Not planned	Not planned	Not done	Not planned
Habitat restoration	Not planned	Not planned	Planned but not done	Not planned	Not planned
Catch monitoring	By DoF, fishers in their own note book	By DoF, fishers in the cash register	Planned but not done	By DoF, fishers in the cash register	By DoF, fishers in the cash register
Fishing effort control	Planned & done	Planned & done	Planned & done	Planned & done	Planned & done
Increased income	Fully achieved	Partially achieved	Partially achieved	Fully achieved	Partially achieved
Closed season(3 months-mid April-mid July)	Planned & done	Planned & done	Planned & done	Yes	Planned & done
Fix and collect gear fees	Planned & done	Not planned	Not planned	Not applicable	Not planned
Fix production target	Planned & on-going	Planned but not done	Not planned	Not planned	Planned but not done
Building brush piles	Not planned	Planned & done	Not planned	Not planned	Planned but not done
Boat repairing	Not planned	Planned but not done	Not planned	Planned but not done	Planned but not done
Fingerling stocking	Not planned	Planned but not done	Not planned	Planned but not done	Planned but not done
Fencing the open area	Not planned	Planned & done	Not planned	Not planned	Planned & done
Purchase net	Not planned	Planned but not done	Not planned	Not planned	
Preparing list of fishers	Planned & done	Planned & done	Planned & done	Planned & done	Planned & done
Establishment of nursery	Not planned	Not planned	Not planned	Not planned	Planned & done
Lease payment	Not applicable	Planned & done	Planned but not done	Not applicable	Planned but not done
Alternate livelihoods	Not planned but needed	Not planned	Not planned but needed	Not planned	Not planned
Annual Budget	Planned & done	Planned & done	Planned & done	Planned & done	Planned & done

1.3 Previous or existing information systems to support the project or local management activities.

- For FFP Catch Assessment Surveys the Field Assistant and Assistant Fisheries Officer of DoF collect data from the field every month for 3 days. The number of fishers are fixed but rotate among the existing fishers. The parameters used were catch/person, weight by species, number and type of gear used. The DoF staff are also expected to do market survey and record fish data.
- Collected data are sent to headquarters for further processing. The headquarters use the data for various policy making purposes.

- Feedback of the data and its meaning/use never goes back to the local level officers or to the fishers/beneficiaries or FMCs.
- Fishers keep their own records officially (for group fishing catch by species and total income are recoded in the FMC cash register) or unofficially (in note books for their own use). The unofficial catch data were never compiled by the fishers or the NGO.
- During monthly meeting fishers/FMC and DoF officials discuss about issues.
- Monthly meeting minutes are kept and the progress is followed up in the next meeting.
- Fishers can inform others about any new species or species in abundance from their own record.

1.4. Expected/desired outcome of applying the Field Guide

To develop a monitoring programme to help assess the impacts and performance of community-based management and to have the local users provide data rather than rely on NGO staff (or as of 2005 on DOF regular staff), all the four information categories were evaluated against the main stakeholder groups (Table 4).

Table 4: The four information categories and stakeholders

Sl.No	Category of information	Outcomes	
		Department of Fisheries	Community
1	Information to formulate and evaluate the national fisheries policy and development plans including information to evaluate the success/performance of <i>the co-management policy itself</i>	Catch/production data for national statistics and to demonstrate its success.	Cross checking of the information collected by the Department and Fisheries for further refinement of policies (such as fixing lease value on the basis of biological productivity, to find out the reasons for increase or decrease of fish production in certain waterbodies and adopt corrective measures (technical help from DoF).
2	Information to formulate or help refine <i>local</i> management plans	Impact of fish enhancement methods planned by the community. Breeding period of different fish species, breeding sites (closed season and area restriction)	Catch /Production data for waterbody status, management implications, cost effectiveness of stocking or management, information on new species
3	Information to implement management plans including enforcing rules and regulations, coordinating management activities and monitoring and resolving conflicts.	Number of conflict resolution meetings between fishers and DoF.	Low/no poaching/rule breaking cases (insiders, outsiders, fishers/non-fishers), increased production, income, high social cohesion.
4	Information to evaluate local management plans	Catch/production	

2. Field Testing Activities Undertaken

Testing of data sharing guidelines and piloting of data sharing in the openwater component of the Fourth Fisheries Project involved: selecting five waterbodies and their associated Fisheries Management Committees (FMC) to work with in the piloting. They agreed with the project management unit and represent the different types of waterbody: river, large open beel, and smaller semi-closed waterbody. Sites from among the 30 or so with well established FMCs were selected. To simplify logistics three were in the north-west, one in north central region and one in the south-west. Key parts of the guidelines were used for planning workshops in each site that involved the different stakeholders (management committee, general professional fishers, subsistence fishers, local DOF staff) to identify data needs and potential uses, and to agree on collection systems and sharing that the community and DOF will follow. Then after about 2-3 months of the community operating their new data collection system wherever they needed, or where there is ongoing community monitoring/data collection, new and/or previous data will be shared between local DOF staff and the research team, which will review the results and the method, and then the fishing community and DOF will respectively share findings and methods through local follow up workshops with the fisher community, FMC and DOF. A report will be made on the findings and method, and the outcomes from the five sites discussed in a seminar with relevant DOF staff.

It may be noted that the technical assistance and NGO support components of the FFP are winding down but will continue to June 2005, and in a reduced form to June 2006, while co-management agreements between MOL, DOF and FMCs will continue on average for a further 5 years, before being subject to renewal. Already data collection (catch assessment survey) has been taken up as a responsibility of regular DOF staff rather than project paid staff, but staff resources are limited and the issue of participatory monitoring and use for management has been raised in project planning.

The research project's funding covered researcher time to design the participatory process, conduct workshops and review and report on results; assistants to help with facilitating workshops, costs of holding workshops, local travel and subsistence. The FFP so far as possible helped in contacting the communities and providing lists of participants, helping to arrange venues, etc.; and ensured the participation of relevant DOF staff. The FFP will also ensure access to past data on the fishery etc from the pilot sites for sharing and comparisons.

Local workshops were held at each waterbody to review management activities and information needs of FMC and then match interests/needs with those of DOF. Having agreed on the indicators and data needs, then an agreement on the collection system and processing and feedback was sought.

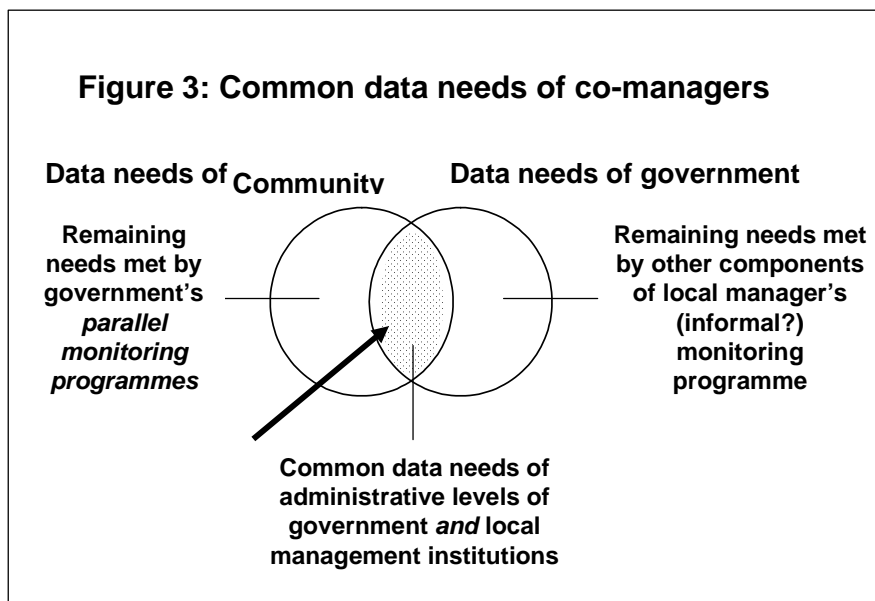
Participants in each site workshop:

- 15-18 members of FMC and FSCs representing all main fishing villages involved in managing the site.

- concerned NGO team leader.
- SUFO/UFO, AFO, FA of DOF.
- District Survey Officer of DOF.
- Representatives of FFP-PMU, FRSS, FFP-TA.

After the planning workshops the FMC and local DOF staff will carry out the agreed monitoring. There will be a feed back review in the field and then a small workshop in Dhaka to assess the experience and make any recommendations, probably in August 2005. This will be decided after discussion with DOF.

The participants, specially the FMC members were introduced with the word “Data” with an example of body temperature recording for identifying fever type and treatment required. The difference between “data” and “information” was also explained with examples. The need for data collection was discussed widely and which data for what need was also discussed in the forum. The participants, FMC members and DoF officials analysed the fishery management plan for the waterbody separately and the objectives/purpose for each activity to implement the plan were elaborated. Indicators for success for each activity were also set by the participants. The data needed for management decisions on the waterbody were explained by the participant FMC members and DoF officers separately according to their annual plan. The data needed was discussed among themselves and the idea in the following figure was used to find out the common and individual data needs.



The common and individual needs were separated and facilitator along with the FMC and DoF participants found out which of the data items were already being collected, how they are collecting data, and how they are using and sharing the existing data. It was discussed in the workshop by the participants, how these common data collection process are being implemented and pros and con of those methods. It was also discussed how those data collection methods could be improved. A proposed eight-stage process for designing data collection and sharing systems for co-

managed fisheries was also discussed and the participants could identify which stage they are in and where to start the workshop discussion. They also analysed the stage(s) they already crossed and how best where those for preparation of management plan and to implement it. The workshop discussed a coordinated collection method of common data to all the stakeholders, but it was decided that different stakeholders can collect data in their own way but could share and exchange to triangulate.

The following figures were taken from the draft field guide and were used to guide the workshops. The sections were useful in explaining the need for data and sharing.

Fig 2. A proposed eight-stage process for designing data collection and sharing systems for co-managed fisheries.

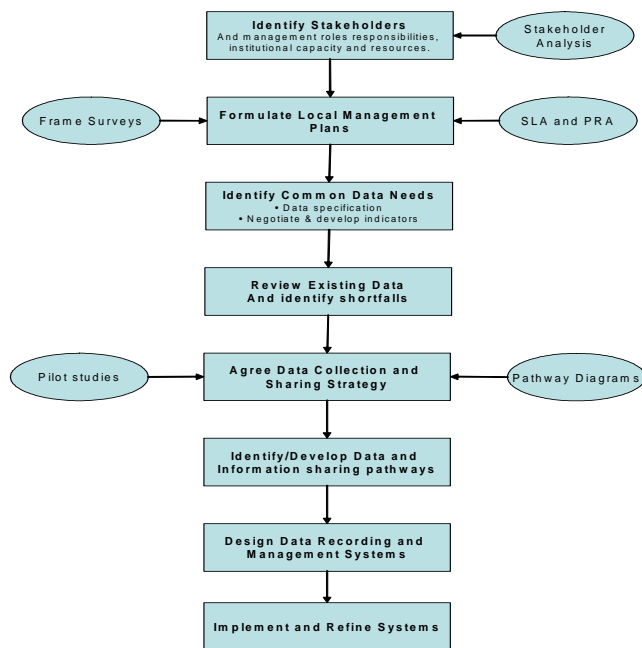


Fig 3 Typical roles of co-managers and intermediary organisations

Key Co-Management Activities	Management roles	Who?		
		Government	Facilitators	FMCs
Formulate / refine national fisheries policy & development plans	Formulate fisheries policy and development plans.	√		
	Allocate financial and human resources to policy and development plans	√		
	Ensure fisheries are adequately valued and protected within the multi-sectoral planning and funding environment.	√	√	√
	Formulate co-management policy	√		
Formulating <i>local</i> management plans	Set objectives		√	√
	Ensure objectives are consistent with national policy and development goals	√	√	
	Agree rules and regulations/ decide upon interventions eg stocking.	√	√	√
	Ensure rules and regulations are consistent with national legislation	√	√	
	Provide technical advice and information.	√	√	
Implementing <i>local</i> management plans	Provide local knowledge and advice			√
	Enforce rules and regulations including access restrictions and licensing agreements	√		√
	Monitor local management plan performance against objectives		√	√
	Share local knowledge and experiences			√
	Facilitate the sharing of local knowledge and experiences	√	√	
	Monitor fisheries policy and development plan performance	√	√	√
	Ensure that any participatory monitoring undertaken by LMI for evaluating the performance of fisheries policy and development plans meet national, regional, or international obligations and standards.	√	√	
	Monitor the performance of co-management policy (process and outcomes)	√	√	√
	Monitor local management activities and coordinate local plans	√	√	
Evaluating <i>local</i> management plans	Monitor and resolve conflicts	√	√	√
	Evaluate local management plan performance against agreed objectives	√	√	√
Evaluating national fisheries policy and development plans	Information sharing and among unit evaluation and learning	√	√	√
	Evaluate fisheries policy and development plan performance	√	√	
	Evaluate co-management policy performance (how many units, conflict...)	√	√	

Sessions covered:

- Review management plan, explain each activity in the plan and state reasons for each activity
- Indicators for success of each activity
- Any data collection needed so far for each activity? If so, what are those?
- Fisheries management policy - any data contribution towards it?
- DoF workplan- regular data collection, why and what?
- What other issues needed to be covered?
- What information needed for those?
- How to collect data?
- What indicators needed?
- Who will be responsible: DoF side, community side?
- When shall we start and how?
- Who is handling data and how? How they are processed?
- Is there any sharing of data yet? If yes, what data is shared and what is the process of sharing? If not what data/findings needed to be shared? Process of sharing.
- How to collate data and share?
- When? How frequently. Pathways for sharing and utilization of data.
- Reporting.

Follow-up

The government and the FMCs will collect data what they think are needed and decided in the workshops. NGOs will follow-up with the FMCs and will send the data. DoF will also report on the data collection and sharing in August. In the rivers and stocked beels fishing has not yet started because of observation of closed season. In the seasonal beels water did not enter in the beel yet and fishing will start from July.

3. Results/Findings

3.1 Piloting Site 1: Old Brahmaputra, Trisal under Fourth Fisheries Project

Data sharing workshop held on 3 April 2005 with: DFO Mymensingh, SUFO, AFO and FA Trishal, ADA FFP Dhaka, Fisheries Management Specialist and Community Management Specialist FFP, 16 Fishers including office bearers of Fisheries Management Committee
Facilitated by Dr Parvin Sultana

Discussion on fisheries management activities and plans, and issues for information needs in separate stakeholder groups raised the following points:

Fishers' data needs/interests:

- ✚ Quantity of fish caught
- ✚ Area of the waterbody in monsoon
- ✚ Best breeding places for different species - when and where different species breed
- ✚ Use of different gears in different locations
- ✚ Number of rule breaking incidences
- ✚ Socio-economic condition of the fishers-categorise fishers
- ✚ List of fishers who need support from the NGOs during close seasons
- ✚ Data sharing

FMC data need

- ✚ number of fishers active
- ✚ diversity of fish species and which species are common
- ✚ catch rates of different gears
- ✚ is sanctuary protecting fish and is it silting up
- ✚ which months are appropriate to allow which gears
- ✚ extent current jal (banned gear) are used
- ✚ does closed season protect egg bearing fish
- ✚ if carp smaller than 9 inches are being caught
- ✚ if FMC financial records are ok
- ✚ say that they can/plan to collect complete data on catch by species from ber jal (seine net) which amounts to 50% of fishing effort in this river, as all the ber jal teams under the FMC sell fish through FMC-aratdar link.

DOF officers data need

- + Census data on fishers
- + Compliance with rules/rule breaking
- + If fishers are disbenefited by closed season
- + Already monitor since December 2004 catches and effort on 2 days per month for a sample of gears but not used so far
- + Spot selection for sanctuary- water level, security, no. of fishers living near the sanctuary
- + Fisheries law -Open access : level of dis-benefit to the fishers, level of pressure on the resources
- + Coordination- level and frequency, impact of coordination
- + Data sharing

Data collection and sharing

Joint discussion on scope for data collection and sharing to support fishery management resulted in the following priorities and agreements:

1. What impacts are there of closed season on fishers, indicators agreed for FMC to record:
 - a. number of households with reduced income in those months,
 - b. number of households with reduced meals and how many meals eaten per day.
2. DoF will collect data on level of dis-benefits to the fishers, level of pressure on the resources
3. Locations and seasons of key habitats for fish, indicators – expert fishers of FMC to map these breeding sites for use in adjusting rules.
4. DoF will assess methods of coordination and success.
5. Share and compare catch and effort data collected by DOF from sample surveys and catch data collected by FMC from arat for ber jals, do this over next 3 months and previous 4 months. To be compared in monthly meetings between DOF staff at Upazila level and FMC.

3.2 Pilot site 2: BKSB-Kalia, Narail

Data sharing workshop held on 30th April 2005 with: UFO, AFO and FA Kalia, DAD FFP Dhaka, Community Management Specialist FFP, 16 Fishers including office bearers of Fisheries Management Committee
Facilitated by Dr Parvin Sultana

Discussion on fisheries management activities and plans, and issues for information needs in separate stakeholder groups raised the following points:

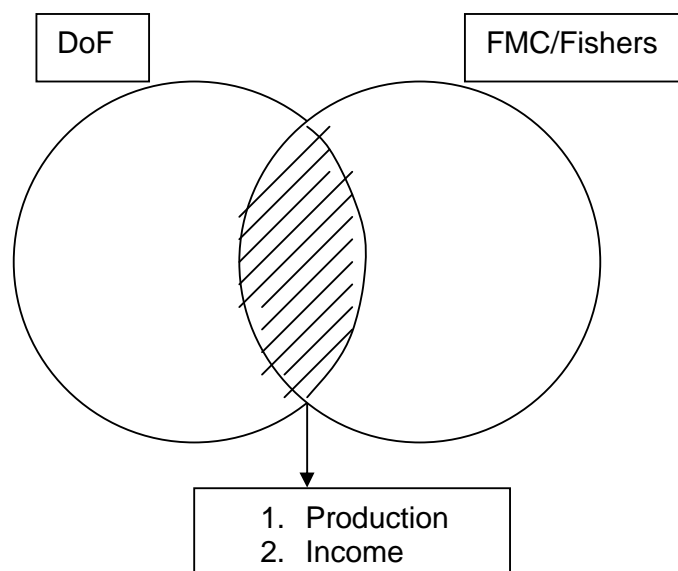
Analysis of the BSKB Kalia Management Plan by fishers & FMC

Plan	Objective	Indicators of success	Data collection done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
4 new sanctuary established	To increase 1. fishery resources 2. income 3. biodiversity	1. Catch and 2. Income increased compared to previous year 3. New fish species	No	From fish landing sites and individual income data	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Habitat restoration	To increase 1. fishery resources 2. income 3. biodiversity	1. Catch and 2. Income increased compared to previous year 3. New fish species	No	From fish landing sites and individual income data	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Catch monitoring	To know status of fishery resources for further improvement plan	1. Catch and 2. Income increased compared to previous year [note fishers did not identify any in between indicator for doing monitoring]	No	From fish landing sites and individual income data	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Fishing effort control	To restrict certain harmful gears	No use of restricted gears	Yes	Report on number of user of harmful gears and rule breaking incidences	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Closed season	To save brood fish catch	Visibility of fry and fingerlings Increased fish catch after closed season	Yes	Market monitoring, no small fish in the market	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Increased income	To improve fishers livelihoods status	Diversified income sources during dry season and closed season	No	Survey of fisher household on present income, sources, skill and need	Through FMC and FSC monthly meeting where DoF also attend	FMC and FSC

Analysis of the BSKB Kalia Management Plan by DoF

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Proper management of BKS B part of Kalia	<ol style="list-style-type: none"> 1. To look after the fishers interest 2. Increased production 3. To resolve unemployment problem 4. Increased income of the fishers 5. To restore rare fish species 6. Increased biodiversity 	<ol style="list-style-type: none"> 1. Increased production 2. Increased income of the fishers 	On-going	<ol style="list-style-type: none"> 1. Catch Survey 2. Fishers Status analysis conflict resolution 3. FGD 4. Decision making on the basis of discussion 5. Establishment of sanctuary 6. Fish act 7. Publicity 8. Closed season 9. Restriction of harmful gear use 10. Restriction on fishing effort 	<ol style="list-style-type: none"> 1. Visit 2. Monthly meeting 3. Exchange of ideas 	FMC and DOF

Common Data needs



Data collection decisions

Who will collect	What to collect	How to collect
DoF	Fish catch-amount and varieties	Catch monitoring through selected fishers catch per month (5/month), 2 days per month
FMC	Fish catch-amount and varieties	Monsoon (June-July) catch data from market survey and individual survey
	Income of the fishers	Daily income of each fisher
	Household survey	Poverty/health/education, skill and IGA need

3.3 Pilot site 3: Tangon Nadi-Pirganj, Thakurgaon

Data sharing workshop held on 3rd May 2005 with: UFO, AFO and FA Pirganj, Fisheries Management Specialist FFP, 13 Fishers including office bearers of Fisheries Management Committee
Facilitated by Dr Parvin Sultana

Discussion on fisheries management activities and plans, and issues for information needs in separate stakeholder groups raised the following points:

Analysis of the Tangon River Management Plan by FMC & fishers

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Rehabilitation of sanctuaries	To increase 1. Fishery resources 2. Production	1. Catch and 2. Income increased compared to previous year 3. New fish species	Yes	Each individual from their note book (record if fished and catch for last about 8 months)	Through FMC and FSC monthly meeting where DoF also attend	Each fisher, FSC and FMC members
Closed season (3 months-mid April-mid July)	To save brood fish catch	Visibility of fry and fingerlings Increased fish catch after closed season. No fishing observed.	Yes	Waterbody guarding, market monitoring	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Collection of gear fees	Fund raising	Receipt, ID card and record book	Yes	Receipt book	Monthly meeting with DoF	Cashier and FMC
Fix production target (100t)	To increase production	Individual and collective record	On-going	Each individual from their note book	Monthly meeting with DoF	Each fishers, FSC and FMC members
Fishing effort control	To restrict certain harmful gears	No use of restricted gears, amount of fees collected and number of non compliance	Yes	Report on number of user of harmful gears and rule breaking incidences	Through FMC and FSC monthly meeting where DoF also attend	FSC and FMC members
Budget	To keep income-expenditure record	income-expenditure record kept in the record book	Yes	Cashier will record in the record book	With fishers and DoF in monthly meeting and AGM	Cashier and FMC

Analysis of the Tangon River Management Plan by DoF

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Establish rights of the fishers	To establish community based fisheries management	Fishers own plan followed in the management without any interference of others	Yes	Raising awareness among the fishers	FMC	DoF
Establishment of fish sanctuary	Increased production	Sanctuary in place	Yes			
Production increased	To increase fish and biodiversity	more species, higher catch per day, higher fisher income	Yes	data from CAS and fishers income	FMC and local government through meetings and rally	DoF

Common Data needs

- Production data

Data collection decisions

Who will collect	What to collect	How to collect
DoF	Gear wise and species wise catch breakdown	Catch monitoring through selected fishers catch per day (5 fishers/gear/month), 2 days per month, used to estimate monthly catch
FMC	Effort (total days fished), fish catch - amount (and varieties), by gear used	Individual record (note book, but can't record species in detail)
	Income of the fishers	Daily income of each fisher (from individual note book)
	Household survey	Poverty/health/education, skill and IGA need

Other data needs

- Information on fishery laws

It was agreed that the data sharing study would help develop a system for summarising the individual fisher records being kept in their note books, and for this a simple summary format was agreed in the meeting which the NGO will help the FMC complete through the FSC meetings. The summary of effort and catch will be compared with the CAS results, expecting that simple ways of compiling trends can be agreed. Recording species caught was also discussed but is too complex to record in detail for each fisher (some already record the main species in their days catch).

3.4 Pilot site 4: Masankura Mora Nadi-Pirgacha, Rangpur

Data sharing workshop held on 4th May 2005 with: UFO, AFO and FA Pirgacha, Fisheries Management Specialist FFP, 15 Fishers including office bearers of Fisheries Management Committee
Facilitated by Dr Parvin Sultana

Discussion on fisheries management activities and plans, and issues for information needs in separate stakeholder groups raised the following points

Analysis of the Masankura Mora Management Plan of FMC and fishers

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Sanctuary establishment and sanctuary rehabilitation	Shelter during breeding period for brood fish	Fry and fingerlings seen within sanctuary	Yes	Visual observation	With DoF	FMC
Building brush piles (FAD)	To raise FMC fund	Brush piles established, fish catch	Yes	Catch data from brush piles	With DoF in monthly meeting	FMC
Boat repairing	To guard waterbody and to catch fish	Boat in use	No			
Fingerling stocking (500 kg)	Extra production	Fishing data	No	At time of fingerling purchase	With fishers and DoF in monthly meeting	FMC, DoD and NGO
Fencing the open area	To save stocked fish from escaping	Fence established, stock fish catch	Yes			
Purchase net	FMC asset and to reduce cost	Cost reduced	No	Purchase receipt of net materials		
Preparing list of fishers and fix gear fees	To know fishers number and income-expenditure of the fishers and loan status	A list of genuine fishers and socio-economic survey data	No	Household survey and scrutinizing through FMC meeting	With fishers and DoF in monthly meeting	FMC and NGO
Fixing production target (23.5 t)	To increase income and status of life	Annual income of the fishers increased	No	Daily individual income record and compiled monthly record and gear fees collection record	With fishers and DoF in monthly meeting	Each fisher and FMC
Budget	To keep income-expenditure record	income-expenditure record in the record book kept	Yes	Cashier will record in the record book	With fishers and DoF in monthly meeting and AGM	Casier and FMC

Analysis of the Masankura Mora Management Plan by DoF

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Preparation of beneficiary list	Establish right of the fishers in the waterbody	List of fishers available	Yes	Survey	Local government representatives, local elites and DoF staff	DoF field staff
Help in establishing FMC and FSC	Proper management and sustainable management system	A CBO established with executive body elected by direct voting	Yes	Observation of election	With FMC and NGO	FMC, NGO and DoF
Help fishers in collection of savings	To build fund	Sufficient savings in bank and correct individual records	Yes	Bank statement and pass book	During monthly Meeting	DoF, NGO
Registration of FMC	To organize fishers and to operate management in a lawful manner	Report	Yes	With the help of FMC and NGO apply to Department of Social Welfare	FMC and NGO and Department of Social Welfare	DoF, NGO and FMC
Annual Waterbody lease value collection	Submission of lease value in the government treasury	Receipt from the government treasury	Yes	Treasury chalan		FMC and DoF
Help in preparing Management Plan of FMC	For better management of fisheries	A management plan exist	Yes	review management plan	With FMC by preparing management plan	DOF and NGO
Help FMC in restoring habitat and sanctuary establishment	To expand fish grazing area, save rare fish species and brood fish and increase production	Report on fish production from CAS	Yes	DoF field staff through CAS	Through monthly report	DoF and NGO
Effort control and implementation of fisheries law	To protect brood fish and fries	Field survey and report	Yes	Through discussion with and assistance to the beneficiaries	UFO and FMC	UFO and local government
Help in Stocking fingerlings	Increase fish production and increase income of the fishers	Field survey and report	Yes	Through discussion with beneficiaries	UFO	FMC, DOF and NGO
Increased production	To observe trend in fishery	CAS report	Yes	CAS	Through monthly report	DoF

Common Data needs

- Production data

Decisions

Fishers will collect and share with DoF in the monthly meeting:

1. Survey on Socio-economic status of fishers compiled by the FMC

Name	Source of loan, if any	Amount of loan (Tk.)	Main occupation	Any skill? Which one (s)	Any training?	What do you want to do as AIGA	Market demand of the IGA

2. Record on catch by species and gear and income data in the monthly meeting and the FMC will compile those for last 4 months of fishing. They will follow the format below for individual data collection and compilation:

Species caught	Total amount (kg) caught from group fishing	Tk. earned	Rate (Tk/kg)

3. DoF (UFO) will analyse last 6 months data and share with the FMC in the next monthly meeting

In summary this FMC already keeps full records of stocking and harvesting including financial data (which was not really shown in the FMC analysis but the records are already being maintained and shared with PMU), but has not been recording other catches and wants to see and assess the DOF CAS data.

3.5 Pilot site 5: Borobila -Pirganj, Rangpur

Data sharing workshop held on 5th May 2005 with: UFO, AFO and FA Pirganj, Fisheries Management Specialist FFP, 18 Fishers including office bearers of Fisheries Management Committee
Facilitated by Dr Parvin Sultana

Discussion on fisheries management activities and plans, and issues for information needs in separate stakeholder groups raised the following points

Analysis of the Borobila Management Plan by FMC and fishers

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Establishment of nursery	Production of fingerlings	Fingerling production in the nursery	Yes	Counting fingerlings after dragging net		
Fingerling stocking	Extra production	Catch and income from stocked fish	No	see production target	With fishers and DoF in monthly meeting	
Sanctuary establishment and sanctuary rehabilitation	Shelter during breeding period for brood fish	Fry and fingerlings seen within sanctuary and nearby area	Yes			
Building brush piles	To raise FMC fund	Brush piles established, fish catch	No			
Boat repairing	To guard waterbody and to catch fish	Boat in use	No			
Fencing the open area	To save stocked fish from escaping	Fence established, stock fish catch	Yes			
Lease payment	To continue property right	Receipt from the government (treasury chalan) and lease right to the fishers	No	Checking receipt	With fishers and DoF in monthly meeting	FMC and NGO
Preparing list of fishers and fix gear fees	To know fishers number (with gear type and number) and income and expenditure of the fishers	A list of genuine fishers and license for fishing	No	Household survey and scrutinizing through FMC meeting	With fishers and DoF in monthly meeting	FMC and NGO
Ban period and Ban on gear	To save brood fish and fingerlings	No Fingerlings or brood fish appeared in the market, increased production	Yes	Awareness raising through, miking and meeting	With fishers and DoF in monthly meeting	FMC
Fixing	To increase income	Annual income of the	No	Daily individual	With fishers and	Each fisher and

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
production target (50 t)	and status of life	fishers increased		income record and compiled monthly record and gear fees collection record	DoF in monthly meeting	FMC
Budget	To keep income-expenditure record	income-expenditure record in the record book kept	Yes	Cashier will record in the record book	With fishers and DoF in monthly meeting and AGM	Cashier and FMC

Analysis of the Borobila Management Plan by DoF

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Proper use of resources	1. Increased production 2. Income generation 3. Increased income 4. Poverty alleviation	1. CAS 2. Infrastructure development for the fishers 3. Health and education 4. Savings 5. Fish abundance in the market	Yes	1. CAS 2. Market survey 3. Impact assessment	With FMC by preparing management plan	DoF and NGO
Establish fishers right	1. To establish rights of the fishers 2. to alleviation poverty 3. To improve social status of the fishers	1. MOU for 10 years with the Land Ministry 2. Abolition of lease system 3. No increase in lease value 4. abolition of VAT and Income tax 5. MOU between DoF and CBO 6. List of fishers prepared	Yes			
Increased Biodiversity	1. Save rare species 2. Increased Fishery 3. Prepare breeding ground	1. Appearance of new fish species 2. Increased fishes	Yes	1. CAS 2. Market survey 3. Building spillway 4. Sanctuary 5. Breeding ground	Through monthly report	DoF and NGO

Plan	Objective	Indicators of success	Done (Yes/No)?	How data will be collected?	Sharing data	Responsibility
Increased production	<ol style="list-style-type: none"> 1. Increased nutrition 2. Increased income 3. Poverty alleviation 4. Employment generation 5. Earning foreign exchange 	<ol style="list-style-type: none"> 1. Increased supply in the market 2. Improvement in health and education 3. Improved status of life 	Yes	<ol style="list-style-type: none"> 1 Market monitoring 2. Death rate 3. Rate of education 	Through monthly report	DoF

Common Data needs

- Production
- Fishers list
- Gear fees

Decisions

Fishers will collect and share with DoF in the monthly meeting

1. List of genuine fishers will be prepared and compiled by the FMC
2. Each individual fisher will submit their catch by species and gear and income data in the monthly meeting and the FMC will compile those for last 4 months of fishing. They will follow the format below for individual data collection and compilation:

Species caught	Amount (kg)	Tk. earned	Amount consumed (Kg)	Rate (Tk/kg)

3. Gear fees collection data
4. DoF will analyse last 6 months CAS data and share with the FMC in the next monthly meeting.

5.6. Improvements

The workshops achieved and improved the following:

1. Awareness among the fishers about the need for data collection and recording
2. Helped local managers revisit their management plans.
3. Helped local managers implement their management plans.
4. Helped local managers evaluate and refine their management plans.
5. Communicating the importance of local monitoring in shaping policy.
6. Participation in local monitoring programmes could be made a condition of access to the fishery.
7. Helped local managers to rethink the data needs and type of data needs after they evaluate their data collection and use methods.

4. Conclusions and Recommendations

- A. A proper training/workshop to discuss the guidelines is needed. People are busy and do not want to read big documents unless there is a pressing need.
- B. Handing over the technical report as well as field guide for opinion will not be productive (to get any feedback follow-up is needed).
- C. The guidelines was found useful by the DoF staff. However, to change the systems they need a wider discussion within the higher level of authority

and the guidelines needed to be discussed with higher level officials in DoF. A series of discussion and follow-up may change the situation.

- D. The technical guidelines may be more appropriate for the projects at the starting point.
- E. This guideline will be appropriate for including in the curriculum of the institutions responsible for fisheries education.
- F. The field guide should be distributed among the wider community. NGOs who are responsible for data collection at different levels need to be included in the stakeholder list.
- G. Data analysis should be a vital part of the guidelines (for different stakeholders and different needs - e.g. fishers are collecting data which are not used or interpreted and used for their development needs).
- H. Data collection and sharing method should be included in the project design.
- I. Nocturnal fishing activities and catch are most of the time avoided or missed by the project data collectors, especially by the regular staff. A mechanism should be developed for joint data collection covering night fishing.