MACH
Completion Report

Management of Aquatic Ecosystems through Community Husbandry

Volume 4

Performance Monitoring

October 2003

A project of the Government of Bangladesh
Supported by USAID
Project Partners:
Winrock International
Bangladesh Centre for Advanced Studies (BCAS)
Center for Natural Resource Studies (CNRS)
CARITAS Bangladesh

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PREFACE

The MACH completion report represents a summary of activities and achievements of the Manageme of Aquatic-ecosystems through Community Husbandry MACH. The project was initiated in September 1998 and the contents of this completion report contain activities and achievements through August 2003. The fieldwork of MACH began at two sites (Hail Haor in Srimangal and the Turog-Bangshi site Kaliakor) in June of 1999 after an initial inception period. Fieldwork at a third site (Kongshaw-Maliijh in Sherpur) began July the following year in 2000. This report represents the achievements in the field 4 years in the case of two sites and 3 years in the case of the Sherpur site.

This volume 4 contains the MACH Project Performance Monitoring Report in line with the USAID SO Performance Monitoring Plan as revised in November of 2001. The performance indicators for MAC were changed half way through the project. Some indicators remained the same; some were remov while others have been added. The following volume 3 of the MACH completion report contains the ne SO 6 performance monitoring reference sheets provided by the USAID SO 6 Environment Team.

The text that follows is shown in thirteen sections representing the thirteen indicators that apply MACH. Each section has a tab number that is referenced in a summary sheet at the beginning. With each section there is a cover page showing the indicator in that section, a reference sheet for the indicato and a series of descriptions and tables that provide the reader with the background on how the indicat targets and results have been derived. In addition if appropriate, maps have been provided demonstratir the location and position of the accomplishments.

With this document the reader is able to understand how results have been derived (methods used) and what extent the project has achieved its target indicators. Background data in some cases has bee provided in greater detail so that verification is simplified.

This completion report has been broken up into 5 volumes, each of which has been listed below:

Volume 1 – Main Report
Volume 2 – Appendices
Volume 3 – Fish Catch and Consumption Survey Report
Volume 4 – Performance Monitoring Report
Volume 5 – Geospatial Data Portfolio

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SO 6 Indicators Summary Sheet

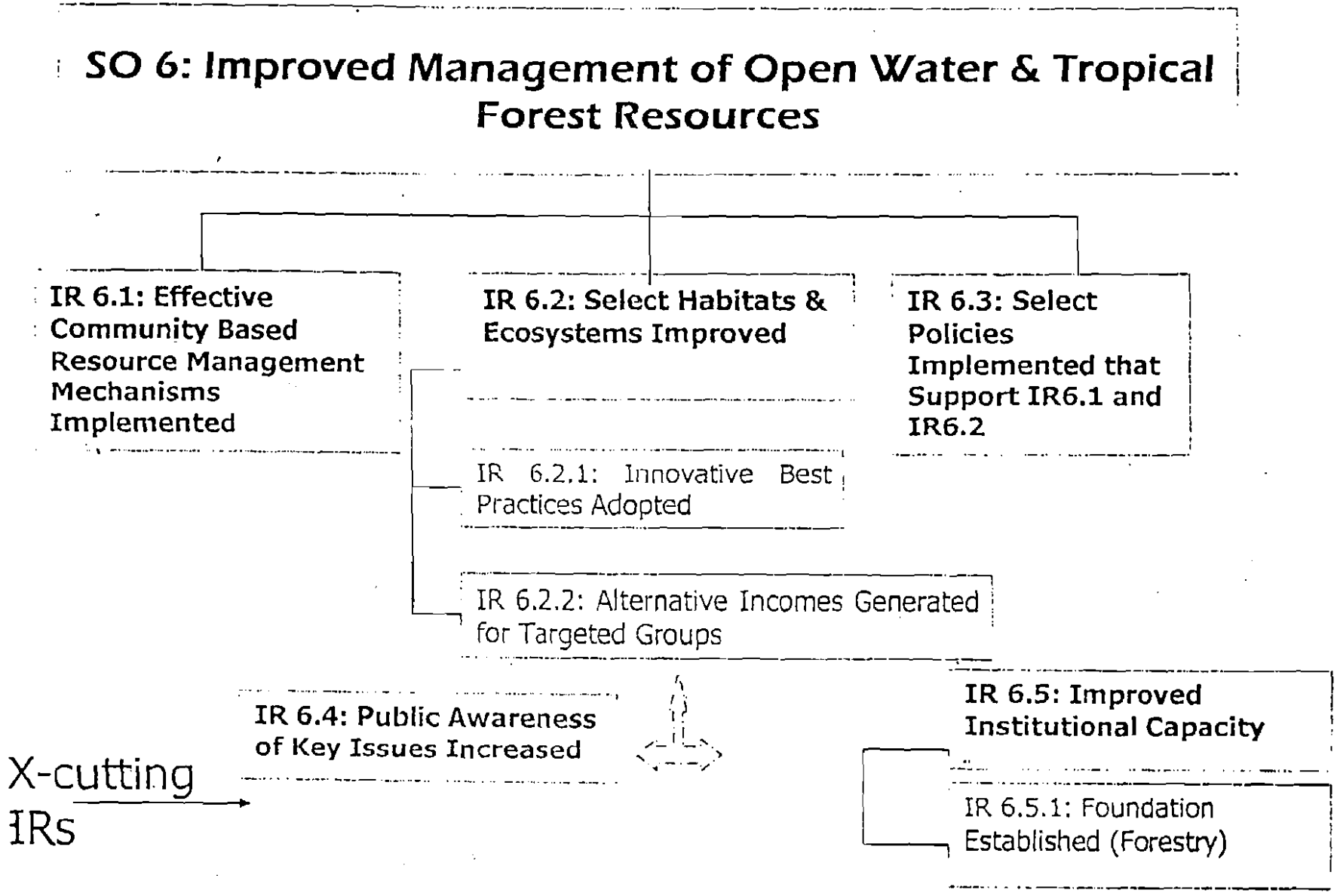
SO 6: Improved Management of Open Water and Tropical Forest Resources

Indicators

- **Indicator 6a** **Extent to which best practices from USAID-funded projects are used elsewhere**
- **Indicator 6b** **Increased production of natural resources in targeted areas**
- **Indicator 6c** **Increased biodiversity in targeted areas.**

Intermediate Results	Indicators
IR 6.1: Effective Community Based Resource Management Mechanisms Implemented	Indicator 6.1a: Area of floodplain where sustainable management is implemented.
IR 6.2: Select Habitats and Ecosystems Improved	Indicator 6.2a: Aquatic habitats converted from seasonal to perennial in targeted areas Indicator 6.2b: Upland forest habitat improved in targeted areas. Indicator 6.2c: Riparian habitat improved in targeted areas
IR 6.2.1: Innovations and Best Practices Adopted	Indicator 6.2.1a: Number of sanctuaries established Indicator 6.2.1b: Meters of channels rehabilitated
IR 6.2.2: Alternative Incomes Realized for Target Groups	Indicator 6.2.2a: Percentage increase in income of targeted beneficiaries
IR 6.3: Select Policies Implemented that Support IRs 1 & 2	Indicator 6.3a: Leases of water bodies to community resource management groups granted in target areas. Indicator 6.3b: Number of communities adopting the following key regulations in target areas: • Restrictions on the use of inappropriate fishing methods and gear • Restrictions on the fishing season and harvesting of fish fry • Restrictions on the areas of fishing
IR 6.4: Public Awareness of Key Issues Increased	Indicator 6.4a: Number of individuals reached by the public awareness activities
IR 6.5: Improved Institutional Capacity	TBD

Revised Results Framework



Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6a: Extent to which best practices from USAID funded projects are used elsewhere

October 2003

Winrock International

CNRS

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Indicator 6a: Extent to which best practices from USAID funded projects are used elsewhere.

A. Description

Precise Definition of Indicator: Number of occasions where a new or innovative best practice, identified or supported by a USAID project, is used by other organizations (e.g. other donors, NGOs communities or the GOB). Specific examples of best practices are:

1 Co-management of natural resources
2 Sanctuary development
3 Alternate income generating activities for Natural Resources dependant population

Unit of Measure: Number of occasions

Disaggregate by * Other Organizations, Donors, Projects, NGOs (details in MACH Completion Report, October 2003)

Justification/Management Utility: This provides a sense of whether local best practices and models begin to be replicated more broadly. This is important because replication of the best practices nationwide will ensure a better sustainable management of natural resources resulting in increased production and enhanced biodiversity and, at the same time, rehabilitation of degraded ecosystem.

B. Plan for Data Collection by USAID

a Collection Method: Examples throughout the year will be collected and reported on .... annual basis.

Method of Acquisition by USAID: Receipt of Semi-Annual Reports from Winrock

Data Source(s): Project reports from implementers and other donors, information from the LCG and the Wetland Network.

Frequency/ Timing of Data Collection: Information will be recorded as available.

Estimated Cost of Collection: low

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment:

Known Data Limitations (if any): This indicator, although set at the SO level, may not be a direct outcome of USAID's program implementation efforts. When complimented with the other indicators, it will provide more depth to SO performance.

Actions Taken or Planned to Address Data Limitations: None.

Date of Future Data Quality Assessments:

Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Semi-annually, particularly prior to the semi-annual reviews

sentation of Data: Table

Review of Data: Semi-annual for project management purposes and portfolio reviews.

Reporting Data: SAR, AR and CBJ

D. Other Notes

Notes on the Baselines/Targets: Baseline is zero

Location of Data Storage: P:\Mission Sharable\EGFEpub\Environment\PMP

Comments: This indicator is a special status indicator. It is expected that the public outreach efforts will be instrumental in making other actors in the sector, including the GOB and other donors, aware of the success of the best practices, facilitating their replication. USAID believes that replication of best practices will lead to national level impacts but recognizes that it cannot control replication by outside agencies.

Unit of measure:		
Year	Planned	Actual
Baseline 2000		0
2001		
2002		
2003		143*
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6a: Extent to which best practices from USAID funded projects are used elsewhere.

This indicator was not one of the original project indicators. This indicator has been added in November 2001 during the revision of the performance indicators by USAID. It must be understood that the project cannot force others to use approaches found successful in MACH. MACH is demonstrating to others through example and field demonstration. MACH is also the founding member of the Wetland Network where all major and minor organizations involved in resource management particularly in wetlands meet and exchange ideas and develop policy recommendations for government. The project has taken other project personnel and NGO personnel working in similar programs to the MACH sites. MACH has also taken government officials from the Ministry of Fisheries, Planning, Land, ERD, Finance, IMED, and Environment to project sites and generated awareness of the approach and its merits. These institutions have spread the word within their ministries as well as in outside forums. Many of MACHs efforts and work in getting people to the field has resulted in paving the way for other project to get support for community-based approaches in government.

The other aspect is that because of MACH's success in the approach, the NGOs working within MACH are exporting the ideas to other programs of a similar nature that they are involved in. Examples of this are CNRS and CARITAS as they are involved in not only MACH but in CBFM, SEMP, and parts of fourth fisheries. The approaches and successes developed in MACH are taken by these NGOs to other programs. BCAS also retains some of the key positions in projects like the fourth fisheries project where staff have been interchanged from MACH.

As the project cannot guarantee that other programs and groups will take up the approach, this indicator is termed a "Special Status" indicator.

The examples of "Best Management Practices" specified in the performance monitoring plan are:

1. Co-management of natural resources
2. Sanctuary development
3. Alternate income generating activities for Natural Resources dependent populations

The unit of measure is to be the number of occasions where these are used by other organizations (eg. Projects, NGOs, GoB, communities).

The CBFM project 2nd phase has incorporated elements that were not in the 1st phase but that do exist in MACH. Their project review recommended and they have accepted the need for closer project links to local government institutions where they are working. This project is also relying on the same group of National NGO's as MACH is and the approaches used by them will be the successful elements used in MACH for example. The CBFM review referred to the MACH project approach with local government as one that they favored for adoption.

The Dampara project has employed methods from MACH as has some of the Danida programs in Patuakhali and Noakhali. Government officials that have visited and have understood the concept have used MACH as an example. The Project Director of the 4th fisheries project is in the MACH Technical Committee and regularly participates in shared discussion on approaches. The 4th fisheries project works nearly countrywide and has been an active member of the Wetland Network where MACH is a founding member. This project has adopted the sanctuary approaches with more local involvement of communities as MACH has recommended. See the following pages for the locations where best practices used in MACH are being used elsewhere. It is not possible to say that only because of MACH that these best

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practices have occurred in all of these locations. MACH has certainly interacted with the groups shown and it is likely either directly contributed or supported decisions that were taken.

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Indicator 6a: Extent to which best practices are used.

Organization	Practices	No. of occasions & places
1. Fisheries Resource Dev. Project in open & close Jalmahals under new fisheries policy. GOB Project.	• Sanctuary establishment • Co-management • Community organization • Habitat restoration • Restriction of harmful gears • Seasonal restriction on fishing	Places: In 23 districts: Rangpur, Bogra, naogaon, Rajshahi, Shirajgonj, noabgonj, Kurigram, Gopalgonj, Kishorgonj, Jamalpur, Minshigonj, Mymensingh, Netrokona, Tangail, Chittagong, Habogonj, Laxmipur, Moulvibazar, Sunamgonj, meherpur, Sylhet, Bhola, Sherpur. • 13 openwater sanctuaries and 20 closed water sanctuaries are established.
2. Patuakhali-Barguna Project-DANIDA assisted	• Sanctuary maintenance • Co-management • Habitat restoration • AIGA for the fishers	2 districts: Patuakhali, Barguna area
3. Fourth Fisheries Project (Financed by World Bank, DFID, GEF, GOB)	• Sanctuary establishment • Stocking of fish fingerling • Habitat restoration • Community based management • Co-management	In 53 places of the following districts : Noakhali, Naogaon, Pabna, Natore, Gaibanda, Kurigram, Thakurgaon, Rongpur, Bogra, Khulna, Narail, Bagerhat, Jessore, Magura, Faridpur, Madaripur, Barishal, Bhola, Patuakhali, Manikgonj, Munshigonj, Narashindi, Mymansingh, Kiashorgonj, Netrokona, Sylhet, Comilla, Laxmipur, Khagrachari.
3a. BRAC, GMF, Proshika, TMSS, CNRS, ESDO, SDO, Padakhep, Nabolok NGOs working in 4th Fisheries Project.	• Same norms	In same areas & locations.
4. CNRS a) in SEMP project	• Co-management • Sanctuary establishment • Time closure • Effort control	In 3 places of Sunamgonj, Moulvibazar district.

Organization	Practices	No. of occasions & places
b) in CBFM -2 Project	• Same as above	In 4 districts: Sunamgonj, Tangail, Narail, Magura, Kishorgonj, Moulvibazar.
c) in WRMP (Wetland Resource management Project) Ford Foundation funded)	• Habitat restoration • Sanctuary maintenance • Community based resource management	3 places in Tangail, Sunamgonj, Brahamanbaria.
d) Coastal Fishermen Empowerment Project	• Habitat restoration • Fishing effort reduction	Different places in Cox's Bazar district. (1)
5. DAMPARA Project	• Sanctuary establishment • Habitat restoration • Co-management	Netrokona (1)
6. TARA (working under WorldFish center)	• Sanctuary establishment • Fish conservation • Habitat restoration	3 places in Netrokona district: Kongsha, Someswari, Ubdakhali. (39 different types of sanctuaries are there)
7. CBFM-2 Project (under Department of Fisheries)	• Sanctuary establishment • Community organization • Co-management • Close-season followed • Habitat restoration • Restriction on harmful gears • Re-introduction of endangered fish species • Water pollution control • AIGA • Social awareness on aquatic resources	In 22 districts, 47 Upazilas, 78 waterbodies in Dinajpur, Rangpur, Gaibanda, Bogra, Naogaon, Sirajgonj, Pabna, Magura, Narail, Jessore, Gopalgonj, Tangail, Mymensingh, Netrokona, Kishorgonj, B.Baria, Comilla, Sunamgonj, Gazipur, Faridpur, Moulvibazar.
8. WorldFish Center	• Same as above	Same area
9. Banchte Shekha (NGO)	• Same as above	In some of the above areas
10. BRAC (NGO)	• Same as above	In some of the above areas

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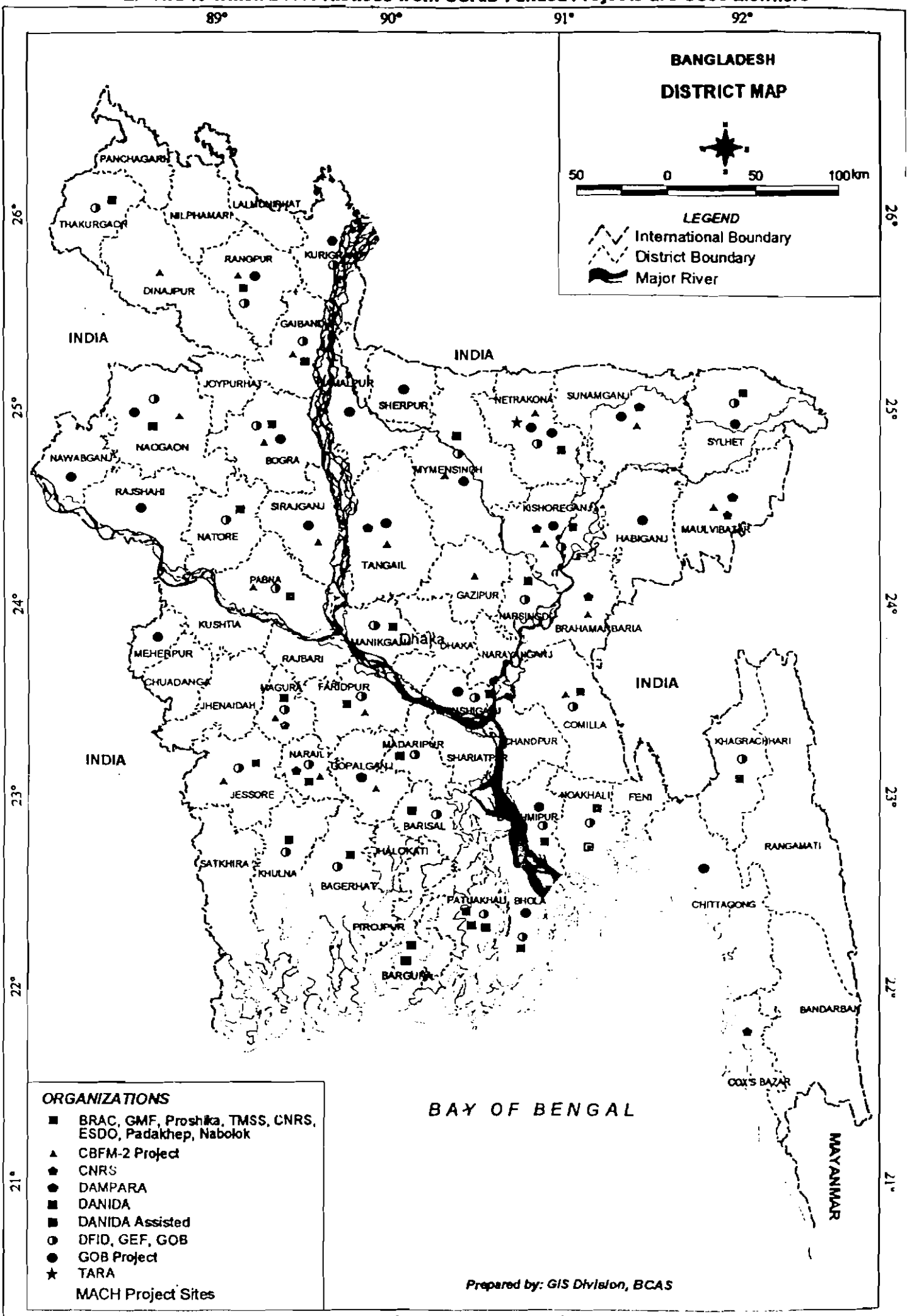
Organization	Practices	No. of occasions & places
11. Caritas (NGO)	• Same as above	In some of the above areas
12. Center for Rural & Environmental Development (CRED) (NGO)	• Same as above	In some of the above areas
13. Grassroot Health & Rural Organization for Nutrition Initiative (GHARONI) (NGO)	• Same as above	In some of the above areas
14. Shiksha Shastha Unnayan Karzakram (SHISUK) (NGO)	• Same as above	In some of the above areas
15. Society Development Committee (SDC) (NGO)	• Same as above.	In some of the above areas
16. DFID	• Same as above	In some of the above areas
17. DANIDA	• Same as above	3 Districts: Patuakhali, Barguna, Noakhali

Extend to which Best Practices from USAID Funded Projects are Used Elswhere



Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6b: Increased production of natural resources in targeted areas (fish and other wetland products)

October 2003

Winrock International

CNRS

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Indicator 6b: Increased production of natural resources in targeted areas (fish and other wetland products)

A. Description

Precise Definition of Indicator: This indicator measures the increase in production of fish and other aquatic resources in target areas. Target areas are the Turag Bhangshi (TB) and Hail Haor (HH) sites.

Unit of Measure: Kg/ha of fish and other aquatic products.

Disaggregate by: Project Site.

Justification/Management Utility: Fisheries and wetland resources play a critical roll in Bangladesh's overall food security. Production is a direct indicator of improved management of open water resources.

B. Plan for Data Collection by USAID

Data Collection Method: The grantee collects data fortnightly from the targeted people throughout the year for the wetland component.

Method of Acquisition by USAID: Receipt of Semi Annual Reports from Winrock

Data Source(s): Quarterly and annual reports of the grantee.

Frequency/ Timing of Data Collection: The grantee collects data fortnightly and submits semiannual and annual reports to USAID.

Estimated Cost of Collection: High, but already factored into budget and integrated into ect management.

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: FY2002

Known Data Limitations (if any): No reliable historical data on the resource as affected by varying hydrological regimes to compare the baseline. Results are not always attributable to USAID's assistance. Production varies in a given year based on the seasons and climatic/hydrologic variations.

Actions Taken or Planned to Address Data Limitations:

Use of control areas, supervision and training of data collectors

Date of Future Data Quality Assessments:

Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Prepared and analyzed by SO Team

Presentation of Data: Table

Review of Data: Semi-annual mission portfolio review, and individual review with implementers

Reporting Data: Internal mission report, R-4 report, CBJ

E. Other Notes

Notes on the Baselines/Targets: KM site data for 2003 will be available in Aug 03.

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment PMP

Comments: Tropical forest components are expected to begin in 2002. A separate indicator page will be developed to deal with forest products. Current data reporting will only be on fish and other aquatic products.

Unit of measure: Kg/ha

Year	Planned	Actual
Baseline 2000		TB = 58 HH = 171
2001	TB = 61 HH = 174	TB = 125 HH = 205 KM=base=150
2002	TB = 71 HH = 184	TB = 105 HH = 191 KM =149
2003	TB= 81 HH=194 KM=160	TB=140 HH= 287 KM= 273
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6b: Increased production of natural resources in targeted areas (fish and other wetland products)

There is' no historical data set of sufficient quality and temporal magnitude to track trends in fish production in the MACH Project sites. It is therefore very difficult to accurately measure open water fish production impacts against a backdrop of non-existent historical trend data. The project having a very short lifetime cannot develop sufficient background trend data to understand the natural variations and complexities of the existing fishery fully. The catch data taken by the project can be very reliable (in itself) but the variables that determine the catch are different every year. The periodicity of and area water coverage (extent) for example varies from year to year. These hydrologic and climatological changes cause variation in the catch normally. It is these "normal" fluctuations for which historical trend data is insufficient in Bangladesh. For the specific MACH sites there is also no historical record of area and extent of inundation from year to year. Therefore the results shown by the project data may not all be attributable to USAID's assistance. The project has attempted to use the 3-4 years of data that has been gathered to try to understand the gross trend in the production for each of the areas taking into account the hydrology recorded by the project.

One possible solution the project looked at was to use another basin (other than the ones MACH works in) as a control. For this approach to be viable the other basin must be similar in nature to the one to be tested. The project looked for possible controls but was unable to find ones that did not have significantly different conditions. There were so many differences that the controls were unworkable and would have been misleading.

With the high degree of hydrological variability in the floodplain, this indicator should be used to look at gross trends only. The actual catch data is already proving to be in the ranges that would be expected and the differences found between sites in the Catch per Unit of Area seem very plausible. In general regional averages for yields per hectare in high quality active floodplain are in the range of 300 to 400 kgs per hectare. The Turag Bangshi site being a highly degraded system is quite low (58 kgs during the baseline year) and (125 kgs. During first project impact year). The Turag Bangshi site has the least dry season water followed by the KM site. Hail Haor has the most dry season water area of the 3 sites and had the highest baseline yield. With management and dry season sanctuary establishment it seems quite likely that significant increases could be brought about in the fishery. On the other hand the baseline yields of all three sites were well below that expected in reasonably healthy connected floodplains of the region.

The project continues to monitor the catch on an intensive 10 day frequency and this will continue into the phase II for a period before reducing somewhat. The yields have been evaluated and are discussed briefly below. As one can see from the data contained in the attached tables the fisheries of the three areas had declined and production was far reduced from what should have existed in a healthy floodplain. Just maintaining yields over the past 3 years from the baseline figures would have been an achievement. As can be seen in the following tables MACH has seen not only maintenance of the baseline yields but significant increases which appear to be maintainable. MACH has recorded many hundreds of actual fishing events over the past 4 years in all types of habitat and with all types of gears. MACH also has anecdotal evidence from the many interviews which have reflected the patterns seen in the data.

The monitoring methodology for fish catch

The baseline data collection year in the Turag-Bangshi and in Hail Haor was April of 1999 through March of 2000. The baseline year for the Kangsha-Malijhee (Sherpur) site was August 2000 to July 2001. The impact monitoring is continuing at all three sites. The following methodology and analysis procedure has been followed.

Habitat Stratification

Biological productivity is a function of the ecological condition of the habitat, which is governed by the landscape, and hydrological regime of the area. The spatial and temporal variation in the project area is high as it is over most of the floodplain area of Bangladesh. Fishing method and gear techniques vary considerably at the different habitat locations. In order to portray a fish catch that represents the project area, the habitats have been stratified into rivers canals beels and floodplains. The selection criteria also included the geographical distribution over the project site, water flow, inundation regime and biological zone of the area. The baseline conditions will be used in some cases to measure parameter changes after appropriate interventions and future implementation of fisheries management. The changes expected will be both local (in a specific habitat) and global (throughout the project site areas). Accordingly a number of locations and habitats were selected and are being monitored.

Monitoring Site Selection

The monitoring site selections during the baseline study (following the wetland inventory and resource mapping exercise conducted by MACH) is also used for the impact assessment. The same criterion as in the baseline has been followed. Potential intervention sites for impact monitoring were chosen by the MACH project along with a Participatory Community group made up of local people.

Sampling Protocol

Floodplain fisheries, with their spatial and temporal variations in fish and water abundance, are as complex and dynamic as the fishing practices. The type of fishing gear used affects a fisher's catch within a specific habitat. A sample unit was considered to be one set of gear used for a catch attempt. The effectiveness of the fishers and their motivations are also significant in setting parameters for recording sample units. The selection of sample fishing units while recording catch data is crucial and it requires the judgement of the fisheries biologist. Accordingly, attempts have been made to be consistent so that the best possible estimates can be made from the collected data.

To offset any bias from the spatial distribution of fishing gear used the field biologist collected data from different locations at the monitoring locations. For each gear type at least three fishing units were monitored. If there were more than 30 fishing units of one particular gear type operating in a day data was collected from not less than 10 percent of the operating fishing units. Irrespective of catch data from individual fishing gear use by all types of fishing units in operation were counted during the catch monitoring day. This is the effort for that day. At the end of the day a list of fishing units by gear type was prepared. In order to accommodate for possible temporal variations in a single month the sampling intensity was set at a 10 days interval and accordingly data was collected three times a month from the selected locations. Gear of the same type with differing dimensions were standardized in the survey to 100 feet" (See MACH, Baseline report on fisheries, vegetation, wildlife and protein consumption).

Monitoring Parameters

Fish catch assessment monitoring collects data on fishing intensity, species diversity, catch composition, fishers by category and fishing gear through a questionnaire. The data gathered on these parameters acts as a benchmark during the baseline and was used to measure impacts. The terminology is defined as follows:

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Fish catch:
- species by number and weight

Fishing gear and fishers:
- fishing gear type and number, net area and mesh size
- fishers type, sex, age, village and distance from fishing ground

Time and duration of fishing:
- fishing starting and ending times
- probable fishing duration

Fishing rights:
- the fisher's access to the fishing ground

Data Analysis

The fish catch can vary spatially, temporally, and on the basis of the ecological condition of the habitat. In order to incorporate these variations and to monitor parameters the collected data has been analyzed on the basis of the monitoring locations, monitoring habitats, types of gear, types of fishers and seasonal variation. Fishing intensity, duration of fishing, total catch, catch by species, and the number of species with their abundance have been analyzed. Catch per Unit of Effort (CPUE) has been analyzed along with above mentioned parameters and has been used to determine the Catch per Unit Area (CPUA) which has been considered as the indicator of fish yield. Formulas and definitions are provided below.

Seasonal variation: For the study the year was divided into four seasons. These are Pre-Monsoon (April-June), Monsoon (July-Sept.), Post-Monsoon (Oct.-Dec.) and Dry (Jan.-March).

Table 1: Monitoring locations, habitats and areas

Monitoring locations	Monitoring area (ha)	Habitat
Hail-haor site		
Jethua Beel (I)	67.95	*Beel, Canal, Floodplain*
Gopla River	41.23	*River*
Boulashir floodplain	234.38	*Floodplain*
Cheruadubi Beel	30.40	*Beel*
62-Beel Complex	419.48.	*Beel, floodplain*
Rustompur beel Complex	221.73	*Beel, Canal, Floodplain*
Balla Beel	159.09	*Beel, floodplain*
Total	1174.26	
Turag-Bangshi Site		
Mokash Beel South(I)	100	*Beel*
Mokash Beel North	100	*Floodplain*
Kali-daha Beel (I)	50	*Beel*
Mokash Khal (I)	0.70	*Canal*
Turag River (I)	14	*River*
Aowla Khal	1.02	*Canal*
Aowla Beel (I)	100	*Beel*
Bangshi River	17	*River*
Total	382.72	
KM site		
Baila Beel(1)	44.10	*Beel, floodplain*
Takimari Beel (I)	34.75	*Beel, floodplain*
Kewta Beel (1)	33.07	*Beel*
Nijla Beel (I)	63.92.	*Beel, floodplain*
Bagadubi Khal	4.20	*Khal*
Malijhi River (baharalia kur)	5.00	*River*
Aowra Bowra Beel	69.33	*Beel*
Bailasha Beel (I)	13.35	*Beel,floodplain*
Total	267.72	

Fishing gear: The types of fishing gear found in operation during the monitoring year were recorded with their dimensions. Current *jal* and *Ber jal* Gear of the same type with differing dimensions were standardized to 100 feet to include in the analysis for Catch per Unit of Effort (CPUE).

Fishing intensity and duration of fishing: Fishing intensity describes the amount of gear used during the monitored day. This has been calculated from an average of three sampling days. Gear numbers of all types are counted and then extrapolated for that month. Fishing duration was recorded for all the operated gear and the average duration of fishing was calculated for each specific gear type.

Catch per Unit of Effort (CPUE): The average catch in kilograms per unit gear per hour of operation.

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Special considerations

In this report there is some deviation between data already reported earlier in reports and the impact in this report. This report is the final analysis of the data and incorporates:

I. A comparative analysis of baseline versus impact years using the common monitoring locations and

II. An estimation made based on the area fixed at the baseline period.

III. Output tables/data were further reviewed at the site and as well as at the RMO level. Outputs were finalized after considering the feedback from the sites.

MIS unit

The MIS unit analyses data and monitors fish production, bio-diversity, fish and other protein consumption and hydrology. The MIS unit provides monthly output tables for management and RMO's.

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MACH – CNRS
Sreemongol(Hail Haor)

Table: Location and Wise CPUA 1 *Thursday, August 28, 2003*

Baseline(April'1999 – March'2000)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Jethua Beel	67.95	13.37	62.80	26.41	19.00	121.58
Gopla River	41.23	59.53	97.52	146.50	90.12	393.67
Boulashir Flood Plain	234.38	11.20	24.01	24.37	10.24	69.82
Chiruadubi Beel	30.40	0.00	18.80	131.45	128.06	278.31
62-Beel Complex	419.48	3.35	115.43	128.28	16.68	263.75
Rustompur Beel Complex	221.73	0.00	58.18	100.90	0.00	159.09
Balla Beel	159.09	2.59	17.56	14.87	0.58	35.60
All Location	1174.26					171.08

Impact Year – I(April'2000 – March'2001)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Jethua Beel	67.95	16.45	31.64	12.15	130.31	[illegible]
Gopla River	41.23	53.47	0.00	72.75	339.51	[illegible]
Boulashir Flood Plain	234.38	12.27	25.11	19.57	21.06	[illegible]
Chiruadubi Beel	30.40	54.93	18.02	87.64	162.37	322.97
62-Beel Complex	419.48	12.19	136.05	71.25	96.31	315.80
Rustompur Beel Complex	221.73	7.53	51.77	62.28	32.85	154.43
Balla Beel	159.09	3.86	0.00	20.58	62.40	86.84
All Location	1174.26					205.05

Impact Year – II(April'2001 – March'2002)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Jethua Beel	67.95	1.13	18.78	46.24	93.95	160.08
Gopla River	41.23	85.22	2.49	99.52	302.76	490.00
Boulashir Flood Plain	234.38	29.36	11.26	12.14	9.27	62.03
Chiruadubi Beel	30.40	106.35	96.89	97.59	318.67	619.49
62-Beel Complex	419.48	13.28	40.57	72.63	130.40	256.89
Rustompur Beel Complex	221.73	38.93	37.65	43.39	24.89	144.86
Balla Beel	159.09	33.63	16.39	19.99	53.56	123
All Location	1174.26					190

Impact Year – III(April'2002 – March'2003)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Jethua Beel	67.95	12.14	17.53	33.11	92.12	154.91
Gopla River	41.23	0.00	0.00	169.20	563.52	732.72
Boulashir Flood Plain	234.38	9.84	11.86	15.07	20.51	57.28
Chiruadubi Beel	30.40	53.47	116.83	54.48	258.16	482.94
62-Beel Complex	419.48	13.51	101.75	163.65	169.37	448.29
Rustompur Beel Complex	221.73	19.12	45.63	109.31	79.91	253.96
Balla Beel	159.09	24.17	27.52	51.90	48.17	151.76
All Location	1174.26					287.28

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MACH – CNRS

Kaliakoir(Turag Baongshi)

Table: Location and Wise CPUA 1 *Thursday, August 28, 2003*

Baseline(May '1999 – April '2000)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Mokash Beel (South)	100.00	1.87	4.41	28.30	7.45	42.03
Mokash Beel (North)	100.00	1.97	4.30	15.51	11.70	33.48
Kalidaha Beel	50.00	8.55	10.06	30.31	13.48	62.40
Mokash Khal	0.70	26.73	67.60	574.19	122.35	790.88
Turag River	14.00	29.01	3.01	76.73	35.71	144.47
Aowla Khal	1.02	0.00	92.93	534.75	0.00	627.68
Aowla Beel	100.00	14.42	17.38	26.11	7.87	65.78
Bongshi River	17.00	6.97	6.25	35.55	48.57	97.34
All Location	382.72					57.80

Impact Year – I(May '2000 – April '2001)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Mokash Beel (South)	100.00	8.42	8.39	66.18	15.25	98.25
Mokash Beel (North)	100.00	7.26	12.88	70.09	14.46	104.68
Kalidaha Beel	50.00	19.14	12.38	80.29	29.16	140.97
Mokash Khal	0.70	133.25	212.30	1878.87	156.58	2380.99
Turag River	14.00	12.88	5.50	153.14	45.72	217.23
Aowla Khal	1.02	42.55	79.46	1363.29	0.00	1485.30
Aowla Beel	100.00	16.85	8.38	42.10	10.51	77.84
Bongshi River	17.00	44.15	22.58	272.21	37.18	376.12
All Location	382.72					124.75

Impact Year – II(May '2001 – April '2002)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Mokash Beel (South)	100.00	4.81	34.05	35.29	5.64	79.80
Mokash Beel (North)	100.00	9.15	46.62	42.34	6.35	104.46
Kalidaha Beel	50.00	11.74	6.86	28.52	22.23	69.34
Mokash Khal	0.70	222.43	320.53	588.81	273.18	1404.94
Turag River	14.00	33.55	11.55	149.82	56.63	251.54
Aowla Khal	1.02	129.81	123.37	601.75	3.14	858.07
Aowla Beel	100.00	6.17	42.30	46.73	9.75	104.96
Bongshi River	17.00	42.38	17.86	48.37	28.43	137.04
All Location	382.72					104.78

Impact Year – III(May '2002 – April '2003)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Mokash Beel (South)	100.00	4.82	12.81	81.68	4.55	103.86
Mokash Beel (North)	100.00	9.45	24.71	99.74	15.52	149.42
Kalidaha Beel	50.00	44.03	48.12	40.37	36.65	169.17
Mokash Khal	0.70	386.83	777.57	2237.56	294.46	3696.42
Turag River	14.00	34.35	17.79	111.52	89.42	253.07
Aowla Khal	1.02	74.92	281.31	644.42	91.09	1091.74
Aowla Beel	100.00	7.17	29.74	27.53	11.68	76.12
Bongshi River	17.00	29.71	54.84	142.39	65.34	292.27
All Location	382.72					140.08

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MACH – CNRS
Sherpur(Kongshow Malijhee)

Table: Location and Wise CPUA

Baseline(August '2000 – July '2001)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Baila Beel	44.10	27.94	39.94	48.77	17.62	134.27
Takimari Beel	34.75	17.49	38.62	76.20	47.67	179.98
Kewta Beel	33.07	12.86	68.26	110.46	59.18	250.77
Nijla Beel	63.92	12.51	35.27	48.17	8.38	104.33
Bagadubi Khal	4.20	75.00	790.73	377.66	62.15	1305.54
Bahar Ali Kur(Malijhee River)	5.00	20.68	19.92	14.21	216.36	271.17
Aowra Bowra Beel	69.33	30.84	8.71	0.00	0.00	39.55
Bailsha Beel	13.35	55.70	21.67	71.02	112.49	260.88
All Location	267.72					150.16

Impact Year – I(August '2001 – July '2002)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Baila Beel	44.10	20.89	43.19	43.25	28.90	144.23
Takimari Beel	34.75	17.72	46.96	38.78	43.49	146.96
Kewta Beel	33.07	42.10	71.69	29.76	43.05	189.60
Nijla Beel	63.92	47.57	34.19	46.41	46.70	174.78
Bagadubi Khal	4.20	105.32	325.30	277.50	139.15	847.28
Bahar Ali Kur(Malijhee River)	5.00	65.28	106.21	221.69	48.75	441.92
Aowra Bowra Beel	69.33	18.56	10.21	0.00	0.00	28.76
Bailsha Beel	13.35	76.44	52.69	72.48	50.04	251.66
All Location	267.72					149.16

Impact Year – II(August '2002 – July '2003)

Location	Area(ha)	CPUA(Kg/ha)				
		Pre-Monsoon	Monsoon	Post-Monsoon	Dry-Season	All-Season
Baila Beel	44.10	104.27	84.56	68.44	76.04	333.71
Takimari Beel	34.75	99.31	127.87	72.22	122.92	422.37
Kewta Beel	33.07	79.68	91.47	80.47	118.05	369.66
Nijla Beel	63.92	22.49	49.37	50.74	33.36	155.95
Bagadubi Khal	4.20	304.42	1270.89	279.97	273.17	2128.45
Bahar Ali Kur(Malijhee River)	5.00	127.26	374.16	169.30	303.02	973.73
Aowra Bowra Beel	69.33	24.86	13.15	0.00	0.00	38.01
Bailsha Beel	13.35	134.31	81.55	75.05	95.22	386.13
All Location	267.72					273.37

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Fish catch per Unit of Area in three major wetlands (MACH sites) in Kilograms per hectare per year

Site	Baseline Year KG/Ha/Yr	Impact over entire period (Ave) Kg/ha/Yr	Increase over baseline Kg/Ha/Yr
Turog Bangshi	58	123	65
Hail Haor	171	228	57
Kangsha Malijhee	150	211	61

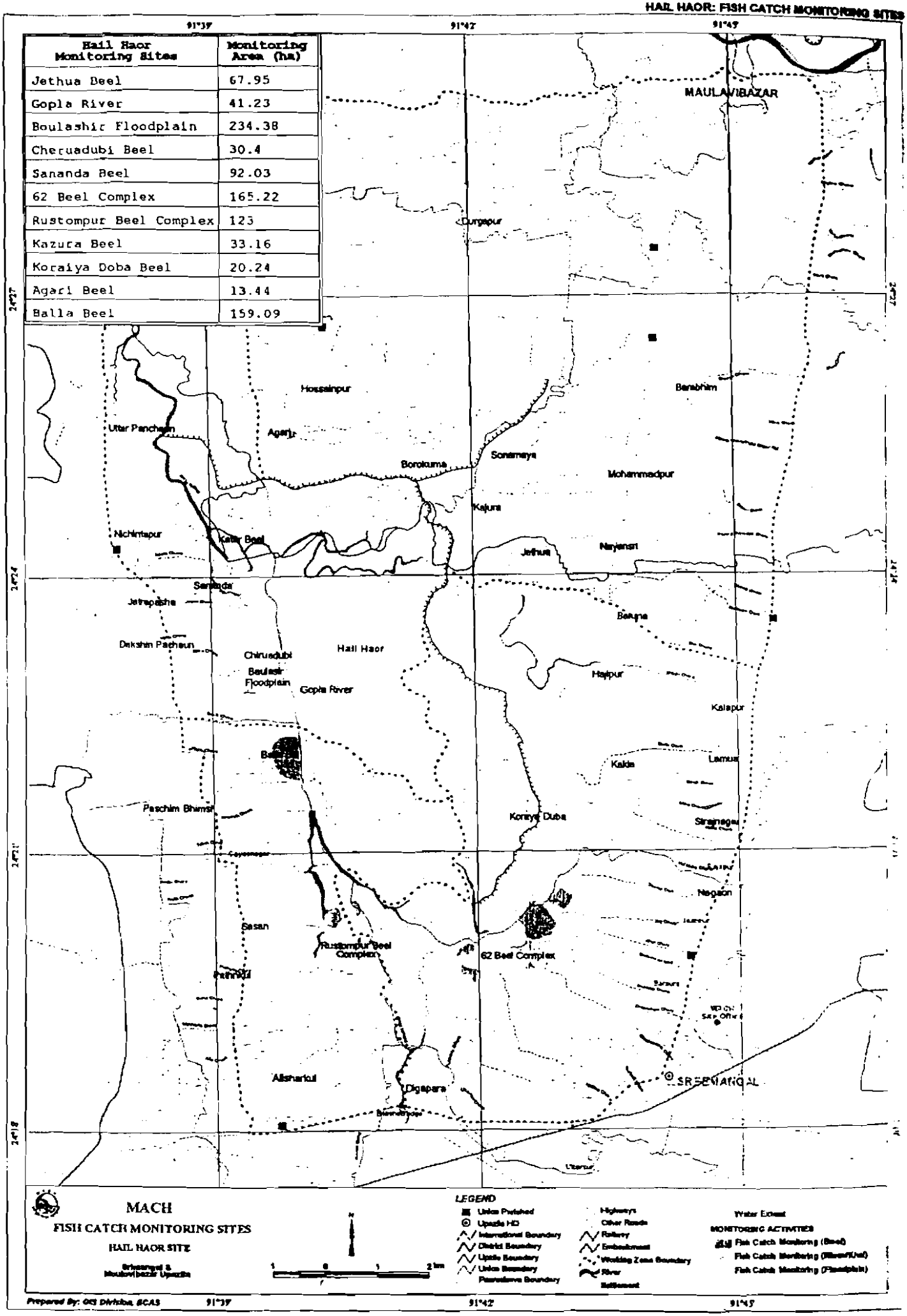
Site	Fish yield increase over baseline Kg/Ha/Yr change	Area of wetland where yield change was assessed (hectare of wetland)	Estimated increase in total yield from the wetland post baseline (kgs/yr)	Estimated increase in value per wetland/Yr from fish Lakh TK
Turog Bangshi	65	4,500	292500	117
Hail Haor	57	12,500	712500	285
Kangsha Malijhee	61	8,000	488000	195
Total		25,000	1,493,000	597

Site	Baseline Fish Consumption (gm/capita/day)	Impact year fish consumption (3 years for HH and 1 for Sherpur) (gm/capita/day)
Hail Haor	46.90	60.89
Turog-Bangshi	27.32	37.14
KM Sherpur	22.00	26.58 *

* Two years data

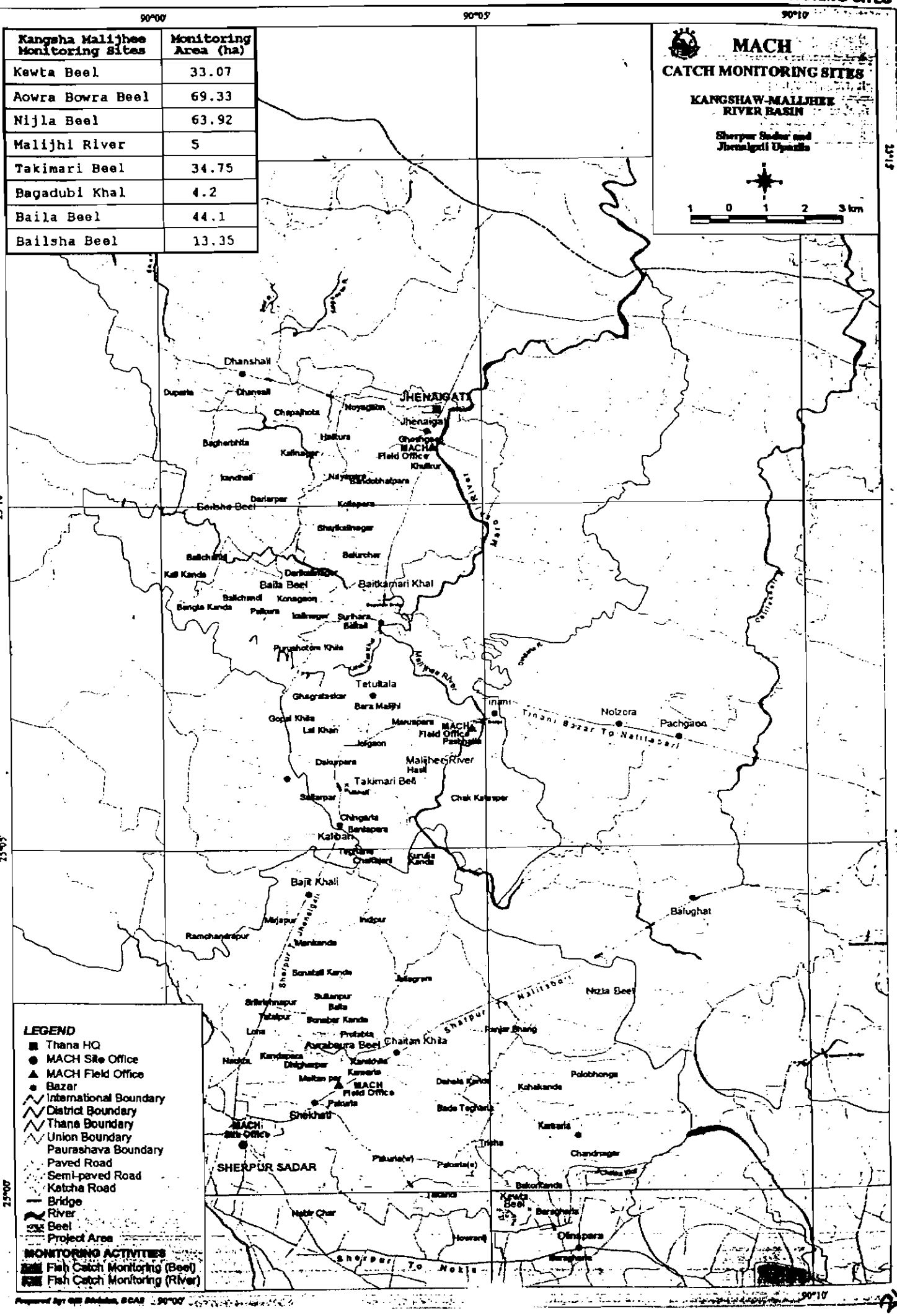
HAIL HAOR: FISH CATCH MONITORING SITES

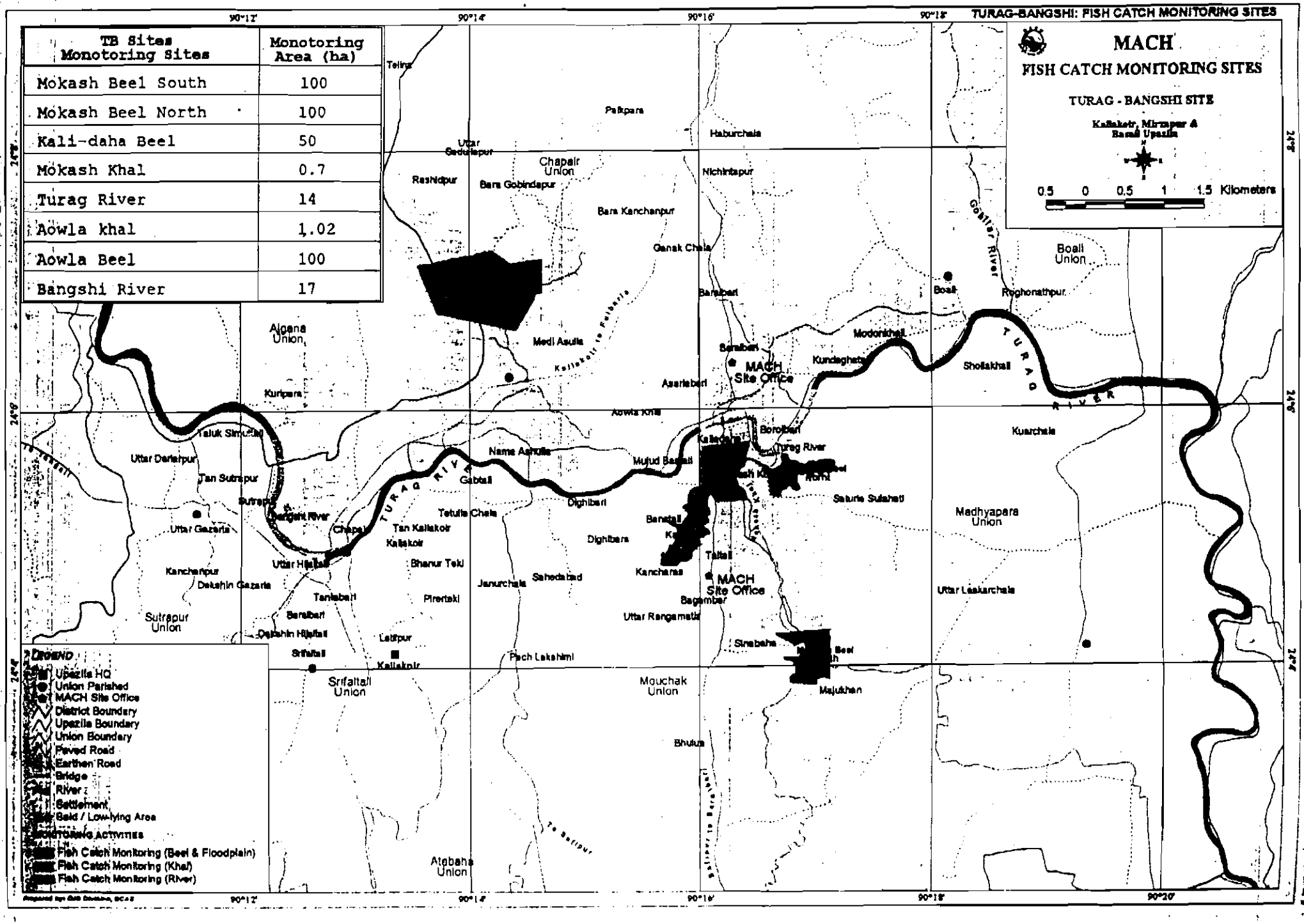
Hail Haor Monitoring Sites	Monitoring Area (ha)
Jethua Beel	67.95
Gopla River	41.23
Boulashir Floodplain	234.38
Cheruadubi Beel	30.4
Sananda Beel	92.03
62 Beel Complex	165.22
Rustompur Beel Complex	123
Kazura Beel	33.16
Koraiya Doba Beel	20.24
Agari Beel	13.44
Balla Beel	159.09



KANGSHAW MALIJHEE: CATCH MONITORING SITES

Kangsha Malijhee Monitoring Sites	Monitoring Area (ha)
Kewta Beel	33.07
Aowra Bowra Beel	69.33
Nijla Beel	63.92
Malijhi River	5
Takimari Beel	34.75
Bagadubi Khal	4.2
Baila Beel	44.1
Bailsha Beel	13.35





TB Sites Monotoring Sites	Monotoring Area (ha)
Mokash Beel South	100
Mokash Beel North	100
Kali-daha Beel	50
Mokash Khal	0.7
Turag River	14
Aowla khal	1.02
Aowla Beel	100
Bangshi River	17

Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6c: Increased biodiversity in targeted areas

October 2003

Winrock International

CNRS

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Indicator 6c: Increased biodiversity in targeted areas

A. Description

Precise Definition of Indicator: Biodiversity means the assemblage of all the biological organisms in a given ecosystem. This indicator will measure the increase in aquatic species in Turag Bhangshi (TB) and Hail Haor (HH), the targeted areas.

Unit of Measure: Number of species.

Disaggregate by: N/A

Justification/Management Utility: Biodiversity preservation and enhancement is a direct indicator of habitat quality. Habitat quality can be improved through better management of the resources Biodiversity increase depends on the restoration of degraded habitats, success in establishing sanctuaries, protected areas and buffer zones and compliance with the natural resources laws by the resources user communities. Changes are expected as habitat complexity increases. This indicator will be reported at the end of the strategy period.

B. Plan for Data Collection

Data Collection Method: Baseline and end of project data collected by the implementers.

Method of Acquisition by USAID: Receipt of Semi-Annual Reports from Winrock.

Data Source(s):Project implementers

Frequency/ Timing of Data Collection: Baseline and end of project.

Estimated Cost of Collection: Medium. Already factored into budget.

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: TBD

Known Data Limitations (if any):

Actions Taken or Planned to Address Data Limitations:

Date of Future Data Quality Assessments:

Procedure of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Analysed by SO Team

Presentation of Data: Table

Review of Data: Semi-annual mission portfolio review, individual review with implementers.

Reporting Data: Internal mission report, R4 and CBJ reports, project completion report.

E. Other Notes:

Notes on the Baselines/Targets: Implementers have established baseline data through catch and household surveys.

Location of Data Storage: P:\MissionSharable\EGFEpub Environment\PMP Comments: Changes in species diversity are expected through life of project but will be evaluated at the end of the project. Setting yearly targets and measuring performance would not be productive, as the project is re-creating the habitat. The extent of reestablishment of species will only be indicated at project completion.

Unit of measure: Number of species

Year	Planned	Actual
Baseline		0*
2001	-	-
2002	-	-
2003	25 species increase	Fish=28** Plant=47
2004		
2005		

*Baseline Species diversity established as existing situation defined as "0" point.

** Represents fish species that have either reestablished themselves through project stocking or improved habitat.

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6c: Increase bio-diversity in targeted areas

Bio-diversity within a system is dependent upon the quality of the habitat. The wetland habitat that exists in the floodplains where MACH works is degraded and often not functional. Dysfunction in the systems in which MACH works has lot to do with the reductions in diversity of fish and other animals as well as vegetation.

Restoration of habitat can take years to accomplish and the resultant increases in diversity likely from habitat improvements can take even longer. Full restoration to historical conditions is most often not possible because of human needs and requirements. Restoration programs in the US, where natural processes are allowed to perform the restoration, can take between 15-20 years to show meaningful change.

The MACH project baseline year for the Hail Haor and the Turag-Bangsi (T-M) site was from April of 1999 through March of 2000. For the Konsha-Malghee (K-M Sherpur) site the baseline year was from August 2000 through July of 2001. Establishment of sanctuaries and the reduction of fishing seasons did not begin until 2000 and 2001. The two sites of Hail Haor and Turag-Bangsi have had 3 years of time under which improved management and restoration of parts of the wetland have taken place. In the 3rd site of Kongsha-Malghee there has been only 2 years where management through MACH have been improved, sanctuaries established, and some restoration implemented.

With the improvement of habitat, the diversity should improve. The types of habitat improvement practiced by community groups (guided by MACH) have implemented are permanent twelve month per year wetland sanctuaries, re-excavation of canals and low areas of beels to make them perennial, and re-introduction of native trees with community protection over grazing and destruction in riparian and wetland areas.

The time frame set for the project is far too short to be able to see the diversity changes that take years to occur. Realizing this, the project has created for example sanctuary areas within the wetlands and re-introduced species of fish and trees that used to exist on the site but no longer do. By providing early protection in the preferred areas of these species, it was hoped that the reestablishment of some will be jump started. The project is doing this with some of those species that can naturally reproduce within the floodplain and do not rely on the river. This has been particularly successful with a number of native fish species such as Shol, Gozar, Poda, Pabda, Meni, Sarputi, Foli, Gonia, and Kalibaush.

The other area where the project has intervened to create habitat change is in the planting of trees in riparian and wetland areas. The growth of the canopies of these areas will take 10-15 years alone. It is not expected that diversity changes in wildlife such as birds or mammals for example would be seen before 10 years. The experience in the US has been where habitat is improved or created, improvements to the diversity of organisms do occur in time.

This indicator should really be evaluated 10-15 years after the project. The project has reported here in any case in the following table and map what has been evident during the short project lifetime. It is expected that as the sanctuaries continue to hold older and larger broodfish for example a reasonably sustainable improved diversity will develop.

Introduction

Historically, millions of rural people in Bangladesh maintained their livelihood from the open capture fishery. Unfortunately, this rich open capture fisheries along with other flora and fauna of the wetlands are now under serious threat due to various natural and anthropogenic causes. Apart from the faulty leasing systems and associated problems, habitat degradation, lack of awareness & understanding of the dynamics of the floodplain production systems and over fishing can be underlined as major problems. In this fragile situation, lack of appropriate management interventions and initiatives have further aggravated the declining trend of the wetland biodiversity and productivity.

MACH Initiatives for conserving and enhancing biodiversity

The major focus of the MACH project is to begin restoring and then maintain enhance bio-diversity and productivity of floodplain habitats. The conservation practices and interventions being undertaken by MACH are holistic and take into consideration the entire wetland and involve all stakeholders at different hierarchies of use, control and management. The major focus is on ecosystem function and revitalization of wetland habitat, taking into consideration land, water, fish, watershed, vegetation, wildlife, agriculture and other resources. The wetland resources conservation & management interventions being implemented are all suggested and implemented by the users and other local stakeholders. MACH, in fact, is helping the local people in identifying the problems and taking measures to improve, conserve and promote the wise use of resources. Various interventions aiming at biodiversity conservation and enhancement being implemented at MACH sites include the following:

Wetland habitat Rehabilitation

Several beels and khals (wetland habitats) which were either degraded (or not functioning) have been rehabilitated in each of the three MACH sites. Most of these habitats were seasonal before the interventions, now all these have become perennial and retain water round the year. Fish and other aquatic biota will take refuge in these habitats. Khal rehabilitation and in some cases opening, has facilitated migration of fish among habitats. This of course is essential for biological cycle (spawning, nursing, feeding and taking refuge) completion.

Restoration of swamp forests

Suitable wetlands have been planted with wet area tree species (*Hijal:* Barringtonia acutangula and *Koroch*: Pungamia pinnata) in each of the three sites. These wetland forests will enhance the quality of habitats by providing additional niches for growing of food and as a refuge area for fish and other aquatic life. The community also earns income form these trees through selling of branches for makingof brush piles and for use as fuel wood.

Watershed management and riparian vegetation restoration

In order to protect the stream banks and reduce soil erosion, selected stream banks within and adjacent to the project sites have been planted with trees (timber, fruits others) and shrubs to develop a riparian forest along the river course. In addition to the ecological importance of riparian forest for birds and wildlife, the local communities can also earn income from the trees.

Besides, the riparian reforestation, contour plantation of pineapples on the hills has been successfully demonstrated in the Hail Haor Site. The project started with demonstration plots in the first year, which attracted many growers in the area. In the second year, 11 such demonstration plots have been organized in different hills around the haor. It is expected that more growers will continue to plant on the counter in the next year.

Reintroduction of locally threatened and lost species of fish and trees
Based on the historical knowledge of local fishermen and the findings of baseline survey, lists of locally threatened or endangered species of fish and trees for each site have been developed. In order to increase the diversity of fauna and flora in the project sites, several species of locally threatened, endangered or lost species of fish have been re-introduced in each of the three sites. The community participated in the selection of the species. Both adults and fingerlings of locally endangered or lost species of fish have been re-introduced in the first year. Similarly, tree species that are endangered or have disappeared from native habitat are being reintroduced to increase the diversity of flora in each of the sites.

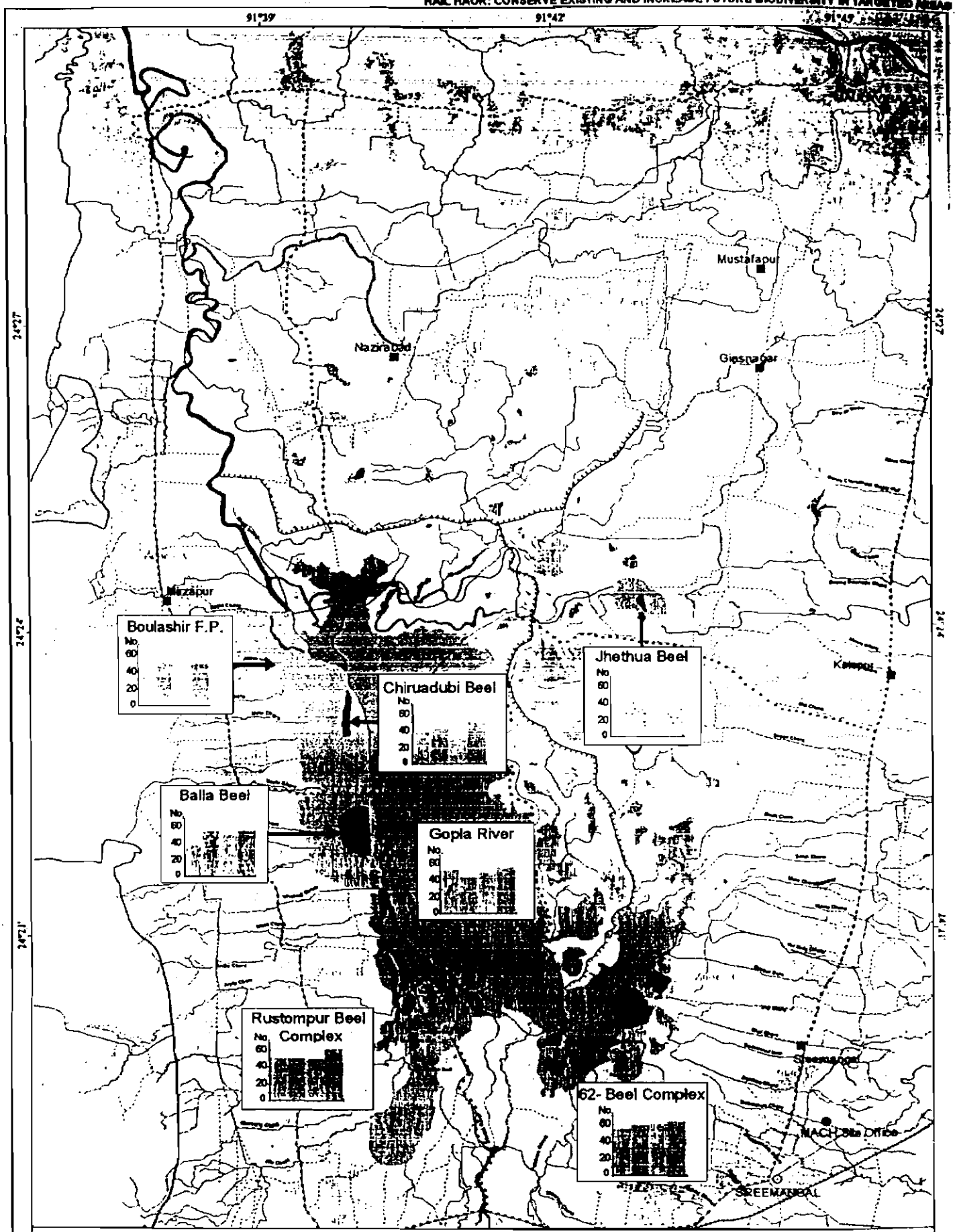
Establishment of wetland sanctuary
A number of wetland sanctuaries (conservation areas) have been established in each of the three MACH sites. As a general rule, in each of the habitats rehabilitated, 1-3 sanctuaries have been established. These sanctuaries provide refuge for fish in the dry season and protect a mix of diverse species in reasonable quantities allowing them to attain maturity for repopulating the ecosystem in the next monsoon. The communities are developing and adopting norms for management of the sanctuaries. There is a rule in practice that there should be no fishing or activities of any sort in the sanctuary areas. MACH, along with the communities is setting up large permanent and perennial sanctuaries, at least one in each of the three sites. The large perennial permanent sanctuaries are very important for long term replenishment of (grass and shrubs) fish stock in the larger floodplain ecosystem. Large sanctuaries can also effectively contribute to provide refuge for other aquatic fauna including wetland birds.

Protection of natural growth of plants in wetlands and watersheds
Measures have been taken to protect the natural growth of vegetation in the stream banks in chharas in hail haor site. Within the planted swamp tree areas other grasses and bushes being developed which would provide enhanced habitats for various species and thus in turn would increase the biodiversity of the areas.

Flexible restrictions on using harmful fishing gears and destructive fishing practices
The communities have established time closures on fishing in many areas. The communities ban on using harmful gears like *khata jal, current jal, polo fishing* (to protect the aquatic vegetation and spawn of the fish) within the RMO managed water-bodies in each of the sites have been very successful. The fishing bans during critical spawning and fish recruitment periods have resulted in large blooms of small but valuable fish species as well as new regetative habitat. Fishing by complete dewatering has been stopped in RMO managed wetlands and efforts have been taken to discourage other leaseholders in the area not to de-water the beels completely for fishing.

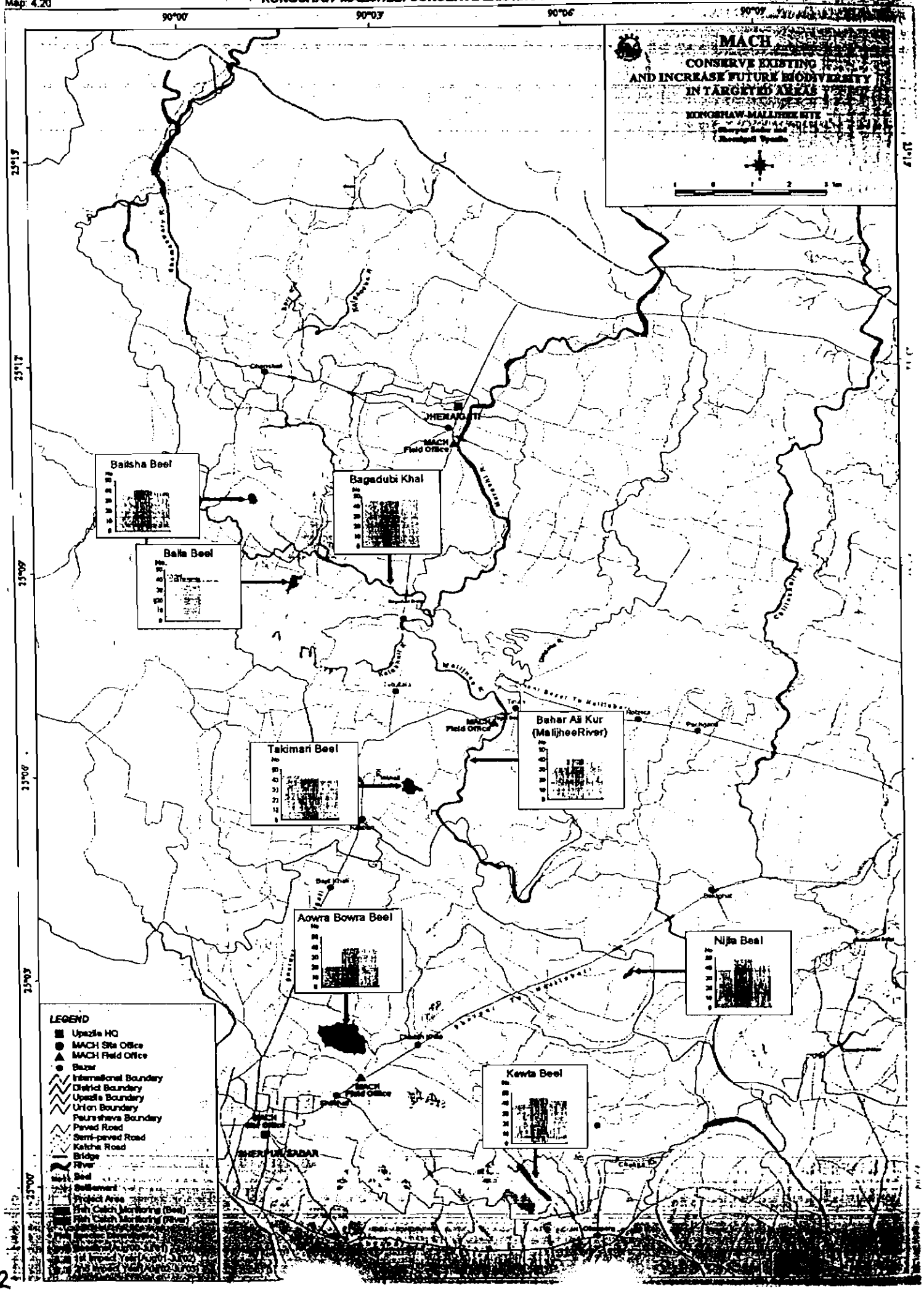
Discouraging hunting of birds and catching of fish fry and brood fish
The communities are organized and motivated to stop hunting of birds and catching of fish fry in RMO managed wetlands. Awareness and motivational campaigns continue in wider areas covering various users and stakeholders, bird hunters and fry/brood fish catching.

HAIL HAOR: CONSERVE EXISTING AND INCREASE FUTURE BIODIVERSITY IN TARGETED AREAS

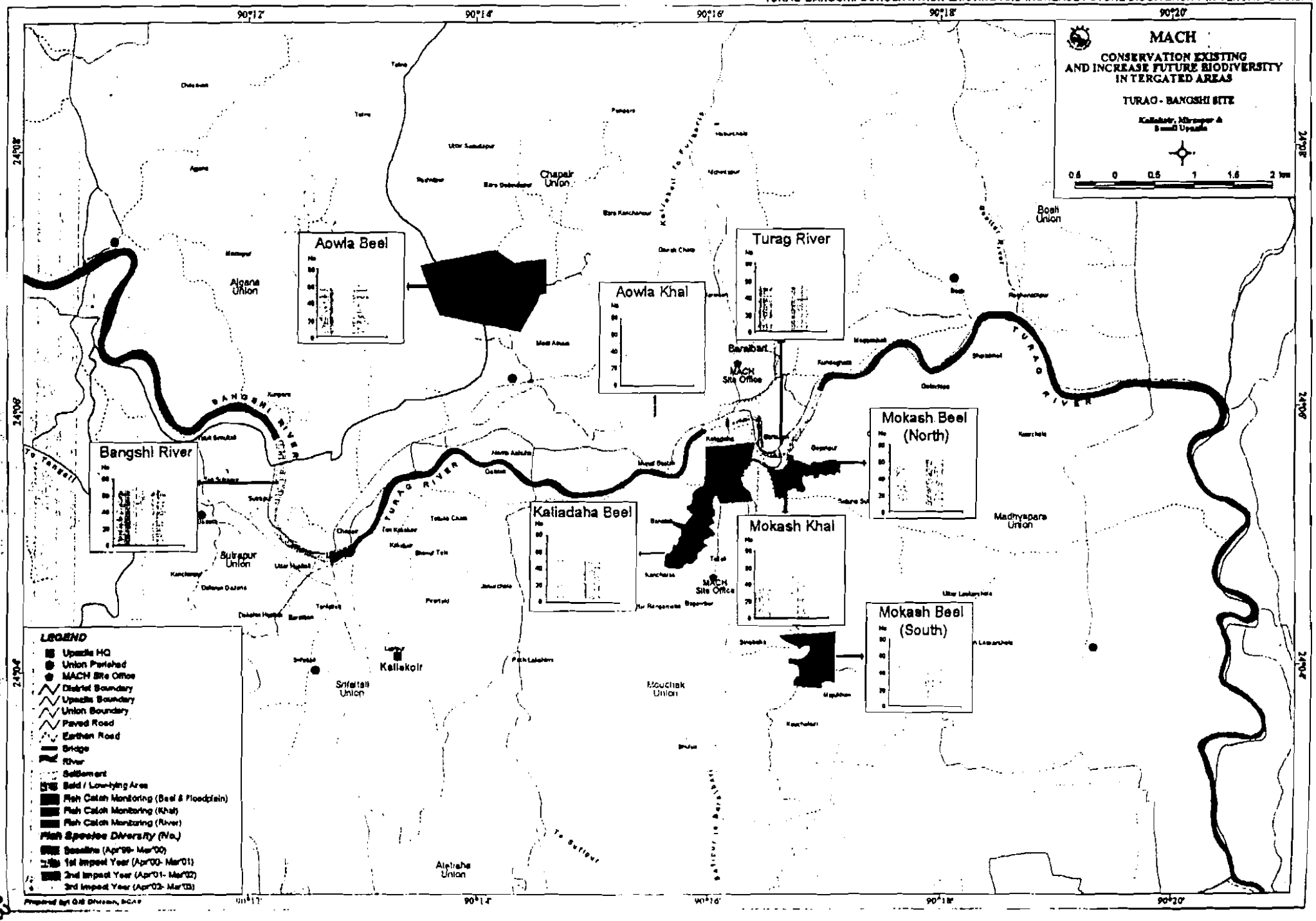


Map: 4.20

KONGSHAW-MALLIHEE: CONSERVE EXISTING AND INCREASE FUTURE BIODIVERSITY IN TARGETED AREAS



TURAG-BANGSHI: CONSERVATION EXISTING AND INCREASE FUTURE BIODIVERSITY IN TERGATED AREAS



Species Diversity Comparison of Hail Haor by different Intervention

Species Name(Bengali)	Scientific Name	Baseline	Impact-1	Impact-2	Impact-3
Jat Puti	*Puntius sophore*	√	√	√	√
Kanchan Puti	*Puntius conchonius*	√	√	√	√
Tit Puti	*Puntius ticto*	√	√	√	√
Jhili Puti	*Puntius gelius*	√	√	√	√
Futani Puti	*Puntius phutunio*	√	√	√	√
Teri Puti	*Puntius terio*	√	X	X	√
Mola Puti	*Puntius guganio*	X	X	√	√
Shar Puti	*Puntius sarana*	X	X	√	√
Chola Puti	*Puntius chola*	√	√	X	√
Thai Shor Puti	*Puntius gonionotus*	√	√	√	√
Bagha Puti	*Puntius stigma*	X	X	X	√
Mola	*Amblypharyngodon mola*	√	√	√	√
Chela	*Oxygaster pholo*	√	√	√	√
Chep Chela	*Chela laubuca*	√	√	√	√
Ranga Chanda	*Chanda ranga*	√	√	√	√
Lamba Chanda	*Chanda nama*	√	√	√	√
Gol.Chanda	*Chanda baculis*	√	√	√	√
Chapila	*Gudusia chapra*	√	√	√	√
Khalisha	*Colisa fasciatus*	√	√	√	√
Lal Khalisha	*Colisa lalius*	√	√	√	√
Chuna Khalisha	*Colisa laboisa*	√	√	√	√
Dankina	*Rasbora daniconius*	√	√	√	√
Meni/Bheda	*Nandus nandus*	√	√	√	√
Koi	*Anabas testudineus*	√	√	√	√
Kali/Napti Koi	*Badis badis*	√			
Bele	*Glossogobius giurius*	√	√	√	√
Rani	*Botia dario*	√	√	√	√
Kachki	*Corica soborna*	√	X	X	X
Kaikla	*Xenentodon cancila*	√	√	√	√
Poa	*Pama pama*	X	√	X	√
Gutum	*Lepiodocephalus guntea*	√	√	√	√
Khalla/Kharshulla	*Mugil corsula*	X	X	√	√
Tin Chokha	*Aplocheilus panchax*	√	√	√	√
Boro Baim	*Mastacembelus armatus*	√	√	√	√
Guchi Baim	*Mastacembelus pancalus*	√	√	√	√
Tara Baim	*Macrognathus aculeatus*	√	√	√	√
Kuicha	*Cuchia cuchia*	√	√	√	√
Taki	*Channa punctatus*	√	√	√	√
Shol	*Channa striata*	√	√	√	√
Gojar	*Channa marulius*	√	√	√	√
Cheng	*Channa gachua*	√	√	√	√
Vangra	*Labeo boga*	√	X	√	X
Goinna	*Labeo gonius*	√	√	√	√
Tatkini	*Crossocheilus latius*	X	√	X	X
Raek	*Cirrhinus reba*	X	X	X	√
Air	*Mystus aor*	√	√	X	√
Bajri Tengra	*Mystus tengara*	√	√	√	√

BEST AVAILABLE COPY

Species Name (Bengali)	Scientific Name	Baseline	Impact-1	Impact-2	Impact-3
Golsa	*Mystus cavasius*	√	√	√	√
Tengra	*Mystus vittatus*	√	√	√	√
Kabasi Tengra		X	X	X	√
Bacha	*Eutropiichthys vacha*	√	√	√	√
Baspata/Kazuli	*Danio devario*	X	X	X	√
Boal	*Wallago attu*	√	√	√	√
Pangas	*Pangasius pangasius*	X	X	X	√
Kani Pabda	*Ompok bimaculatus*	√	√	√	√
Pabda Machu *					
Pabda Kowakata Ghorakata	*Ompok pabda*	√	√	√	√
Chaka/Gangina Kowakata	*Chaka chaka*	√	√	√	√
Shing	*Heteropneustes fossilis*	√	√	√	√
Magur	*Clarius batrachus*	√	√	√	√
African Magur	*Clarias gariepinus*	X	√	X	X
Chital	*Notopterus chitala*	X	X	X	√
Foli	*Notopterus notopoterus*	√	√	√	√
Telapia	*Oreochromis (Telapia) mossambicus*	√	√	√	√
Rui *	*Labeo rohita*	√	√	√	√
Catla	*Catla catla*	√	X	√	√
Mrigel	*Cirrhinus mrigala*	√	√	√	√
Kalibaush *	*Labeo calbasu*	√	√	√	√
Silver Carp	*Hypophthalmichthys molitrix*	X	√	X	√
Grass Carp	*Ctenopharyngodon idellus*	√	√	√	√
Mirror Carp	*Cyprinus carpio*	X	√	X	X
Common Carp/Karfu	*Cyprinus carpio*	√	√	√	√
Bighead Carp	*Aristechthys nobilis*	X	X	X	√
Gura Echa	*Macrobrachium lamrrei*	√	√	√	√
Narkeli Chela	*Oxygaster bacalia*	√	√	√	√
Naitani/Berkul	*Osphronemus(Ctenops) nobilis*	√	√	√	√
Ghaura	*Clupisoma garua*	√	X	X	X
Tepa/Futkora	*Tetraodon cutcutia*	√	√	√	√
Buth Koi/Bali Chata/Balitora	*Nemacheilus batia*	X	√	√	X
Satka Chingri	*Macrobrachium*	X	X	√	√
Dimua/Kathalia Echa		√	√	X	√
Thengua Echa	*Macrobrachium birmanicus*	√	√	√	√
Elong		√	X	X	X
Gora Gutum/Ganga Shagor		√	√	√	X
Boiragi Echa		√	X	X	X
Reckha Kholisha		√	√	√	√
Sheild Kholisha	*Colisa labiosus*	√	√	√	X
Kecho Bime	*Ophichthys boro*	√	X	X	X
Potka	*Tetraodon patoca*	√	√	√	√
Senia (Eusufi)	*Gagata cenia*	X	√	√	X
Moa	*Rohtee cotio*	X	√	√	√
Total		71	71	69	76

* Introduced, re-introduced SPP

BEST AVAILABLE COPY

Species Diversity Comparison of Turag Bongshi by different Intervention

Species Name(Bengali)	Scientific Name	Baseline	Impact 1	Impact 2	Impact 3
Jat Puti	*Puntius sophore*	√	√	√	√
Kanchan Puti	*Puntius conchonius*	√	√	√	√
Tit Puti	*Puntius ticto*	√	√	√	√
Jhili Puti	*Puntius gelius*	√	√	√	√
Futani Puti	*Puntius phutunio*	√	X	X	X
Chola Puti	*Puntius chola*	√	√	√	√
Thai Shor Puti	*Puntius gonionotus*	√	√	√	√
Bagha Puti	*Puntius stigma*	√	√	√	√
Mola	*Amblypharyngodon mola*	√	√	√	√
Dhela	*Amblypharyngodon microlepis*	√	√	√	√
Chela	*Oxygaster pholo*	√	√	√	√
Chep Chela	*Chela laubuca*	√	X	X	X
Ranga Chanda	*Chanda ranga*	√	√	√	√
Lamba Chanda	*Chanda nama*	√	√	√	√
Gol Chanda	*Chanda baculis*	√	√	√	√
Chapila	*Gudusia chapra*	√	√	√	√
Khalisha	*Colisa fasciatus*	√	√	√	√
Lal Khalisha	*Colisa lalius*	√	√	√	√
Chuna Khalisha	*Colisa laboisa*	√	√	√	√
Dankina	*Rasbora daniconius*	√	√	√	√
Koi	*Anabas testudineus*	√	√	√	√
Kali/Napti Koi	*Badis badis*	√	√	√	√
Beie	*Glossogobius giurius*	√	√	√	√
Rani	*Botia dario*	√	√	√	√
Kachki	*Corica soborna*	√	√	√	√
Kaikla	*Xenentodon cancila*	√	√	√	√
Poa	*Pama pama*	√	√	√	√
Gutum	*Lepiodocephalus guntea*	√	√	√	√
Khalla/Kharshulla	*Mugil corsula*	√	√	√	√
Peali	*Aspidoparia morar*	√	√	√	√
Tin Chokha	*Aplocheilus panchax*	√	√	√	√
Fesha	*Raconda russeliana*	√	X	X	√
Boro Baim	*Mastacembelus armatus*	√	√	√	√
Guchi Baim	*Mastacembelus pancatus*	√	√	√	√
Tara Baim	*Macrognathus aculeatus*	√	√	√	√
Kuicha	*Cuchia cuchia*	√	√	X	√
Taki	*Channa punctatus*	√	√	√	√
Shol	*Channa striata*	√	√	√	√
Cheng	*Channa gachua*	√	√	√	√
Vangra	*Labeo boga*	√	√	√	X
Tatkini	*Crossocheilus latius*	√	√	√	√
Air	*Mystus aor*	√	√	√	√
Guzi air/Guzkata	*Mystus seenghala*	√	X	√	√
Bagha Air	*Bagarius bagarius*	√	√	√	√
Batasi	*Clupisoma (Pseudentropious) atherrinoides*	√	√	√	√
Golsa	*Mystus cavasius*	√	√	√	√
Tengra	*Mystus vittatus*	√	√	√	√

BEST AVAILABLE COPY

Species Name (Bengali)	Scientific Name	Baseline	Impact 1	Impact 2	Impact 3
Bacha	*Eutropiichthys vacha*	√	√	√	√
Baspata/Kazuli	*Danio devario*	√	√	√	√
Boal	*Wallago attu*	√	√	√	√
Rita	*Rita rita*	√	√	√	√
Silong	*Silonia silondia*	√	√	√	√
Kani Pabda	*Ompok bimaculatus*	√	√	√	√
Pabda/Madhu Pabda/Kowakala/Ghorakala	*Ompok pabda*	√	√	√	√
Chaka/Gangina/Kowakala	*Chaka chaka*	√	√	√	√
Shing	*Heteropneustes fossilis*	√	√	√	√
Magur	*Clarius batrachus*	√	√	√	√
Foli	*Notopterus notopoterus*	√	√	√	√
Hilsha (Jatka)	*Tenualosa ilisha*	√	√	√	√
Telapia	*Oreochromis (Telapia) mossambicus*	√	√	√	√
Rui	*Labeo rohita*	√	√	√	√
Catla	*Catla catla*	√	√	√	√
Mrigel	*Cirrhinus mrigala*	√	√	√	√
Kalibaush	*Labeo calbasu*	√	√	√	√
Silver Carp	*Hypophthalmichthys molitrix*	√	√	√	
Common Carp/Karfu	*Cyprinus carpio*	√	√	√	
Gura Echa	*Macrobrachium lamrrei*	√	√	√	√
Golda Echa	*Macrobrachium rosenbergii*	√	√	√	√
Narkeli Chela	*Oxygaster bacalia*	√	X	X	X
Kaitani/Barkul	*Osphronemus(Ctenops) nobilis*	√	X	X	X
Chanda	*Clupisoma garua*	√	√	√	√
Tepa Puti/Bra	*Tetraodon cutcutia*	√	√	√	√
Batli Kor Bali Chata Baliora	*Nemacheilus batia*	√	√	√	√
Salka Chingri	*Macrobrachium*	√	√	√	√
Putul	*Botia lohachata*	√	X	X	X
Dimua/Kathalia Echa		√	√	√	√
Gora Gutum/Ganga Shagor		√	√	√	√
Gugri Bila		√	√	√	√
Polka	*Tetraodon paloca*	√	√	√	X
Nayan bali		√	√	√	
GangChela/Ghora Chel		√	X	√	
Peashi	*Aspidoparia jaya*	√	√	√	
Mola Puti	*Puntius guganio*	X	X	√	√
Shar Puti	*Puntius sarana*	X	X	X	√
Meni/Bheda	*Nandus nandus*	X	√	√	√
Gojar	*Channa marulius*	X	√	√	√
Goinna	*Labeo gonius*	X	X	X	√
Bajri Tengra	*Mystus tengara*	X	X	√	√
Kabasi Tengra		X	X	√	√
Pangas	*Pangasius pangasius*	X	X	√	X
African Magur	*Clarias gariepinus*	X	√	X	√
Chital	*Notopterus chitala*	X	X	X	√
Grass Carp	*Ctenopharyngodon idellus*	X	√	√	√
Miror Carp	*Cyprinus carpio*	X	√	√	√

BEST AVAILABLE COPY

Species Name(Bengali)	Scientific Name	Baseline	Impact-1	Impact-2	Impact-3
Bighead Carp	*Aristechthys nobilis*	X	X	X	√
Gang Tengra	*Gagata viridescens*	X	X	√	X
Tengra (Batasio)	*Batasio batasio*	X	√	X	√
Senia (Eusufi)	*Gagata cenia*	X	X	√	√
Mamoli Chapila		X	√	√	√
Chenua		X	X	X	√
	Total	82	81	86	91

* Introduced, re-introduced fish spp.

BEST AVAILABLE COPY

Species diversity comparison of Kongshow-Malijhee by different Intervention

Bengali Name	Scientific Name	Baseline	Impact-1	Impact-2
Jat Puti	Puntius sophore	√	√	√
Kanchan Puti	Puntius conchonius	√	√	√
Tit Puti	Puntius ticto	√	√	√
Jhili Puti	Puntius gelius	√	X	X
Putani Puti	Puntius phutunio	X	X	√
Mola Puti	Puntius guganio	√	X	X
Shar Puti	Puntius sarana	√	√	√
Chola Puti	Puntius chola	√	X	√
Thai Shor Puti	Puntius goniorotus	√	√	√
Bagha Puti	Puntius stigma	X	√	√
Mola	Amblypharyngodon mola	√	√	√
Chela	Amblypharyngodon microlepis	√	√	√
Chela	Oxygaster pholo	√	√	√
Chep Chela	Chela laubuca	√	√	√
Ranga Chanda	Chanda ranga	√	√	√
Lamba Chanda	Chanda nama	√	√	√
Goi Chanda	Chanda baculis	√	√	√
Chapila	Gudusia chapra	√	√	√
Khalisha	Colisa fasciatus	√	√	√
Lal Khalisha	Colisa lalius	√	√	√
Chuna Khalisha	Colisa laboisa	√	√	√
Darkina	Rasbora daniconius	√	√	√
Meni/Bheda	Nandus nandus	X	X	√
Koi	Anabas testudineus	√	√	√
Kali/Napti Koi	Badis badis	√	√	√
Bele	Glossogobius giurius	√	√	√
Pani	Botia dario	√	√	√
Kaikla	Xenentodon cancila	√	√	√
Poa	Pama pama	X	√	√
Gutum	Lepiodocephalus guntea	√	√	√
Tin Chokha	Aplocheilus panchax	√	X	√
Boro Baim	Mastacembelus armatus	√	√	√
Guchi Baim	Mastacembelus pancalus	√	√	√
Tara Baim	Macrognathus aculeatus	√	√	√
Kuicha	Cuchia cuchia	√	√	√
Taki	Channa punctatus	√	√	√
Shol	Channa striata	X	√	√
Gojar	Channa marulius	X	√	√
Cheng	Channa gachua	√	√	√
Bata	Labeo bata	√	√	√
Vangra	Labeo boga	√	X	√
Goinna	Labeo gonius	X	√	√
Tatkini	Crossocheilus latius	√	√	√
Raek	Cirrhinus reba	X	√	√
Nandil	Labeo nandina	√	√	√
Air	Mystus aor	√	X	X

BEST AVAILABLE COPY

Bengali Name	Scientific Name	Baseline	Impact-1	Impact-2
Guzi air/Guzkata	Mystus seenghala	X	X	√
Bagha Air	Bagarius bagarius	√	X	X
Batasi	Clupisoma (Pseudentropious) atherrinoides	√	√	√
Bajri Tengra	Mystus tengara	X	X	√
Golsa	Mystus cavasius	√	√	√
Tengra	Mystus vittatus	√	√	√
Kabasi Tengra		X	√	X
Boal	Wallago attu	√	√	√
Pangas	Pangasius pangasius	X	√	√
Silong	Silonia silondia	X	X	√
Kani Pabda	Ompok bimaculatus	√	X	X
Pabda/Madhu Pabda/Kowakata/Ghorakata	Ompok pabda	√	√	√
Shing	Heteropneustes fossilis	√	√	√
Magur	Clarius batrachus	√	√	√
African Magur	Clarias gariepinus	X	√	X
Foli	Notopterus notopoterus	√	√	√
Hilsha (Jatka)	Tenualosa ilisha	X	√	√
Telapia	Oreochromis (Telapia) mossambicus	X	√	√
Rui	Labeo rohita	√	√	√
Catla	Catla catla	√	√	√
Mrigel	Cirrhinus mrigala	√	√	√
Kalibaush	Labeo calbasu	√	√	√
Silver Carp	Hypophthalmichthys molitrix	√	√	√
Grass Carp	Ctenopharyngodon idellus	√	√	√
Miror Carp	Cyprinus carpio	√	√	√
Comon Carp/Karfu	Cyprinus carpio	√	√	√
Bighead Carp	Aristechthys nobilis	X	X	√
Gura Echa	Macrobrachium lamrrei	√	√	√
Golda Echa	Macrobrachium rosenbergii	√	√	X
Naftani/Berkul	Osphronemus(Ctenops) nobilis	X	√	X
Ghaura	Clupisoma garua	√	√	X
Tepa/Futkora	Tetraodon cutcutia	√	√	√
Gora Gutum/Ganga Shagor		√	√	√
Gugri Bila		X	X	√
Potka	Tetraodon patoca	√	X	X
Senia (Eusufi)	Gagata cenia	X	√	X
GangChela/Ghora Chel		√	X	√
Batai		√	√	X
		64	67	71

BEST AVAILABLE COPY

Re-introduction of threatened fish species:

Site	Year	Species Re-introduced	Number
Kaliakoir	2001	Kalibaush(*Labeo calbasu*), Pabda(*Ompok pabda*), Deshi- Sarputi(*Puntius sarana*), Foli(*Notopterus notopoterus*), Meni(*Nandus nandus*) * Brood of the above fishes was introduced.	10 12 80 20 14
		Total	136
	2002	Rui(*Labeo rohita*)	26,434
		Kalibaush(*Labeo calbasu*)	144
		Gonia(*Labeo gonius*)	5,051
		Total	31,629
	2003	Rui(*Labeo rohita*)	109,510
		Gonia(*Labeo gonius*)	24,332
		Total	133,842
		Sub-total	165,607
Sherpur site	2001	Shol(*Channa striata*)	11,180
		Gojar(*Channa marulius*)	1,390
		Kalibaush(*Labeo calbasu*)	16,940
		Gonia(*Labeo gonius*)	12,780
		Total	42,290
	2002	Meni (*Nandus nandus*)	372
		Sarputi (*Puntius sarana*)	2,090
		Pabda (*Ompok pabda*)	137
		Kalibaush(*Labeo calbasu*)	175
		Gonia(*Labeo gonius*)	11,028
		Gulsha(Mystus cavasius)	30
		Rui(*Labeo rohita*)	320
		Total	14,152
	2003	Gonia(*Labeo gonius*)	7,439
		Bata(*Labeo bata*)	6,534
		Shol(*Channa striata*)	70
		Chapila(*Gudusia chapra*)	150
		Rui(*Labeo rohita*)	27,939
		Total	42,132
		Sub-Total	98,574
Sreemangal site	2001	Gonia(*Labeo gonius*)	13,200
		Ayer(*Mystus aor*)	384
		Kalibaush(*Labeo calbasu*)	2,108
		Sarputi(*Puntius sarana*)	4,136
		Total	19,828

BEST AVAILABLE COPY

Site	Year	Species	Number
	2002	Gonia(*Labeo gonius*)	14,350
		Ayer(*Mystus aor*)	2,934
		Kalibaush(*Labeo calbasu*)	15,213
		Sarputi(*Puntius sarana*)	3,600
		Total	36,097
	2003	Rui(*Labeo rohita*)	117,253
		Gonia(*Labeo gonius*)	59092
		Ayer(*Mystus aor*)	500
		Total	176,845
		Sub-Total	232,770
		Grand-Total	496951

Re-introduction of species since inception to the end of the project period:

Species	HH	TB	KM	Total
Ayer(*Mystus aor*)	3,818	-	-	3,818
Gonia(*Labeo gonius*)	86642	29,383	31,247	147272
Rui(*Labeo rohita*)	117,253	135,944	28,259	281,456
Sarputi (*Puntius sarana*)	7,736	80	2,090	9,906
Kalibaush(*Labeo calbasu*)	17,321	154	17,115	34,590
Chapila(*Gudusia chapra*)	-	-	150	150
Shol(*Channa striata*)	-	-	11,250	11,250
Bata(*Labeo bata*)	-	-	6,534	6,534
Gulsha(*Mystus cavasius*)	-	-	30	30
Pabda(*Ompok pabda*)	-	12	137	149
Meni(*Nandus nandus*)	-	14	372	386
Gojar(*Channa marulius*)	-	-	1,390	1,390
Foli(*Notopterus notopoterus*)	-	20	-	20
Total	232770	165,607	98,574	496951

BEST AVAILABLE COPY

List of species of plants planted in MACH project area

Sl. No	Bangla name	Scientific name
1	Mahogony	*Swietania macrophylla*
2 *	Shishu	*Dalbargia sissoo*
3 *	Arjun	*Terminalia arjuna*
4	Jaam	*Sysygium jambulana*
5 *	Akashmoni	*Acacia auriculiformis*
6	Mangium	*Acacia mangium*
7	Kanthal	*Artocarpus heterophylia*
8	Bakain	*Melia azadarach*
9	Shegun/ Teak	*Tectona grandis*
10	Aam	*Mangifera indica*
11	Kala Koroi	*Albizia lebbeck*
12	Shil Koroi	*Albizia procera*
13	Raj Koroi/Road Chambal	*Albizia rhichardiana*
14	Jarul	*Lagerstromia flosregene*
15	Rain-tree	*Samanea saman*
16	Kadom	*Anthocephalus kadamba*
17	Chikrashi	*Chickrassia tabularis*
18	Chapalish	*Artocarpus chaplasha*
19	Telsur	*Hopea odorata*
20	Jalpai	*Elaeocarpus robusta*
21	Bamboo/ Baash	*Bambusa vulgaris*
22	Katt Badam	*Terminalia katappa*
23	Dewa / Borta	*Artocarpus lakoocha*
24	Semul	*Salmalia malabaricum*
25	Sheora	*Streblus asper*
26	Hijol	*Barringtonia aquatangula*
27	Koroch	*Pongamia glabra*
28	Pitali	*Trewia nudiflora*
29	Barun	*Crataeva nurvula*
30	Khude Jaam	*Syzygium fruticosa*
31	Boroi	*Ziziphus mauritiana*
32	Babla	*Acacia nilotica*
33	Ipil-Ipil	*Leucaena lucocephella*
34	Chalta	*Dillenea indica*
35	Neem	*Azadirachta indica*
36	Lombu	*Pajenellia longifolia*
37	Aamloki	*Phyllanthus emblica*
38	Haritaki	*Terminalia chevula*
39	Bahera	*Terminalia ballirica*
40	Bot	*Ficus bangalensis*
41	Pakur/Ashwatha	*Ficus religiosa*
42	Chatian	*Alstonia scholaris*
43	Devdaru	*Polialthia longifolia*
44	Mahua	*Bassia latifolia*

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45	(Jongli) Aamra	*Spondias pinnata*
46	Bokool	*Mimassops elengi*
47	Dumoor	*Ficus semicordata*
48	Garjan	*Dipterocarpus turbinatus*
49	Telsur	*Hopea odorata*
50	Pitraj	*Amoora wallichi*
51	(Pobon) Jhau	*Casuarina equisetifolia*
52	Lohakatt	*Xylia dolabriformis*
53	Polash	*Butea monosparma*
54	Krishna Chhura	*Delonix regia*
55	Agor	*Aquilaria agallocha*

* Introduced or re-introduced spp

Table : Fish Species diversity in the Hail Haor by Monitoring Locations and by Year

Monitoring locations	Number of Fish Species observed					
	Baseline	Impact-1	Impact-2	Impact-1 & 2 combined	Impact-3	Impact-1, 2 & 3 combined
Jethua Beel	38	48	47	56	47	59
Gopla River	54	44	49	51	55	60
Boulashir FP	50	51	51	57	50	61
Chiruadubi Beel	46	44	52	55	50	56
62- Beel	59	59	61	67	63	71
Rustampur Beel	50	51	50	56	62	68
Balla Beel	39	55	50	60	55	67
Overall	71	71	69	77	76	85

Table : Fish Species diversity in the Turag-Bongshi by Monitoring Locations and by Year

Monitoring Locations	Number of Fish Species observed					
	Baseline	Impact-1	Impact-2	Impact-1 & 2 combined	Impact-3	Impact-1, 2 & 3 combined
Mokash Beel (South)	55	58	51	65	57	69
Mokash Beel (North)	58	56	62	69	52	72
Kaliadaha Beel	59	54	49	59	54	67
Mokash Khal/Solhati Khal	39	46	51	59	50	69
Turag River Section	54	55	58	67	71	79
Aowla Khal (Canal)	50	46	46	58	49	64
Aowla Beel	59	58	59	68	66	75
Bangshi River Section	67	70	67	79	75	86
Overall	82	81	86	89	91	95

Table -: Fish Species diversity in the Kongshaw-Malijhee by Monitoring Locations and by Year

Monitoring Locations	Number of Fish Species observed			
	Baseline	Impact-1	Impact-2	Impact-1 & 2 Combined
Baila Beel	46	43	41	49
Takimari Beel	44	41	39	46
Kewta Beel	39	45	42	56
Nijla Beel	37	48	42	52
Bagadubi Khal (Canal)	46	46	47	56
Bahar Ali Kur (Malijhee River)	32	40	37	45
Aowra Bowra Beel	21	31	25	36
Bailsha Beel	36	41	35	48
Overall	64	67	71	78

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Species diversity increased

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hail Haor	8	*Shar Puti (*Puntius sarana*),Satka Chingri (*Macrobrachium malcolmsonii*),*Goinna (*Labeo gonius*), Ayer (*Mystus aor*),*Rui (*Labeo rohita*), *Kalibaush (*Labeo calbasu*), *Pabda/Madhu Pabda (*Ompok pabda*),Moa (*Rohtee cotio*),	18	Sissoo (*Dalbargia sissoo*), Arjun (*Terminalia arjuna*), Bakain (*Melia azadarach*, Chikrashi (*Chickrassia tabularis*), Telsur (*Hopea odorata*), Katt Badam (*Terminalia katappa*), Dewa/Borta (*Artocarpus lakoocha*), Hijol (*Barringtonia aquatangula*), Koroch (*Pongamia glabra*), Borun (*Crataeva nurvula*), Khude Jaam (*Syzygium fruticosa*), Babla (*Acacia nilotica*), Chalta (*Dillenea indica*), Haritaki (*Terminalia chevula*), Bahera (*Terminalia ballirica*), Debdaru (*Polialthia longifolia*), (Jongli), Aamra (*Spondias pinnata*), Garjan (*Dipterocarpus turbinatus*).
Turag Bongshi	10	Mola Puti (*Puntius guganio*), *Goinna (*Labeo gonius*), Ayer (*Mystus aor*), Guzi air/Guzkata (*Mystus seenghala*), *Pabda/Madhu Pabda (*Ompok pabda*), *Foli (*Notopterus notopoterus*), *Rui (*Labeo rohita*), *Kalibaush (*Labeo calbasu*), *Meni/Bheda (*Nandus nandus*), Gojar (*Channa marulius*),	7	Sissoo (*Dalbargia sissoo*), Arjun (*Terminalia arjuna*), Bakain (*Melia azadarach*), Chikrashi (*Chickrassia tabularis*), Katt Badam (*Terminalia katappa*), Hijol (*Barringtonia aquatangula*), Haritaki (*Terminalia chevula*).
Kongshow Malijhee	10	*Meni/Bheda (*Nandus nandus*), Bajri Tengra (*Mystus tengara*), *Shar Puti (*Puntius sarana*), *Chapila (*Gudusia chapra*), *Shol (*Channa striata*), *Gojar (*Channa marulius*), *Goinna (*Labeo gonius*), *Pabda/Madhu Pabda (*Ompok pabda*), *Rui (*Labeo rohita*), *Kalibaush (*Labeo calbasu*),	22	Sissoo (*Dalbargia sissoo*), Arjun (*Terminalia arjuna*), Bakain (*Melia azadarach*), Chikrashi (*Chickrassia tabularis*), Katt Badam (*Terminalia katappa*), Dewa/Borta (*Artocarpus lakoocha*), Hijol (*Barringtonia aquatangula*), Koroch (*Pongamia glabra*), Babla (*Acacia nilotica*), Chalta (*Dillenea indica*), Aamloki (*Phyllanthus emblica*), Haritaki (*Terminalia chevula*), Bahera (*Terminalia ballirica*), Debdaru (*Polialthia longifolia*), Mahua (*Bassia latifolia*), Aamra (*Spondias pinnata*), Bokool (*Mimassops elengi*), Garjan (*Dipterocarpus turbinatus*), Telsur (*Hopea odorata*), Pitraj (*Amoora wallichi*), (Pobon) Jhau (*Casuarina equisetifolia*), Agor (*Aquillaria agallocha*).
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*Note: * Introduced, re-introduced fish species*

Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.1.a: Area of Floodplain where Improved Management is implemented

October 2003

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.1: Effective Community Based Resource Management Mechanisms Implemented

Indicator 6.1a: Area of floodplain where sustainable management is implemented

A. Description

Precise Definition of Indicator: Sustainable management is defined by meeting the following criteria:

1. Participatory mechanisms for decision making are used (e.g. community management committee, local government management committee). These committees must include representatives both from the local government and the community.
2. Planning of activities is coordinated to identify priorities, needs, and resources for implementation
3. Procedures for environmentally sound resource use established.

Includes both open water and riparian areas.

Unit of Measure: Hectare

Disaggregate by: N/A

Justification/Management Utility: This is a quantitative indicator that allows the SO Team to determine progress. Increase in the area coverage will indicate the intensification of the sustainable management practices on one hand and improvement of the habitat on the other. Sustainable management practices will be instrumental in improving degraded habitats and ecosystems to ensure increased production of natural resources and enhance biodiversity.

B. Plan for Data Collection

Data Collection Method: Surveys, satellite imagery, LGED maps.

Method of Acquisition by USAID: Receipt of Semi-Annual Reports form Winrock

Data Source(s): Winrock International and partners

Frequency/ Timing of Data Collection: Annual.

Estimated Cost of Collection: Medium

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: Not undertaken to date. This is a new indicator.

Known Data Limitations (if any):

Actions Taken or Planned to Address Data Limitations:

Date of Future Data Quality Assessments: TBD

Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Review, by SO 6 Team, trends of progress comparing target to actual performance.

Presentation of Data: Table, maps and photos

Review of Data: Semi-annual mission portfolio review, R4 review and individual review with recipient

Reporting Data: Internal mission report, R4 report and CBJ report.

E. Other Notes:

Notes on the Baselines/Targets: Established by the grantee from land survey records, satellite images and LGED maps. No sustainable Management practices in place before MACH. The figure shown for 2002 actual in this report differs from the May 2003 report. The figure reported in the May report represented a figure that was only through June of 2002. This figure was mistakenly carried forward into the May 2003 reporting. The figure shown here is the actual for the entire year through Dec 2002.

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments:

Cumulative Unit of measure: Ha.

Year	Planned	Actual
Baseline		0
2000	1,200	2,200
2001	5,200	6,300
2002	11,200	11,202
2003	15,000	18,866
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6.1.a: Area of Floodplain where Improved Management is implemented

The area under improved management is that area where:

A. **Participatory mechanisms in place:**

1. Community based Resource Management Organization (RMO) formed and functional
2. Union Parishad chairmen and members are involved and meet regularly on area resource management issues and serve as advisers to the RMOs when requested
3. Upazila committee formed and active in area resource management, co-management practiced

B. Resource Management Plan in place identifying priority needs and resources, with environmentally sound resource use procedures established

C. Best management practices being adopted (procedures for sound resource use established):

1. Sanctuaries established
2. Time or area fishing closure periods established and effectively implemented
3. Refrain from destructive harvest practices (de-watering reduced, spawn collection reduced)
4. Re-introduction of previously existing species into sanctuary habitat
5. Restoration of wetland areas from annual to perennial

MACH has already had success in implementing land management policy changes for the Hail Haor basin by getting changes made to the leases for government land where pineapple is planted on the hillsides. The project has been a factor in getting longer-term leases for RMO's, and changes to the yearly 25%/10%/10% lease rate increases. The project has also worked toward having certain restrictions placed on the lease such as mandatory sanctuary creation, alternating harvest, and no de-watering. MACH has successfully changed a government policy by getting agreement that 8 critical areas in the MACH floodplains be set aside, the GoB give up the revenue, and that these areas be managed by the communities as sanctuaries and conservation areas for all time in the future. This has been accomplished and will favorably impact the entire 25,000 hectares of wet season wetlands of the MACH project. The setting up of these 8 permanent sanctuaries will ensure that the integrity of the fishery can be sustained.

Methodology for Area Delineation. The project has worked at 4 levels in improving the management of resource areas. The organization at the resource level (1st level) is the Resource Management Organization (RMO) and this is a community-based organization managing a part or an entire wetland area. The Union Parishad Chairman can be an advisor to this organization and plans are done through the Union Parishad (2nd level) and the next level at the Upazila (3rd level). MACH has formed Local Government Committees for providing GoB support and strength to the resource management decisions made by the RMO and agreed to at the Union Parishad level. The fourth level is the MACH Steering Committee at the National Level.

The Area under improved management has been determined as that area which has come under the best management practices of a Resource Management Organization and the institutional support of Local Government both at the Union and the Upazila level where best management practices described above and being implemented. On the following pages the delineated

improved management is shown in both tabular and map form. The various resource management organization data sheets are also provided for reference.

Area under Improved Management (ha)

Hail Haor Site

RMO	LU	Year 2001	2002	2003	Total
Agari Beel RMO	Land	440.65		120.98	561.63
	Settlement	51.98	17.56	12.55	82.09
	Waterbody	8.94		50.09	59.03
	Road Side Plantation	1.84	7.22		9.06
	Total	503.42	24.78	183.62	711.81
Alla Chhora RMO	Land	48.95			48.95
	Settlement	37.53			37.53
	Chora Plantation			13.24	13.24
	Total	86.49	0.00	13.24	99.72
Balla Beel RMO	Land	107.71	18.01	50.16	175.89
	Settlement	150.24			150.24
	Waterbody	107.64	9.61	60.52	177.77
	Road Side Plantation		0.82		0.82
	Chora Plantation	1.23	0.65	1.82	3.70
	Kanda			0.00	0.00
	Total	366.83	29.08	112.51	508.42
Baula Chhora RMO	Land	166.35			166.35
	Settlement	30.00			30.00
	Total	196.35	0.00	0.00	196.35
Boro Gangina RMO	Land			618.25	618.25
	Settlement		35.59		35.59
	Waterbody		0.38	1292.39	1292.77
	Road Side Plantation		6.40	2.35	8.75
	Kanda			43.52	43.52
	Khal		15.31	5.95	21.25
	Total	0.00	57.68	1962.46	2020.13
Dumuria Beel RMO	Land	510.17			510.17
	Settlement	55.71	1.28		56.99
	Waterbody	181.68			181.68
	Road Side Plantation	2.23	3.40		5.64
	Chora Plantation			2.44	2.44
	Kanda	13.75			13.75
	Total	763.55	4.69	2.44	770.68

RMO	LU	Year 2001	2002	2003	Total
Jag Chhora RMO	Land	86.37			86.37
	Chora Plantation		1.38		1.38
	Total	86.37	1.38	0.00	87.75
Jethua Beel RMO	Land	247.97		428.28	676.25
	Settlement	65.18		15.23	80.41
	Waterbody	2.51		575.71	578.22
	Road Side Plantation	1.57	2.09	6.98	10.64
	Chora Plantation			2.62	
	Total	317.24	2.09	1028.82	1345.53
Jolla Chhora RMO	Land	184.19			184.19
	Total	184.19	0.00	0.00	184.19
Kazura Beel RMO	Land	241.70		619.23	860.94
	Settlement	77.99	35.73		113.71
	Waterbody	9.25		7.81	17.06
	Road Side Plantation	1.96			1.96
	Total	330.90	35.73	627.05	993.67
Sananda Beel RMO	Land	87.89	191.16	391.90	670.95
	Settlement	129.77			129.77
	Waterbody	4.14	100.44	182.62	287.20
	Road Side Plantation	1.93	3.26		5.19
	Chora Plantation			2.01	2.01
	Total	223.74	294.86	576.53	1095.12
Out side of RMO but managed by RUG/MACH	Settlement	85.35	182.69		268.04
	Road Side Plantation		14.31	2.96	17.27
	Chora Plantation			3.68	
	Pineapple Demo	0.49	1.92	10.39	12.80
	Total	85.84	198.92	17.03	298.11
Grand Total		3144.00	649.20	4523.68	8311.48

RMO	LU	Year 2001	2002	2003	Total

Area under Improved Management (ha)

Kongshaw-Malijhee Site

NAME	Year 2001	2002	2003	Total
Beel				
Aourabaura Village Co	65	205	15	285
Bailsha BRMO	300		330	630
Dholi - Baila BRMO	430	15	125	570
Kewla BRMO	170	270	780	1220
Takimari - Dharabasia	690		950	1640
River / Jhora				
Bogdubi - Paglarmukh River Section			10	10
Kalghosha Chhora Committee		330		330
Nakshi Jhora Committee		60		60
Someswari River Committee			10	10
Gaimara Kur Committee			1520	1520
Grand Total	1655	880	3740	6275

N.B. Under outreach program Jheenigati plantation (Plantation Committees)			6750	

Area under Improved Management (ha)

Turag-Bangshi Site

Name	Year 2001	2002	2003	Total
Alua Beel RMO	600	950	900	2450
Mokosh Beel RMO	725	950		1675
River / Khal				
Turag River RMO	155			155
Total	1480	1900	900	4280

Source of Data
Monthly Reports of Resource Management Organization of MACH sites

RMOs	Sub-committee formed	Managed by RMOs	Species re-introduced	Brush piling done (Br) & Tetra-pod piling (Tp)		Stop fishing in sanctuaries
				Br	Tp	
H-H site						
1. Sananda		√	√	√	√	√
2. Balla		√	√	√	√	√
3. Jethua		√	√	√	√	√
4. Kajura		√	√	√	√	√
5. Agari		√	√	√	√	√
6. Borogangina		√		√	√	√
7. Dumuria		√		√		√
T-B site						
8. Mokosh	√	√	√	√	√	√
9. Aula	√	√	√	√	√	√
10. Turag River	√	√	√	√		√
K-M site						
11. Kewta		√	√	√	√	√
12. Takimari-Dharabasia	√	√	√	√	√	√
13. Dhali-Baila		√	√	√		√
14. Bailsha		√	√	√		√

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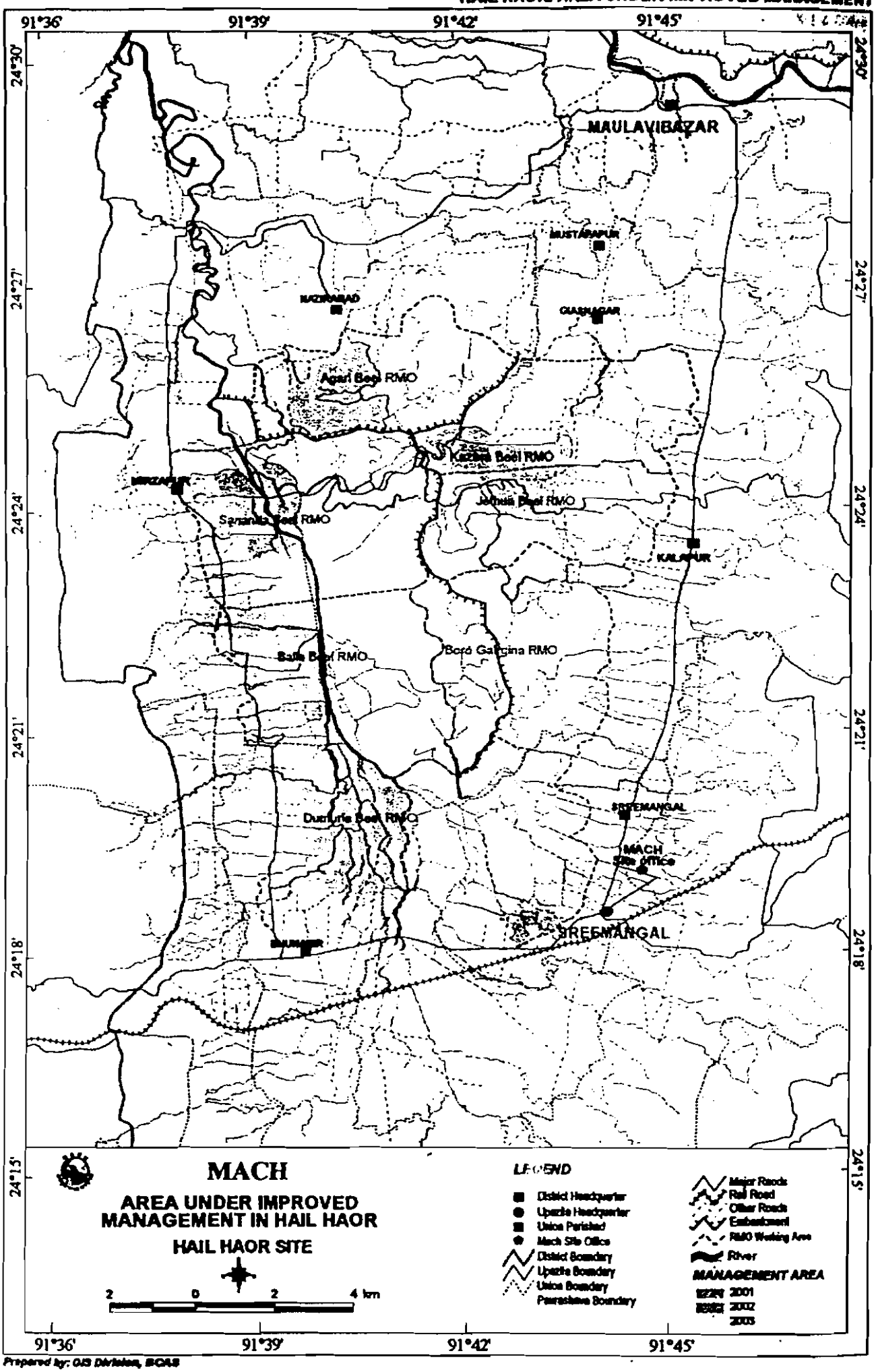
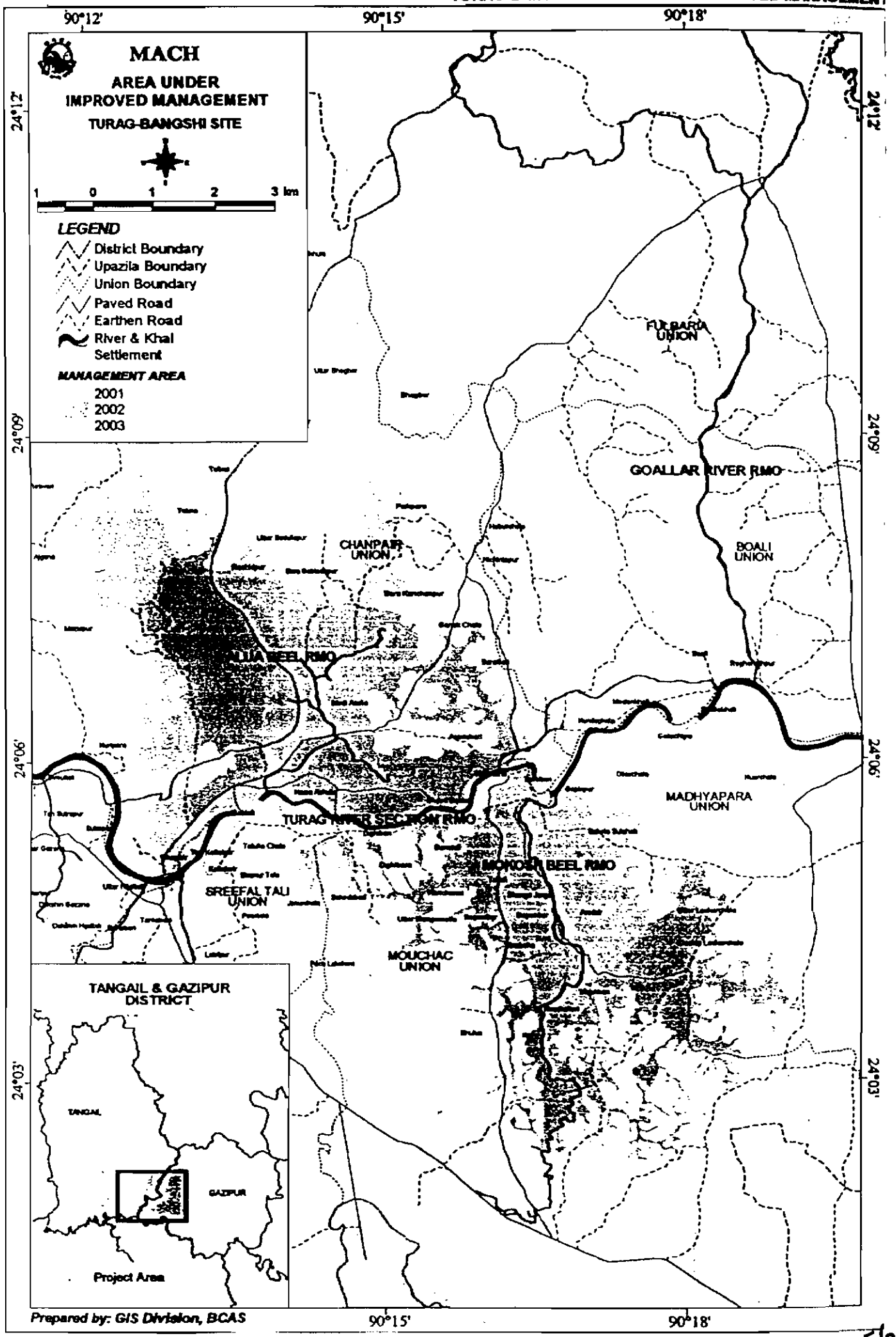
HAIL HAOR: AREA UNDER IMPROVED MANAGEMENT

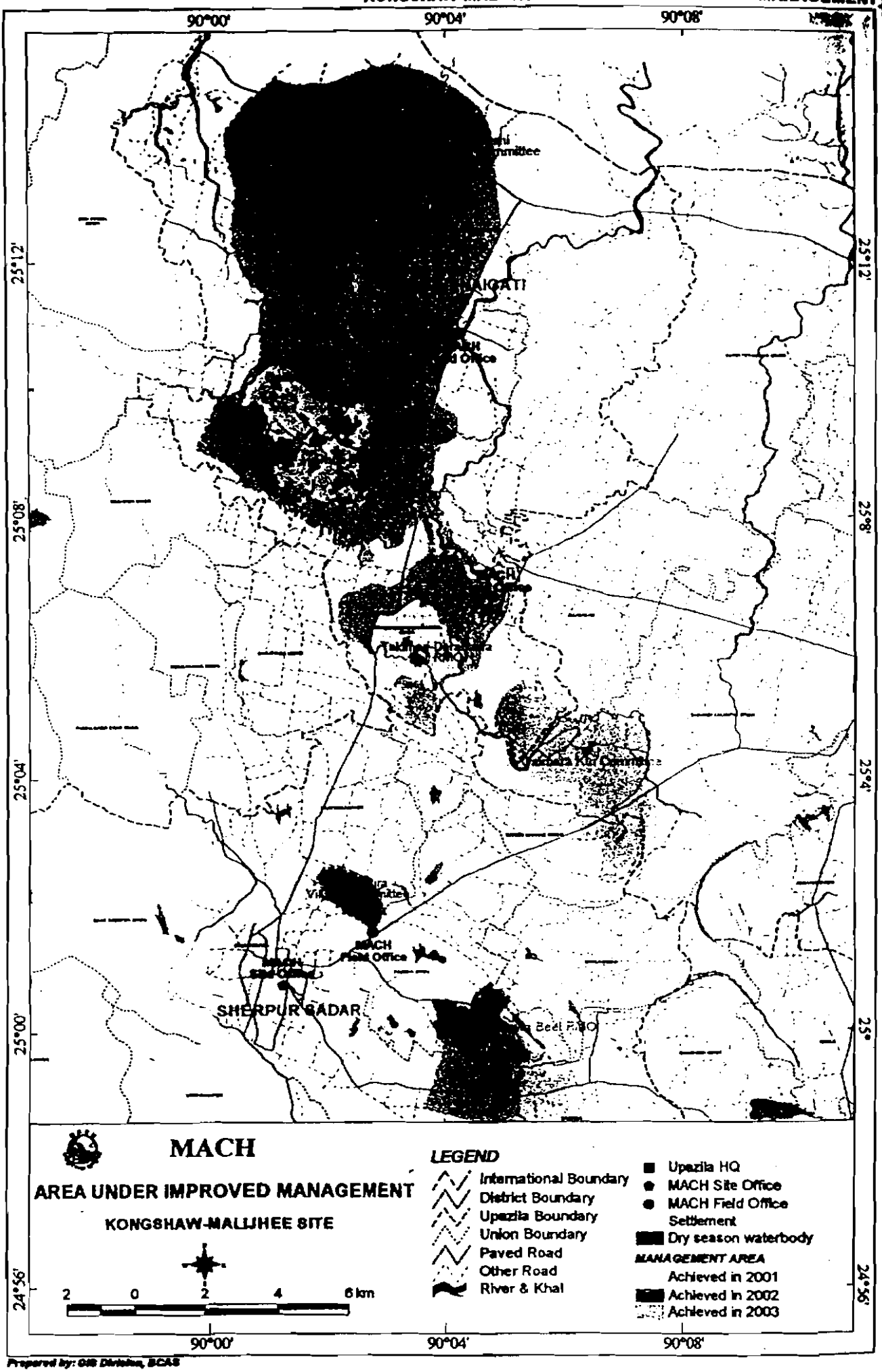


Prepared by: GIS Division, BCAS

TURAG-BANGSHI: AREA UNDER IMPROVED MANAGEMENT

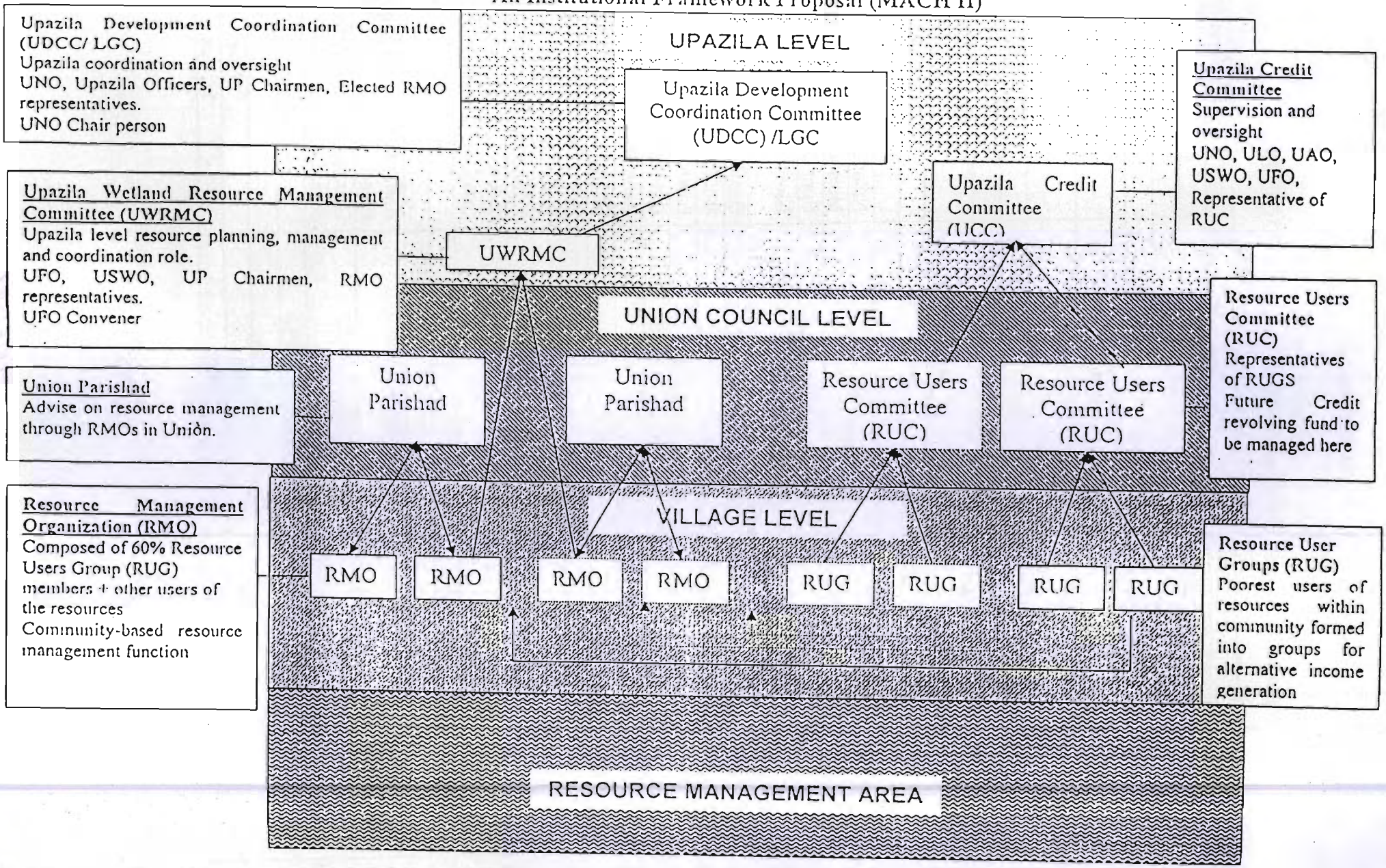


KONGSHAW-MALIJHEE: AREA UNDER IMPROVED MANAGEMENT



Prepared by: GIS Division, BCAS

Figure 1: Community-based Co-management of Natural Resources
An Institutional Framework Proposal (MACH II)



MACH Project

MACH-CNRS

Wetland Resource Management Organizations (RMOs) in Three Sites

Report as on August 31, 2003

Site	Beel RMO	Stream RMO	Daha/Kum RMO
Hail Haor	Sanada RMO	Alia Chhara RMO	-
	Jethua RMO	Boula Chhara RMO	-
	Balla RMO	Jaag Chhara RMO	-
	Dumuria RMO	Joita Chhara (Lower) RMO	-
	Agari RMO	Joita Chhara (Middle) RMO	-
	Kajura RMO	Ful Chhara Committee	-
	Borogangina RMO		-
	Ramaia RMO (Under process)		-
Total	8 nos.	6 nos.	-
Turag-Bangshi	Mokosh RMO	-	Naler Daha Committee
	Turag River RMO	-	Moisher Daha Committee
	Alua RMO	-	Burir Daha Committee
	Goallar River RMO (Under process)	-	Nawkhola + Dholi Daha Committee
	-	-	Bastoli Daha Committee
	-	-	Golachipa Kum Committee
	-	-	Lalkhar Kum Committee
	-	-	Gabtoli Sayedpur Kum Committee
	-	-	Bamoner Ghuni Committee
	-	-	Bhangi Danga Daha Committee
	-	-	Doika Daha Committee
	-	-	Boro Daha Committee
	-	-	Folimara Daha Committee
	-	-	Dilarhari Daha Committee
	-	-	Gurerhari Daha Committee
Total	4 nos.	-	15 nos.
Kangsha-Malijhee	Kewta RMO	Kalaghosa-1 JRMO	Bahar Ali Kur Committee (Malijhee River)
	Takimari-Dharabashia RMO	Kalaghosa-2 JRMO	Gaimara Kur Committee (Under process)
	Dholi-Baila RMO	Nakshi-Mala JRMO	-
	Bailsha RMO	-	-
Total	4 Nos.	3 Nos.	2 Nos.
G. Total	16 Nos.	9 Nos.	17 Nos.

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RMO Profile for SO6

Items	UP: Mirzapur Upazila: Sreemongal Dist.: Moulavibazar Project Site: Hail Haor Beel Complex: Sananda	
Name of RMO	Sananda Resource Management Organization	
No. of Village covered:	4 nos.	
Total Population.	6,080 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base	Sananda beel & associated floodplain	
Date of Registration	13-12-2000	
No. of RMO member		
- GB	72(Female 2)	
- RUG	42	
- EC	13	
Area of Water body (Khas):	8.89 acre	
Command Area (Resource):	1190 ha	
Beel area re-excavated (ha)	1.86	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Sananda- 3 nos.	0.42 acre
Rescurce Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	5	44,554
CPUA (kg/ha) at impact-3	107.30	
Bio-diversity at impact-3	56 nos.	
No. of Meetings	Executive Committee	General Body
	40	8
Management interventions		
- Area closure (Fishing restriction)	0.42 acre	
- Time closure	3 months March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, Fish spawn, brood fish	
Area under improved management	1095.12 ha	

Note:
Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and biodiversity: changes from the baseline due project interventions

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Sreemongal Project Site: Hail Haor	UP: Kalapur Dist.: Moulavibazar Beel Complex: Jethua
Name of RMO	Jethua Resource Management Organization	
No. of Village covered:	6 nos.	
Total Population:	5,917 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Jethua beel and associated floodplain	
Date of Registration	01-01-2001	
No. of RMO member		
- GB	42 (Female 4)	
- RUG	25	
- EC	15	
Area of Water body (Khas):	624.65 acre	
Command Area (Resource):	1445 ha	
Beel area re-excavated (ha)	3.10	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Jethua- 2 nos.	1.04 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	5	23,940
CPUA (kg/ha) at impact-3	154.91	
Bio-diversity at impact-3	47 nos.	
No. of Meetings	Executive Committee	General Body
	40	8
Management interventions		
- Area closure (Fishing restriction)	1.04 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, Fish spawn, brood fish	
Area under improved management	1345.53 ha	

Note:
Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and biodiversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Sreemongal Project Site: Hail Haor	UP: Bhunabir Dist.: Moulavibazar Beel Complex: Balla Beel
Name of RMO	Balla Resource Management Organization	
No. of Village covered	3 nos.	
Total Population	6,603 nos	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base	Balla beel and associated khal, river and floodplains	
Date of Registration	15-05-2001	
No. of RMO member		
- GB	51(Female 5)	
- RUG	31	
- EC	13	
Area of Water body (Khas):	105.98 acre	
Command Area (Resource):	613 ha	
Beel area re-excavated (ha)	0.10	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Balla beel – 4 nos.	5.06 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	4	35,458
CPUA (kg/ha) at impact-3	151.76	
Bio-diversity at impact-3	58 nos.	
No. of Meetings	Executive Committee	General Body
	33	7
Management interventions		
- Area closure (Fishing restriction)	5.06 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current ban: De-watering, fish scawn, brood fish	
Area under improved management	508.42	

Note:
Area under improved management where Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and biodiversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Moulavibazar Project Site: Hail Haor	UP: Giasnagar Dist.: Moulavibazar Beel Complex: Kazura
Name of RMO	Kazura Resource Management Organization	
No. of Village covered:.	2 nos.	
Total Population:	2,997 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Kazura beel and khal, river and associated floodplains	
Date of Registration	06-09-2001	
No. of RMO member		
- GB	40(Female 9)	
- RUG	26	
- EC	11	
Area of Water body (Khas):	0.40 acre	
Command Area (Resource):	1088ha	
Beel area re-excavated (ha)	0.20	
Khal/River area re-excavated (meter)	100	
No. of Sanctuaries established	Where	Area
	Kazura Beel – 1 no.	0.33 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	4	7,220
CPUA (kg/ha) at impact-3	33.14	
Bio-diversity at impact-3	36 nos.	
No. of Meetings	Executive Committee	General Body
	36	5
Management interventions		
- Area closure (Fishing restriction)	0.33 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, fish spawn, brood fish	
Area under improved management	993.67 ha	

Note:
Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and biodiversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Moulavibazar Sadar Project Site: Hail Haor	UP: Najirabad Dist.: Moulavibazar Beel Complex: Agari Beel Comp.
Name of RMO	Agari Resource Management Organization	
No. of Village covered:	3 nos.	
Total Population:	3,304 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Agari beel and associated floodplains	
Date of Registration	04.09.2001	
No. of RMO member		
- GB	50(Female 9)	
- RUG	30	
- EC	15	
Area of Water body (Khas):	72.86 acre	
Command Area (Resource):	816 ha	
Beel area re-excavated (ha)	2.49	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Agari beel – 5 nos.	2.64 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	4	7,221
CPUA (kg/ha) at impact-3	310.47	
Bio-diversity at impact-3	37 nos.	
No of Meetings	Executive Committee	General Body
	36	5
Management interventions		
- Area closure (Fishing restriction)	2.64 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, fish spawn, brood fish	
Area under improved management	711.81	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated

Increased fish yield and biodiversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Sreemongal Project Site: Hail Haor	UP: Bhunabir Dist.: Moulavibazar Beel Complex: Dumuria
Name of RMO	Dumuria Resource Management Organization	
No. of Village covered:	3 nos.	
Total Population:	6,176 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	-	
Name of Resource base:	Dumuria beel, Dhaliduba khal, River and associated floodplains	
Date of Registration	Formed on 12-12-2000	
No. of RMO member		
- GB	51(Female 3)	
- RUG	32	
- EC	15	
Area of Water body (Khas):	-	
Command Area (Resource):	880 ha	
Beel area re-excavated (ha)	1.98	
Khal/River area re-excavated (meter)	468	
No. of Sanctuaries established	Where	Area
	Dumaria – 6 nos.	6.63 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	2	56,560
CPUA (kg/ha) at impact-3	-	
Bio-diversity at impact-3	-	
No. of Meetings	Executive Committee	General Body
	38	7
Management interventions		
- Area closure (Fishing restriction)	4.65 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, fish spawn, brood fish	
Area under improved management	770.68	

Note:
Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items	Upazila: Sreemongal Project Site: Hail Haor	UP: Kalapur Dist.: Moulavibazar Beel Complex: Bargangina Beel
Name of RMO	Bargangina Resource Management Organization	
No. of Village covered	3 nos.	
Total Population:	5,715 nos	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	-	
Name of Resource base	Bargangina beel and associated floodplains	
Date of Registration	-	
No. of RMO member		
- GB	51(Female 4)	
- RUG	36	
- EC	13	
Area of Water body (Khas):	146.17 acre	
Command Area (Resource):	2125 ha	
Beel area re-excavated (ha)	1.82	
Khal/River area re-excavated (meter)	4428	
No. of Sanctuaries established	Where	Area
	Bogagangina-5 nos	23.53 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organisational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	2	57,817
CPUA (kg/ha) at impact-3	-	
Bio-diversity at impact-3	-	
No. of Meetings	Executive Committee	General Body
	26	3
Management interventions		
- Area closure (Fishing restriction)	23.53 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, fish spawn, brood fish	
Area under improved management	2020.13 ha	

Note:

Area under improved management where Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated

Increased fish yield and bio-diversity: changes from the baseline due project interventions

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	UP:Mouchak, Madyapara Dist.: Gazipur Beel Complex: Mokesh-Kaliadoha
Name of RMO	Mokesh Resource Management Organization	
No. of Village covered:	16 nos.	
Total Population:	18,096 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Mokesh beel, Kaliadaha Kamlai beel and associated floodplains	
Date of Registration	05.03.2002	
No. of RMO member		
- GB	123(Female 29)	
- RUG	76	
- EC	19	
Area of Water body (Khas):	46.2 acre	
Command Area (Resource):	1780 ha	
Beel area re-excavated (ha)	5.43	
Khal/River area re-excavated (meter)	500	
No. of Sanctuaries established	Where	Area
	Mokesh – 9 nos.	5.24 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	6	91,519*
CPUA (kg/ha) at impact-3	140.81	
Bio-diversity at impact-3	57 nos.	
No. of Meetings	Executive Committee	General Body
	23	10
Management interventions		
- Area closure (Fishing restriction)	5.24 acre	
- Time closure	3 months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, De-watering, Brood-fish, Fish fry	
Area under improved management	1675 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets etc.)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

* 5 species Brood-fish being introduced in year 2001 (Kalibaush, Pabda, Deshi Sarputi, Foli, Meni)

MACH-CNRS
RMO Profile for SO6

Items.	UP: Chapair, Madyapara, Srefaltali, Boali, Mouchak Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Turag River and Associate floodplain	
Name of RMO	Turag Resource Management Organization	
No. of Village covered	17 nos	
Total Population:	13,135 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Turag River and associated floodplains	
Date of Registration	10-06-2002	
No. of RMO member		
- GB	105(Female 22)	
- RUG	63	
- EC	19	
Area of Water body (Khas):	-	
Command Area (Resource):	205 ha	
Beel area re-excavated (ha)	-	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Turag River – 3 nos.	5.80 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	5	68*
CPUA (kg/ha) at impact-3	272.67	
Bio-diversity at impact-3	75 nos.	
No. of Meetings	Executive Committee	General Body
	17	5
Management interventions		
- Area closure (Fishing restriction)	5.80 acre	
- Time closure	3 months during March-May (Total river area)	
- Restriction on destructive fishing	Current Jal, De-watering, Brood-fish, Fish fry	
Area under improved management	155 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets etc.)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

* 5 species Brood fish being introduced in year 2001 (Kalibaush, Pabda, Deshi Sarputi, Foli, Meni)

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Kaliakoir, Mirzapur Project Site: Turag-Bongshi	UP: Chapair, Azgana Dist.: Gazipur, Tangail Beel Complex: Alua Beel
Name of RMO	Alua Resource Management Organization	
No. of Village covered:	6 nos.	
Total Population:	13,342 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Alua Beel and associated floodplains	
Date of Registration	11-06-2002	
No. of RMO member		
- GB	165(Female 18)	
- RUG	99	
- EC	19	
Area of Water body (Khas):	10.07 acre	
Command Area (Resource):	2555 ha	
Beel area re-excavated (ha)	3.84	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Alua-7 nos.	12.94 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	3	74,020
CPUA (kg/ha) at impact-3	76.12	
Bio-diversity at impact-3	66 nos.	
No. of Meetings	Executive Committee	General Body
	17	5
Management interventions		
- Area closure (Fishing restriction)	12.94 acre	
- Time closure	3 months March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, Dewatering, Brood-fish, Fish fry	
Area under improved management	2450 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Sherpur Project Site: Kongshaw-Malijhee	UP: Pakuria, Dala Dist.: Sherpur Beel Complex: Kewta Beel Complex
Name of RMO	Kewta Resource Management Organization	
No. of Village covered:	7 nos.	
Total Population:	14,520 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Kewta beel	
Date of Registration	08.12.2001	
No. of RMO member		
- GB	147(Female 3)	
- RUG	89	
- EC	15	
Area of Water body (Khas):	99.20 acre	
Command Area (Resource):	1325 ha	
Beel area re-excavated (ha)	0.79	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Kewta – 4 nos.	0.92 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	10	28,004
CPUA (kg/ha) at impact-3	369.66	
Bio-diversity at impact-3	42 nos.	
No. of Meetings	Executive Committee	General Body
	30	10
Management interventions		
- Area closure (Fishing restriction)	0.92 acre	
- Time closure	3 months during March-May (Total beel area)	
- Restriction on destructive fishing	Kheta jal, Dewatering, Baby fish and broodfish	
Area under improved management	1220 ha	

Note:
Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Sherpur Project Site: Kongshaw-Malijhee	UP: Malijheekanda Dist.: Sherpur Beel Complex: Takimari-Darabashia Beel Complex and associated floodplains.
Name of RMO	Takimari Darabashia Resource Management Organization	
No. of Village covered:	5 nos.	
Total Population:	14,250 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Takimari-Darabashia Beel Complex and associated floodplains	
Date of Registration	11.03.2002	
No. of RMO member		
- GB	97(Female 6)	
- RUG	59	
- EC	21	
Area of Water body (Khas):	-	
Command Area (Resource):	1745 ha	
Beel area re-excavated (ha)	1.90	
Khal/River area re-excavated (meter)	2606	
No. of Sanctuaries established	Where	Area
	Takimari-Darabashia- 6 nos.	4.28 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	9	41,593
CPUA (kg/ha) at impact-3	422.37	
Bio-diversity at impact-3	39 nos.	
No. of Meetings	Executive Committee	General Body
	26	7
Management interventions		
- Area closure (Fishing restriction)	4.28 acre	
- Time closure	3 Months during March-May (Total area)	
- Restriction on destructive fishing	Current Jal, Kheta jal, Dewatering, Baby fish, Broodfish	
Area under improved management	1640 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items	UP:Hatibandha, Jhinaigati Upazila: Sherpur Project Site: Kongshaw-Malijhee	Dist.: Sherpur Beel Complex: Dholi-Balia Beel Complex
Name of RMO	Dholi-Baila Resource Management Organization	
No. of Village covered:	5 nos.	
Total Population:	9,878 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Dholi-Balia Beel Complex and associated floodplains	
Date of Registration	20.03.2002	
No. of RMO member		
- GB	95(Female 5)	
- RUG	56	
- EC	19	
Area of Water body (Khas):	54 acre	
Command Area (Resource):	665 ha	
Beel area re-excavated (ha)	0.72	
Khal/River area re-excavated (meter)	1391	
No. of Sanctuaries established	Where	Area
	Dholi-Balia – 9 nos.	4.91 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	9	14,423
CPUA (kg/ha) at impact-3	333.71	
Bio-diversity at impact-3	41 nos.	
No. of Meetings	Executive Committee	General Body
	22	5
Management interventions		
- Area closure (Fishing restriction)	4.91 acre	
- Time-closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, Dewatering, Baby fish, Broodfish	
Area under improved management	570 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	UP: Kongsha, Dhanshail Upazila: Sherpur Project Site: Kongshaw-Malijhee	Dist.: Sherpur Beel Complex: Bailsha Beel Complex
Name of RMO	Bailsha Resource Management Organization	
No. of Village covered:	3 nos.	
Total Population:	6,499 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Bailsha Beel Complex and associated floodplain	
Date of Registration	20.03.2002	
No. of RMO member		
- GB	87(Female 7)	
- RUG	51	
- EC	17	
Area of Water body (Khas):	7.04 acre	
Command Area (Resource):	735 ha	
Beel area re-excavated (ha)	2.83	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Bailsha Beel – 2 nos.	2.00 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	8	12704
CPUA (kg/ha) at impact-3	644.34	
Bio-diversity at impact-3	39 nos.	
No. of Meetings	Executive Committee	General Body
	22	5
Management interventions		
- Area closure (Fishing restriction)	2.00 acre	
- Time closure	3 months during March-May (Total beel area)	
- Restriction on destructive fishing	Kheta-jal, Dewatering, Baby fish and brood fish	
Area under improved management	630 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items	UP:Hatibandha, Jhinaigati Upazila: Sherpur Project Site: Kongshaw-Malijhee	Dist.: Sherpur Beel Complex: Dholi-Balia Beel Complex
Name of RMO	**Dholi-Baila Resource Management Organization**	
No. of Village covered:	5 nos.	
Total Population:	9,878 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Dholi-Balia Beel Complex and associated floodplains	
Date of Registration	20.03.2002	
No. of RMO member		
- GB	95(Female 5)	
- RUG	56	
- EC	19	
Area of Water body (Khas):	54 acre	
Command Area (Resource):	665 ha	
Beel area re-excavated (ha)	0.72	
Khal/River area re-excavated (meter)	1391	
No. of Sanctuaries established	Where	Area
	Dholi-Balia – 9 nos.	4.91 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	9	14,423
CPUA (kg/ha) at impact-2	333.71	
Bio-diversity at impact-2	41 nos.	
No. of Meetings	Executive Committee	General Body
	22	5
Management interventions		
- Area closure (Fishing restriction)	4.91 acre	
- Time closure	3 Months during March-May (Total beel area)	
- Restriction on destructive fishing	Current jal, Dewatering, Baby fish, Broodfish	
Area under improved management	570 ha	

Note:
Area under improved management where. Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	UP: Kongsha, Dhanshail Upazila: Sherpur Project Site: Kongshaw-Malijhee	Dist.: Sherpur Beel Complex: Bailsha Beel Complex
Name of RMO	Bailsha Resource Management Organization	
No. of Village covered:	3 nos.	
Total Population:	6,499 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Bailsha Beel Complex and associated floodplain	
Date of Registration	20.03.2002	
No. of RMO member		
- GB	87(Female 7)	
- RUG	51	
- EC	17	
Area of Water body (Khas):	7.04 acre	
Command Area (Resource):	735 ha	
Beel area re-excavated (ha)	2.83	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Bailsha Beel – 2 nos.	2.00 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	8	12704
CPUA (kg/ha) at impact-2	386.13	
Bio-diversity at impact-2	35 nos.	
No. of Meetings	Executive Committee	General Body
	22	5
Management interventions		
- Area closure (Fishing restriction)	2.00 acre	
- Time closure	3 months during March-May (Total beel area)	
- Restriction on destructive fishing	Khela-jal, Dewatering, Baby fish and brood fish	
Area under improved management	630 ha	

Note:
Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for S06

Items:	Upazila: Sherpur Project Site: Kongshaw-Malijhee	UP: Malijheekanda Dist.: Sherpur Beel Complex: Takimari-Darabashia Beel Complex and associated floodplains.
Name of RMO	Takimari Darabashia Resource Management Organization	
No. of Village covered:	5 nos.	
Total Population:	14,250 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Takimari-Darabashia Beel Complex and associated floodplains	
Date of Registration	11.03.2002	
No. of RMO member		
- GB	97(Female 6)	
- RUG	59	
- EC	21	
Area of Water body (Khas):	-	
Command Area (Resource):	1745 ha	
Beel area re-excavated (ha)	1.90	
Khal/River area re-excavated (meter)	2606	
No. of Sanctuaries established	Where	Area
	Takimari-Darabashia- 6 nos.	4.28 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	9	41,593
CPUA (kg/ha) at impact-2	422.37	
Bio-diversity at impact-2	39 nos.	
No. of Meetings	Executive Committee	General Body
	26	7
Management interventions		
- Area closure (Fishing restriction)	4.28 acre	
- Time closure	3 Months during March-May (Total area)	
- Restriction on destructive fishing	Current Jal, Khela jal, Dewatering, Baby fish, Broodfish	
Area under improved management	1640 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
RMO Profile for SO6

Items:	Upazila: Sherpur Project Site: Kongshaw-Mafijhee	UP: Pakuria, Dala Dist.: Sherpur Beel Complex: Kewta Beel Complex
Name of RMO	**Kewta Resource Management Organization**	
No. of Village covered:	7 nos.	
Total Population:	14,520 nos.	
RMO functional	Yes	
RMP in place	Yes	
Best management practice in place	Yes	
Name of Resource base:	Kewta beel	
Date of Registration	08.12.2001	
No. of RMO member		
- GB	147(Female 3)	
- RUG	89	
- EC	15	
Area of Water body (Khas):	99.20 acre	
Command Area (Resource):	1325 ha	
Beel area re-excavated (ha)	0.79	
Khal/River area re-excavated (meter)	-	
No. of Sanctuaries established	Where	Area
	Kewta – 4 nos.	0.92 acre
Resource Management Plan	Plan prepared for five years	
Capacity building training		
- Financial management	Basic training imparted	
- NRM	Training on going as per schedule	
- Organizational management	Training on going as per schedule	
Re-introduction fish species	No. of Species	No. of fish Released
	10	28,004
CPUA (kg/ha) at impact-2	369.66	
Bio-diversity at impact-2	42 nos.	
No. of Meetings	Executive Committee	General Body
	30	10
Management interventions		
- Area closure (Fishing restriction)	0.92 acre	
- Time closure	3 months during March-May (Total beel area)	
- Restriction on destructive fishing	Kheta jal, Dewatering, Baby fish and broodfish	
Area under improved management	1220 ha	

Note:

Area under improved management where: Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.

Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.

Increased fish yield and bio-diversity: changes from the baseline due project interventions.

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Naler Daha
Name of Committee	NalerDaha Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Naler Daha	
Registration	-	
No. of Committee member	19	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Mokesh RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Moisher Daha
Name of Committee	Moisher Daha Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Moisher Daha	
Registration	-	
No. of Committee member	19	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Mokesh RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Nawkhola-Dholi Daha
Name of Committee	Nawkhola-Dholi Daha Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila- local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Nawkhola-Dholi Daha
Registration	-
No. of Committee member	33
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Mokesh RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir · Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Burir Daha
Name of Committee	Burir Daha Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Burir Daha
Registration	-
No. of Committee member	31
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Mokesh RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Bastoli Daha
Name of Committee	Bastoli Daha Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Moisher Daha
Registration	-
No. of Committee member	21
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Mokesh RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Golachipa Kum
Name of Committee	Golachipa Kum Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Golachipa Kum	
Registration	-	
No. of Committee member	11	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Turag Bongshi RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Lalkhar Kum
Name of Committee	Lalkhar Kum Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Lalkhar Kum	
Registration	-	
No. of Committee member	15	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Turag Bongshi RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Gabtoli-Sayedpur Kum
Name of Committee	Gabtoli-Sayedpur Kum Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Gabtoli-Sayedpur Kum
Registration	-
No. of Committee member	15
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Turag Bongshi RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items.	Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Bamoner Ghuni
Name of Committee	Bamoner Ghuni Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Bamoner Ghuni
Registration	-
No. of Committee member	35
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Bhangi Danga Daha
Name of Committee	Bhangi Danga Daha Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Bhangi Danga Daha	
Registration	-	
No. of Committee member	25	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Eael Complex: Doika Daha
Name of Committee	Doika Daha Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Doika Daha
Registration	-
No of Committee member	19
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Dist.: Gazipur Project Site: Turag-Bongshi Beel Complex: Boro Daha
Name of Committee	Boro Daha Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Boro Daha
Registration	-
No. of Committee member	23
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Folimara Daha
Name of Committee	Folimara Daha Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Folimara Daha	
Registration	-	
No. of Committee member	23	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Folimara Daha
Name of Committee	Folimara Daha Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Folimara Daha	
Registration	-	
No. of Committee member	23	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area underimproved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Upazila: Kaliakoir Project Site: Turag-Bongshi	Dist.: Gazipur Beel Complex: Gurerhari Daha
Name of Committee	Gurerhari Daha Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best.management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Gurerhari Daha	
Registration	-	
No. of JRMO member	19	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Alua RMO.
Best management practice. Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Thana: Jhinaigathi Project Site: Kongshaw-Malijhee	Dist.: Sherpur Daha/Kum/Kur: Bahar Ali Kur
Name of Committee	Bahar Ali Kur Committee	
Committee formed & functional	Yes	
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes	
Resource management plan in place	Yes	
Best management practice in place	Yes	
RMP in place	Yes	
Name of Resource base:	Bahar Ali Kur	
Registration	-	
No. of Committee member	18	
Area of Water body (Khas):	-	
Resource Area:	-	
Capacity building training		
- Financial management	X	
- NRM	X	
- Organizational management	X	
Plantation(Trees)	Planted (Trees)	
	-	
Area under improved management	-	

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place along with Takimari-Dharabashia RMO.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

MACH-CNRS
Doha/Kum/Kur Committee Profile

Items:	Thana: Jhinaigathi Dist.: Sherpur Project Site: Kongshaw-Malijhee Daha/Kum/Kur: Gaimara Kur
Name of Committee	Gaimara Kur Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Gaimara Kur
Registration	-
No. of Committee member	20
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, Committee formed, RMP in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)

Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.2a: Aquatic habitat converted from seasonal to perennial in targeted areas

October 2003

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.2: Select Habitats and Ecosystems Restored

Indicator 6.2a: Aquatic habitat converted from seasonal to perennial in targeted areas

A. Description

Precise Definition of Indicator: Perennial aquatic habitat retains sufficient water during the dry season to maintain fish stocks. Seasonal aquatic habitat dries up.

Unit of Measure: Hectare

Disaggregate by: N/A

Justification/Management Utility: Area of perennial water-bodies and associated aquatic habitats has declined over the years. This indicator measures the success of habitat improvement efforts that re-convert water-bodies from seasonal to perennial status in targeted areas. This is a quantitative indicator that allows the SO Team to determine the success of the ecosystem improvement effort. Physical intervention will improve the connections between rivers and beels (perennial water-bodies) and selected beels will be deepened, which will increase the area of perennial water bodies.

B. Plan for Data Collection

Data Collection Method: Annual by Winrock International and partners

Method of Acquisition by USAID: Receipt of Semi-Annual Reports from Winrock

Data Source(s): Land maps, satellite images, GPS ground surveys.

Frequency/ Timing of Data Collection: Annual

Estimated Cost of Collection: Medium

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: None

Known Data Limitations (if any): Dry season water area varies from one year to another due to variations in local rains and irrigation withdrawals

Actions Taken or Planned to Address Data Limitations:

Date of Future Data Quality Assessments: TBD

Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Review trends of progress comparing targets for actual performance.

Presentation of Data: In Table

Review of Data: Semi-annual mission portfolio review, R-4 review, and individual review with recipient.

Reporting Data: AR/ SAR and CBJ report.

E. Other Notes

Notes on the Baselines/ Targets: Baseline is zero.

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments:

Cumulative Unit of measure: Ha.

Year	Planned	Actual
Baseline 2000		0
2001	15	25
2002	40	142
2003	50	269
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6.2.a: Aquatic habitat converted from seasonal to perennial in targeted areas

The targets for this indicator were based on the approval and availability of the "Investment support fund (416b)" in the year 2000. This fund did not become available to MACH until April of 2003. This indicator was not an original project indicator.

In the attached table there can be seen three figures which are important. The first figure is the area of actual soil removal or deepening (Area excavated), the second figure is the area of the "beel or lake" resource as identified in the government records as that part which is leased (Area of Water body), and the third figure is the probable immediate basin impact area or the area of aquatic habitat impacted by the change of the water body from seasonal to perennial (Influence area).

The areas shown are those water bodies that prior to the project intervention dried during the dry season. The impact of this drying is that residual fish stocks diminish and fewer individuals are available for reproduction to replenish the stocks on the floodplain in the wet season. Diversity also diminishes due to the lack "over the dry season" habitat area. By restoring these dry season fish reserves, adult brood stock can be retained to quickly repopulate the floodplain during the wet season and the impact is over a larger beel and floodplain area. These activities impact the entire wet season wetland area.

The baseline is the area that is not perennial with the impacted area becoming perennial through depth alteration. The actual area excavated has been physically measured by our field teams and is shown in the attached table. The second figure is the beel or water body area converted from a "seasonal" beel or water body to a "perennial" beel or water body. This figure comes direct from the government records and is the area of beel or water body lease and is the area recorded as the area of habitat converted. The third figure is a probable impact area of enhanced beel habitat.

The increase in perennial wetland area will likely have some of the most pronounced and prolonged impact on the function of the wetland and thereby the fish production and diversity.

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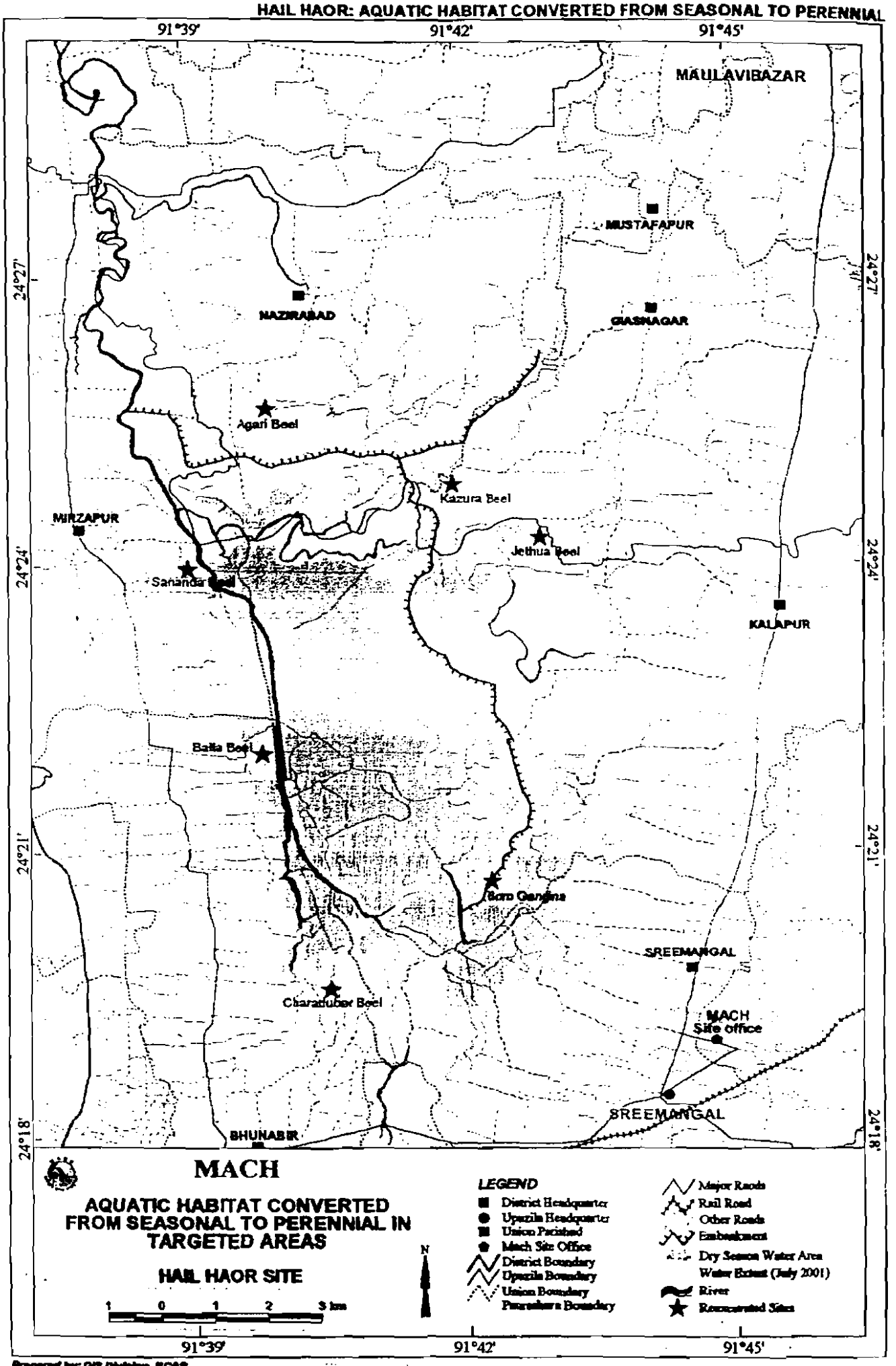
Management of Aquatic Ecosystem through Community Husbandry (MACH)

Aquatic habitat converted from seasonal to perennial in targeted areas

		Though 2000			Through 2001			Through 2002			Through 2003			Consolidated statement		
		Area of excavated beel	Area of water body	Influence area of the scheme	Area re-excavated	Area of water body	Influence area of the scheme	Area of excavated beel	Area of water body	Influence area of the scheme	Area of excavated beel	Area of water body	Influence area of the scheme	Area re-excavated	Area of water body	Influence area of the scheme
	Name of scheme	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha	Ha
HH Site:																
01	Chiradoba beel	1.25	6.00	320.00										1.25	6.00	320
02	Sananda beel-I				0.71	3.60	92							0.71	3.60	92
03	Kajura beel				0.20	0.32	200							0.20	0.32	200
04	Agari beel-I				0.61	29.50	396							0.61	29.50	396
05	Balla beel				0.10	29.04	293							0.10	29.04	293
06	Jathua beel				2.01	2.36	278							2.01	2.36	278
07	Agari beel-II							1.88		396				1.88	0.00	396
08	Sananda beel-II							0.52		92				0.52	0.00	92
09	Charadoba beel							0.47	1.42	362				0.47	1.42	362
10	Borogangma							1.82	33.10					1.82	33.10	0
11	Kajura beel/canal															
12	Lalitagangma										1.57	29.50		1.57	29.50	0
13	Uchari										0.41	2.39		0.41	2.39	0
Sub-total area (Ha)		1.25	6.00	320	3.63	64.82	1259	4.69	34.52	850	1.98	31.89	0.00	11.55	137.23	2429
KM Site:																0
01	Katakhali-I						36									36
	Khalakhali-II															
02	Darabasia beel				0.08	1.23	30							0.08	1.23	30
03	Kewta beel				0.79	13.77	87							0.79	13.77	87
04	Bailsha beel							1.62	1.25	0	1.21	1.21		2.83	2.46	0
05	Dalnnar							0.20	1.62	2				0.20	1.62	2
06	Someswari							0.72	0.86	0				0.72	0.86	0
Sub-total area (Ha)					0.87	15.00	153	2.54	3.73	2	1.21	1.21	0.00	4.63	19.94	155

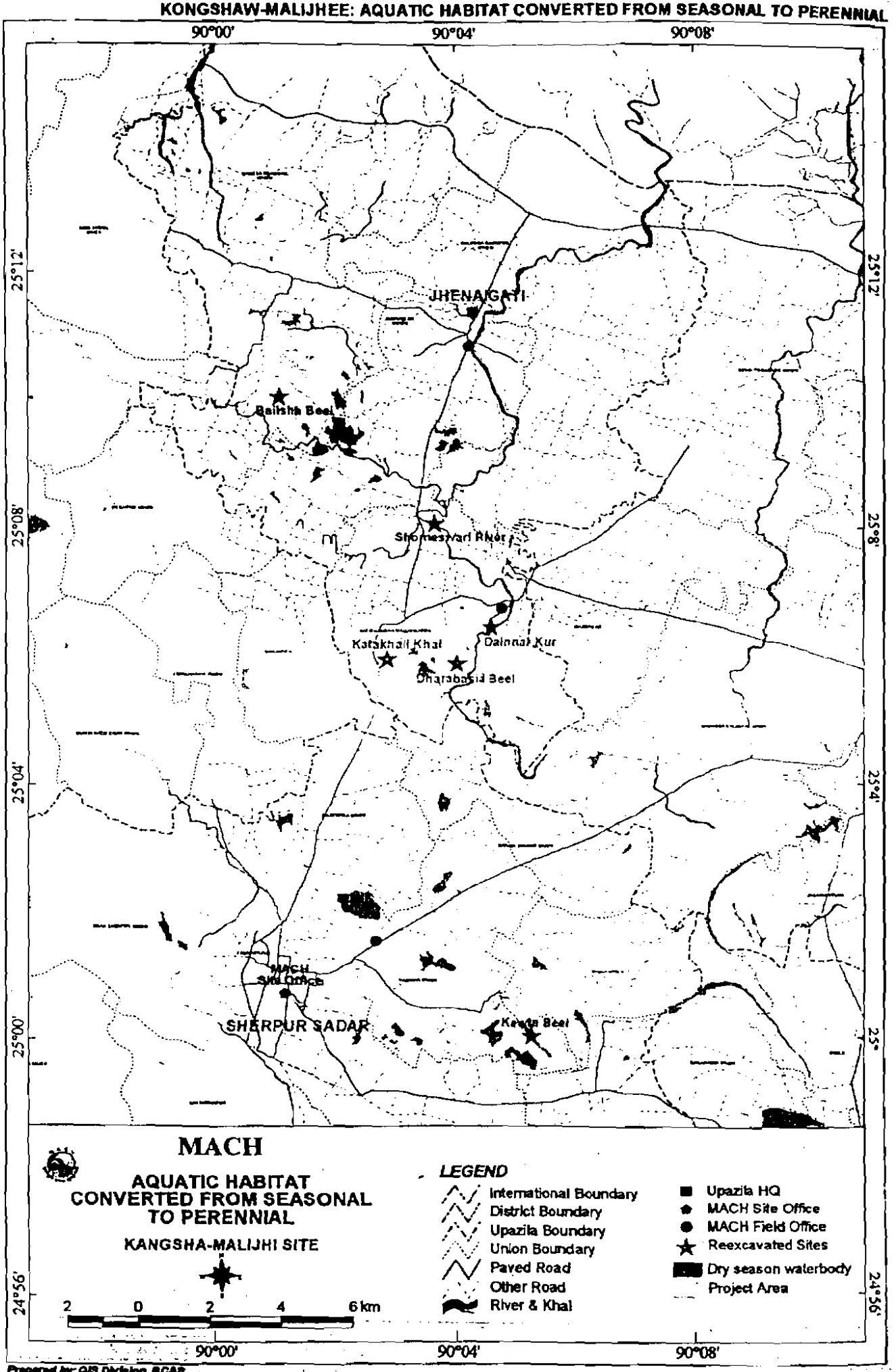
		Though 2000			Through 2001			Through 2002			Through 2003			Consolidated statement		
		Area of excavated beel	Area of water body	Influence area of the scheme	Area re-excavated	Area of water body	Influence area of the scheme	Area of excavated beel	Area of water body	Influence area of the scheme	Area of excavated beel	Area of water body	Influence area of the scheme	Area re-excavated	Area of water body	Influence area of the scheme
TB Site:																0
01	Naler Doha				0.19	4.05	390		4.05	390				0.19	8.10	780
02	Nowkhola Doli beel							2.02	50.20					2.02	50.20	0
03	Folimara-1							0.81	27.53					0.81	27.53	0
04	Daika							0.28	10.12					0.28	10.12	0
05	Dholi bariguni & Bamuner guni							2.02	12.15					2.02	12.15	0
06	Bastoli							0.10	0.40					0.10	0.40	0
07	Dholi bariguni										2.63	2.63		2.63	2.63	0
08	Folimara -2										1.21	1.21		1.21	1.21	0
Sub-total area (Ha)					0.19	4.05	390	5.24	104.45	390	3.85	3.85		9.28	112.35	780
	Total	1.25	6.00	320	4.69	83.87	1802	12.47	142.70	1242	7.04	36.95	0.00	25.46	269.52	3364

HAIL HAOR: AQUATIC HABITAT CONVERTED FROM SEASONAL TO PERENNIAL



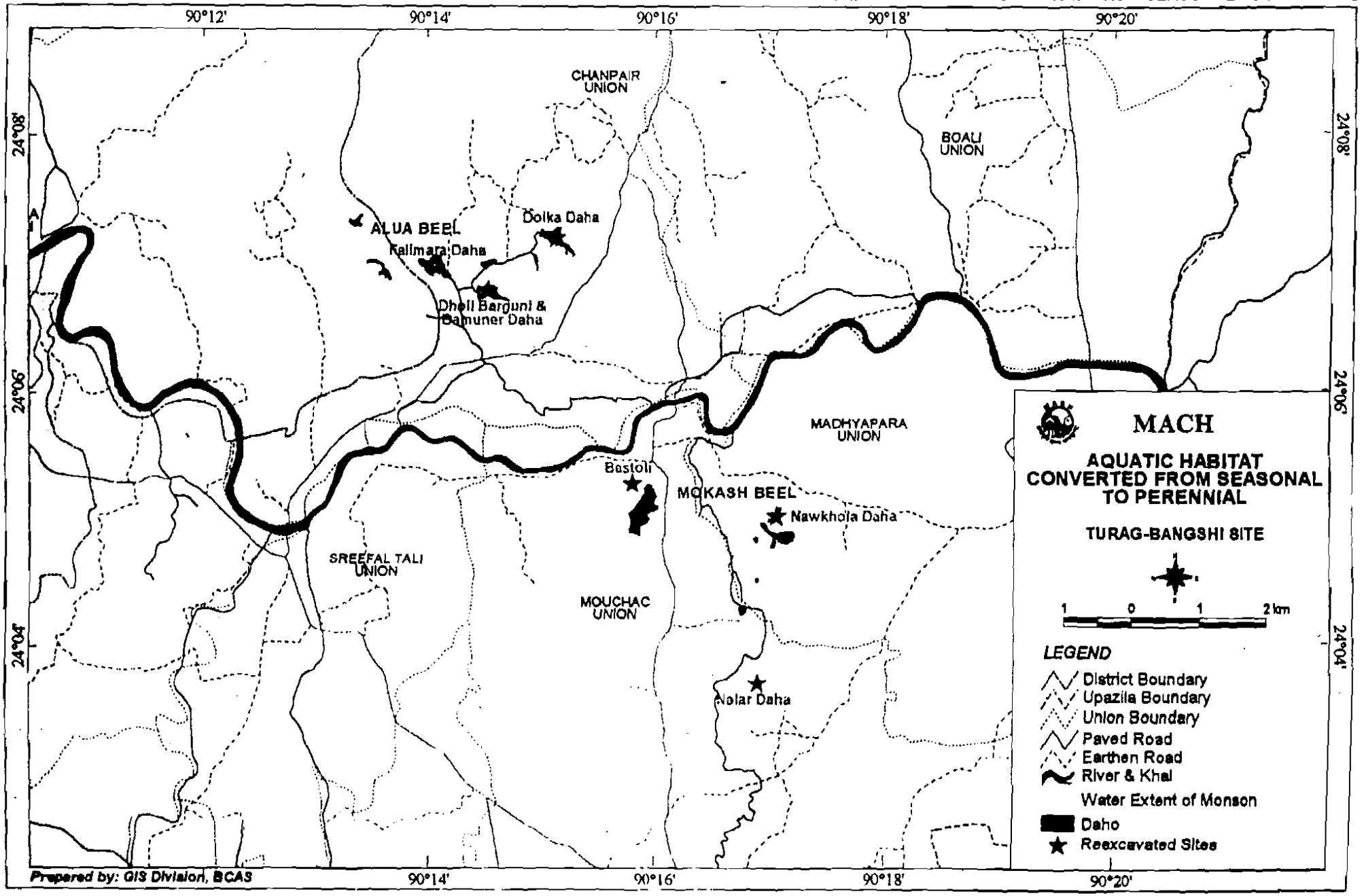
Prepared by: GIS Division, BCAS

KONGSHAW-MALIJHEE: AQUATIC HABITAT CONVERTED FROM SEASONAL TO PERENNIAL



Prepared by: GIS Division, BCAS

TURAG-BANGSHI: AQUATIC HABITAT CONVERTED FROM SEASONAL TO PERENNIAL



Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.2c: Riparian habitat improved in targeted areas

October 2003

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.2: Select Habitats and Ecosystems Improved

Indicator 6.2c: Riparian habitat improved in targeted areas

A. Description

Precise Definition of Indicator: This indicator measures the area of riparian habitat that will be brought under community based management within an integrated wetland/upland management system. Improved means stream bank stabilization, use of soil conserving agricultural production practices, and similar measures.

Unit of Measure: Kilometers of stream length

Disaggregate by: N/A

Justification/Management Utility: Indication to measure the increase in aquatic habitats and biodiversity. Riparian habitats are important contributors to the SO level indicators affecting wetland and biodiversity.

B. Plan for Data Collection

Data Collection Method: Winrock and its implementation partners will measure and report on actual amount of riparian area under improved practices.

Method of Collection by USAID:

Data Source(s): Winrock and its partners.

Frequency/ Timing of Data Collection: Semi-annual.

Estimated Cost of Collection: Nominal.

Responsible Individual(s) at USAID: Team Leader

D. Data Quality Issues

Date of Initial Data Quality Assessment: none undertaken to date

Known Data Limitations (if any):

Actions Taken or Planned to Address Data Limitations:

Date of Future Data Quality Assessments: TBD

Procedures of Future Data Quality Assessments: TBD

C. Plan for Data Analysis, Reporting, and Review

Data analysis: Review trends of progress comparing targets to actual performance.

Presentation of Data: In Table

Review of Data: Semi-annual mission portfolio review, R4 review and individual review with recipient.

Reporting Data: Internal mission report, R4 report and CBJ report.

E. Other Notes:

Notes on the Baselines/Targets: Recipient will establish baseline data in Dec. 2001. There were no riparian improvements in these areas before MACH. The figure shown for 2002 actual in this report differs from the May 2003 report. The figure reported in the May report represented a figure that was only through June of 2002. This figure was mistakenly carried forward into the May 2003 reporting. The figure shown here is the actual for the entire year through Dec 2002.

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments: * In addition to 166.91 km riparian plantation a total of 8.42 ha swamp/patch plantation was done. Total no of sapling planted was 267,808 including institutional premises. A total of 65,229 saplings were planted along the rural road side organized by the resource users. So during 1999-2003 a total of 333,037 saplings were planted.

Cumulative Unit of measure: (km)

Year	Planned	Actual
Baseline 2001	20	26. 5
2002	30	80
2003	40	166..91*
2004	TBD	
2005	TBD	

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6.2.c: Riparian habitat improved in targeted areas

This was an area that MACH was not obligated to perform in but because of the importance of the watershed and in particular the riparian area, MACH has put resources forward on selected demonstration Charas. The planned levels are all in addition to what was originally set out for the project in the way of outputs. This indicator was not an original project indicator.

As the streams selected had no riparian canopy (trees) and none of the bank holding vetiver grass, the baseline condition was considered to be zero. All trees and grasses are readily identifiable as all have been planted and none were there previously. The numbers are ascertained by counting directly. The kilometers of stream planted are measured from maps built from accurate geo-referenced satellite images

The planned levels of performance were dependent on the Investment support (416b) fund becoming available. It was expected in 2000 but because of the time required for GoB project document approvals, the fund only became available to the project in April of 2003. MACH continued to use funds as best as possible so that afforestation continued albeit at reduced levels. MACH has used upwards of 30 different species in the riparian areas to ensure varied habitat for birds and other animals. There are benefits to both the communities managing in terms of the future value of the trees which is considerable and to the stream itself through improving bank stability and reduced erosion. The trees provide structure to the stream banks and income to the communities which was previously not there.

The scope for riparian corridor reforestation is quite large at the HH and KM sites. The long term benefits would be in improving stream bank stability and thereby reducing erosion, providing potential movement and shelter corridors for birds and other animals (forest to the wetland), and a potential enhanced income to the communities with future selective harvest.

STRATEGIC OBJECTIVE 6:
Indicator 6.2c: Riparian habitat improved in targeted areas

MACH-CNRS
CHHARA/ SMALL HILL STREAM PILOT PROGRAM

Introduction

The original design of MACH did not include working in the uplands. During the participatory planning at the community level with the stakeholders, it was determined that for reaching the sustainable management of Hail Haor resources, it would be necessary to manage the Chharas flowing from the hills into the Hoar. Considering the communities suggestions, MACH initiated on a pilot basis improved chhara management in four Chharas. The chharas seected were Jaita, Boula, Alia and Jag. Out of four charas Jaita is receiving more resources.

Hail haor watershed is located in the Northeast hills of Bangladesh. Hail *haor* watershed area is estimated to be 60,000 ha. Approximately 85% in Bangladesh and 15% in India. Due to the undulating landscape and optimum climatic conditions this area was good habitat for a very diverse and abundant flora and fauna. Lawachara Reserve Forest, which is about 3440 ha, is situated on the East side of *Hail haor*. This is one of the important patches of tropical forests remaining in Bangladesh Bangladesh containing a wide range of flora and fauna. *Hail haor* watershed is now a zone under intensive multi crop cultivation. The upper catchment, is previously dense forest, is .ow covered with tea, Pineapple and Lemon. The middle reach of most Chharas is tea & lemon and the lower flood plain and *haor* basin is under rice cultivation.

The communities around the haor have said that as many as 352 streams used to flow from the upper catchment into the Haor. Presently a total of 59 flowing Chharas have been found by inventory that feed the Hail haor. Degradation of *Chhara* as well as the loss of riparian vegetation has resulted in the degradation of the Streambanks and a removal of the wildlife corridor. The existing habitats have become segregated patches limiting wildlife shelter, and bankstability.

Chhara (Hill Stream)

All the *Chharas* that are feeding *Hail haor* originate from the hills of Sreemangal, Bahubal, and Kamalgonj *Upazila* namely- *Balisera*, *Satgaon* and *Faizabad* hills. Water flowing through *Chharas* varies in quantity and quality, as their upper catchments are different. It is evident that because of watershed degradation the hill stream have unstable banks, carry increased sediment and are "flasy" during the wet season and dry during the dry season. Many of the chharas dry up during the dry season.

Among the 59 *Chharas* only a few *Chharas* (viz. Bilas, *Alia*, Jaita, Shaon and Jaag *Chhara*) supply most of the vater to the haor, particularly during the dry season.

Problems Identified

The vegetative cover including the forest, and the aquatic habitats have degraded largely due to human interactions. Problems related to the watershed of *Hail haor* are identified in the problem census workshops. The problems & solutions have analyzed. It was and found that increasing use of irrigation water during the dry season, excessive siltation, *Chhara* bank erosion, use of agro-chemicals, land use for pineapple and lemon cultivation in the upper catchment are the major intervention affecting the *Hail haor* watershed.

Regeneration of Riparian Vegetation

The riparian vegetation on unprotected streams is nonexistent or highly degraded due to exploitation or harvesting as fire woods timber, forage and grazing. There are 59 *Chhara*, which are transporting water to *Hail haor*. The total length of all *Chharas* is about 360 km of which 95% is degraded. To reestablish riparian vegetation along streams of the watershed area, selected *Chharas* are being managed and planted with trees, shrubs and grasses. Community participation regarding development of plans to reestablish riparian vegetation has been started.

Considering the need for improved Hail haor resource management MACH with its existing resources has worked to improve the riparian conditions of four Hail Haor feeder streams

1. Jait Chhara 6.98 km
2. Boula Chhara 7.13 km
3. Alia Chhara 8.79 km
4. Jug Chhara 6.63 km

In Korshaw-Malijhi MACH project site Jhara management program started in the year 2002.

1. Kalagosha Jhara –1 5 km
2. Kalagosha Jhara –2 4.2 km
3. Nakshi Jhara 3.5 km
4. Bagadobi Jhara 1 km (12.3 ha)

The major activities for Chhara management pilot project are:

Major Activities	Hail Haor				Kongshaw-Malijhi			
	Jaita Chhara	Boula Chhara	Alia Chhara	Jug Chhara	Kalagosha Jhara -1	Kalagosha Jhara – 2	Nakshi Jhara	Bagadobi Khal
Awareness program	x	x	x	x	x	x	x	x
Formation of RMOs	x	x	x	x	x	x	x	x
Riparian habitat improve (regeneration of riparian vegetation)	x	x	x	x	x	x	x	x
Riparian trees aforestation	x	x	x	x	x	x	x	x
Trees and vetiver nursery	x				x	x	x	x
Demo programs (pineapple and Lemon)	x			x				
Water flow and Sedimentation monitoring	x	x	x	x	x	x	x	x

Jhara/Chhara resource management organizations are formed with representatives from the villages along the streams. The representatives are selected by the villagers. Jhara/Chhara management activities have been implemented by the concern RMOs with the guidance of MACH staff. Selection of riparian tree species also done by the RMOs. Technical support in connection with the riparian tree plantation has been provided from the MACH Project.

Abstract of Reforestation under MACH Project Up to August 2003 (tree numbers planted): (RMO Organized i.e. CNRS)

Site	Riparian					Swamp					Institution					G.Total
	2000	*2001*	*2002*	*2003*	*Sub-Total*	*2000*	*2001*	*2002*	*2003*	*Sub-Total*	*2000*	*2001*	*2002*	*2003*	*Sub-total*	
HH	13,722	4,107	15,242	15,567	48,638	18,882	5,700	0	1,725	26,307	200	2,100	1,250	8,301	11,851	86,796
TB	0	3,100	10,100	9,892	23,092	0	400	1,225	203	1,828	3,286	6,422	6,658	7,156	23,522	48,442
KM	0	7,873	19,422	69,429	96,724	0	5525	4,299	2,850	12,674	0	944	7,000	15,228	23,172	132,570
Total	13,722	15,080	44,764	96,238	168,454	18,882	11,625	5,524	4,778	40,809	3,486	9,466	14,908	30,685	58,545	267,808

Plantation : (RUG Organized i.e., Caritas)

Site	Road Site					Instution					Grand Total
	2000	2001	2002	2003	Sub-Total	2000	2001	2002	2003	Sub-Total	
HH	6,020	6,620	4,000	1,950	18,590	480	1,830	3,830	1,995	8,135	26,725
TB	4,200	4,725	2,287	0	11,212	0	1,332	2,475	0	3,807	15,019
KM	0	5,500	8,260	1,525	15,285	0	2,000	5,000	1,200	8,200	23,485
Total	10,220	16,845	14,547	3,450	45,087	480	5,162	11,305	3,195	20,142	65,229

Site wise, Year wise Plantations Raised from 1999 - 2003
Partner Organization : CNRS

Site	Year of Plantn.	Type of Plantatn.	Name of Plantation Scheme	Extent of Plantatn		# Saplings planted	Remarks
				Km	Ha		
Hail Haor	1999-2000	Riparian Plantatn.	i). Boula Chhar	7		4004	
			ii). Joita Chhara	7		6,018	
			iii). Aliya Chaara	5		1,400	
			iv). Jaag Chhara	4		2,300	
			Sub-Total	*23*		*13,722*	
		Swamp Plantation	a. Kagaura Kandi		1.5	10,000	
			b. Ichhamoti Chhara	0.7		370	
			c. Kazura Beel Bank	0.175		412	
			d. Agari Beel Bank	0.35		700	
			e. Jethua Beel Bank	0.73		2500	
			f. Gondorbopur			900	
			g. Lamua Road	4		4,000	
			Sub-Total	*5.955*	*1.5*	*18,882*	
		Institution Plantatn.	1 Institution			200	
		Total for the year 1999-2000		28.955		32,804	
	2000 -2001	Riparian Plantatn.	i). Joita Chhara			3,027	Additional planting in
			ii). Aliya Chhera			110	1999-2000 plantn. Area
			iii). Jaag Chhara	0.5		970	
			Sub-Total			*4,107*	
		Swamp Plantation	a. Kagaura Kandi		2.3	5,700	
		Institution Plantatn.	16 Institutions			2,100	
		Total for the year 2000-2001		0.5		11,907	
	2001 - 2002	Riparian Plantatn.	i). Joita Chhara			4,546	3-5 rows expaned planting
							in 1999-2000 plantn. area
			ii). Aliya Chhara	3		10,696	
			Sub-Total	3		*15,242*	
		Institution Plantatn.	4 Institutions			1,250	
		Total for the year 2001-2002		3		16,492	61,20
	2002-2003	Riparian Plantatn.	i). Jolom Chhara	1	0	626	
			ii). Mora Chhara	0.8		500	
			iii). Ichhamoti Chhara	0.6		645	
			iv). Burchungi Chhara	1		448	
			v). Makria Chhara	2.5		1,255	
			vi). Alia CHHar (Middle)	3		2,220	
			vii). Alia Chhara lower	1		650	
			viii). Ful Chhara (Upper & Lower)	1		2,250	
			ix). Shaon Chhara)	2.5		1,200	
			x). Boruna to Hazipur road	3		3,135	
			xi). Shial Chhara emkktt.	0.5		1,233	
			xii). Agari Beel Embktt.	1		200	
			xii). Kajura Canal	0.75		1,205	
			Sub-total	18.65	0	*15,567*	
		Swamp	Kagaura Kandi	0.5		1,725	
		Institution Plantatn.	43 institutions			8,301	
		Total for the year 2002-2003		19.15		25,593	
	Grand Total for HH Site (1999-2003)			51.605		86,796	
Turag-Bongshi	1999 - 2000	Institution Plantatn.	16 Institutions			3,286	
		Total for the year 1999-2000				3,286	
	2000- 2001	Riparian Plantatn.	Turag River Bank	4		3,100	
		Swamp Plantatn.			0.16	400	
		Institution Plantatn.	35 Institutions			6,422	
		Total for the year 2000-2001		4	0.16	9,922	

	2001 -2002	Riparian Plantatn.	Turag River Bank	10		10,100	
		Swamp Plantatn.	Mokosh & Alua beel periphery planting	1	0.13	1,225	
		Institution Plantatn.	18 Institutions			4,213	
		Homestead plantatn	489 Homesteads			2,445	
		Total for the year 2001-2002		11	0.13	17,983	
	2002-2003	Riparian Plantatn.	i). Billbaria to Rashidpur	2		1,702	
			ii). Boroibari to Ashari Bari Road	0.75		400	
			iii). Boroibari bridge to Ideal college Rd.	1		640	
			iv).Turag river bank (Kutubdia to Gabtali)	4		4,948	
			v).Kaliakoir Sr. Madrasga to Rajabazaar	1		987	
			vi). Dhalibari to Medi Road	0.5		240	
			vii). Alua Beel surrunding		0.3	665	
			viii). Der Chala Beel surrunding		0.2	310	
			Sub Total	*9.25*	*0.5*	*9,892*	
		Swamp Plantatn.	Folimaradoah surrounding		0.2	203	
		Institution Plantatn.	24# Institutions			7,156	
		Total for the year 2002-2003		9.25	0.7	17,251	
	Grand Total for T-B Site (1999-2003)			24.25		48,442	
Kongsho-Malijhee	2000-2001	Riparian Plantatn.	i). Paglarmukh to Tinani -Stream bank	3		3,839	
			ii). Hasligaon to Dargar khal	2		1,426	
			iii). Katakhali bridge to Takimari Beel	1.2		1,100	Includes 700 Hijal saplings
			iv). Biswa road Porar Dokan -Tirsa	1.25		1,251	
			v). Patch forest, Ghagra-Kamarpara		0.1	257	
			Sub-Total	*7.45*	*0.1*	*7,873*	
		Swamp Plantatn.	Paglar Mukh to Dorgar Khal	6.5		5,525	
		Institution Plantatn.	11 Institutions			944	
		Total for 2000-2001		13.95	0.1	14,342	
	2001 - 2002	Riparian Plantatn.	i). Batia Gaon to Dorgar Khal	3		2,335	
			ii). Bania Para toMalijhee rive embmtt.	2		1,510	
			iii). Kala Ghosha Jhara Bank plantatn.	8.5		11,380	
			iv). Bagher Vita Ashrayan approach Rd.	1.5		2,892	Includes 352 Hijal saplings
			v). Nokshi-Mala Jhara (Jamtali Bazaar Latif's House)	1.2		1,305	
			Sub-Total	*16.2*		*19,422*	
		Swamp plantation	a. Kata Khali bride to Takimari Beel	0.8		1,067	! extra row added to down slope of 2001 plantation
			b. Baliachandi to Dariar Par	2		3,232	
		Institution Plantatn.	73 Institutions			7,000	
		Total for 2001-2002		19	0	30,721	
	2002-2003	Riparian Plantatn.	1. Jhinaigati BRAC to Dakabar road	1		1,000	
			2. Dhanshail to Banda bhatpara	2		2,835	
			3. Botibanda uttarpara to Dakhinpara	3		2,950	
			4. Digharpar madrasha to J. gati bridge	1		3,250	
			5. Konagaon bridge to Baliachandi rd.	1.1		1,100	
			6. Dakabar Balurghat patch forest		0.4	2,205	
			7. UNO office backside Rd. Jhenaigati	3		6,000	
			8.Tetultala bazaar to Surjadi Hospital	1.3		1,150	
			9. Surjadi eidgaon -Tinanipara pucca rd.	0.9		750	
			10. Protabia to Bot Tala Road	1.5		1,300	
			11. Shutir Par Bazar to Chakan Dharla Road up to Balurghat Bridge	1.0		662	
			12. Chakpara Korokanda bridge to border of Nalitabari	1.0		1000	
			13. Haora nic Fakir bari to Moinary beel	0.5		410	
			14. Julgaon Sarker Bari to Kata Khali Khal Road	1.0		1000	
			15. Julgaon Koya Road (from Haji Nowab Ali's House to Hasligaon	0.5		506	
			16. Bania Para to Ruha Beel Road	1.0		1000	
			17. Katakhali khal	2.0		2100	
			18. Dhanshali Modhypara to Chakpara Road (from Abdul Jabber's house to Harun's house via Latif's house)	1.3		1129	
			19. Tota Member's house to Dudnoi Bazar Road via Panbor	5.0		4800	
			20. Tal Tala to Abul Hossen Mastar's house, Dhanshali	1.0		935	
			21. Bagher Vita Bazar to Gajamari Ghat Road, Dhanshali	2.5		2,870	

			22. Dhanshal Matbya Mosque to Bhaluka School Road	2.0		1690	
			23. Shahali Bridge to Bhaluka School Dhanshali	2.0		1900	
			24. Nun Khola to Jaara tali Bazar Road	3.0		3000	
			25. Jhenaigati Girl's School to Futhari Upto Kalaghosa River	4.0		3500	
			26. Bakkar Mistry's House to Bangali Bura's House road	1.5		610	
			27. Bakakura Bazar to Panbor Bazar Via Dhanshal Chalkpara Mad	3.5		3800	
			28. Bakakura Bazar to Trimuhani via Bakakura Christian Mission	1.5		1300	
			29. Chapa Jhara to West Damarpar Road (Upto Chairman's House Bridge)	2.0		1902	
			30. Noon Khola to Deptar School Road	3.0		2000	
			31. Abdul Jaccar's Land at Chalkpara, Dhanshal		0.50	1100	
			32. Achia Bewa's Private Land at Dhanshal		0.28	300	
			33. Abul Hossain Commander's Private land at Dhanshal		0.30	700	
			34. Jhuhurul Mohiana House to Bakkar Mohiana House Damarpar	1.0		1000	
			35. Abdul Zabbar's (BDR) Private Land Chalkpara, Dhanshal		1.25	1075	
			36. Abdul Ali's Private Land Bakakura, Dhanshal		1.00	1300	
			37. Gazni Obokash kendra plantatn.		2	5,200	
			Sub Total=	*55.1*	*5.83*	*69,429*	
		Swamp plantation	1). Dorikalinagar to Kanduli	3		2,850	
		Institution Plantatn.	103 # Institutions			15,228	
		Total for 2002-2003		58.1		87,507	
	Grand Total for K-M Site (1999 - 2003)			91.05		132,570	
	Grand Total (UptoAug,03)			166.91		267,808	

Summary saplings planted in the Roadside, Homestead and Institute areas by the RUG members
MACH, CARITAS

Reporting peirod : Since inception up to August 2003

Site	Saplings planted					Total	
	Roadside	RUG members involved	Homestead	RUG members involved	Institution	Saplings	RUG members involved
Hailhaor	18590	393	5300	1060	2835	26725	1453
Kongsa-Malijhee	15285	263	8200	1800	0	23485	2063
Turag-Bongsi	11212	246	3807	828	0	15019	1074
Grand total	45087	902	17307	3688	2835	65229	4590

Site wise, Year wise Plantations Raised from 1999 - 2003
Partner Organization : Caritas

Site	Year of Plantatn	Type of Plantatn.	Name of Plantation Scheme	Extent of Plantatn.		# Saplings planted	Remarks
				km	Ha		
Hail Haor	1999-2000	Road Side	i). Pachoun - Kheaghat road				
			ii). Rustampur- Hail Haor road	1		900	
			iii). Bilash Chhara Par	1		400	
			iv). Boruna - Hazipur road	0.5		925	
			v). Baruna - Nayansri road	1		925	
			vi). Kaliargaor - Hail Haor road	1		870	
			vii). Baroiun Hail Haor road	1		1,000	
				1		1,000	
			Sub-Total	*6.5*		*6020*	
		Institution Plantatn.				480	
		Total for the year 1999-2000		6.5		6,500	
	2000-2001	Road Side	i) . Boulashir - Hail Haor road	1		1,000	
			ii). Vimshi - Hail Haor road	1		950	
			iii). Fatki - Tikria road	1.5		1,000	
			iv). Shabujbagh - Hail Haor road	1		1,000	
			v). Rahim Nagar- Nayansree road	1		900	
			vi). Gram Sreemongol- Hail Haor road	1		870	
			vii). Atghor-Manik Haor Road	1		900	
			Sub-Total	*7.5*		*6,620*	
		Institution Plantatn.				330	
		Homestead plantn.				1,500	
		Total for the year 2000-2001		7.5		8,450	
	2001-2002	Roadside	I) Shobujbagh-Hail Haor road	1		1,000	
			ii). Gram Sreemongol- Hail Haor road	1		1,000	
			iii). Atghor-Manik Haor Road	1		1,000	
			iv). ZamShi - Horina Kandi road	1		1,000	
			Sub-Total	*4*		*4,000*	
		Institution Plantatn.				30	
		Homestead plantn.				3,800	
		Total for the year 2001-2002				7,830	
	2002-2003	Roadside	Bilasherpar to Motiganj road	2		1,950	
			Institution Plantation			1,995	
		Total for the year 2002-2003		2		3,945	
	Grand Total for H H Site (1999-2003)					26,725	
Turag-Bongshi	1999-2000	Road Side	i). Matikata - Mazu Khan road	2		2,500	
			ii). Sina Bao -Mokosh Beel road	1		700	
			iii). Bansh Toli Road	0.5		200	
			iv).Main road to Vulua Ashrayan project	0.5		800	
			Sub-Total	*4*		*4,200*	
		Total for the year 1999-2000		4		4,200	
	2000-2001	Road Side	i). Minarbaa - Betara road			600	
			ii). Subapur Chourasta- Majhi Para road	1		945	
			iii). Nama Shulai - Azgana	1		620	
			iv). Boroi Bari Bazaar - Dakurail road	1		960	
			v). Madan Khali - Beali road	2		1,600	
			Sub-Total	*6*		*4,725*	
		Homestead plantn.	333 Homesteads			1,332	
		Total for the year 2000-2001		6		6,057	
	2001-2002	Road Side	i). Ratanpur - Mazu Khan road	1		915	
			ii). Kanchanpur- Kota Moni road	1		792	
			iii). Shola Hati - Dhonia Para	1		580	
			Sub-Total	*3*		*2,287*	
		Homestead plantn.	456 Homesteads			2,475	
		Total for the year 2001-2002		3		4,762	

	2002-2003	0	0	0	0	0	
	Grand total for T-B Site (1999-2003)					15,019	
Kongsho - Malijhee	2000-2001	Road Side	i) Pakuria Beel bank-Bakar Kunda road	2		2,000	
			ii). Matia Para- Balu Char road	1		1,000	
			iii). Dori Kalinagar -Kona gaon road	1		1,000	
			iv). Kona gaon primary Scool - Suri Hara	1		1,000	
			v) Dori Kakinagor - west Beel Bank	0.5		500	
			Sub-Total	*5.5*		*5,500*	
		Homestead plantn.	400 Homesteads			2,000	
		Total for the year 2000-2001		5.5		7,500	
	2001-2002	Road Side	i).Hawra Neez to Jarar Bari	1.5		1,500	
			ii). Ram Khila - Bada Teghana road	2		2,060	
			iii). Dori Kali Naçar to Utta Beel Bank	0.5		600	
			iv) Kanduki Cou rastra to sonnashy tola	1.8		1,800	
			v). Sari Kalinagor to Balu Chor	1.3		1,300	
			vi). Salda - Baliya - Chondi	1		1,000	
			Sub-Total	*8.2*		*8,260*	
		Homestead plantn.	1,000 Homesteads			5,000	
		Institution Plantatn.	50 Institutions				
		Total for the year 2001-2002		8.2		13,260	
	2002-2003	Roadside	i) Salda pry. School to east Tematha Rd.	0.8		825	
			ii) Sarikalinagar to Gajarman Rd.	0.7		700	
			Sub-Total	*1.5*		*1,525*	
			Homestead Plantation			1,200	
		Total for the year 2002-2003		1.5		2,725	
	Grand Total for K-M Site (1999-2003)					23,485	
	.Grand Grand Total for Caritas RUG fostered plantation (1999-2003)					65,229	

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Sreemongal Dist.: Moulavibazar Project Site: Hail Haor Stream: Alia Chhara
Name of RMO	Alia Chhara Resource Management Organization
CRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management [illegible]	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Alia Chhara
Registration	x
No of CRMO member	
- General Body	31
- Executive Committee	11
Area of Water body (Khas):	-
Resource Area:	149 ha
Capacity building training	
- Financial management	x
- NRM	x
- Organizational management	x
Plantation(Trees)	Planted (Trees)
	15,076
Area under improved management	99.72 ha

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Sreemongal Dist.: Moulavibazar Project Site: Hail Haor Stream: Boula Chhara
Name of RMO	Boula Chhara Resource Management Organization
CRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Boula Chhara
Registration	-
No. of CRMO member	
- General Body	25
- Executive Committee	7
Area of Water body (Khas):	-
Resource Area:	251 ha
Capacity building training	
- Financial management	x
- NRM	x
- Organizational management	x
Plantation (Trees)	Planted (Trees)
	4,004
Area under improved management	193.35 ha

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
- RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Sreemongal DistL: Moulavibazar Project Site: Hail Haor Stream: Joita Chhara
Name of RMO	Joita Chhara (Lower) Resource Management Organization
CRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Joita Chhara
Registration	X
No. of CRMO member	
- General Body	18
- Executive Committee	7
Area of Water body (Khas):	-
Resource Area:	180 ha
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	8,291
Area under improved management	104 ha

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Sreemongal Dist.: Moulavibazar Project Site: Hail Haor Stream: Jaag Chhara
Name of RMO	Jaag Chhara Resource Management Organization
CRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Jaag Chhara
Registration	X
No. of CRMO member	
- General Body	32
- Executive Committee	11
Area of Water body (Khas):	-
Resource Area:	142 ha
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	3,270
Area under improved management	87.75 ha

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Sreemongal Dist.: Moulavibazar Project Site: Hail Haor Stream: Joita Chhara
Name of RMO	Joita Chhara (Middle) Resource Management Organization
CRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Joita Chhara
Registration	X
No. of CRMO member	
- General Body	18
- Executive Committee	7
Area of Water body (Khas):	-
Resource Area:	130 ha
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	5,300
Area under improved management	60 ha

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream Committee Profile

Name of Area:	UP: Upazila: Sreemongal Dist.: Moulavibazar Project Site: Hail Haor Stream: Ful Chhara
Name of Committee	Ful Chhara Committee
Committee formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Ful Chhara and its bank
Registration	X
No. of Committee member	11
Area of Water body (Khas):	-
Resource Area:	-
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	2,250
Area under improved management	-

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
Committee functional: RMP developed, and Management practice in place, Formal training initiated.

ACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Jhinaigathi Dist.: Sherpur Stream: Kalagosha Jhara (Section-2)
Name of RMO	Management Organization
JRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Kalagosha Jhara (Section-2)
Registration	-
No. of JRMO member	
- General Body	34
- Executive Committee	X
Area of Water body (Khas):	-
Resource Area:	290 ha
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	25,378
Area under improved management	200 ha

Note:
Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.
Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.
RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Jhinaigathi Dist.: Sherpur Project Site: Kongshaw-Malijhee Stream: Kalagosha Jhara (Section-1)
Name of RMO	Kalagosha Jhara(Gandhigaon) Resource Management Organization
JRMO formed & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Kalagosha Jhara (Section-1)
Registration	-
No. of JRMO member	
- General Body	17
- Executive Committee	X
Area of Water body (Khas):	-
Resource Area:	250 ha
Capacity building training	
- Financial management	X
- NRM	X
- Organizational management	X
Plantation(Trees)	Planted (Trees)
	-
Area under improved management	130 ha

Note:

Area under improved management : Community sensitized and motivated, RMO formed, RMP in place and sustainable management practice in place.

Best management practice: Riparian area conserved, Local species (Riparian Trees) re-introduced.

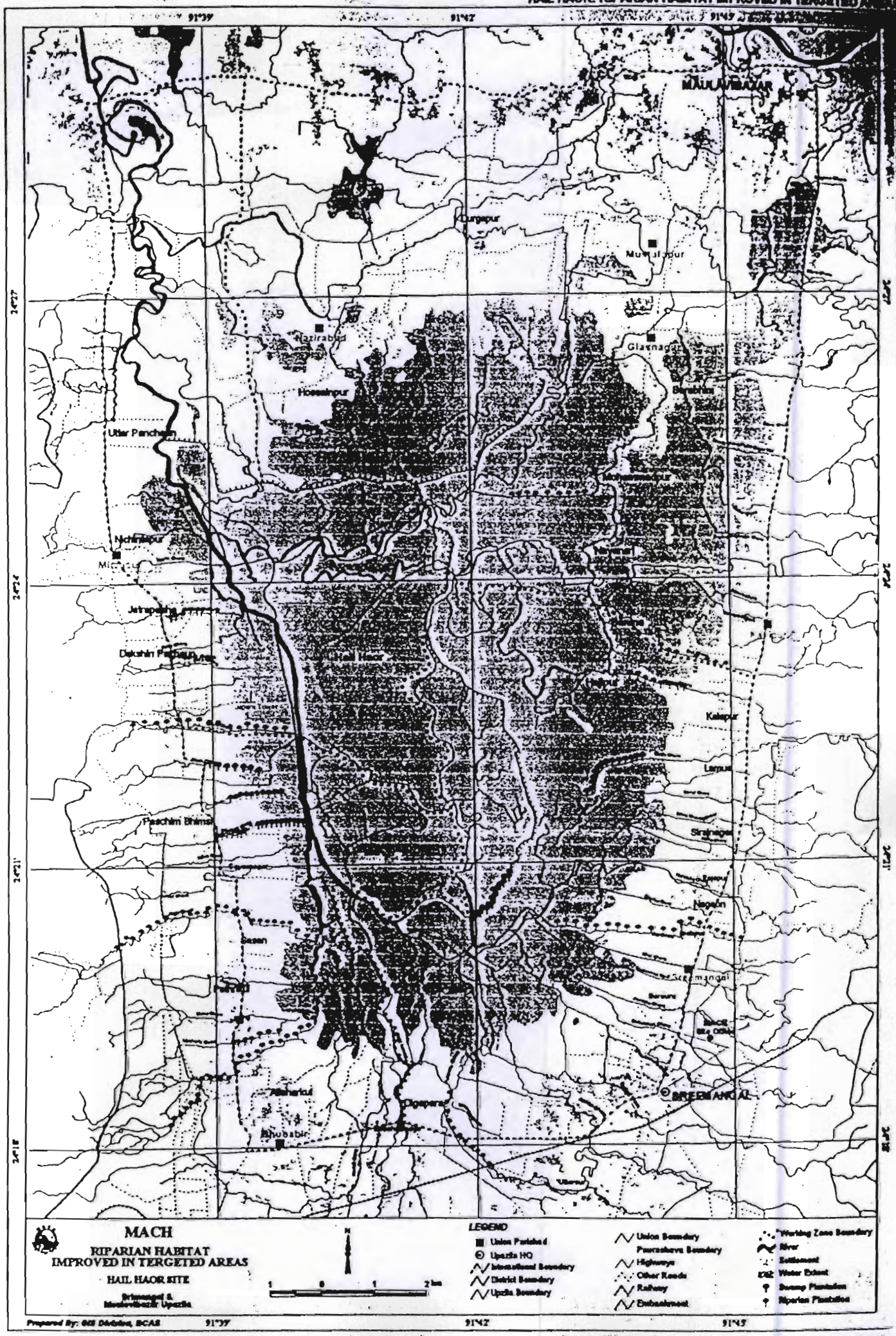
RMO functional: RMP developed, and Management practice in place, Formal training initiated.

MACH-CNRS
Stream RMO Profile

Name of Area:	UP: Upazila: Jhinaigathi Dist.: Sherpur Project Site: Kongshaw-Malijhee Stream: Nakshi-Mala Jhara
Name of RMO	Nakshi-Mala Jhara Resource Management Organization
JRMO Established & functional	Yes
Institutional Framework of UP committee and Upazila local Govt. committee formed and active	Yes
Resource management plan in place	Yes
Best management practice in place	Yes
RMP in place	Yes
Name of Resource base:	Nakshi-Mala Jhara
Registration	-
No of JRMO member	
- General Body	17
- Executive Committee	x
Area of Water body (Khas):	-
Resource Area:	105 ha
Capacity building training	
- Financial management	x
- NRM	x
- Organizational management	x
Plantation(Trees)	Planted (Trees)
	2,900
Area under improved management	60 ha

Note:
Area under improved management : Community sensitized and motivated, Sanctuary established, RMO established, RMP in place and sustainable management practice in place.
Best management practice: Time closure, Area closure, Refrain from destructive harvest methods (De-watering, Fine mesh drag nets)
RMO functional: Formed registered, RMP developed, and Management practice in place, on job training going on, Formal training initiated.
Increased fish yield and bio-diversity: Changes from the baseline due to project interventions.

HAIL HAOR: RIPARIAN HABITAT IMPROVED IN TERGETED AREAS



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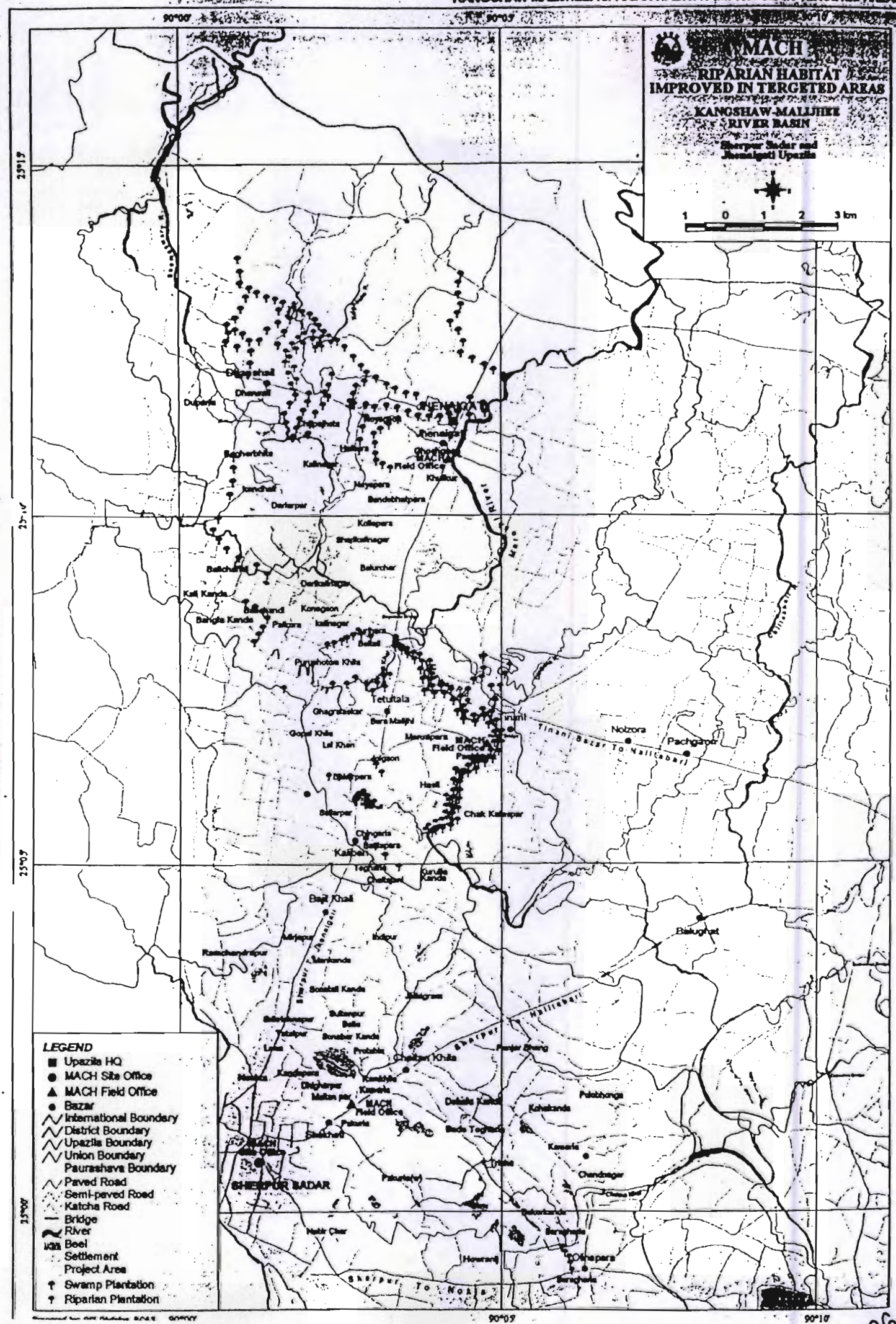

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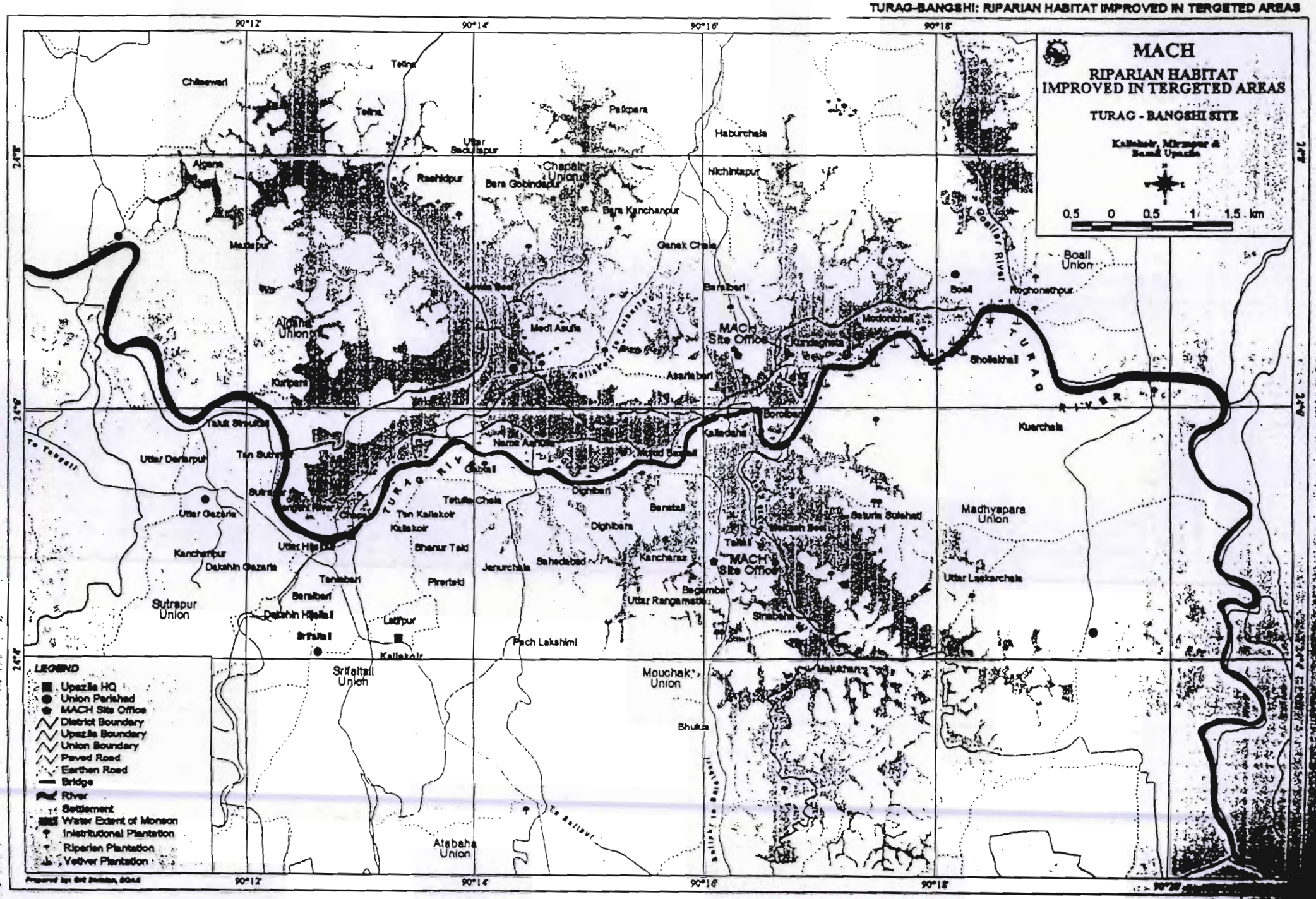

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Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.2.1a: Number of sanctuaries established

October 2003

Winrock International

CNRS

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Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.2.1: Innovations and Best Practices Adopted

Indicator 6.2.1a: Number of sanctuaries established

A. Description

Precise Definition of Indicator: This indicator records the number of fish sanctuaries established by the community groups through USAID assistance. "Established" means clearly demarcated and in existence for at least one year.

Unit of Measure: Number

Desegregate by: N/A

Justification/Management Utility: Sanctuary establishment allows aquatic species to survive from one season to the next, and also provides protection for fish stocks during key points in their life cycle. Community establishment protects these sanctuaries from depletion during the dry season. Sanctuary establishment is one of the "best practices" being promoted and reported on under indicator 6a.

B. Plan for Data Collection

Data Collection Method: Winrock and partners will conduct an actual count to verify information from community Resource Management Committees.

Method of Collection by USAID: Semi-Annual Reports from Winrock

Data Source(s): Winrock and its partners

Frequency/ Timing of Data Collection: Semi-Annual

Estimated Cost of Collection: Nominal. Already built into Winrock work program.

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: none to date

Known Data Limitations (if any):

Actions Taken or Planned to Address Data Limitations:

Date of Future Data Quality Assessment: TBD

Procedure of Future Data Quality Assessment: TBD

D. Plan for Data Analysis, Reporting, and Review

Data analysis: SO team will analyze data.

Presentation of Data: Table

Review of Data: Semi-annual mission portfolio review, and regular performance monitoring.

Reporting Data: Internal mission report, R4 and CBJ reports.

Other Notes: A further 9 sanctuaries are planned for establishment in the newly excavated and extended leased areas and to be formed resources management areas.

Notes on the Baselines/Targets: No sanctuaries existed in the targeted areas before intervention of MACH project.

Location of Data Storage: P\MissionSharable\EGFEpub\Environment\PMP Comments:

Cumulative Unit of measure: #

Year	Planned	Actual
Baseline	0	0
2000	15	16
2001	30	54
2002	40 (70)	64
2003	50 (75)	66
2004		
2005		

This Sheet Last Updated On: 10/21/03

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Strategic Objective 6:
Indicator 6.2.1a: Number of sanctuaries established

Sanctuary Establishment

Introduction: One of the objectives of MACH project is to conserve and enhance the biodiversity. Increased biodiversity through establishing sanctuaries has been emphasized and reflected in project documents. To this end, MACH project in all three sites has taken steps toward conservation of fish through establishing sanctuaries since March 1999. The MACH supported communities have established sanctuaries in the deep scour holes of rivers, in beels where 10-year lease arrangements have been arranged by the project through the MoL, and most recently MACH and its community-based programs have been granted permanent sanctuaries over an entire beel lease forever. One of these is more than 120 acres and the entire amount has been set aside as a sanctuary.

Sanctuary Rational: The floodplain fish community in Bangladesh has in the past been very rich and diverse. To maintain a sustainable floodplain fisheries production, it is necessary to maintain the fish community, the habitat diversity and practices of sustainable fishing or harvesting. Sanctuaries are important today because of the extreme loss of habitat for fish in the dry season. The sanctuaries form a very important link for replenishing the stocks of fish in floodplain ecosystems. Permanent sanctuaries can provide dry season shelter for increasing quantities of parent stock necessary for replenishing a defined floodplain ecosystem through reproduction each year (an example being the entire Hail Haor).

Selection of sites: The sanctuaries established were of a reasonable size to provide adequate space and shelter for parent fish stocks to be able to repopulate the habitat managed by the RMOs. Prior to selecting the locations, detailed information has been gathered on the biological condition, social interaction (fishing intensity & users status), existing management system and physical condition of the proposed area. Consideration has also been paid to the location of the sanctuary site. The collected data has been analyzed, reviewed and the technical feasibility has been established to ensure the restoration and improvement activities are successful.

Management: The number, location and size of the sanctuaries established can be seen on the tables that follow. All these sanctuaries have been established based on RMOs decisions and long term plans. Brush piling with tree branches and bamboo has been made in all sanctuaries to improve habitat quality as well as to protect fish. Signboards, slogans and red flags have been erected at sites to draw the attention of the people. MACH has also been supporting the RMOs in using for the first time permanent structure (concrete hexapods) to create shelter for fish and aquatic invertebrates as well as provide permanent protection from inadvertent or planned netting.

In TB site the sanctuaries are Daha (deep pools in the beels/lake) and Kum (or river scour hole) in the Turag river. In Hail Haor sanctuaries are in beels (lakes), khals (canals) and the Gopla river channel. The RMOs at all sites form sanctuary management sub-committees within their organizations for management.

Management plans are developed by the community (by the RMOs) which lay out the regulations to be put in place in the wetlands including the water bodies and sanctuaries. The regulations can include full closure of all fishing 12 months per year, time closure (dry season) or particular times of the year, ban on the use of destructive gears like the khata jal, current jal (to protect the aquatic vegetation and spawn of the fish), stop or reduce fry/brood fishing, stop dewatering in the water body and the sanctuaries. Fishing has in most cases been totally banned in the specified sanctuary areas within the beels. The concerned RMOs are responsible for guarding of the sanctuaries round the year and they also inform the community and local government about the sanctuaries.

Re-introduction of locally threatened fish species. Re-introduction of locally threatened fish species is a means to enhance the bio-diversity. Accordingly broods of Meni (*Nandus nandus,)*, Pabda (*Ompak pabda*), Sarputi (*Puntius Sanana)* Foli (*Notopterus notopterus)*, Kalibaus (*Labeo calbasu)* have been reintroduced in the sanctuary where male/female ratio was maintained at 2:1.

Reintroduction of fry and fingerling of locally threatened fish species have been done in the all three MACH sites. In the Kongshaw-Malijhee area Shoil, Gojer, Ghoinna, Kalibaus, Pabda and Sorputi has already been reintroduced by the end of August 2001. Similarly, in the Hail Haor Ghoinna, Kalibaus, Air and Sorputi were reintroduced.

On the following tables and maps the number and locations of the sanctuaries has been shown. The locations have been mapped through field GPS reconnaissance.

Declaration of permanent sanctuary by the Government based on the MACH project

Eight (8) important water bodies both technically and strategically have been declared by the GoB as sanctuaries for all time to come. The GoB has given up the revenue earning for the water bodied in lieu of community based co-management for the imp-rovement of the entire resource including the fishery. On behalf of the RMOs MACH took the proposal to MoL through the UP, LGC, DC, DoF and MoFL with their eddorsement. Eventually the MoL has declared these water bodies officially as permanent sanctuaries. This is the mile-stone in the history of conservation of wetland resources in Bangladesh. These sanctuaries are being managed by the concerned RMOs. It is already mentioned that there are 58 sanctuaries in MACH Project sites in addition to the above declared sanctuaries. There are three types of declared sanctuaries, those are Complete beel (water body) as sanctuary, part of a beel (water body), and Kur Kum (deepest part of river) of river as sanctuaries. These sanctuaries have been declared by memo no. ML/Sha-7/Misc.-40/2002 dated 01/07/2003 in the MoFL/MoL.

A copy of the sanctuary establishment letter follows as evidence of the government commitment.

List of permanent/central sanctuaries under MACH declared by MOL:

Name of Waterbody	Location	Area (acre)	MACH site	Remarks
Jaduria Beel	Plot No. 9 Habibpur Srimangal, Moulvibazar	100.50	HH	Being established
Chapra-Magura	Plot No. 477, 478 & 492 Habibpur Srimangal, Moulvibazar	21.88	HH	Being established
Mokosh Beel (Nawkhola Dhalidoho)	Plot No. 3807 Saturia Kaliakoir,Gazipur	2.24	TB	Existing
Alua Beel (Baradaha)	Plot No. 143 Bara Gobindapur Kaliakoir,Gazipur	4.44	TB	Existing
Malijhee River (Part)	Plot No. 2556-59, 2565, 2577-79 Malijheekanda Jhenaigathi, Sherpur	Kur plus* 200m up stream & 200m down stream	KM	Existing
Turag-Banshi River part.				
a) Galachipa Kum	Plot No. 2233 Boali Kaliakoir,Gazipur	Kum plus* 200m up stream & 200m down stream	TB	Existing
b) Lalkhar Kum	Plot No. 670 Boroibari Kaliakoir,Gazipur	Kum plus* 200m up stream & 200m down stream	TB	Existing
c) Gabtoli-Sayedpur Kum	Plot No. 1 Shakhipur Plot No. 120 Gabtoli Kaliakoir,Gazipur	Kum plus* 200m up stream & 200m down stream	TB	Existing
Total	8	129.06		

** Area is not included in total but would be an additional 16-20 acres*

Sanctuary: All MACH sites

Sl. No	Name of waterbody (Beel/Khal/River)	Number of Sanctuaries	Area (ha)	Probable Immediate Impact (ha)
1	Hail Haor : Sreemongol	26	39.65	10,586
2	Turag-Bangshi: Kaliakoir	19	23.98	5,537
3	Kangsha-Malijhee: Sherpur	21	12.11	4,898
Total		66	75.74	21,021

MACH Project

MACH-CNRS Activity (Wetland Sanctuaries at Hail Haor Site)

Name of the water-body and Name of Sanctuary	Since inception as on Aug. 2003		Name of Union	Managed by RMO
	No.	Area (acre)		
Sananda Beel				
Sananda Sanctuary-1	1	0.14	Mirzapur	Sananda RMO
Sananda Sanctuary-2	1	0.14	do	do
Sananda Sanctuary-3	1	0.14	do	do
Sub-total	**3**	**0.42**		
Balla Beel				
Balla Sanctuary-1	1	1.61	Bhunobir	Balla RMO
Balla Sanctuary-2	1	1.15	do	do
Balla Sanctuary-3*	1	1.61	do	do
Balla Sanctuary-4*	1	0.69	do	do
Sub-total	**4**	**5.06**		
Jethua Beel				
Jethua Sanctuary-1	1	0.52	Kalapur	Jethua RMO
Jehua Sanctuary-2*	1	0.52	do	do
Sub-total	**2**	**1.04**		
Kajura Beel				
Kajura Sanctuary-1	1	0.33	Giasnagar	Kajura RMO
Sub-total	**1**	**0.33**		
Agari Beel				
Agari Sanctuary-1	1	0.80	Nazirabad	Aagari RMO
Agari Sanctuary-2	1	0.69	do	do
Agari Sanctuary-3	1	0.34	do	do
Agari Sanctuary-4	1	0.41	do	do
Agari Sanctuary-5	1	0.40	do	do
Sub-total	**5**	**2.64**		
Borogangina Canal				
Borogangina Sanctuary-1	1	0.59	Kalapur	Boragangina RMO
Borogangina Sanctuary-2	1	0.30	do	do
Borogangina Sanctuary-3	1	0.30	do	do
Borogangina Sanctuary-4	1	0.46	do	do
Chapra Magura (central sanctuary)	1	21.88	do	do
Sub-total	**5**	**23.53**		
Dumaria Beel				
Chharadoba Sanctuary-1	1	0.08	Bhunobir	Dumaria Beel
Chharadoba Sanctuary-2	1	0.07	do	do
Patharia beel Sanctuary-1*	1	0.92	do	do
Cheruabadaly Sanctuary-1*	1	1.47	do	do
Cheruabadaly Sanctuary-2*	1	2.11	do	do
Gopla river Sanctuary-1*	1	1.98	do	do
Sub-total	**6**	**6.63**		
Total	**26**	**39.65**		
Planned				
Medi beel	1	1.00	Nazirabad	Ramai RMO (Under process)
Khaya Beel	1	0.75	do	do
Jaduria Beel (Permanent Sanctuary)	1	100.50	Kalapur	Boragangina RMO

* *Not in function, those were maintained for three years*

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MACH Project

MACH-CNRS Activity (Wetland Sanctuaries at Turag-Bangshi Site)

Name of the water-body and Name of Sanctuary	Since inception as on Aug 2003		Name of Union	Managed by RMO
	No.	Area (acre)		
Mokosh Beel				
Naler Daha Sanctuary	1	0.50	Mouchak	Mokosh RMO
Moisher Daha Sanctuary	1	0.50	do	do
Burir Daha Sanctuary	1	0.50	do	do
Moulovir Ghuni Sanctuary	1	0.40	do	do
Masterer Ghuni Sanctuary	1	0.40	do	do
Nepaler Ghuni Sanctuary	1	0.50	do	do
Nawkhola Sanctuary	1	1.00	do	do
Dholi Daha Sanctuary	1	1.24	do	do
Kalia Daha Sanctuary	1	0.20	do	do
Sub-total	9	5.24		
Turag River				
Golachipa Kum Sanctuary	1	1.50	Maddya Para	Turag River RMO
Lalkhar Kum Sanctuary	1	1.80	Chapair	do
Gabtoli Sayedpur Kum Sanctuary	1	2.50	do	do
Sub-total	3	5.80		
Alua Beel				
Bamoner Ghuni Sanctuary	1	2.20	Chapair	Alua RMO
Bhangi Danga Daha Sanctuary	1	1.80	do	do
Doika Daha Sanctuary	1	1.00	do	do
Folimara Daha Sanctuary	1	1.50	do	do
Boro Daha Sanctuary	1	4.44	do	do
Dilarhari Daha Sanctuary	1	1.00	do	do
Gurerhari Daha Sanctuary	1	1.00	do	do
Sub-total	7	12.94		
Total	19	23.98		
Planned				
Goallar River	2	2.00	Fulbaria	New RMO

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MACH Project

MACH-CNRS Activity (Wetland Sanctuaries at Kongshaw-Malijhee Site)

Name of the water-body and Name of Sanctuary	Since inception as on Aug. 2003		Name of Union	Managed by RMO
	No.	Area (acre)		
Kewta Beel				
Kewta Sanctuary-1	1	0.46	Pakuria	Kewta RMO
Kewta Sanctuary-2	1	0.16	do	do
Kewta Sanctuary-3	1	0.18	do	do
Kewta Sanctuary-4	1	0.12	do	do
Sub-total	4	0.92		
Takimari-Dharabashia Beel				
Dharabashia Sanctuary-1	1	0.21	Malijhikanda	T-D RMO
Kathakhali Khal Sanctuary-1	1	0.89	do	do
Kathakhali Khal Sanctuary-2	1	0.77	do	do
Kathakhali Khal Sanctuary-3	1	0.67	do	do
Kathakhali Khal Sanctuary-4	1	0.94	do	do
Malijhee River (Dainnar Kur) Sanctuary-1	1	0.80	do	do
Sub-total	6	4.28		
Dholi- Baila Beel				
Dholi- Baila Sanctuary-1	1	0.50	Jhinaigati	Dholi- Baila RMO
Dholi- Baila Sanctuary-2	1	0.50	do	do
Dholi- Baila Sanctuary-3	1	0.50	do	do
Dholi- Baila Sanctuary-4	1	0.50	do	do
Dholi- Baila Sanctuary-5	1	0.50	do	do
Dholi- Baila Sanctuary-6	1	0.50	do	do
Tanachura/Shomeshwari river San.-1	1	0.59	do	do
Tanachura / Shomeshwari river San.-2	1	0.39	do	do
Tanachura / Shomeshwari river San.-3	1	0.93	do	do
Sub-total	9	4.91		
Bailsha Beel				
Bailsha Sanctuary-1	1	1.00	Dhanshail	Bailsha RMO
Bailsha Sanctuary-2	1	1.00	do	do
Sub-total	2	2.00		
Total	21	12.11		
Planned				
Gaimara Kur	1	3.00(Appx.)	Kalarpar	Gaimara Kur committee
Kaitari Beel	1	3.00(Appx.)	Pakuria	Kewta RMO
Dholi Beel	1	3.00(Appx.)	Jhinaigati	Dholi- Baila RMO
Grand Total (Existing):	66	75.74		
Grand Total (Planned):	8	113.25(Appx)		

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গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
ভূমি মন্ত্রণালয়
শাখা-৭

স্মারক নং- ভূঃমঃ/শা-৭/বিবিধ-৪০/২০০২- তারিখ : ০১/০৭/২০০৩ খৃঃ।

প্রাপক : জেলা প্রশাসক,
মৌলভীবাজার/শেরপুর/গাজীপুর।

বিষয় : অভয়াশ্রম ঘোষনা প্রসংগে।

উপর্যুক্ত বিষয়ের বরাতে জানানো যাচ্ছে যে, মাচ প্রকল্পের আওতাধীন এ যাবৎ স্থাপিত মৎস্য অভয়াশ্রমগুলো পুরো প্রকল্প এলাকাকে প্রভাবিত করার জন্য যথেষ্ট নয় বিধায় উক্ত প্রকল্পভূক্ত ৩ (তিন)টি এলাকায় যথা মৌলভীবাজার জেলার শ্রীমংগল, গাজীপুর জেলার কালিয়াকৈর এবং শেরপুর জেলার ঝিনাইগাতীতে অবস্থিত বিল, বিলের অংশ, নদীর কুম এবং কুরকে কতিপয় শর্ত সাপেক্ষে স্থায়ী মৎস্য অভয়াশ্রম ঘোষনা করতঃ সরকারী রেকর্ডের অন্তর্ভূক্ত করার জন্য সরকার সিদ্ধান্ত গ্রহন করেছে।

২। উপরোক্ত সিদ্ধান্ত মোতাবেক যে সকল বিল, বিলের অংশ, নদীর কুম/কুরকে অভয়াশ্রম ঘোষনা করার সিদ্ধান্ত গ্রহন করা হয়েছে। সেগুলোর বিস্তারিত তপসিল নিম্নে পেশ করা হলোঃ-

সম্পূর্ন বিল

(ক) যাদুরিয়া বিল (হাইল হাওড়) আয়তন-১০০.৫০ একর। আর,এস দাগ নং-৯, মৌজা-হাবিবপুর, উপজেলা-শ্রীমংগল, জেলা-মৌলভীবাজার।

(খ) চাপরা মাগুরা বিল (হাইল হাওড়) আয়তন ২১.৮৮ একর (৪৭৭, ৪৭৮ নং দাগে ৩.৯৬ একর এবং ৪৯২ নং দাগে ১৭.৯২ একর) মৌজা-হাবিবপুর, উপজেলা-শ্রীমংগল, জেলা-মৌলভীবাজার।

বিলের অংশ

(গ) মাবশা বিলের নোয়াখোলা-ধলিজাহা, আয়তন-২.২৪ একর, আর, এস দাগ নং-৩৮০২, মৌজা-সাটুরিয়া, সোলাহাটি, উপজেলা-কালিয়াকৈর, জেলা-গাজীপুর।

(ঘ) আউলা বিলের বারোজাহা আয়তন-৪.৪৪ একর, আর,এস দাগ নং-১৪৩, বড় গবিন্দপুর মৌজা, উপজেলা-কালিয়াকৈর, জেলা-গাজীপুর।

নদীর কুম/কুর

(ঙ) মালিজি নদীর ধেয়ার কুর, ২৫৫৬, ২৫৫৭, ২৫৫৮, ২৫৫৯, ২৫৬৫, ২৫৭৭, ২৫৭৮, ২৫৭৯ নং দাগের অংশ, (উক্ত স্থান হতে ২০০ মিটার উজান এবং ২০০ মিটার ভাটিস্থান পর্যন্ত) মৌজা মালিজিকান্দা, উপজেলা-ঝিনাইগাতী, জেলা-শেরপুর।

(চ) কালিয়াকৈর উপজেলার তুরাগ এবং বানশি নদীর কুম।

(১) গলাচিপা কুম (আর,এস দাগ নং-২২৩৩) (কুমের ২০০ মিটার উজান এবং ২০০ মিটার ভাটি স্থান পর্যন্ত) মৌজা-বোয়ালী, কালিয়াকৈর, গাজীপুর।
(২) লালখার কুম (আর,এস দাগ নং-৬৭০) (২০০ মিটার উজান ও ২০০ মিটার ভাটি স্থান পর্যন্ত)

(৩) গাবতলী এবং সৈয়দপুর কুম (আর এস প্লট নং-১) (কুমের ২০০ মিটার উজার ও ২০০ মিটার ভাটি স্থান পর্যন্ত) মৌজা-শকিপুর, এস,এ দাগ নং-১২০, মৌজা-গাবতলী, কালিয়াকৈর, জেলা-গাজীপুর।

৩। চাপড়া মাওরা এবং যাদুরিয়া বিল দুটি বর্তমান ইজারা মেয়াদ কাল শেষ হওয়ার পর মাচ প্রকল্পের সংগঠনের নিকট নামমাত্র মূল্যে ইজারা প্রদান করতে হবে।

৪। নদীর অংশ এবং জলাভূমিগুলি নামমাত্র খাজনা (নদীর ক্ষেত্রে বাৎসরিক ১০১/- (একশত এক) টাকা এবং বিলের ক্ষেত্রে বাৎসরিক ৫০১/- (পাঁচশত এক) টাকা খাজনায় কেবলমাত্র সংরক্ষণ ও রক্ষনা বেক্ষনের জন্য মাচ প্রকল্প দ্বারা সংঘটিত সম্পদ ব্যবস্থাপনা সংগঠনের জন্য লীজ প্রদান করা যাবে। এ পদক্ষেপ স্থানীয়ভাবে সংগঠনগুলোকে সংরক্ষনের অধিকার প্রদান করবে।

৫। যেসব সংগঠন সংরক্ষন ও রক্ষনা বেক্ষনে ব্যর্থ হলে সংশ্লিষ্ট সংরক্ষিত জলাভূমি সরকারে প্রত্যাবর্তিত হবে।

৬। সংশ্লিষ্ট উপজেলা নির্বাহী অফিসারের নেতৃত্বে উপজেলা পর্যায়ে গঠিত জলাভূমি মূল্য নির্ধারন কমিটি এ কার্যক্রম তদারকি করবে এবং জেলা প্রশাসকের মাধ্যমে এ মন্ত্রণালয়কে অবহিত রাখবে।

উপরোক্ত সিদ্ধান্তের আলোকে আইনানুগ প্রয়োজনীয় ব্যবস্থা গ্রহনের জন্য নির্দেশক্রমে অনুরোধ করা হলো।

স্বা:
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোন: ৭১৬১১৭৫

স্মারক নং-ভূম/শা-৭-বিবিধ-৪০/২০০২/ ৬৭৬ /১(৩) তারিখ: ০৯/৭/২০০৩ইং

অনুলিপি সদয় অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহনের জন্য প্রেরন করা হলো :-

১। সচিব, মৎস্য ও পশু সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
(দৃঃআঃ জনাব মোঃ নজরুল ইসলাম খান, সিনিয়র সহকারী সচিব, মৎস্য শাখা-৩)।

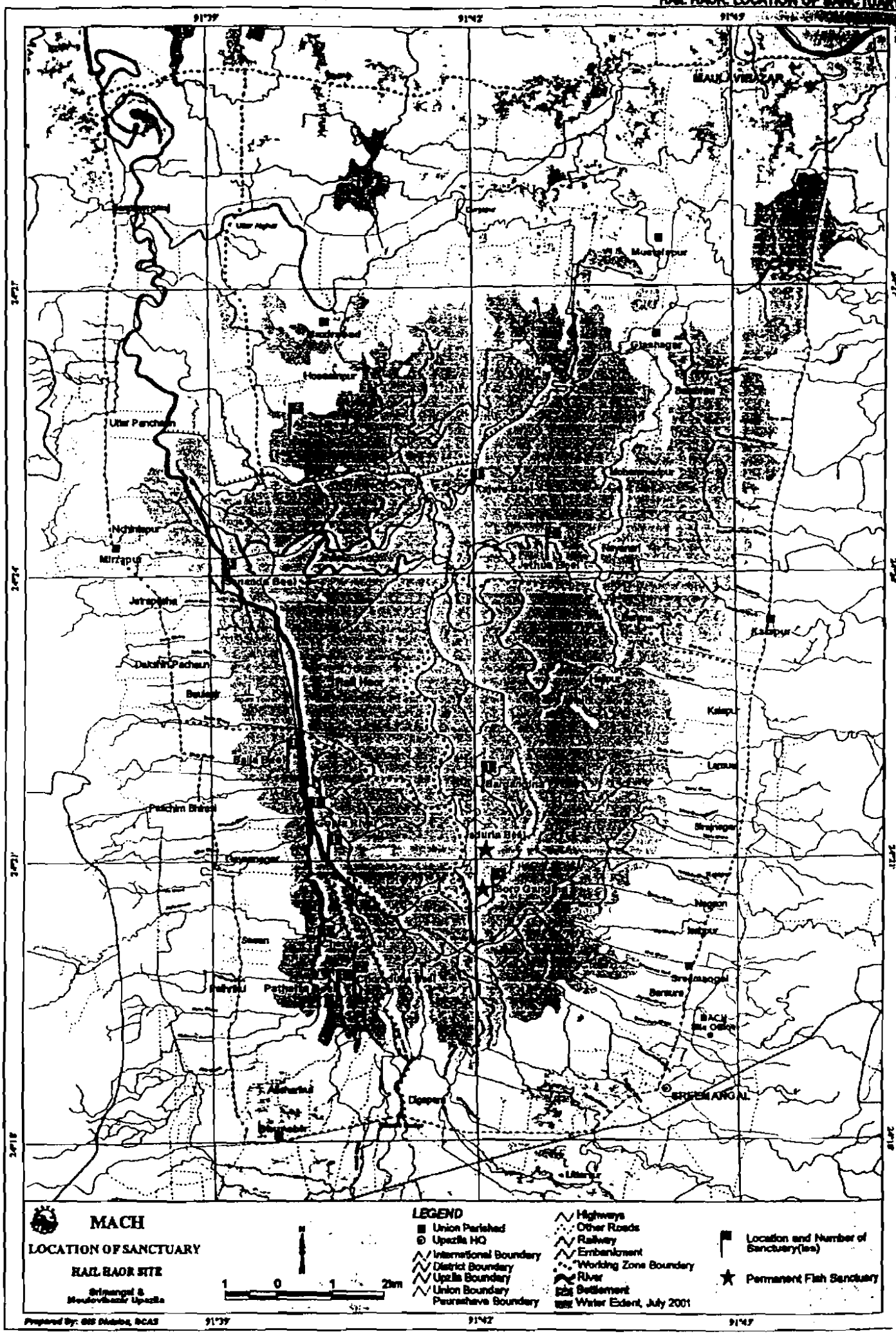
২। Chief of Party, MACH Project, Bangladesh Office, House No.2 (4th floor), Road No.33/A, Gulshan, Dhaka-1212.

৩। প্রকল্প পরিচালক, মাচ কার্যক্রম, বিনিয়োগ সহায়তা প্রকল্প, বাড়ী নং-২, রোড নং-২৩/এ, গুলশান-১, ঢাকা-১২১২।

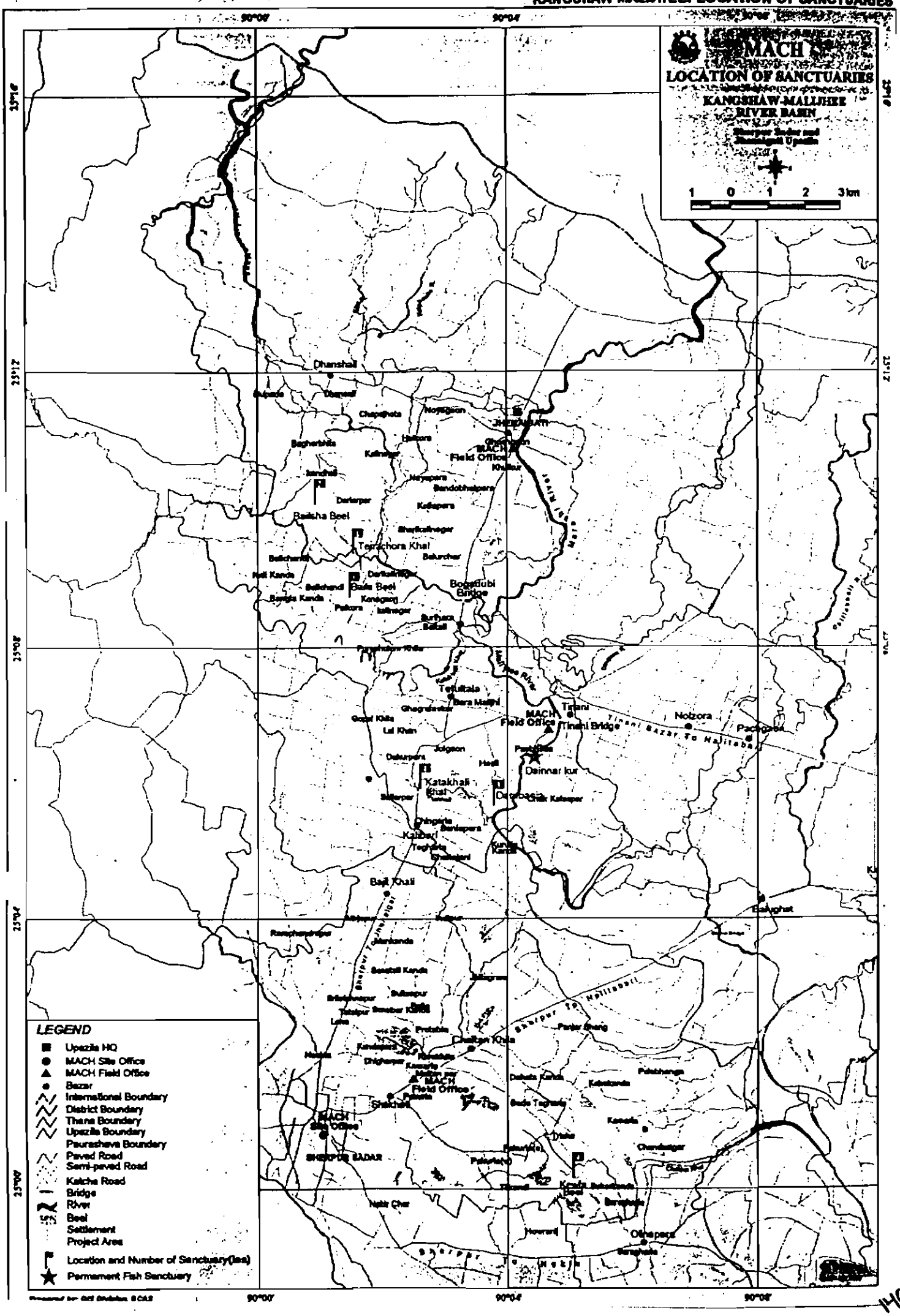
০৯/০৭/০৩
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোন: ৭১৬১১৭৫

Received
02/7/2003

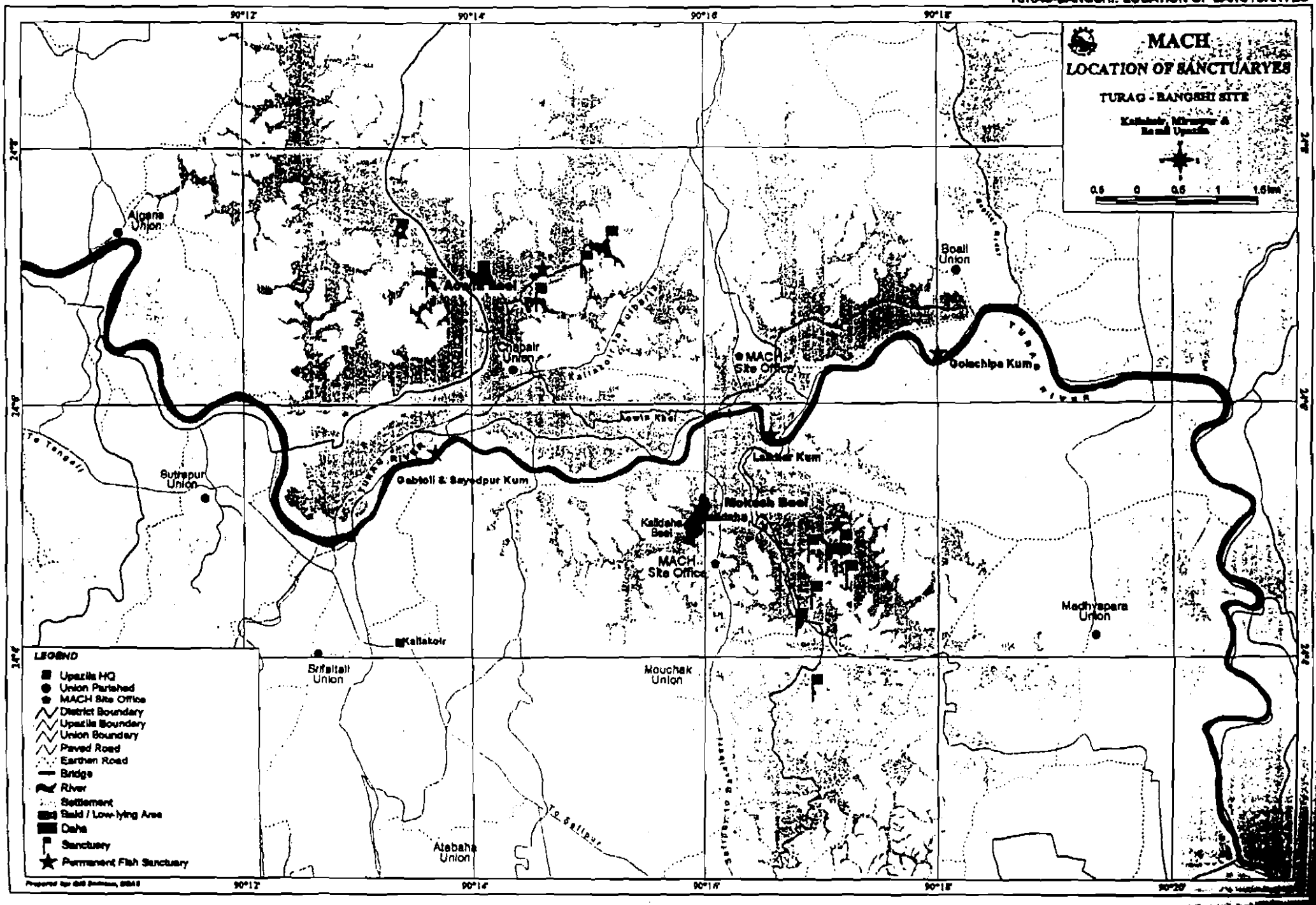
HAIL HAOR: LOCATION OF SANCTUARY



KANGSHAW MALIJHEE: LOCATION OF SANCTUARIES



TURAG-BANGSHI: LOCATION OF SANCTUARYES



Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.2.1b: Meters of channel rehabilitated

October 2003

Winrock International

CNRS

CARITAS BANGLADESH

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Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.2.1: Innovations and Best Practices Adopted

Indicator 6.2.1b: Meters of channels rehabilitated

A. Description

Precise Definition of Indicator: Canals/channels re-excavated to restore the lost connections among the water bodies as well as between the water bodies with the larger floodplains and rivers

Unit of Measure: Meters.

Disaggregate by: N/A

Justification/Management Utility: Re-connecting "beels" (perennial wetlands) to floodplains and rivers allows movement of fish and other aquatic organisms within former habitats and promotes carryover of fish stocks from one year to another. This is one of the "best practices" being promoted and reported on under indicator 6a. Only channels that do not lower overall dry season water levels will be chosen.

B. Plan for Data Collection

Data Collection Method: Physical measurement by Winrock and its partner NGOs of the channels rehabilitated.

Method of Collection by USAID: Reports from Winrock

Source(s): Winrock and its partners

Timing/Frequency of Data Collection: Data collected throughout the year will be compiled annually.

Estimated Cost of Collection: Nominal. Already included in Winrock workplan.

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: none to date

Known Data Limitations (if any): Channels opened may be again filled in. Follow up will be necessary in insure that channels remain open.

Actions Taken or Planned to Address Data Limitations: TBD

Date of Future Data Quality Assessments: TBD

Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Winrock International in conjunction with the SO 6 team will analyze data.

Presentation of Data: Table

Review of Data: Semi-annual mission portfolio review, and regular implementation monitoring

Reporting Data: Internal mission report, R4 and CBJ reports.

E. Other Notes: *Much of the Physical Intervention work was delayed, as the 416b fund (local currency) did not arrive until April 2003.

Notes on the Baselines/Targets: Baseline is zero

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments: Ability to meet targets is contingent on the timely availability of 416(b) local currency funds.

Cumulative Unit of measure: (M)

Year	Planned	Actual
Baseline	0	0
2000	1000	1,800
2001	2,800	2,800
2002	5,000	5,495
2003	10,000	11,293*
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6.2.1b: Meters of channel rehabilitated

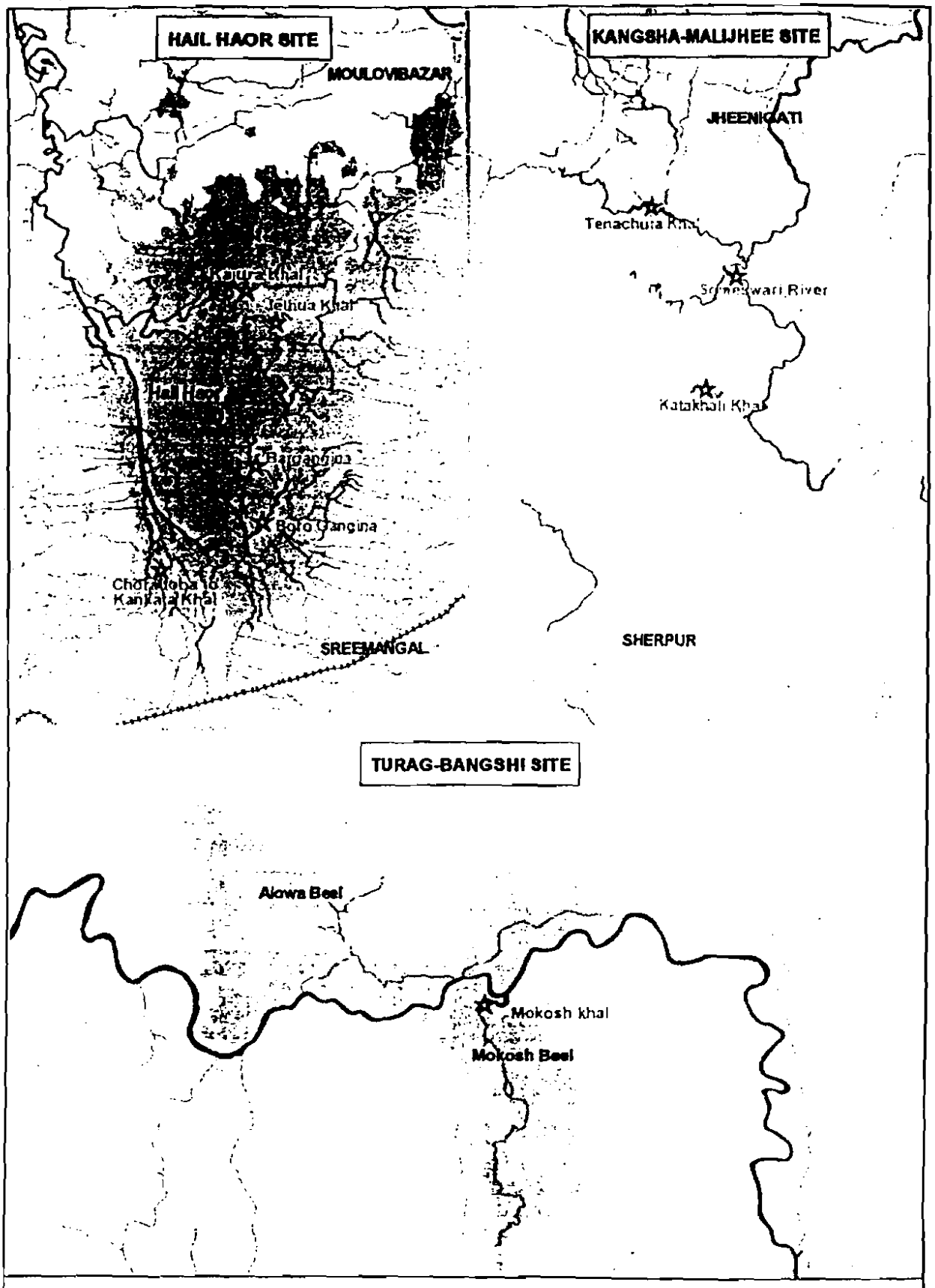
This indicator was not one of the original project indicators. Targets for this were set based on the availability of the local currency fund in 2000. This fund was not made available to the project until April of 2003, because of delays in processing the investment fund program through the GoB channels.

The project is also not implementing as many of the channel or canal rehabilitation schemes (re-excavation) as was originally envisioned for another reason as well. The potential benefits of improved canal or channel connectivity for fish movement is often far outweighed by the potential disturbances and loss of wetland function that might occur from the improved drainage of the wetland. If the drainage is improved from a beel to a river for example the beel might actually drain faster than before further shrinking the inundation extent and the dry season storage of water. The project has restored only those channels or canals that will not alter the wetland area that currently exists and rejects any excavation or restoration that would reduce the size of the wetland area. Only those channels that will allow for improved migration of fish between beels have been rehabilitated. Rehabilitation has also been done where making certain portions deeper to serve as refuges for dry season fish stocks have been advantageous to production.

Even though in limited cases the rehabilitation may be successful, the project recommends that this indicator not be used as a determinant of project success. The attached table shows the meters of canal rehabilitated in the three sites and this is accomplished through actual field measurement. It should be noted that all canal or beel link channel excavation scheme is decided on by the community and developed by themselves for the most part with local labor.

Management of Aquatic Ecosystem through Community Husbandry (MACH)
Meters of channel rehabilitated

	Name of scheme	Through June 30, 2002	FY 2002-03 August			
		Legth of re-excavated canal Meter	Re-excavated area Ha	Length of re-excavated canal Meter	Total length	Influence area of the scheme up to 2002 Ha
HH Site:						
1	Jalhira canal	1,800			1,800	278
2	Borogangina-I	1,000			1,000	101
3	Borogangina-II	676			676	
4	Kajura canal	100			100	178
5	Borogangina-III		4.1	845	845	
6	Bargangina		12.1	1,907	1,907	
7	Choradoba to Kankala		2.3	468	468	
	Sub-total area (m)	3,576	18.5	3,220	6,796	557
KM Site:						
1	Kur in Katakhali khal-I	500			500	54
2	Kur in Katakhali khal-II	493			493	36
3	Someswari	426			426	101
4	Katakhali -V (FC)		2.4	1,235	1,235	
5	Katakhali -VI (LC)		1.2	378	378	
6	Tenachura Khal		1.6	965	965	
	Sub-total area (m)	1,419	5.2	2,578	3,997	191
TB Site:						
1	Mokesh to Turag canal	500	0	0	500	390
	Sub-total area (m)	500	0	0	500	390
	Total	5,495	23.7	5,798	11,293	1,138



Prepared by: GIS Division, BCAS

Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.2.2a: Income of targeted beneficiaries

October 2003

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.2.2: Alternative Incomes Generated for Targeted Groups

Indicator 6.2.2a: Income of targeted beneficiaries

A. Description

Precise Definition of Indicator: This indicator measures the increase in income, from the baseline established at the outset of the activity, of the targeted beneficiaries who are being given alternate income generating technologies and credit by the program. "Targeted beneficiaries" are those dependent on fishing for their livelihoods, and whose income would be adversely affected in the near term by the institution of geographic or temporal restrictions on fishing.

Unit of Measure: Percentage increase

Disaggregate by: Gender

Justification/Management Utility: Increased income of target group from new income sources will reduce the need for fishing and collecting of aquatic species during the "lean" season. This will help protect sanctuaries and other aquatic habitats.

B. Plan for Data Collection

Data Collection Method: Annual surveys by Winrock and partners.

Method of Collection by USAID: Reports from Winrock

ta Source(s): Winrock and its partners.

requency/ Timing of Data Collection: Annual

Estimated Cost of Collection: Medium, included in activity budgets.

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: None to date

Known Data Limitations (if any): Increase in income may not be always attributable to adoption of income-generating technologies. Data will need to be adjusted for inflation.

Actions Taken or Planned to Address Data Limitations: Other probable factors adding to income will be factored into the analytical methods.

Date of Future Data Quality Assessments: TBD

Procedure of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Review trends of increase in income among the beneficiaries.

Presentation of Data: Table

Review of Data: Semi-annual mission portfolio review, R4 review and individual review with recipient.

Reporting Data: Internal mission report, R4 report and CBJ report.

E. Other Notes: Caritas monitors this item on an annual basis every October.

Notes on the Baselines/Targets: Winrock and its partners have established baseline data through household survey. Baseline is 1450 taka/capita/year

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments:

Cumulative Unit of measure: %

Year	Planned	Actual
Baseline		
2000	20%	19%
2001	30%	31%
2002	40%	37%
2003	50%	46.55%
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:

Indicator 6.2.2a: Alternative Income of Targeted Resources User Group (RUG) members

Description

Recognizing that the reduction of fishing pressure is a key element to the revival of the floodplain fisheries, MACH has included supplemental income generating activities that focused on fishers and others dependent of wetland resources. Average income amongst MACH RUG households is approximately Tk 35,000 per year. The GOB household poverty line has been set at Tk 45,000 indicating that most MACH RUG members are amongst the poorest people in rural Bangladesh. Surveys, undertaken by MACH and others, show that the poor generally take on a wide variety of income generating activities, as compared to (relatively) more affluent members of the community. Income sources amongst the poor are a moving target as the poor are more opportunistic in adopting new occupations. As sources of income change from year to year and even season to season, this has made the identification of what is alternative and what is the main income source difficult to identify and track.

MACH in the beginning of the project suggested that the credit program seek to increase alternative incomes by 50% or more. The overall finding of both MACH surveys, discussed below, completed by CARITAS and RMC/ Socio-Consult, were that project credit is having a positive impact and exceeding planned targets. In MACH II the program will use more quantitative targets to track credit activities.

The main basis for determining the supplemental income for MACH RUG group members has been the annual surveys undertaken by CARITAS. As detailed below, CARITAS surveyed a total of 137 RUG members in 2000 in the Hail Haor and Turag-Bangshi sites. Credit efforts did not begin in the Kangsa-Maljhii site until 2001 and baseline interviews of 97 RUG members did not take place until 2002. The same individuals were surveyed in subsequent years. Total income increase over baseline levels as reported by CARTIAS were Tk 4,615 in Year 1, Tk 6,471 in Year 2, Tk 6,651 in Year 3 and Tk 8,775 in Year 4. Based on these CARITAS surveys in Year 4 income of those surveyed increased by a total of 46% over CARITAS baseline estimates. Of those surveyed by CARITAS over 24% of those initially fishing as their main source of fishing no longer fish for income. Site wise the number reported in thas survey to be leaving fishing were 54% in Hail Haor, 27% in Turag-Bangshi and 5% in the Kangsa-Maljhii. CARITAS staffs at the sites feel that these numbers, while correct for the individuals surveyed, in all probability are too high. The actual number is possibly on the order of 10%. Additionally sites state that there has been a reduction in overall fishing intensity among RUG members of 20-30%.

The MACH MTR and MACH HQ recommended that an outside firm be contracted to verify CARITAS findings. As a result a survey was conducted in late 2002 to specifically identify average supplemental income as well the impact of MACH credit activities. A large sample of 2,500 randomly selected RUG members out of 4,500 were interviewed; 1,636 who had received loans and 850 who had not received loans. The 850 non-recipients of loans are of the same socio-economic status as MACH loanees. These non-loanees serve as the source of base-line information. Based on that survey it is estimated that the average 'alternative income' for non-loanees is Tk 1,412 per household. For those RUG households undertaking AIGAs and receiving MACH loans the average profit has been reported to be Tk 2,150. Average profit per loan is estimated at 43%. These results are similar to the outcomes found in other organizations undertaking micro-credit.

Caritas Survey Findings

Year 1 Impacts

In Year 1 (2000), at the Hail Haor and Turag-Bongsi sites, CARITAS reported that those implementing IGAs showed average income increases of. 19.44% or Tk 4,015 (based on a survey of 137 individual users survey out of total 511 loanees as of **December 2000 as** shown in Table – A).

Year 2 Impacts

In the second year (2001) using the same users from Hail Haor and the Turag-Bangshi sites average **supplemental income increased to Tk 6,471 or 31.11%** (based on 183 individual users surveyed out of 1,279 loanees in **December 2001 as shown in Table -B**

Year 3 Impacts

In Year 3 (2002) the same users supplemental income increased on average to Tk 6,631 or 40.29% (based on 37 individual users opinion out of 74 base sample-2000 in Sreemongal and Kaliakoir site in late September 2002. Moreover, the income-increased survey included the MACH-Sherpur site and data indicated that alternative income increased to 30.13% (based on the income status of 97 individual users). **The average supplemental income increased for all three sites is 36.9% as detailed in Table-C.**

Year 4 Impacts These surveys generally occur in September/October. In order to meet the data requirements of MACH a limited survey was conducted in August 2003. . In this round the sample population in the Sreemongal and Kaliakoir sites (base samples of 2000 & 2001) had an average alternative income increase amounting to Tk 8,778 or 51.60% (based on 91 respondents surveyed). While the supplemental income of the MACH Sherpur site (2nd survey on its 3rd year of implementation IGAs) found that alternative income increased by 40.34% (based on 94 individuals surveyed). The overall supplemental income increased for the three sites is 46.55% (based on 165 base samples) in the 4th year of MACH-I,as shown in table -D.

CARITAS was included in MACH because of its long experience in wetlands and with micro-credit. MACH adopted the CARTIAS model for use in its credit systems. Early in the process MACH and CARITAS agreed to raise the maximum loan size. As per MACH-Caritas credit policy RUG members can now receive up to Tk. 5,000 for a first loan. Subsequently RUG members are allowed Tk. 8,000 in the second and Tk 10,000 if they apply for a third loan. . A total of 4,058 individual users have received 7,008 loans. These are being used to generate income in a total 27 trades, as shown in table-E.
Moreover, a small number of special entrepreneurial loans are being attempted, based on the performance and potential of selected members. These amount to Tk. 15,000-30,000 with 13 individuals(3 women) receiving these loans.

The income increased assessment survey has been taken place on December 2000 (at Sreemongal and Kaliakoir site), December 2001(at Sreemongal and Kaliakoir site) September 2002 (at Sreemongal, Sherpur and Kaliakoir site) and on August 2003 in the three sites.

Status of income increased by the Resource User Group (RUG) members under MACH-Caritas

Table-A : December 2000

Site	No. of Resource Area	Union council covered (nos.)	Village covered (nos.)	RUG covered (nos.)	Daily average income of individual group members (taka)			Remarks
					Before IGA	After IGA	Increased %	
Hailhaor	3	5	7	11	55.79	66.42	19.69	
Turag/Bongsi	2	2	9	9	58.29	69.67	19.63	
Actual*				Avg.	57.04(1)	68.05(2)	19.66(3)	
Reported*				Avg.	57	68	19.44	Report published

Table-B : December 2001

Site	No. of Resource Area	Union council covered (nos.)	Village covered (nos.)	RUG covered (nos.)	Daily average income of individual group members (taka)			Remarks
					Before IGA	After IGA	Increased %	
Hailhaor	7	7	19	35	47.23	64.23	36.00	
Turag/Bongsi	3	4	17	20	52.02	67.93	31.77	
Actual*				Avg.	49.63(1)	66.08(2)	33.89(3)	
Reported**				Avg.	57	74.73	31.11	Report published

* ** The actual data varied from the reporting data due to calculating the both by utilizing excel software also conducting the same manually using calculator respectively.

Table-C : September 2002

Site	Re-survey based on sample	No. of Resource Area	Union council covered (nos.)	Village covered (nos.)	RUG covered (nos.)	Daily average income of individual group members (taka)			Remarks
						Before IGA	After IGA	Increased %	
HH(1)	Base 2000	4	5	11	11	55.90	78.82	41.00	Re-survey
	Base 2001	7	6	16	35	51.07	65.47	28.20	Re-survey
	New sample 2002	7	7	19	30	49.22	58.05	17.94	Survey on new sample
TB(2)	Base 2000	2	5	11	9	58.26	81.32	39.58	Re-survey
	Base 2001	3	7	15	20	55.63	74.64	34.17	Re-survey
	New sample 2002	3	9	23	19	33.94	40.81	20.24	Survey on new sample
KM(3)	New sample 2002	4	7	21	33	50.61	65.86	30.13	Survey on new sample

Table –D : September 2003

Site	No. of Resource Area	Union council covered (nos.)	Village covered (nos.)	RUG covered (nos.)	Daily average income of individual group members (taka)			Remarks
					Before IGA	After IGA	Increased %	
Hailhaor	7	7	19	56	51.23	77.88	52.02	Covering all base sample
Turag/Bongsi	3	4	17	35	57.66	87.03	50.94	Do
Sherpur	4	7	21	74	48.54	68.12	40.34	Do
Total	14	18	57	165	51.39	75.44	46.55	Weighted average

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Data collection and analysis :

Most of RUG members do not record or remember their income, which in some cases they earned six months before. Though some IG activities are easy to determine income and expenditure records as they take place on a cyclical basis (like poultry, cow fattening, plant nursery, etc.). The field staff collected information on income and expenditure from selected RUG members per cycle and no. of completed cycles from each respondent. Finally, the collected data are analyzed following a specific method described below (some analysis sheet are also enclosed herewith).

Daily average income of RUG members (before being a the member of the samity) = X
Present daily average income from income generating activities after implementing the same at least for 12 months period. Data analysis process is –
Period of per cycle to obtain profit from the activity (days)
Number of cycle completed within last 365 days or continuation days of the same cycle (repeatedly)
Profit per cycle of activity

Daily average income from IGA = X $\frac{\text{Profit per cycle (iii)}}{\text{Period per cycle (days)}}$ Number of cycle Completed (ii)

Present daily average income from main profession
Present total income = (b) + (c)

Increased percentages (%) = $\frac{(d) - (a)}{(a)} \times 100$

Table E: Number of implemented AIGA by the RUG members.

Kind of AIGAs	Sreemongal	Sherpur	Kaliakoir	Total
Fish culture	33	52	8	93
Fish fry business	37	7	11	55
Lease of pond/beel	15	98	5	118
Fish business	445	184	165	794
Fish nursery	21	9	2	32
Dried fish business	85	15	20	120
Cage fish culture	20	25	10	55
Milk cow rearing	275	349	151	775
Goat rearing	24	15	30	69
Duck rearing	65	43	11	119
Buffalo rearing	54	13	10	77
Cow/calf rearing	292	154	15	461
Poultry	66	68	25	159
Rich business	238	194	29	461
Paddy husking	163	210	10	383
Vegetable & eggs	138	7	51	196
Plant nursery	16	20	8	44
Rickshaw driving	82	304	49	435
Grocery shop	121	86	28	235

Boat making	46	28	9	83
Sewing machine	37	46	21	104
Hockery	23	32	11	66
Wood, Cloth, Muri & Seasonal business	205	68	142	415
Handicrafts	62	23	16	101
Carpentry	27	5	26	58
Small business	180	515	92	787
Fruit business	15	0	16	31
Power tiller/pump	5	0	2	7
Agriculture	227	4	25	256
Others	190	168	61	419
Total	3,207	2,742	1,059	7008

Independent Credit Survey 2002

Based on the suggestion of the 2001-2002 Mid-term Review (MTR). MACH requested that CARTIAS undertake a survey of its credit operations through an independent firm. Resource Management Consultants was selected to develop the questionnaire, conduct the survey and prepare a report. Problems developed with the data base and questionnaires and the firm Socio-Consult assisted in 'cleaning' of the questionnaire, reentry of the data and development of required tables.

Specific tasks included acquiring information on: the poverty status of RUG members, income from non-loanees to provide baseline information, overall income from loans, and quantifying income from loans and profitability of those loans.

Questionnaires were developed and the field aspects of the survey were completed in November 2002. The original questionnaires required significant review and after several false starts it was determined that much of the data required re-entry. This was completed and tables were developed in June 2003. It is expected that a report utilizing this data will be available in December 2003.

RUG Members

Tables10 and Tables 13 A detail the standings of MACH RUG members. Table 10 shows that the vast majority of RUG households have less than 0.5 acres of land. In Table 13 A incomes of RUG households are shown to average approximately Tk 35,000, well below Tk 45,000 used by the GOB and World Bank to identify the poor. MACH CARITAS staff have been successful in identifying including the poor in MACH activities.

Loan Impacts

Tables 30E and Table 37 show profit levels by site and type of loan activity. The overall findings are that the average profit, that is income from the activity after paying off the loan, is approximately Tk. 2, 150. In addition given an average loan size of Tk 4,900 profit for all activities for all sites was 43%. All activities appeared to be profitable for RUG members ranging from 66% to 24% for the activities documented. The most profitable activities appear

to be Rickshaws, Small Business (small shops) and the Fish Business (reselling fish- generally dried fish).

Supplemental Income

According to the information shown in Table 13 B which tracks incomes of RUG member who have not received loans the average or base line *supplemental income* is estimated to be Tk 1412. MACH limits supplemental income to non-mainstream activities in this case "collection". Collection is the term used to indicate income derived from subsistence activities- grass or fodder, wild aquatic vegetables, fuel and other collection from common pool resources. As shown MACH credit activities have increased this by over 150%.

Table 10: Distribution of Samples by Own Cultivable Land and Program Area

Possess Cultivable Land		Loanee			Non-loanee		
		HH	KM	TB	HH	KM	TB
No Land	N	459	485	225	164	301	102
	%	64.00%	79.20%	73.30%	58.00%	77.60%	52.80%
Up to 0.50 acre	N	108	98	42	40	70	36
	%	15.10%	16.00%	13.70%	14.10%	18.00%	18.70%
0.51 to 1.50 acre	N	116	24	34	58	13	39
	%	16.20%	3.90%	11.10%	20.50%	3.40%	20.20%
1.51 to 2.50 acre	N	16	3	4	8	1	13
	%	2.20%	0.50%	1.30%	2.50%	0.30%	6.70%
Above 2.50 acre	N	18	2	2	13	3	3
	%	2.50%	0.30%	0.70%	4.60%	0.80%	1.60%
Entire PoP.	N	717	612	307	283	388	193
	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 13 A:RUG Member Incomes

Program Area	Nos.	Average Annual Income					
		Agricultural	Fish income	Non-agricultural	Business	Collection	Family income
Hail Haor	1000	8758	11595	6304	11671	1586	39913
Kongshaw-Malijhee	1000	4275	5457	10497	5965	972	27164
Turag-Bongshi	500	10380	6323	8458	13565	1689	40414
Entire PoP.	2500	7289	8085	8412	9767	1361	34914

Note: Theses average tables generated by all of 2500 samples

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Loan Impacts

Table 30e: Average Profit by Different type of Loan Caues by Ceiling 1,2 and 3

Loan Cause	Hail Haor		Kongshaw-Malijhee		Turag-Bongshi		Overall	
	Nos.	Avg. Income	Nos.	Avg. Income	Nos.	Avg. Income	Nos.	Avg. Income
Barber Shop	0	0	2	2233	1	36000	3	13489
Poultry	13	2178	0	0	6	4000	19	2753
Rickshaw	15	1802	82	2651	4	5250	101	2627
Other	55	2900	26	2622	30	1117	111	2353
Small Business	201	1998	177	1906	81	3700	459	2263
Agri Farming	70	1963	21	1164	16	4911	107	2247
Fish Business	79	2497	85	2058	48	2044	212	2218
Rice Business	81	2479	47	1910	5	800	133	2215
Sewing Machine	3	1600	1	0	4	3000	8	2100
Vegetable Gardening	8	1910	1	500	1	3500	10	1928
Milky Cow	135	1542	124	1446	97	2743	356	1835
Nursery	4	3008	0	0	4	586	8	1797
Fish Culture	18	1672	10	1635	4	1500	32	1639
Cottage	2	850	2	2000	0	0	4	1425
Cow Rearing	33	1119	24	1252	5	386	62	1111
Entire PoP.	717	2038	602	1905	306	2897	1625	2151

37: Percentage of profit on average IGA investment Ceiling 1,2 and 3

Loan Cause	Hail Haor				Kishaw-Malije				Turag-Bangshi				Over all			
	Nos.	Avg. Loan In Tk.	Avg. Profit		Nos.	Avg. Loan In Tk.	Avg. Profit		Nos.	Avg. Loan In Tk.	Avg. Profit		Nos.	Avg. Loan In Tk.	Avg. Profit	
			Taka	%			Taka	%			Taka	%			Taka	%
Small Business	201	5348.20	1998.44	37.37	177	3423.44	1905.85	55.67	81	6209.83	3699.81	59.58	459	4758.03	2262.98	47.56
Fish Business	79	6075.82	2496.84	41.09	85	3566.48	2058.08	57.71	48	6562.71	2043.77	31.14	212	5179.96	2218.34	42.83
Veg. Gardening	8	5625.00	1910.00	33.96	1	3000.00	500.00	16.67	1	5000.00	3500.00	70.00	10	5300.00	1928.00	36.38
Milky Cow	135	5940.73	1541.79	25.95	124	3675.35	1446.18	39.35	97	6195.77	2742.76	44.27	356	5221.16	1835.72	35.16
Cow Rearing	33	5181.82	1118.82	21.59	24	3499.75	1251.67	35.76	5	5400.00	386.40	7.16	62	4548.29	1111.18	24.43
Poultry	13	8923.08	2177.69	24.41	0	0.00	0.00	0.00	6	6833.33	4000.00	58.54	19	8263.16	2753.16	33.32
Fish Culture	18	6055.56	1672.22	27.61	10	3800.00	1635.20	43.03	4	2750.00	1500.00	54.55	32	4937.50	1639.13	33.20
Sewing Machine	3	6000.00	1600.00	26.67	1	4000.00	0.00	0.00	4	6500.00	3000.00	46.15	8	6000.00	2100.00	35.00
Cottage	2	2000.00	850.00	42.50	2	4000.00	2000.00	50.00	0	0.00	0.00	0.00	4	3000.00	1425.00	47.50
Barber Shop	0	0.00	0.00	0.00	2	3667.00	2233.00	60.89	1	8000.00	36000.00	450.00	3	5111.33	13488.67	263.90
Rickshaw	15	5333.33	1802.00	33.79	82	3502.61	2650.73	75.68	4	8500.00	5250.25	61.77	101	3972.42	2627.63	66.15
Nursery	4	5750.00	3007.50	52.30	0	0.00	0.00	0.00	4	6000.00	585.50	9.76	8	5875.00	1796.50	30.58
Agri Farming	70	4771.51	1963.34	41.15	21	3101.19	1163.81	37.53	16	6499.88	4910.69	75.55	107	4702.14	2247.15	47.79
Rice Business	81	5703.65	2479.27	43.47	47	3830.01	1909.91	49.87	5	5400.00	800.00	14.81	133	5030.15	2214.94	44.03
Other	55	5617.95	2900.31	51.63	26	3692.31	2622.12	71.02	30	5531.93	1116.63	20.19	111	5143.65	2353.07	45.75
Entire Pop.	717	5618.70	2037.58	36.27	602	3550.29	1904.87	53.65	306	6180.24	2897.09	46.88	1625	4957.95	2150.27	43.37

Table 13b: Average Annual Family Income for Non-loanee from Different Sector by Program Area

Program Area	Nos.	Average Annual Income					
		Agricultural	Fish income	Non-agricultural	Business	Collection	Family income
Hail Haor	283	9744	10203	7684	11097	1531	40560
Kongshaw-Malijhee	388	3675	5123	12258	4888	890	26833
Turag-Bongshi	193	12168	5471	6837	11307	1845	37629
Entire PoP.	864	7560	6865	9549	8356	1412	33741

Note: Theses average tables generated by all of 2500 samples

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Note: Theses average tables generated by all of 2500 samples

Summary status of increased income of RUG members of MACH-Sreemongal site

Site : Hailhaor, Sreemongal

Base sample : 2000 & 2001 Reserveyed : August 2003

Sl	Name of RUG members	Name of RUG	Base		Present daily income				Increased income		Remarks
			Daily income (Tk)	Profession	Income profession Taka	Implemented IGA Activities	Implemented IGA Income (Tk.)	Total income (Taka)	Taka	%	
1	Mr. Umesh Sarker	Ananda Matshajibi Samity	61	Fishing	50	Duck rearing	38.99	88.99	27.99	45.89	
2	Mr. Rabi mia	Shaharsri Sapla Samity	79	Fishing	0	Fish business	117	117	38	48.10	Left the fishing profession
3	Ms. Regia Begum	Purbachal Mohila Samity	66	House wife	40	Rickshow driving	39	79	13	19.70	
4	Mr. Shaheb Ali	Sunrize Jubok Samity	63	Fishing	25	Rice business	58	83	20	31.75	
5	Mr. Nipendra Sarker	Padda Jubok Samity	45	Fishing	0	Dried Fish busines	72	72	27	60.00	Left the fishing profession
6	Mr. Anwar Hossain	Addrash Motshajibi Samity	55	Fishing	0	Fruit Bussiness	80	80	25	45.45	Left the fishing profession
7	Mr. Arun Sarker	Mannab Unnaun Samity	50	Fishing	0	Grocery Shop	72	72	22	44.00	Left the fishing profession
8	Mr. Haider Ali	Rajonigondha Matshajibi Samity	40	Fishing	0	Grocery shop	63	63	23	57.50	Left the fishing profession
9	Mr. Moklesh Miah	Surjodoy Jubok Samity	40	Fishing	25	Rice business	29	54	14	35.00	
10	Mr. Rushan Ali	Uphar Jubok Samity	50	Fishing	0	Vegetables & egg busines	75	75	25	50.00	Left the fishing profession
11	Mr. Hasmot Ali	Sunrise Jubok Samity	50	Fishing	0	Poultry activities	182	182	132	264.00	Left the fishing profession
12	Mr. Madhai Sarker	Biplobi Purush Samity	60	Fishing	10	Fruit business	81	91	31	51.67	
13	Md. Shahbaz Miah	Manik Haor Jagrato Samity	60	Day labour	33	Milk cow rearing	36	69	9	15.00	
14	Mr. Harun or Rasid	Ekota Jubok Samity	40	Fishing	0	Poultry activities	84	84	44	110.00	Left the fishing profession
15	Mr. Pourosh Miah	Ekota Jubok Samity	40	Fishing	0	Fruit business	104	104	64	160.00	Left the fishing profession
16	Mr. Abdul Awal Miah	Ekota Jubok Samity	40	Fishing	0	Power trailer	97	97	57	142.50	Left the fishing profession
17	Mr. Shorav Miah	Hajipur Jubokallyan samity	60	Fishing	0	Plant nursery	111	111	51	85.00	Left the fishing profession
18	Mr. Esab Uddin	Hajipur Jubokallyan samity	75	Fishing	45	Agriculture	30	75	-	-	
19	Mr. Shaheb Miah	Hajipur Jubokallyan samity	60	Small business	0	Rice business	108	108	48	80.00	Left the fishing profession
20	Mr. Babul Sarker	Ananda Matshajibi Samity	55	Fishing	40	Duck rearing	32	72	17	30.91	
21	Ms Anwara Begum	Asha Mohila Samity	30	Homestead activ	10	Grocery shop	35	45	15	50.00	
22	Ms Parul Rani	Meghna Mohila Samity	20	Homestead activ	10	Cow fattening	31	41	21	105.00	
23	Mr. Rasid Miah	Sabuzbag Matshajibi Samity	50	Fishing	10	Fish nursery+Poultry	114	124	74	148.00	
24	Mr. Ruhul Amin	Rupali Matshajibi Samity	80	Fish busi & Agri	40	Dried fish business	61	101	21	26.25	
25	Mr. Shahar Miah	Sonali Matshajibi Samity	30	Fishing	0	Fish fry business	73	73	43	143.33	Left the fishing profession
26	Ms Joti Sutradhar	Nalunkun Mohila Samity	60	Carpenting	0	Carpenting	84	84	24	40.00	Left the fishing profession
27	Mr. Kutub Uddin	Mirzapur Matshajibi Unnyan Sam	70	Fishing	10	Duck rearing	95	105	35	50.00	
28	Ms. Bashna Boyddha	Modhumita Mohila Samity	20	Homestead activ	10	Tailoring	21	31	11	55.00	
29	Ms Runa Begum	Golaplul Mohila Samity	0	Homestead activ	0	Paddy business	20	20	20	100.00	Left the fishing profession
30	Mr. Ramananda Namashudhra	Sonarbangla Matshajibi Samity	50	Small farmer	0	Boat & Plough manufactu	68	68	18	36.00	Left the fishing profession
31	Ms Pranati Ram Bishwas	Purnima Mohila Samity	35	Homestead activ	10	Handicrafts (Bamboo)	42	52	17	48.57	
32	Mr. Nimoni Sarker	Samprati Jubok Samity	50	Fishing	0	Ferry business (Hawkery)	64	64	14	28.00	Left the fishing profession
33	Mr. Ershad Miah	Doyal Matshajibi Samity	50	Fishing	30	Dried fish business	56	86	36	72.00	

Summary status of increased income of RUG members of MACH-Sreemongal site

Site : Haithaor, Sreemongal

Base sample : 2000 & 2001 — Reserveyed : August 2003

Sl	Name of RUG members	Name of RUG	Base: Daily income (Tk)	Base: Profession	Present daily income: in professi Taka	Present daily income: Implemented IGA: Activities	Present daily income: Implemented IGA: Income (Tk.)	Present daily income: Total income (Taka)	Increased income: Taka	Increased income: %	Remarks
34	Mr. Bani Miah	Sharashti Shapla Purush Samity	70	Fishing	0	Fish business	98	98	28	40.00	Left the fishing profession
35	Mr. Mashar Ali	Hajipur Jubokallyan Samity	75	Fishing	50	Small business	75	125	50	66.67	
36	Mr. Makhan Sarker	Ananda Matshajibi Samity	50	Fishing	40	Milk cow rearing	34	74	24	48.00	
37	Mr. Ishad Miah	Surjomukhi Jubok Samity	85	Fishing	50	Agri (paddy & vegetables)	39	89	4	4.71	
38	Mr. Nependra Sarker	Prakiti Matshajibi Samity	50	Fishing	0	Rickshwa driving	57	57	7	14.34	Left the fishing profession
39	Mr. Dayadra Sarker	Prakiti Matshajibi Samity	30	Fishing	0	Handicrafts (Bamboo & ca	39	39	9	30.00	Left the fishing profession
40	Mr. Mirash Miah	Al-amin Matshajibi Samity	60	Fishing	60	Agriculture	14	74	14	23.33	
41	Mr. Sukkur Miah	Al-amin Matshajibi Samity	75	Fishing	35	Dried fish business	75	110	35	46.67	
42	Ms Habibul Bibi	Mirzapur Lal Golap Mohila Samity	70	Homestead activ	30	Buffalo rearing	47	77	7	10.00	
43	Ms Rahima Bibi	Mirzapur Lal Golap Mohila Samit	50	Homestead activ	30	Grocery shop	45	75	25	50.00	
44	Ms Mala Bibi	Mirzapur Lal Golap Mohila Samity	60	Homestead activ	50	Dried fish business	40	90	30	50.00	
45	Mr Lutfar Rahman	Upahar Jubok Samity	75	Fishing	65	Pond fish culture	37	102	27	36.00	
46	Ms Rukia Bibi	Alghar Shimul Mohila Samity	40	Homestead activ	35	Paddy business	12	47	7	17.50	
47	Mr. Joynuddin	Shahparan Jubok Samity	75	Fishing	0	Cow fattening & business	90	90	15	20.00	Left the fishing profession
48	Mr. Sardar Uddin	Shahparan Jubok Samity	30	Fishing	0	Tailoring	54	54	24	80.00	Left the fishing profession
49	Mr. Nokir Uddin	Shahparan Jubok Samity	50	Fishing	10	Pump renting	45	55	5	10.00	
50	Ms Banu Begum	Karnafuli Mohila Samity	40	Homestead activ	35	Duck rearing	13	48	8	20.00	
51	Ms Kodheya Begum	Karnafuli Mohila Samity	40	Homestead activ	35	Betlel nut business	29	64	24	60.00	
52	Ms Rokeya Begum	Karnafuli Mohila Samity	30	Homestead activ	15	Grocery shop	34	49	19	63.33	
53	Ms Safina Begum	Karnafuli Mohila Samity	35	Homestead activ	30	Rice business	24	54	19	54.29	
54	Ms Amina Khatun	Karnafuli Mohila Samity	35	Homestead activ	20	Clothe business	33	53	18	51.43	
55	Mr. Motin Miah	Anurban Matshajibi Samity	60	Fishing	50	Cow rearing & fattening	41	91	31	51.67	
56	Mr Shakir Miah	Anurban Matshajibi Samity	50	Fishing	10	Fish business	65	75	25	50.00	
		Total	2869		1048		3,313	4361.16	1492		
		Average	51.23		18.71		59.16	77.88	26.65		

Income increased Survey based sample of 2000 & 01 by August 2003

Income survey : First time	Daily average base income	51.23
Aug-03	Daily average increased income	77.88
	Increased Taka	26.65
	Increased Percentages (%)	52.02

St: ... increased income of Resource ... up (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

1 Name of member : Mr. Umes Sarkar Profession : Fishing... Samity : Ananda Motshajibi Samity

(A) BASE (Daily average income before being a group member) : 61 Implemented IGA : Duck rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Input cost	500	1	Egg sale (daily 15 haly eggs at the rate of 12 Tk. within 110 days)	19,800.0	
2	House making cost (30% depreciation cost)	667	2	Present price of duck (100 nos. x 70Tk.)	7,000.0	
	House repair and wested	1,500				
3	Duck purchase cost (100 nos)	9,200				
4	Medicine cost	200				
	Feed cost	500				
	Total	12567		Total	26,800.0	
	(a) Cycle of implemented IGA (days) :	365		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	14,233.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	38.99				
	(e) Present daily average income from main profession :	50				
	(B) INCREASED INCOME {(d) + (e)} :	88.99				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/A X100} :			45.89		

2 Name of member : Mr. Rabi Miah Profession : Fishing... Samity : Sharsri Sapla Purus Samity

(A) BASE (Daily average income before being a group member) : 79 Implemented IGA : Fish business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Purchase of four buskets	300	1	Fish sale (310 x 950)	294500	
2	Dala purchase -4 nos.	120				
3	Bamboo carrier cost	40				
4	Rope purchase	50				
5	Transport cost	1,240				
6	Fish purchase (310 days x 800)	248,000				
7	Tax	620				
8	Service Charge of 10000 loan money	1,200				
	Total	251,570		Total	294500	
	(a) Cycle of implemented IGA (days) :	310		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	42,930.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	117.62				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	117.62				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/A X100} :			48.88		

Status o[illegible] :reased income of Resource User C[illegible] ,) (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

3 | Name of member : Ms. Regia Begum | Profession : House wife | Samity : Purbachal Mohila Samity

(A) BASE (Daily average income before being a group member) : 66 | Implemented IGA : Rickshow driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Rickshow servicing (140 days x10/-)	1400	1	Earn from rickshow driving (70/- x 140 days)	9800	
2	Rent for rickshow per day 20Tk within 140 days	2800	2	Earned from rickshow driving rest time (90/- x 120 days)	10800	
3	New rickshow purchage (30% depriciation cost)	900				
4	Per day repiaring cost (10 Tk. x 120)	1200				
	Total	6300		Total	20600	
	(a) Cycle of implemented IGA (days) :	260		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	14,300				
	(d) Income from IGA per day = ((c) X (b)/365) :	39.18				
	(e) Present daily average income from main profession :	40				
	(B) INCREASED INCOME {(d) + (e)} :	79.18				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			19.97		

4 | Name of member : Mr. Shaheb Ali | Profession : Fishing... | Samity : Sanrise Jubok Samity

(A) BASE (Daily average income before being a group member) : 63 | Implemented IGA : Rice business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Paddy purchase (50 mon x180/-)	9000	1	Paddy sale (60 mon x 275 Tk.)	16500	
2	Gunny bag purchase 40 nos. at the rate of 10 Tk	400				
	Total	9400		Total	16500	
	(a) Cycle of implemented IGA (days) :	90		(b) Number of cycles in a year :	3	
	(c) Income from per cycle of IGA (income-expenditure) :	7,100				
	(d) Income from IGA per day = ((c) X (b)/365) :	58.36				
	(e) Present daily average income from main profession :	25				
	(B) INCREASED INCOME {(d) + (e)} :	83.36				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			32.31		

Str[illegible] increased income of Resource [illegible] oup (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

5 Name of member : Mr. Nipendra Sarkar Profession : Fishing... Samity : Padda Jubok Samity

(A) BASE (Daily average income before being a group member) : 45 Implemented IGA : Dried fish business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Total 1200 kg dried fish purchase cost at the rate of 60/-	72000	1	Sales 1200 kg dried fish at the rate of 80/-	96,000	
2	Transport	1200	2	other dried fish sales	12,000	
3	Other dry dried fish purchaged 120 Kg at the rate of 70/-	8400				
	Total	81600		Total	108000	
	(a) Cycle of implemented IGA (days) :	365		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	26,400				
	(d) Income from IGA per day = ((c) X (b)/365) :	72.33				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	72.33				
	(C) INCREASED PERCENTAGES (%) ((B)-(A)) =(C)/AX100) :			60.73		

6 Name of member : Mr. Anwar Hossain Profession : Fishing... Samity : Addarsha Motshajibi Samity

(A) BASE (Daily average income before being a group member) : 55 Implemented IGA : Fruit business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Shop rent 10/- per day within 180 days	1800	1	Fruit sale (daily 5200/- total day 180)	936000	
2	Revenue 5/ per day within 180 days	900				
3	Electricity cost	360				
4	Fruit purchase (daily 5000/- total day 180)	900000				
5	Transport	3600				
	Total	906660		Total	936000	
	(a) Cycle of implemented IGA (days) :	180		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	29,340				
	(d) Income from IGA per day = ((c) X (b)/365) :	80.38				
	(e) Present daily average income from main profession :	-				Reduce fishing pressure.
	(B) INCREASED INCOME {(d) + (e)} :	80.38				
	(C) INCREASED PERCENTAGES (%) ((B)-(A)) =(C)/AX100) :			46.15		

Status of Increased income of Resource User Group (RUG) members

Year : August, 2003 . Re-surveyed based sample of 2000 & 01 Re-surveyed : 2003 (20)

7 Name of member : Mr. Arun Sarkar Profession : Fishing... Samity : Mannab Unnaan Samity

(A) BASE (Daily average income before being a group member) : 50 Implemented IGA : Grocery shop

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	House making cost (30% depreciation cost)	1333	1	Total sales	121350	
2	Input cost for shop (30% depreciation cost)	800	2	Price of rest goods of the shop	10000	
3	Purchase of goods 30 times	99000	3	Cost of others matrials	500	
4	Transport	3300				
5	Electricity bill	300				
6	Kerosen cost	200				
	Total	104933		Total	131350	
	(a) Cycle of implemented IGA (days) :	180		(b) Number of cycles in a year :	2	
	(c) Income from per cycle of IGA (income-expenditure) :	26,417				
	(d) Income from IGA per day = {(c) X (b)/365} :	72.37				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	72.37				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			44.75		Left the fishing profession

8 Name of member : Mr. Haidar Ali Profession : Fishing... Samity : Rajonigondha Motshajibi Samity

(A) BASE (Daily average income before being a group member) : 40 Implemented IGA : Grocery shop

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Purchase of goods (weekly one day for 50 weeks)	150000	1	Sale of products within 350 days	177000	
2	Grocery shop (30% deperiacliation cost)	500				
3	Transport & others	3500				
	Input cost	1500				
	Total	154000		Total	177000	
	(a) Cycle of implemented IGA (days) :	350		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	23,000.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	63.01				
	(e) Present daily average income from main profession :					
	(B) INCREASED INCOME {(d) + (e)} :	63.01				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			57.53		

St[illegible] of increased income of Resource [illegible] Group (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

9 | Name of member : Mr. Moklesh Miah | Profession : Fishing... | Samity : Surjadoy Jubok Samity

(A) BASE (Daily average income before being a group member) : 40 | Implemented IGA : Rice business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Paddy purchase (within 330 days)	148500	1	Sale of rice within 330 days	185625	
2	Pot purchase	600	2	Cost of pot	500	
3	Rice hasking	3465				
4	Balance (50% deperiaciation cost)	125				
5	Buskates	50				
6	Toll	990				
7	Rent of sales center	1000				
8	Fuel cost	9900				
	Total	164630		Total	186125	
	(a) Cycle of implemented IGA (days) :	660		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	21,495.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	29.45				
	(e) Present daily average income from main profession :	25.00				
	(B) INCREASED INCOME {(d) + (e)} :	54.45				
	(C) INCREASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			36.11		

10 | Name of member : Mr. Rushan Ali | Profession : Fishing... | Samity : Upahar Jubok Samity

(A) BASE (Daily average income before being a group member) : 50 | Implemented IGA : Vegetables & egg business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Bamboo basket purchase	200	1	Average daily sale (59 Kg x 14/-x 300 days)	257880	
2	Shop rent as 5/- per day (365days)	1500				
3	Toll (2/- of 360 days)	600				
4	Transport	12000				
5	Vegtable purchase (ave. 60kg per day at the rate of 12/-)	216000				
	Total	230300		Total	257880	
	(a) Cycle of implemented IGA (days) :	305		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	27,580.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	75.56				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	75.56				
	(C) INCREASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			51.12		Left the fishing profession.

Status of increased income of Resource User Group (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

11 | Name of member : Mr. Hasmot Ali | Profession : Fishing... | Samity : Sanrise Jubok Samity

(A) BASE (Daily average income before being a group member) : 50 | Implemented IGA : Poultry

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	House making cost (30% depriaciation cost)	3350	1	Chicken sale (2660 nos x weight 1.5 Kg, 60Tk per Kg)	239400	
2	Input cost (30% depreciation cost)	500	2	Litre sales	560	
3	Chick purchase for 7 batches (2800 nos at the rate of 21 Tk.)	58800				
4	Feed cost	101500				
5	Medicin purchase (10 batch x 300)	3000				
6	Electricity cost	2700				
7	Liter cost	2000				
8	Lime and others	500				
9	Transport	1000				
	Total	173350		Total	239960	
	(a) Cycle of implemented IGA (days) :	365		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	66,610.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	182.49				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	182.49				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			264.99		Left the fishing profession

12 | Name of member : Mr. Madhai Sarker | Profession : Fishing... | Samity : Biplobi Purus Samity

(A) BASE (Daily average income before being a group member) : 60 | Implemented IGA : Fish business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Balance (50% depriciation cost)	75	1	Daily sale 40 Kg at the rate 44Tk. (120days)	211200	
2	Buskets (7nos)	200				
3	Daily purchase 40 Kg fish, rate 40/ (within 120 days)	192000				
4	Transport cost (within 120 days)	4000				
	Total	196275		Total	211200	
	(a) Cycle of implemented IGA (days) :	120		(b) Number of cycles in a year :	2	
	(c) Income from per cycle of IGA (income-expenditure) :	14,925.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	81.78				
	(e) Present daily average income from main profession :	10.00				
	(B) INCREASED INCOME {(d) + (e)} :	91.78				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			52.97		

St . increased income of Resource . oup (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

13 Name of member : Md. Shahbaz Miah Profession : Day labour Samity : Manik Haor Jagroto Samity

(A) BASE (Daily average income before being a group member) : 60 Implemented IGA : Milk cow rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	House making cost (50% depriaciation cost)	350	1	Milk sales	13280	
2	Water pot and others pots (50% depreciation cost)	250	2	Cowdung sales	250	
3	Feed cost (500/- per month including 12 months)	6000	3	Present price of milkcow	10000	
4	Medicin purchase	553	4	Sale of calf	4000	
5	Milk cow purchase	7000				
	Total	14153		Total	27530	
	(a) Cycle of implemented IGA (days) :	365		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	13,377.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	36.65				
	(e) Present daily average income from main profession :	33				
	(B) INCREASED INCOME {(d) + (e)} :	69.98				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)} =(C)/AX100) :			16.63		

14 Name of member : Mr. Harun -ar- Rashid Profession : Fishing... Samity : Ekota Jubok Samity

(A) BASE (Daily average income before being a group member) : 40 Implemented IGA : Poultry

enditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	House making cost (30% depriaciation cost)	1333	1	Chicken sale (2400 nos x weight 1.5 Kg, 54Tk per Kg)	247500	
2	Input cost (30% depreciation cost)	800				
3	Chick purchase for 6 batches 500 /batch(2900 @ 21 Tk)	75400				
4	Feed cost (6000Kg at the rate of 14.50 Tk)	126000				
5	Medicin purchase (10 batch x 300)	4800				
6	Liter cost	3000				
7	Electricity cost	3000				
8	Transport	1500				
9	Lime and others	1000				
	Total	216833		Total	247500	
	(a) Cycle of implemented IGA (days) :	365		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	30,666.67				
	(d) Income from IGA per day = {(c) X (b)/365} :	84.02				
	(e) Present daily average income from main profession :					
	(B) INCREASED INCOME {(d) + (e)} :	84.02				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)} =(C)/AX100) :			110.05		Left the fishing profession.

Status of increased income of Resource User Group (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

15 Name of member : Mr. Pourus Miah Profession : Fishing... Samity : Ekota Jubok Samity

(A) BASE (Daily average income before being a group member) : 40 Implemented IGA : Fruit business+ Fish business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Shop rent (10 x90 days)	900	1	Sale within 90 days (5145 x90 days)	567000	
2	Toll (2 Tk. per day x 90 day)	180				
3	Electricity cost (5Tk. x 90 days)	450				
4	Fruit purchase (6000 x 90)	540000				
	Transport (20 Tk. x 90days)	1800				
	Pot basket purchase	1000	2	Fish sale	1025500	
	Fish purchase 5000x200	1000000				
	Transport (50 Tk. x 200days)	10000				
	Total	1554330		Total	1592500	
	(a) Cycle of implemented IGA (days) :	290		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	38,170.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	104.58				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	105				
	(C) INCREASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			161.44		

16 Name of member : Mr. Abdul Awal Miah Profession : Fishing... Samity : Ekota Jubok Samity

(A) BASE (Daily average income before being a group member) : 40 Implemented IGA : Power tiller = poultry

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Purchase power tiller (10% depreciation cost)	5300	1	Earn through ploughing of others land as rent	51500	
2	Transport	1000				
3	Mobil	1200				
4	Fuel	9000				
5	Housing making (20% depreciation cost)	1000				
6	Pot purchase	500				
7	Chick purchase 4 batch 200per batch @ 25/	20000		Chick sale	72000	
8	Feed cost	44800				
9	Medicin	1200				
10	Electricity cost	1200				
11	Time and Others	1000				
12	Transport	1000				
	Total	87800		Total	123500	
	(a) Cycle of implemented IGA (days) :	60		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	35,700.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	97.81				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	98				
	(C) INCREASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			144.57		

St. ..., increased income of Resource L... ..oup (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

17 | Name of member : Mr. Sohorab Uddin | Profession : Fishing... | Samity : Hajipur Jubokallan Samity

(A) BASE (Daily average income before being a group member) : 60 | Implemented IGA : Plant nursery

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Poly bag purchase	9600	1	Saplings sale till date	41500	
2	Fencing	500	2	Price of stocked saplings	160000	
3	Soil transport	2500				
4	Cow dung purchase	1000				
5	Chemical fertilizer purchase	1000				
6	Poly bag filing cost	2000				
7	Pesticide purchase	800				
8	Kodal purchase	70				
9	Sprinklar purchase	90				
10	Chaluni purchase	160				
11	Buaket purchase	150				
12	Land preparation	600				
13	Land lease	2000				
14	Others	400				
15	Labour cost	18000				
	Total	38870		Total	201500	
	(a) Cycle of implemented IGA (days) :	700		(b) Number of cycles in a year :	0.5	
	(c) Income from per cycle of IGA (income-expenditure) :	162,630.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	111.39				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	111.39				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100) :			85.65		Left the fishing profession.

Status o[illegible] :reased income of Resource User G[illegible] (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

18 Name of member : Mr. Eshab Uddin Profession : Fishing... Samity : Hajipur Jubokallan Samity

(A) BASE (Daily average income before being a group member) : 75 Implemented IGA : Agriculture

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Ploughing cost (180 decimal land)	2000	1	Rice sale (260x90)	23400	
2	Seed purchase (70 Kg)	1200	2	Straw sale	600	
3	Transplantation cost	1500				
4	Weeding cost	3000				
5	Chemical fertilizer purchase	800				
6	Pesticide purchase	500				
7	Irrigation cost	1200				
8	Rice hervesting cost	1800				
9	Rice proceeing cost	800				
	Total	12800		Total	24000	
	(a) Cycle of implemented IGA (days) :	180		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	11,200.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	30.68				
	(e) Present daily average income from main profession :	45.00				
	(B) INCREASED INCOME {(d) + (e)} :	75.68				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)} =(C)/AX100} :			0.91		

19 Name of member : Mr. Shahen Miah Profession : Small business Samity : Hajipur Jubokallan Samity

(A) BASE (Daily average income before being a group member) : 60 Implemented IGA : Rice business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Rice purchase (960 mond, rate 260Tk)	249600	1	Sale price of 648 mond rice @ 500/-	311040	
2	Rice boiling cost	9000				
3	Rice broken cost	7680				
4	Shop rent	4800				
5	Others	500				
	Total	271580		Total	311040	
	(a) Cycle of implemented IGA (days) :	240		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	39,460.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	108.11				
	(e) Present daily average income from main profession :	-				Left fishing profession
	(B) INCREASED INCOME {(d) + (e)} :	108.11				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)} =(C)/AX100} :			80.18		

St: ..of increased income of Resource L ..oup (RUG) members

Year : August, 2003 | Re-surveyed based sample of 2000 & 01 | Re-surveyed : 2003 (20)

20 | Name of member : Mr. Babul Sarker | Profession : Fishing... | Samity : Ananda Motshajibi Samity

(A) BASE (Daily average income before being a group member) : 55 | Implemented IGA : Duck rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Imput cost	400	1	Egg sale (daily 10 haly eggs at the rate of 12 Tk. within 120 days)	12000	
2	House making cost (30% depreciation cost)	1000	2	Present price of duck (100 nos. x 85Tk.)	8500	
3	Duck purchase cost (100 nos. x 70/-)	7000				
4	Medicine cost	200				
	Total	8600		Total	20500	
	(a) Cycle of implemented IGA (days) :	120		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	11,900.00				
	(d) Income from IGA per day = {(c) X (b)/365} :	32.60				
	(e) Present daily average income from main profession :	40.00				
	(B) INCREASED INCOME {(d) + (e)} :	72.60				
	(C) INCREASED PERCENTAGES (%) {((B)-(A)) =(C)/AX100} :			32.00		

Summary status of increased income of RUG members of MACH-Kaliakoir site

Site : Turag-Bongsi River Basin, Kaliakoir

Base sample : 2000 & 01 (60 nos.) Re-surveyed :35 nos.on August 2003

Sl	Name of RUG members	Name of RUG	Base		Present daily income				Increased income		Remarks
			Daily income (Tk.)	Profession	Main profe Taka	Implemented IGA Activities	Income (Tk.)	Total income (Taka)	Taka	%	
1	Mr. Moajjem Hossain	Baniarchala Taila Samity	60	Fishing	47	Milk cow rearing	43	90	30	50.00	
2	Ms Rokeya begum	Medi Ashulai Doyal Mohila Samit	50	Homestead	50	Calf rearing	24	74	24	48.00	
3	Ms Ruma Begum	Kahadaha Shaluk Mohila Samity	50	Homestead	50	Buffalo rearing	29	79	29	58.00	
4	Md.Sahaj Uddin	Ajgana Chinri Samity	60	Fishing	30	Paddy business	60	90	30	50.00	
5	Ms Rasida Akhter	Ekata Mohila Samity	45	Homestead	45	Tailoring	16	61	16	35.31	
6	Mr. Lakhan Sarker	Sholahati Chitol Samity	60	Fishing	10	Carpentering	82	92	32	53.33	
7	Mr. Anil C. Sarker	Sholahati Chitol Samity	60	Fishing	0	Carpentering	92	92	32	53.33	Left the fishing profession
8	Mr. Ratan Miah	Ajgana Chinri Samity	60	Small farmer	12	Vegetables business	79	91	31	51.67	
9	Mr. Rupchan Sarker	Sholahati Chitol Purush Samity	65	Small farmer	0	Small business (wood)	97	97	32	49.23	Left the fishing profession
10	Mr. Jagodish C. Sarker	Sholahati Chitol Purush Samity	40	Small farmer	18	Boat driving	30	48	8	20.00	
11	Mr. Santi Ronjan Sarker	Sholahati Chitol Purush Samity	65	Small farmer	0	Small business (fruit)	96	96	31	47.69	Left the fishing profession
12	Mr. Mahmud Ali	Amdair Shapla Somobye Samity	65	Fishing	36	Small business (fruit)	61	97	32	49.23	
13	Mr Mojibor Rahman	Amdair Shapla Somobye Samity	70	Fishing	19	Poultry activities	86	105	35	50.00	
14	Mr. Siraj Uddin	Amdair Shapla Somobye Samity	50	Fishing	36	Milk cow rearing and fruit	39	75	25	50.00	
15	Mr. Abdul Hannan	Chouchakori Kajoli Somobye Sa	50	Fishing	13	Puffer rice	64	77	27	54.00	
16	Mr. Mohir Uddin	Chouchakori Kajoli Somobye Sa	70	Fishing	24	Poultry activities	86	110	40	57.14	
17	Md. Abdul Karim	Chouchakori Kajoli Somobye Sa	65	Fishing	46	Milk cow rearing and boat	52	98	33	50.77	
18	Md. Dudu Miah	Chouchakori Kajoli Somobye Sa	65	Fishing	20	Puffer rice	80	100	35	53.85	
19	Mr. Habul Miah	Chouchakori Kajoli Somobye Sa	50	Fishing	23	Milk cow rearing and fruit	69	92	42	84.00	
20	Mr. Ahmed Ali	Bastoli Matshajibi Samity	65	Fishing	0	Small business (Jack fruit)	99	99	34	52.31	Left the fishing profession
21	Mr. Abu Taher	Bastoli Matshajibi Samity	63	Fishing	37	Boat driving	44	81	18	28.57	
22	Mr. Shah Alam	Bastoli Matshajibi Samity	65	Fishing	0	Small business	98	98	33	50.77	Left the fishing profession
23	Mr. Anur Ali	Bastoli Matshajibi Samity	65	Fishing	60	Milk cow rearing and smal	33	93	28	43.08	
24	Md. Agar Ali	Bastoli Matshajibi Samity	65	Day labour	0	Fruit business	97	97	32	49.23	Left the fishing profession
25	Mr. Agu Miah	Bastoli Matshajibi Samity	65	Fishing	0	Small business	89	89	24	37.58	Left the fishing profession
26	Mr. Gour Chad	Gopinpur Rui Matshajibi Samity	50	Fishing	13	Poultry activities	61	74	24	48.00	
27	Mr. Ramprashad	Gopinpur Rui Matshajibi Samity	50	Fishing	34	Milk cow rearing and boat	39	73	23	46.00	
28	Mr. Varat Chandra	Gopinpur Rui Matshajibi Samity	50	Fishing	43	Boat driving	36	79	29	58.00	
29	Mr. Binod Chandra	Gopinpur Rui Matshajibi Samity	60	Fishing	11	Small business	79	90	30	50.00	
30	Mr. Pabon Chandra	Gopinpur Rui Matshajibi Samity	40	Fishing	17	Boat driving	43	60	20	50.00	

Summary status of increased income of RUG members of MACH-Kaliakoir site

Site : Turag-Bongsi River Basin, Kaliakoir

Base sample : 2000 & 01 (60 nos.) Re-surveyed :35 nos.on August 2003

31	Mr. Shamol Chandra	Gopinpur Rui Matshajibi Samity	65	Fishing	12	Small business	85	97	32	49.23	
32	Mr. Anwar Hossain	Haturiachala Catla Prursh Samity	65	Fishing	47	Small business (bannana)	44	91	26	39.75	
33	Md. Mijanur Rahman	Haturiachala Catla Prursh Samity	65	Fishing	47	Milk cow rearing and boat	51	98	33	50.77	
34	Md. Thandu Miah	Chouchakori Kajoli Somobye Sar	50	Fishing	40	Milk cow rearing	45	85	35	70.00	
35	Ms. Mojiron Begum	Taltoli Shapla Mohila Samity	35	Homestead	25	Cow rearing and handicra	53	78	43	122.86	
		Total	2018		865		2,181	3,046			
		Average	57.66		24.71		62.32	87.03			

Income survey based on base sample of 2000 & 2001 by August 2003

Income survey :	Daily average base income (Tk.)	57.66
Aug-03	Daily average increased income	87.03
	Increased Taka	29.37
	Increased percentages (%)	50.94

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

1 — Name of member : Mr. Moajjem Hossain Profession : Fishing.. Samity : Baniarchala Talla Samity

y average income before being a group member) : 60 Implemented IGA : Milk cow rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Cow purchase	12,000	1	Milk sale (Tk. 80 x 240 days)	19,200	
2	Food	5,025	2	Re-sale value of cow	10,000	
3	Medicine	150	3	Value of calf	3,100	
			4	Sale of cow dung	600	
	Total	17,175		Total	32,900	
	(a) Cycle of implemented IGA (days) :	240		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	15,725				
	(d) Income from IGA per day = {(c) X (b)/365} :	43				
	(e) Present daily average income from main profession :	47				
	(B) INCREASED INCOME {(d) + (e)} :	90				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				50.14		

2 — Name of member : Ms Rokeya Begum Profession : Homestead activities Samity : Medi Ashulai Doyal Samity

y average income before being a group member) : 50 Implemented IGA : Calf rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Calf purchase (02 nos.)	5,000	1	Calves sale	13,800	
2	Food	680		Cow dung sale	700	
3	Medicine	150				
4	Marketing cost	50				
	Total	5,880		Total	14,500	
	(a) Cycle of implemented IGA (days) :	365		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	8,620				
	(d) Income from IGA per day = {(c) X (b)/365} :	24				
	(e) Present daily average income from main profession :	50				
	(B) INCREASED INCOME {(d) + (e)} :	74				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				47.23		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

3 — Name of member : Ms Rama Begum — Profession : Homestead activities — Samity : Kaliadaha Shaluk mohila Samity

y average income before being a group member) : 50 — Implemented IGA : Buffalo renting

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Buffalo purchase	14,000	1	Rent of buffalo (Tk. 65 x 270 days)	17,550	
	Food	3,000	2	Sale of buffalo	10,000	
	Total	17,000		Total	27,550	
	(a) Cycle of implemented IGA (days) :	270		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	10,550				
	(d) Income from IGA per day = {(c) X (b)/365} :	29				
	(e) Present daily average income from main profession :	50				
	(B) INCREASED INCOME {(d) + (e)} :	79				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			57.81		

4 — Name of member : Md. Sahaj Uddin — Profession : Fishing.. — Samity : Ajgana Chinri Samity

y average income before being a group member) : 60 — Implemented IGA : Paddy business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Paddy purchase (20 mounds x @ Tk. 275)	5,500	1	Paddy sale (20 mounds x @ Tk. 300)	5,970	
	Transport	110				
	Toll & others	40				
	Total	5,650		Total	5,970	
	(a) Cycle of implemented IGA (days) :	7		(b) Number of cycles in a year :	68	
	(c) Income from per cycle of IGA (income-expenditure) :	320				
	(d) Income from IGA per day = {(c) X (b)/365} :	60				
	(e) Present daily average income from main profession :	30				
	(B) INCREASED INCOME {(d) + (e)} :	90				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			49.36		

5 — Name of member : Ms. Rasida Akhter — Profession : Homestead activities — Samity : Ekata Mohila Samity

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

y average income before being a group member) : 45 — Implemented IGA : Tailoring

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Sweing mechine purchase	3,280	1	Sale of produced wears	2,800	
2	Cloth purchase	2,500	2	Re-sale value of assets	3,600	
3	Thrade	30				
4	Scissors, Laice & others	108				
	Total	5,918		Total	6,400	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	12	
	(c) Income from per cycle of IGA (income-expenditure) :	482				
	(d) Income from IGA per day = {(c) X (b)/365} :	16				
	(e) Present daily average income from main profession :	45				
	(B) INCREASED INCOME {(d) + (e)} :	61				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				35.21		

6 Name of member : Mr. Lakhan Sarker Profession : Fishing Samity : Sholahati Chitol Samity

y average income before being a group member) : 60 — Implemented IGA : Carpenter

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Wood purchase	2,000	1	Furniture sale (weekly)	2,730	
2	Color purchase	30				
3	Sand paper Purchase	10				
4	Others	20				
5	Transport	50				
	Total	2,110		Total	2,730	
	(a) Cycle of implemented IGA (days) :	7		(b) Number of cycles in a year :	48	
	(c) Income from per cycle of IGA (income-expenditure) :	670				
	(d) Income from IGA per day = {(c) X (b)/365} :	82				
	(e) Present daily average income from main profession :	10				
	(B) INCREASED INCOME {(d) + (e)} :	92				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				52.56		

7 Name of member : Anil C. Sarker Profession : Fishing Samity : Sholahati Chitol Samity

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

y average income before being a group member) : 60 — Implemented IGA : Carpenter

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Wood purchase	8,000	1	Chair sale (10 x @ Tk. 140)	1,400	
2	Apparatus purchase	200	2	Table sale ((9 x @ Tk. 300)	2,700	
3	Transport	80	3	Alna (10 x @ Tk. 300)	3,000	
			4	Kot (4 x @ Tk. 400)	1,600	
				Table, bench, Box etc.	2,250	
			5	Stored materials including apparatus	130	
	Total	8,280		Total	11,080	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	12	
	(c) Income from per cycle of IGA (income-expenditure) :	2,800				
	(d) Income from IGA per day = {(c) X (b)/365} :	92				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	92				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				53.42		

8 Name of member : Mr. Ratan Miah Profession : Small farmer.. Samity : Ajgana Chiuri Samity

y average income before being a group member) : 60 — Implemented IGA : Vegetables business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Purchase of vegetables	4,000	1	Sale of vegetables	4,850	
2	Transport	200				
3	Toll & others	50				
	Total	4,250		Total	4,850	
	(a) Cycle of implemented IGA (days) :	7		(b) Number of cycles in a year :	48	
	(c) Income from per cycle of IGA (income-expenditure) :	600				
	(d) Income from IGA per day = {(c) X (b)/365} :	79				
	(e) Present daily average income from main profession :	12				
	(B) INCREASED INCOME {(d) + (e)} :	91				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				51.51		

9 Name of member : Mr. Rupchan Sarker Profession : Small farmer.. Samity : Shotabari Chiuri Parish Samity

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

y average income before being a group member) : 65 — Implemented IGA : Small business (wooden furniture)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Wood purchase	2,000	1	Furnitue sale (weekly)	2,850	
2	Color	35				
3	Transport	30				
4	Sand paper & materials	32				
	Total	2,065		Total	2,850	
	(a) Cycle of implemented IGA (days) :	7		(b) Number of cycles in a year :	45	
	(c) Income from per cycle of IGA (income-expenditure) :	785				
	(d) Income from IGA per day = {(c) X (b)/365} :	97				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	97				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			48.89		

10 — Name of member : Mr. Jagodish C. Sarkar — Profession : Small farmer.. — Samity : Sholahati Chitol Purush Samity

y average income before being a group member) : 40 — Implemented IGA : Boat driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Second hand boat purchase	8,000	1	Ferrying of passengers (Tk. 90/day X 210 days)	18,900	
	Total	8,000		Total	18,900	
	(a) Cycle of implemented IGA (days) :	210		(b) Number of cycles in a year :	1	
	(c) Income from per cycle of IGA (income-expenditure) :	10,900				
	(d) Income from IGA per day = {(c) X (b)/365} :	30				
	(e) Present daily average income from main profession :	18				
	(B) INCREASED INCOME {(d) + (e)} :	48				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			19.66		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

11 Name of member : Mr. Shanti Ronjan S; Profession : Small farmer.. Samity : Sholahati Chitol Purush Samity

y average income before being a group member) : 65 Implemented IGA : Small Business (furniture)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Wood purchase (weekly)	2,500	1	Furniture sale	3,550	Purchase and sale in the same hat
	Transport	80				
	Sand paper & color	90				
	Others	150				
	Total	2,820		Total	3,550	
	(a) Cycle of implemented IGA (days) :	7		(b) Number of cycles in a year :	48	
	(c) Income from per cycle of IGA (income-expenditure) :	730				
	(d) Income from IGA per day = {(c) X (b)/365} :	96				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	96				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			47.69		

12 Name of member : Mr. Mahmud Ali Profession : Fishing Samity : Amdair Shapla Somobaye Samity

y average income before being a group member) : 65 Implemented IGA : Small Business (Rice)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Rice purchase	5,600	1	Rice sale	6,000	Purchase and sale in the same hat
2	Transport	50				
	Total	5,650		Total	6,000	
	(a) Cycle of implemented IGA (days) :	3		(b) Number of cycles in a year :	64	
	(c) Income from per cycle of IGA (income-expenditure) :	350				
	(d) Income from IGA per day = {(c) X (b)/365} :	61				
	(e) Present daily average income from main profession :	36				
	(B) INCREASED INCOME {(d) + (e)} :	97				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			49.80		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

13 Name of member : Mr. Mojibor Rahman Profession : Fishing Samity : Amdair Shapla Somobaye Samity

y average income before being a group member) : 70 Implemented IGA : Poultry activities

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Chicks cost (500 x 26 times)	13,000	1	Sale of lo n	39,187	
2	Feeding	18,750				
	Medecine	1,000				
	Transport	500				
3	Others (Litre)	2,000				
	Total	35,250		Total	39,187	
	(a) Cycle of implemented IGA (days) :	35		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income-expenditure) :	3,937				
	(d) Income from IGA per day = {(c) X (b)/365} :	86				
	(e) Present daily average income from main profession :	19				
	(B) INCREASED INCOME {(d) + (e)} :	105				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				50.41		

14 Name of member : Mr. Saiz Uddin Profession : Fishing Samity : Amdair Shapla Somobaye Samity

y average income before being a group member) : 50 Implemented IGA : Milk cow rearing and fruit business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	5,000	1	Sale of milk (@ Tk. 20 X 4 lt. X 30 days)	2,400	
2	Feeding	600	2	Cow value with calf	5,000	
	Total	5,600		Total	7,400	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income-expenditure) :	1,800				
	(d) Income from IGA per day = {(c) X (b)/365} :	39				
	(e) Present daily average income from main profession :	36				
	(B) INCREASED INCOME {(d) + (e)} :	75				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				50.90		

15 Name of member : Mr. Abdul Hannan Profession : Fishing Samity : Chouchakori Kajoli Somobaye Samity

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Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

y average income before being a group member) : 50 — Implemented IGA : Puffed rice

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Rice purchase	1,760	1	Sale of puffed rice (@ Tk. 30 X 79 Kg)	2,370	
2	Salt, Urea, Fuel	313				
3	Transport & others	175				
	Total	2,248		Total	2,370	
	(a) Cycle of implemented IGA (days) :	2		(b) Number of cycles in a year :	192	
	(c) Income from per cycle of IGA (income-expenditure) :	122				
	(d) Income from IGA per day = {(c) X (b)/365} :	64				
	(e) Present daily average income from main profession :	13				
	(B) INCREASED INCOME {(d) + (e)} :	77				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			54.35		Left the fishing profession

16 — Name of member : Mr. Mohir Uddin — Profession : Fishing — Samity : Chourhakori Kajoli Somobaye Samity

y average income before being a group member) : 70 — Implemented IGA : Poultry activities

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Chicks cost (500 x 26)	13,000	1	Sale of hen	39,187	
2	Feeding	18,750				
3	Medicine	1,000				
4	Later & electricity	2,000				
5	Transport	500				
	Total	35,250		Total	39,187	
	(a) Cycle of implemented IGA (days) :	35		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income-expenditure) :	3,937				
	(d) Income from IGA per day = {(c) X (b)/365} :	86				
	(e) Present daily average income from main profession :	24				
	(B) INCREASED INCOME {(d) + (e)} :	110				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			57.56		Left the fishing profession

17 — Name of member : Md. Abdul Karim — Profession : Fishing — Samity : Chourhakori Kajoli Somobaye Samity

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

y average income before being a group member) : 65 — Implemented IGA : Milk cow rearing and boat driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	9,000	1	Sale of milk (@ Tk.20 X 5 lt. X 30 days)	3,000	
2	Feeding	600	2	Value of cow & calf	9,000	
3	Others	40				
	Total	9,640		Total	12,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income-expenditure) :	2,360				
	(d) Income from IGA per day = {(c) X (b)/365} :	52				
	(e) Present daily average income from main profession :	46				
	(B) INCREASED INCOME {(d) + (e)} :	98				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				50.35		

18 — Name of member : Md. Dudu Miah — Profession : Fishing — Samity : Chouchakori Kajoli Samobaye Samity

y average income before being a group member) : 65 — Implemented IGA : Puffed rice

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Rice purchase	1,980	1	Sale of puffed rice (@ Tk. 30 X 89 Kg)	2,670	
2	Fertilizers, salt, fuel	313				
3	Transport & others	225				
	Total	2,518		Total	2,670	
	(a) Cycle of implemented IGA (days) :	2		(b) Number of cycles in a year :	192	
	(c) Income from per cycle of IGA (income-expenditure) :	152				
	(d) Income from IGA per day = {(c) X (b)/365} :	80				
	(e) Present daily average income from main profession :	20				
	(B) INCREASED INCOME {(d) + (e)} :	100				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				53.78		Left the fishing profession

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

19 **Name of member :** Mr. Babul Miah **Profession :** Fishing **Samity :** Chouchakori Kajoli Sumobaye Samity

y average income before being a group member) : 50 Implemented IGA : Milk cow rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	8,000	1	Sale of milk (@ Tk. 20 x 5 lt. x 30 days.)	3,000	
2	Feeding	600	2	Cost of cow with calf	8,000	
3	Container	300	3			
	Total	8,900		Total	11,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	12	
	(c) Income from per cycle of IGA (income-expenditure) :	2,100				
	(d) Income from IGA per day = {(c) X (b)/365} :	69				
	(e) Present daily average income from main profession :	23				
	(B) INCREASED INCOME {(d) + (e)} :	92				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				84.08		Left the fishing profession

20 **Name of member :** Mr. Ahmad Ali **Profession :** Fishing **Samity :** Bastoli Matshajibi Samity

y average income before being a group member) : 65 Implemented IGA : Small business (seasonal fruit)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Seasonal fruit purchase	15,500	1	Sale of seasonal fruit	19,000	
2	Transport & others	500				
	Total	16,000		Total	19,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	12	
	(c) Income from per cycle of IGA (income-expenditure) :	3,000				
	(d) Income from IGA per day = {(c) X (b)/365} :	99				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	99				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				51.74		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

21 Name of member : Mr. Abu Taher — Profession : Fishing — Samity : Bastoli Matshajibi Samity

y average income before being a group member) : 63 — Implemented IGA : Boat driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Boat purchase and repairing	6,500	1	Ferrying of passengers (93 per day x 30days)	2,790	
			2	Depreciation cost of boatSelling of boat	6,000	
	Total	6,500		Total	8,790	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	7	
	(c) Income from per cycle of IGA (income-expenditure) :	2,290				
	(d) Income from IGA per day = {(c) X (b)/365} :	44				
	(e) Present daily average income from main profession :	37				
	(B) INCREASED INCOME {(d) + (e)} :	81				
ASED RERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				28.44		

22 Name of member : Mr. Shah Alam — Profession : Fishing — Samity : Bastoli Matshajibi Samity

y average income before being a group member) : 65 — Implemented IGA : Small business (Vegetables)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Vegetables purchase	2,500	1	Vegetables sale	3,250	
	Total	2,500		Total	3,250	
	(a) Cycle of implemented IGA (days) :	7		(b) Number of cycles in a year :	48	
	(c) Income from per cycle of IGA (income-expenditure) :	750				
	(d) Income from IGA per day = {(c) X (b)/365} :	99				
	(e) Present daily average income from main profession :					
	(B) INCREASED INCOME {(d) + (e)} :	99				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				51.74		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01

Re-surveyed 35 nos. on August 2003

23 Name of member : Mr. Amir Ali Profession : Fishing Samity : Bastoli Matshajibi Samity

y average income before being a group member) : 65 Implemented IGA : Milk cow rearing & small business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	6,000	1	Sale of milk (@ Tk 20 X 4 lt. x 30 days)	2,400	
2	Feed	600	2	Value of cow & calf	6,000	
3	Medicine & others	60				
	Total	6,660		Total	8,400	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	7	
	(c) Income from per cycle of IGA (income-expenditure) :	1,740				
	(d) Income from IGA per day = {(c) X (b)/365} :	33				
	(e) Present daily average income from main profession :	60				
	(B) INCREASED INCOME {(d) + (e)} :	93				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				43.65		Left the fishing profession

24 Name of member : Md. Ajgar Ali Profession : Day labour Samity : Bastoli Matshajibi Samity

y average income before being a group member) : 65 Implemented IGA : Fruit business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Seasonal fruit purchase	12,000	1	Seasonal fruit sale	15,000	
2	Transport	50				
	Total	12,050		Total	15,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	12	
	(c) Income from per cycle of IGA (income-expenditure) :	2,950				
	(d) Income from IGA per day = {(c) X (b)/365} :	97				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	97				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				49.21		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01

Re-surveyed 35 nos. on August 2003

25 Name of member : Mr. Aju Miah Profession : Fishing Samity : Bastoli Matshajibi Samity

y average income before being a group member) : 65 Implemented IGA : Small Business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Cow purchase	6,000	1	Sale of cow	6,340	
	Total	6,000		Total	6,340	
	(a) Cycle of implemented IGA (days) :	1		(b) Number of cycles in a year :	96	
	(c) Income from per cycle of IGA (income-expenditure) :	340				
	(d) Income from IGA per day = {(c) X (b)/365} :	89				
	(e) Present daily average income from main profession :	-				
	(B) INCREASED INCOME {(d) + (e)} :	89				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				37.58		Left the fishing profession

26 Name of member : Mr. Gour Chad Profession : Fishing Samity : Gopinpur Rui Matshajibi Samity

y average income before being a group member) : 50 Implemented IGA : Poultry

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Chicks cost (100 x 17)	1,700	1	Sale of hen	8,550	
2	Feeding	3,750				
3	Medicine	300				
	Total	5,750		Total	8,550	
	(a) Cycle of implemented IGA (days) :	35		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income expenditure) :	2,800				
	(d) Income from IGA per day = {(c) X (b)/365} :	61				
	(e) Present daily average income from main profession :	13				
	(B) INCREASED INCOME {(d) + (e)} :	74				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				-48.74		Left the fishing profession

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

27 Name of member : Mr. Ramprashad Profession : Fishing Samity : Gopinpur Rui Matshajibi Samity

y average income before being a group member) : 50 Implemented IGA : Milk cow rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	9,000	1	Sale of milk (60 Tk.20 x 5 lt. x 30 days)	3,000	
2	Feeding	1,200	2	Value of cow & calf	9,000	
3						
	Total	10,200		Total	12,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income-expenditure) :	1,800				
	(d) Income from IGA per day = {(c) X (b)/365} :	39				
	(e) Present daily average income from main profession :	34				
	(B) INCREASED INCOME {(d) + (e)} :	73				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			46.90		

28 Name of member : Mr. Varat Chandra Profession : Fishing Samity : Gopinpur Rui Matshajibi Samity

y average income before being a group member) : 50 Implemented IGA : Boat driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Boat purchase	7,000	1	Ferrying of passengers	2,400	
			2	Depreciation cost of boat	6,500	
	Total	7,000		Total	8,900	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	7	
	(c) Income from per cycle of IGA (income-expenditure) :	1,900				
	(d) Income from IGA per day = {(c) X (b)/365} :	36				
	(e) Present daily average income from main profession :	43				
	(B) INCREASED INCOME {(d) + (e)} :	79				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			58.88		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

29 Name of member : Mr. Binod Chandra Profession : Fishing — Samity : Gopinpur Rui Matshajibi Samity

y average income before being a group member) : 60 — Implemented IGA : Small business (fish marketing)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Fish purchase	3,000	1	Fish sale	3,300	
	Transport & other	150				
	Total	3,150		Total	3,300	
	(a) Cycle of implemented IGA (days) :	2		(b) Number of cycles in a year :	192	
	(c) Income from per cycle of IGA (income-expenditure) :	150				
	(d) Income from IGA per day = {(c) X (b)/365} :	79				
	(e) Present daily average income from main profession :	11				
	(B) INCREASED INCOME {(d) + (e)} :	90				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			49 84		

30 Name of member : Mr. Paban Chandra Profession : Fishing — Samity : Gopinpur Rui Matshajibi Samity

y average income before being a group member) : 40 — Implemented IGA : Boat driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Boat purchase (second hand)	6,500	1	Ferrying of passengers	2,250	
2			2	Re-sale value of boat	6,500	
	Total	6,500		Total	8,750	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	7	
	(c) Income from per cycle of IGA (income-expenditure) :	2,250				
	(d) Income from IGA per day = {(c) X (b)/365} :	43				
	(e) Present daily average income from main profession :	17				
	(B) INCREASED INCOME {(d) + (e)} :	60				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			50 38		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01

Re-surveyed 35 nos. on August 2003

31 Name of member : Mr. Shamol Chandra Profession : Fishing

Samity : Gopinpur Rui Matshajibi Samity

y average income before being a group member) : 65

Implemented IGA : Small Business

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Vegetables purchase	500	1	Sale of Vegetables	710	
2	Transport & others	80				
	Total	580		Total	710	
	(a) Cycle of implemented IGA (days) :	1		(b) Number of cycles in a year :	240	
	(c) Income from per cycle of IGA (income-expenditure) :	130				
	(d) Income from IGA per day = {(c) X (b)/365} :	85				
	(e) Present daily average income from main profession :	12				
	(B) INCREASED INCOME {(d) + (e)} :	97				
	ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :			49.97		

32 Name of member : Mr. Anowar Hossain Profession : Fishing

Samity : Haturiachala catla Purush Samity

y average income before being a group member) : 65

Implemented IGA : Small Business (bannana)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Green bannana purchase	3,500	1	Sale of bannana	8,000	
2	Cost of maturation	500				
	Total	4,000		Total	8,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	4	
	(c) Income from per cycle of IGA (income-expenditure) :	4,000				
	(d) Income from IGA per day = {(c) X (b)/365} :	44				
	(e) Present daily average income from main profession :	47				
	(B) INCREASED INCOME {(d) + (e)} :	91				
	ASED PERCENTAGES (%) {(B)-(A)} --(C)/AX100} :			39.75		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01 — Re-surveyed 35 nos. on August 2003

33 Name of member : Md. Mijanur Rahman Profession : Fishing — Samity : Haturiachala catla Purush Samity

y average income before being a group member) : 65 — Implemented IGA : Milk cow rearing and boat driving

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	6,000	1	Sale of milk	3,000	
2	Feeding	600	2	Value of cow & calf	6,000	
3	Medicine	60	3			
	Total	6,660		Total	9,000	
	(a) Cycle of implemented IGA (days) :	30		(b) Number of cycles in a year :	8	
	(c) Income from per cycle of IGA (income-expenditure) :	2,340				
	(d) Income from IGA per day = {(c) X (b)/365} :	51				
	(e) Present daily average income from main profession :	47				
	(B) INCREASED INCOME {(d) + (e)} :	98				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				51.21		

34 Name of member : Md. Thandu Miah Profession : Fishing — Samity : Chouchakori Kajoli Sonobaye Samity

y average income before being a group member) : 50 — Implemented IGA : Milk cow rearing

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Milk cow purchase	10,000	1	Sale of milk (5 Kg @ 18 X 135 days)	12,150	
2	Fodder	4,000	2	Re-sale value of cow	8,000	
			3	Sale of calf	2,100	
	Total	14,000		Total	22,250	
	(a) Cycle of implemented IGA (days) :	135		(b) Number of cycles in a year :	2	
	(c) Income from per cycle of IGA (income-expenditure) :	8,250				
	(d) Income from IGA per day = {(c) X (b)/365} :	45				
	(e) Present daily average income from main profession :	40				
	(B) INCREASED INCOME {(d) + (e)} :	85				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				70.41		

Status of increased income of Resource User Group (RUG) members

Turag-Bongsi River Basin, Kaliakoir

Base sample 2000 & 01

Re-surveyed 35 nos. on August 2003

35 Name of member : Ms Mojiron Begum Profession : Homestead activities Samity : Talroli Shapla Mohila Samity

y average income before being a group member) : 35 Implemented IGA : Cow rearing & Handicrafts (Jute)

Expenditures			Income			Remarks
Sl	Items/head	Taka	Sl	Items/head	Taka	
1	Cow purchase	4,000	1	Sale of cow	7,600	
2	Fodder	1,000				
3	Jute	200	2	Sale of hanak	2,500	
4	Roler	100				
	Total	5,300		Total	10,100	
	(a) Cycle of implemented IGA (days) :	1 & 60		(b) Number of cycles in a year :	4	
	(c) Income from per cycle of IGA (income-expenditure) :	4,800				
	(d) Income from IGA per day = {(c) X (b)/365} :	53				
	(e) Present daily average income from main profession :	25				
	(B) INCREASED INCOME {(d) + (e)} :	78				
ASED PERCENTAGES (%) {(B)-(A)} =(C)/AX100} :				121.72		

Summary status of increased income of RUG members of MACH-Sherpur site

Site : Kongsa-Malijhee River Basin, Sherpur Surveyed 2002 (97 nos.) Re-surveyed (74 nos.) August 03

Sl	Name of RUG members	Name of RUG	Base		Present daily income				Increased income		Remarks
			Daily income (Tk.)	Profession	Main profe	Implemented IGA		Total income	Taka	%	
					Taka	Activities	Income (Tk.)	(Taka)			
1	Mr. Rajak ALi	Baluchar Doyal Matshajibi Samity	40	Fishing	20	Poutry	40	60	20	50.00	
2	Mr. Mumtaj Ali	Darakalinagar Sarputi Samity	50	Fishing	30	Agriculture	40	70	20	40.00	
3	Sarapad Ali	Sarakalinagar Malhsajibi Samity	55	Fishing	20	Rickshwa driving	63	83	28	50.91	
4	Mr. Montaz Ali	Matiapara Matshajibi Samity	60	Fishing	20	Rickshwa van driving	65	85	25	41.67	
5	Mr. Asharatul Islam	Khamarpara Taki Matshajibi Samity	75	Fishing	0	Grocery shop	88	88	13	17.33	Left the fishing profession
6	Mr. Abdus Samad	Khamarpara Taki Matshajibi Samity	40	Small farmer	0	Small tong shop (bread)	61	61	21	52.53	
7	Mr. Mamijaal Haque	Darikalinarag Rui Matshajibi Samity	60	Fishing	30	Poultry	45	75	15	25.00	
8	Mr. Abu Bakker	East Dankalinagar Matshajibi Samity	50	Fishing	35	Cow rearing	21	56	6	12.00	
9	Abdual Malek	Darikalinagar Rui Matshajibi Samity	60	Fishing	40	Agriculture	15	55	(5)	(8.33)	
10	Mr. Chan Mia	West Dankalinagar Carpio Matshajibi	50	Fishing	25	Milk cow rearing	50	75	25	50.00	
11	Ms Kachiman	Konagawn Joba Matshajibi Samity	30	Housewife	10	Fish culture	40	50	20	66.67	
12	Mr. Mojammel Hossain	East Dariarpar Matshajibi Samity	50	Fishing	35	Agriculture	13	48	(2)	(4.00)	
13	Md. Jalal Uddin	West Dankalinagar Matshajibi Samity	50	Fishing	10	Fish business	65	75	25	50.00	
14	Mr. Chan Miah	Hasligaown Maddha Matshajibi Samity	50	Small farmer	30	Rickshaw driving	47	77	27	54.00	
15	Md. Akhter Hossain	Baniapara Purush Samity	55	Fishing	40	Fish business	45	85	30	54.55	
16	Mr. Alaz Uddin	Hasligaown Paschim Matshajibi Samit	59	Fishing	35	Milk cow rearing	30	65	6	10.17	
17	Mr. Allab Hossain	Sarikalinagar Matshajibi Samity	70	Fishing	50	Fish business	40	90	20	28.57	
18	Mr. Jhurul Islam	Dariarpar shapla Matshajibi Samity	70	Fishing	20	Duck rearing	80	100	30	42.86	
19	Md. Abdul Karim	West Dankalinagar Matshajibi Samity	65	Small farmer	30	Small business (hawker)	54	84	19	29.23	
20	Md. Ahez Ali	Hasligaown Maddha para Matshajibi S	60	Fishing	0	Small business (poultry)	86	86	26	43.33	
21	Ms Sufia Khatun	Chenguria Shapla Mohila Samity	30	Housewife	10	Small Business (Carpentr	40	50	20	66.67	
22	Md.Shajahan	Sajib Matshajibi Purush Samity	40	Fishing	10	Handicrafts (bamboo & ca	50	60	20	50.00	
23	Md. Shahen Miah	Baniapara Matshajibi Samity	55	Fishing	30	Egg & vegetable business	40	70	15	27.27	
24	Md. Shorav Ali	West Dankalinagar Matshajibi Samity	60	Small farmer	30	Paddy husking	34	64	4	5.93	
25	Mr. Idris ALi	Dankalinagar Bonnya M. S.	50	Fishing	0	Small business	70	70	20	40.00	Left the fishing profession
26	Mr. Saiz Uddin	Dankalinagar Bonnya M. S.	55	Fishing	30	Tea Stall	40	70	15	27.27	
27	Mr. Azjagar ALi	Sharikalinagar Matshajibi Smaity	40	Small farmer	20	Small business	65	85	45	112.50	
28	Mr. Nazrul Islam	Maddha Dariarpar Matshajibi Smaity	60	Fishing	30	Rice business	50	80	20	33.33	
29	Mr. Ahammed Ali	Baluchar Boyal Matshajibi Samity	40	Fishing	20	Rice business	40	60	20	50.00	
30	Mr. Babar Ali	South Dariarpar Matshajibi Samity	60	Small farmer	30	Hawkery	45	75	15	25.00	
31	Mr. Jabirul Haque	South Dariarpar Matshajibi Samity	60	Fishing	20	Wood business	64	90	30	50.00	
32	Ms Lahila Begum	Tilapia Mohila Samity	20	Housewife	10	Clothe business	36	46	26	130.00	

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Summary status of increased income of RUG members of MACH-Sherpur site

Site : Kongsa-Malijhee River Basin, Sherpur Surveyed 2002 (97 nos.) Re-surveyed (74 nos.) August 03

33	Mr. Abdul Hakim	Vatiarapa Shapla M. Samity	60	Fishing	15	Fish business	67	82	22	37.05	
34	Mr. Nilu	Vatiapara Shapla M. Samity	45	Fishing	0	Rickshwa driving	64	64	19	42.22	Left the fishing profession
35	Mr. Ekabar Ali	Vatiapara Shapla M. Samity	50	Fishing	10	Grocery shop	55	65	15	29.89	
36	Mr. Akkas Ali	Vatiapara Shapla M. Samity	65	Ag. Labour	10	Rice business	70	80	15	22.36	
37	Mr. Arshad Ali	Tilkandi Matshajibi Samity	50	Small farmer	10	Grocery shop	50	60	10	20.00	
38	Ms Ashia Khatun	Khamarpara Rajanigondha Mohila	45	Small farmer	10	Grocery shop	55	65	20	44.44	
39	Ms. Hena Begum	Gonoibenia Jhinuk Mohila Samity	45	Homestead farm	5	Rice business	50	55	10	22.22	
40	Mr. Jalal Uddin	Khamarpara Kholisha Matshajibi Sam	43	Fishing	35	Small business	20	55	12	27.91	
41	Mr. Ansar Ali	Khamarpara Kholisha Matshajibi Sam	50	Fishing	35	Small business	30	65	15	30.00	
42	Mr. Muslem Uddin	Bakarkanda Chanda Matshajibi Samity	45	Fishing	10	Rickshwa driving	55	65	20	44.44	
43	Md. Abdul Malek	Bakarkanda Chanda Matshajibi Samity	40	Fishing	10	Small business	45	55	15	37.50	
44	Md. Jasim Uddin	Bakarkanda Calla Matshajibi Samity	50	Fishing	40	Small business	25	65	15	30.00	
45	Mr. Chanu Miah	Tirsha Kewtabeel Maishajibi Samity	40	Fishing	25	Small business	28	53	13	32.50	
46	Md. Barek	Tirsha Kewtabeel Maishajibi Samity	60	Fishing	45	Small business	47	92	32	53.33	
47	Md. Mojammel	Martinpar Chitol Matshajibi Samity	40	Fishing	0	Rickshwa driving	56	56	16	40.00	
48	Md. Shahadad	Martinpar Chitol Matshajibi Samity	40	Fishing	10	Fish business	56	66	26	65.00	
49	Md. Samiur Miah	Pratibia Paddamoni Matshajibi Samity	45	Fishing	35	Cow fattening	25	60	15	33.18	
50	Mr. Mokshed Ali	Pratibia Paddamoni Matshajibi Samity	30	Fishing	0	Fish business	55	55	25	83.33	
51	Md. Quddus Ali	Pratibia Shol Matshajibi Samity	35	Fishing	0	Fish business	55	55	20	57.14	
52	Md. Mojibor Rahman	Pratiba Shol Matshajibi Samity	36	Fishing	10	Small business	43	53	17	47.22	
53	Md. Masud Miah	Pratiba Shol Matshajibi Samity	35	Small farmer	20	Cow fattening	34	54	19	54.29	
54	Ms Samia	Sonaborlanda Dalim Mohila Samity	30	Homestead farm	25	Rickshwa driving	50	75	45	150.00	
55	Md. Abdus Samat	Sonaborkanda Matshajibi Purush	30	Fishing	0	Grocery shop	45	45	15	50.00	
56	Md. Sekandar Ali	Sonaborkanda Matshajibi Purush	40	Fishing	10	Bread business	53	63	23	57.50	
57	Md. Julhas	Sonaborkanda Matshajibi Purush	26	Fishing	10	Fish business	56	66	40	153.85	
58	Ms. Ashama Begum	Vatiapara Doyal Mohila Samity	18	Housewife	10	Milk cow rearing	26	36	18	100.00	
59	Mr. Monto	South Dariarpar Matshajibi Samity	60	Fishing	30	Fish business	50	80	20	33.33	
60	Mr. Muntaz Ali	Sarikalinagar Gojar Matshajibi Samity	60	Fishing	15	Fish business	60	75	15	25.00	
61	Mr. Jahed Ali	Sarikalinagar Gojar Matshajibi Samity	55	Fishing	35	Fish business	40	75	20	36.36	
62	Md. Shajahan Miah	Baliuchar Boyal Matshajibi Samity	50	Fishing	30	Fish culture	40	70	20	40.00	
63	Mr. Tara Miah	South Dariarpar Matshajibi Samity	60	Fishing	0	Fish business	90	90	30	50.00	
64	Mr. Sayad	Sarikalinarag Matshajibi Samity	50	Fishing	20	Fish business	65	85	35	70.00	
65	Md. Shah Alam	East Darikalinagar Matshajibi Samity	50	Fishing	20	Rickshwa driving	50	70	20	40.00	
66	Mr. Saydur Rahman	East Darikalinagar Matshajibi Samity	50	Fishing	20	Rickshwa driving	50	70	20	40.00	
67	Md. Amazat Ali	Malijheekanda Matshajibi Samity	50	Fishing	10	Rickshwa driving	63	73	23	46.00	

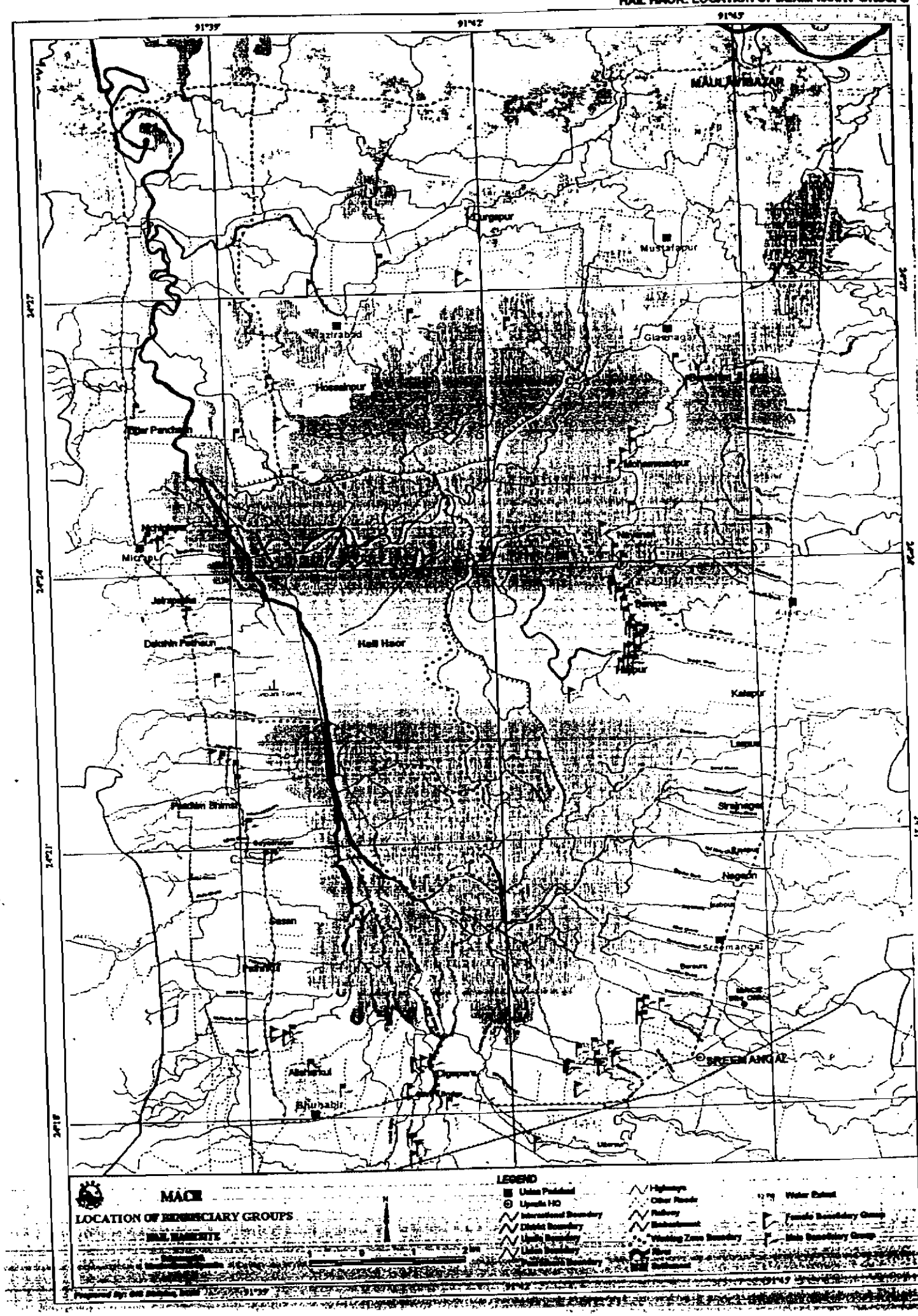
Summary status of increased income of RUG members of MACH-Sherpur site

Site : Kongsa-Malijhee River Basin, Sherpur Surveyed 2002 (97 nos.) Re-surveyed (74 nos.) August 03

68	Md. Rajab Ali	Konagawn Mrigel Matshajibi Samity	40	Fishing	40	Fish culture	15	55	15	37.50	
69	Mr. Sarz Uddin	Konagawn Mrigel Matshajibi Samity	40	Fishing	15	Milk cow rearing	37	52	12	30.00	
70	Mr. Krishmat ALi	Konagawn Shole Matshajibi Samity	45	Small farmer	20	Grocery shop	40	60	15	33.33	
71	Md. Wahab ALi	Chungaria Ekata Matshajibi Samity	50	Small farmer	10	Fish business	54	64	14	28.00	
72	Md. Giyas Uddin	Baturchar Boyal Matshajibi Samity	50	Fishing	30	Milk cow rearing	40	70	20	40.00	
73	Mr. Babul	South Dariarpar Matshajibi Samity	60	Fishing	40	Milk cow rearing	40	80	20	33.33	
74	Mr. Kabir Ali	Dariarpar shapla Matshajibi Samity	60	Fishing	50	Milk cow rearing	30	80	20	33.33	
		Total	3592		1501		3,540	5,041	1,449		
		Average	48.54		20.28		47.84	68.12	19.58		

Income survey : 2nd time	Daily average base income (Tk.)	48.54
Aug-03	Dailr average increased income	68.12
	Increased Taka	19.58
	Increased percentages (%)	40.34

HAIL HAOR: LOCATION OF BENEFICIARY GROUPS

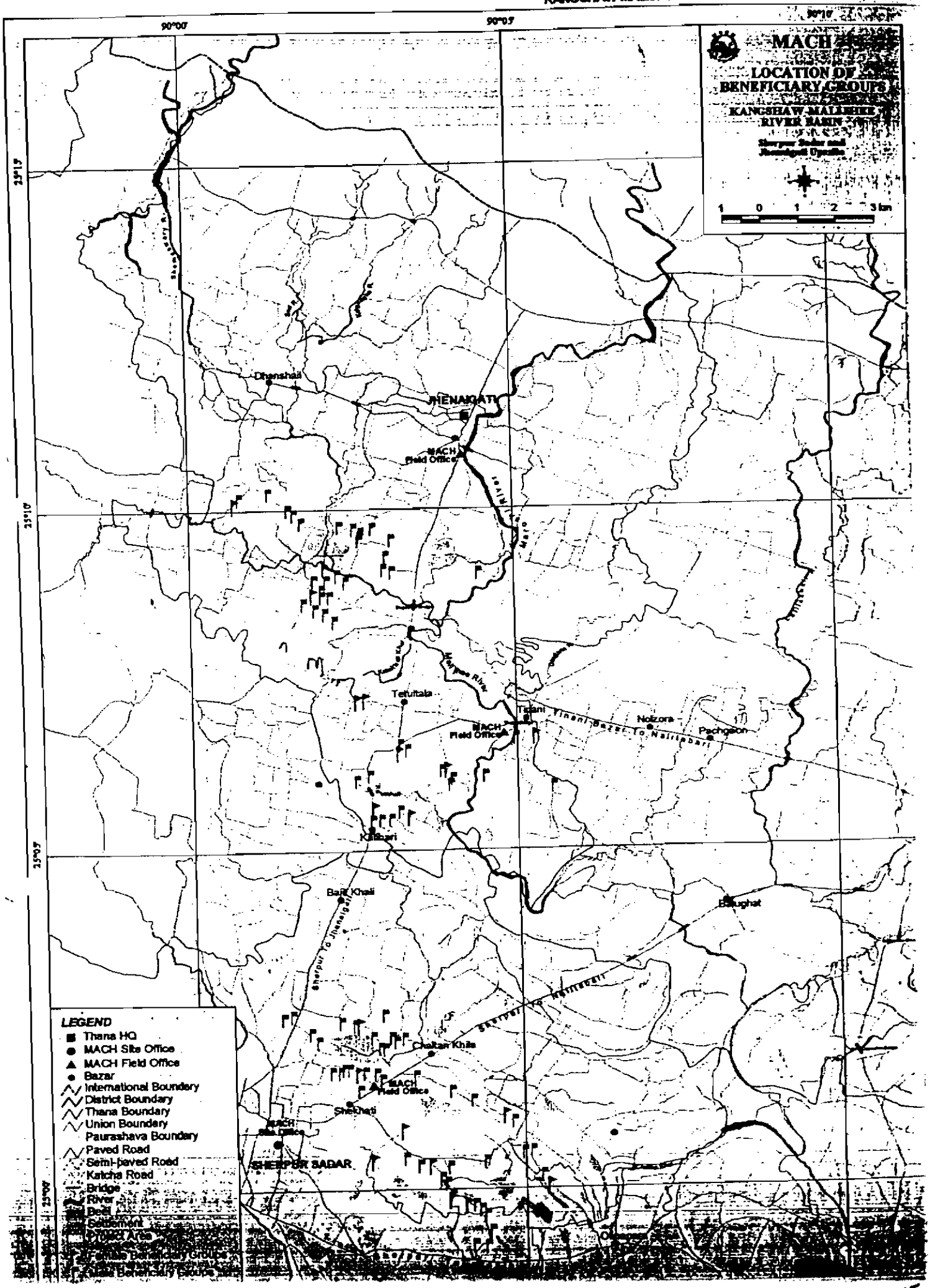


MACH

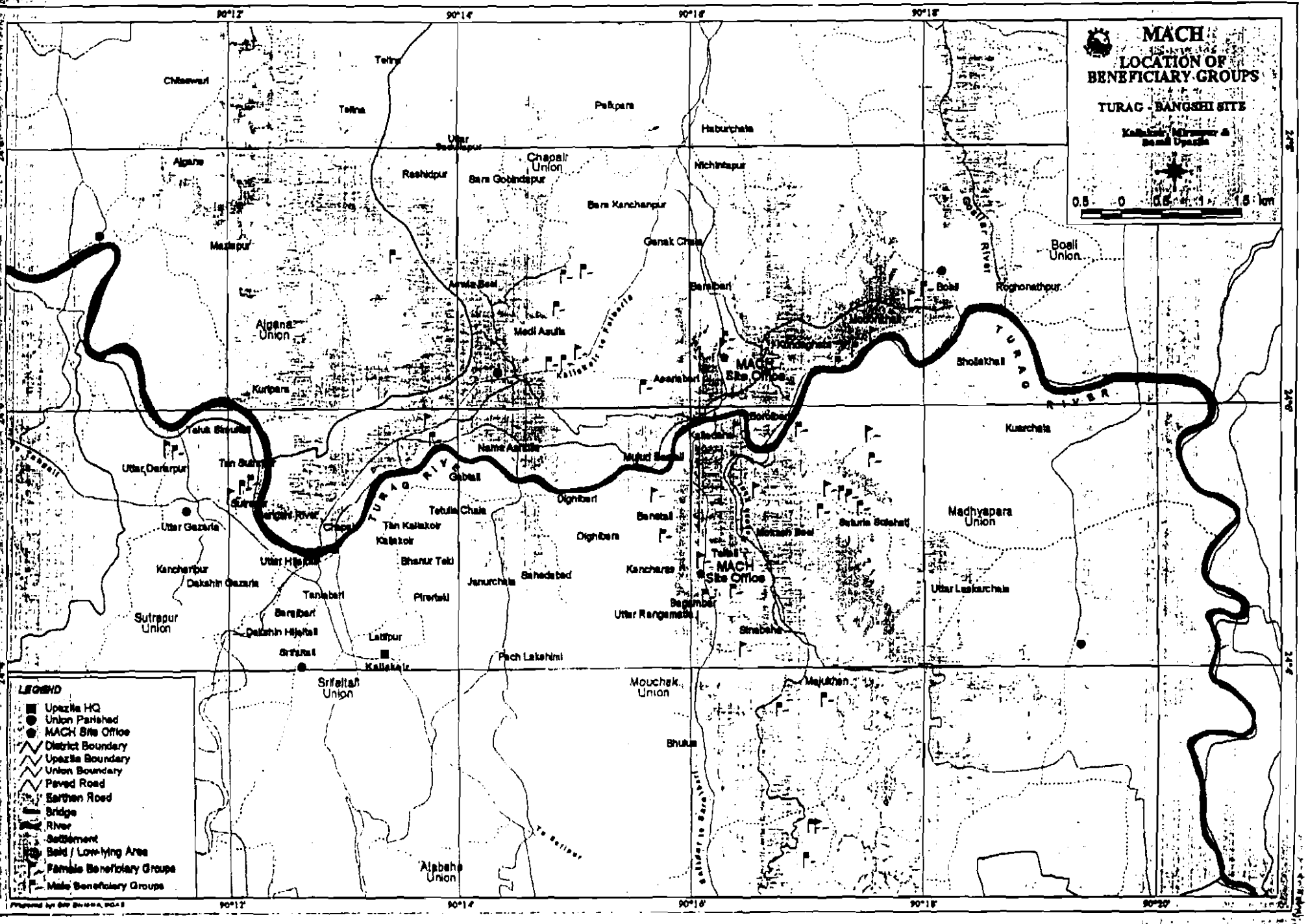
LOCATION OF BENEFICIARY GROUPS

HAIL HAOR/TE

KANGSHAW MALLIHEE: LOCATION OF BENEFICIARY GROUPS



TURAG-BANGSHI: LOCATION OF BENEFICIARY GROUPS



Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.3.a: Leases of water bodies to community resource management groups granted in target areas for a reasonable time period

October 2003

Winrock International

CNRS

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Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.3: Select Policies Implemented that Support IRs 1 and 2

Indicator 6.3a: Leases of water bodies to community resource management groups granted in target areas for a reasonable time period

A. Description

Precise Definition of Indicator: Indicator counts the number of water bodies given out by the Ministry of Land (or other relevant authority) to local communities on 5 – 10 year leases.

Unit of Measure: Number of local leases approved

Disaggregate by: N/A

Justification/Management Utility: Indication of reform policy developed and implemented. This policy change will assist local communities to effectively control of community water bodies. This is the first step in sustainable management of resources.

B. Plan for Data Collection

Data Collection Method: Semi-annual surveys.

Method of Collection by USAID: Reports from Winrock

Data Source(s): Winrock and its partners.

Frequency/ Timing of Data Collection: Semi-annual

Estimated Cost of Collection: Nominal.

ponsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: None undertaken to date.

Known Data Limitations (if any): There may be problems in the implementation of the policy. This will be monitored.

Actions Taken or Planned to Address Data Limitations: Regular monitoring.

Date of Future Data Quality Assessments: None planned.

Procedures of Future Data Quality Assessment:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: Winrock and partners will collect data on a case by case basis and compile and report data annually

Presentation of Data: Table

Review of Data: Semi-annual portfolio review, and regular activity monitoring.

Reporting Data: Internal mission report, R4 and CBJ reports.

E. Other Notes:

Notes on the Baselines/Targets: Baseline completed in 2000; no leases were ved to community groups before MACH.

ation of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments: Models and best practices are developed at the local level to demonstrate to decision-makers. The demonstration effect is transfused to the top-level policy makers through the Local Government Committees and the Steering Committee. This indicator represents a fundamental step for implementation of the program.

Cumulative Unit of measure: Number of Leases

Year	Planned	Actual
Baseline		0
2000	2	2
2001	13	13
2002	17	18
2003	20	24
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6.3.a: Leases of water bodies to community resource management groups granted in target areas for a reasonable time period

Some of the critical water bodies in the floodplain areas of MACH sites have been leased out for up to 10 years to Resource Management Organizations by the Ministry of Land in collaboration with the Ministry of Fisheries. In addition MACH has been successful in getting the GoB through the Ministry of Land to grant MACH community groups perpetual rights over 8 areas in MACH wetlands. These 8 locations will be permanently secured as sanctuaries for all time.

MACH has also worked through its connection at the site level and within the Ministry of Land and the MoFL to promote the removal of the current 25%/10%/10% increases that the MoL imposes on the lessees of the water bodies. This policy of increasing the lease rate every year has been very detrimental to the resource and has promoted the "take everything" attitude that prevailed in MACH areas at the beginning of the project. The MoL has reduced the percentages and has for the first time dropped the entire lease value of a jhalmohol for MACH groups for a permanent sanctuary status.

Currently MACH has 24 water bodies granted by the MoL to Resource Management Groups formed in MACH areas or to sanctuaries for the entire areas. The attached table lists each of the water bodies and their area.

The copies of the government orders for the handover and the signed handover document at the site serve as evidence.

Indicator 6.3a: Lease of water bodies to Community Resource Management Organizations:

Site	Sl no	Name of Water bodies	Area (acre)	Managed by RMO	Remarks
Hail Haor	1.	Balla Beel	70.73	Balla RMO	
	2.	Agari Beel	72.86	Agari RMO	
	3.	Kajura Beel	0.40	Kajura RMO	
	4.	Sananda Beel	8.89	Sananda RMO	
	5.	Jethua Beel	5.82	Jethua RMO	
	6.	Baragangina Canal	13.54	Baragangina RMO	
	7.	Barkandi Beel	10.25	Do	
	8.	Dighali Beel	35.25	Balla RMO	
	9.	Ramai Beel	6.24	Ramai RMO(under Process)	
	10.	Medi Beel	11.98	Ramai RMO(under Process)	
	11.	Khaiya Beel	9.00	Ramai RMO(under Process)	
	12.	Laler doba Beel	618.83	Jethua RMO	Under writ by a private lessee
	13.	Chapra Magura Beel	21.88	Baragangina RMO	
	14.	Jaduria Beel	100.50	Baragangina RMO	
Total			986.17		
Turag-Bongshi	1.	Mokosh Beel	30.98	Mokosh RMO	
	2.	Alua Beel	10.07	Alua RMO	
	3.	Kalidaha Beel	15.22	Mokosh RMO	Under RMO but little khas land in the beel
	4.	Parts of Turag* Bangshi River	(400m+Kum) X 3	Turag RMO	
Total			56.27		
Kangsha-Malijhee	1.	Kewta Beel	99.20	Kewta RMO	
	2.	Dhali Beel	34.00	Dhali-Baila RMO	
	3.	Baila Beel	20.00	Do	
	4.	Bailsha Beel	7.04	Bailsha RMO	
	5.	Awra Baura Beel	34.12	-	Disputed
	6.	Part of Malijhee* River	200m+Kur	Takimari Dharabasia RMO	
Total			194.36		
Grand Total: 24			1236.80		

** Area is not included in total*

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
ভূমি মন্ত্রণালয়
শাখা-৭

স্মারক নং- ভূঃমঃ/শা-৭/বিবিধ-৪০/২০০২-৩২৩ তারিখ : ২৬/০৫/২০০৩ খৃঃ।

প্রাপক : জেলা প্রশাসক,
মৌলভীবাজার।

বিষয় : মৎস্য ও পশু সম্পদ মন্ত্রণালয়াধীন মাচ প্রকল্পের আওতায় সমাজভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার নিমিত্তে ৭টি জলমহালের ব্যবস্থাপনা হস্তান্তরকল্পে ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের মধ্যে সমঝোতা স্মারক প্রসংগে।

অদ্য ২৬/৫/২০০৩খৃঃ তারিখ উপর্যুক্ত বিষয়ে সমঝোতা স্মারকটি ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের মধ্যে স্বাক্ষরিত হয়েছে। সমঝোতা স্মারকের প্রেক্ষিতে উক্ত জলমহালসমূহ উল্লেখিত প্রকল্পে ন্যস্ত করায় সমঝোতা স্মারক মোতাবেক জলমহালগুলির ব্যবস্থাপনা হস্তান্তরের পরবর্তী কার্যক্রম গ্রহনের জন্য সমঝোতা স্মারকের ছায়ালিপি নির্দেশক্রমে এতদসঙ্গে প্রেরণ করা হলো।

সংযুক্তি : বর্ণনামোতাবেক।

স্বা:
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোন: ৭১৬১১৭৫

স্মারক নং- ভূঃমঃ/শা-৭/বিবিধ-৪০/২০০২/৩২৩/১(২) তারিখ : ২৬/০৫/২০০৩

সদয় অবগতির জন্য অনুলিপি প্রেরণ করা হলো :-

১। সচিব, মৎস্য ও পশু সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়,
(দৃঃ আঃ উপ-সচিব, (মৎস্য)) ইহা তাঁর MOFL/F-3/MACH-1/2002/193 Dt.08/04/03 নং স্মারকের সূত্রে প্রেরণ করা হলো।

২। চীফ অব পার্টি, মাচ প্রকল্প, বাড়ী নং-২, রোড নং-২৩/এ, গুলশান-১, ঢাকা।

বদরুদ্দিন
২৬/০৫/০৩
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোন: ৭১৬১১৭৫

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মৎস্য ও পশুসম্পদ মন্ত্রণালয়াধীন মাচ প্রকল্পের আওতায় সমাজভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার নিমিত্তে ৭টি জলমহালের ব্যবস্থাপনা হস্তান্তরকল্পে ভূমি মন্ত্রণালয় এবং মৎস্য ও পশুসম্পদ মন্ত্রণালয়ের মধ্যে সমঝোতা স্মারক।

মৎস্য ও পশুসম্পদ মন্ত্রণালয় কর্তৃক গৃহীত উপরোক্ত প্রকল্পে ব্যবস্থাপনার লক্ষ্যে নির্বাচিত ৭টি জলমহাল (তালিকা সংযুক্ত) মৎস্য ও পশুসম্পদ মন্ত্রণালয়ে ন্যস্ত করার লক্ষ্যে ২০০৩ সালের অদ্য ২৬/০৫/২০০৩ ইং তারিখ রোজ ..... নিম্নবর্ণিত শর্তসাপেক্ষে দুই পক্ষের মধ্যে সমঝোতা স্মারক স্বাক্ষরিত হল।

পক্ষসমূহ

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের ভূমি মন্ত্রণালয়ের পক্ষ হতে
সচিব বা ক্ষমতাপ্রাপ্ত বৈধ প্রতিনিধি

..... প্রথম পক্ষ

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের মৎস্য ও পশুসম্পদ মন্ত্রণালয়ের পক্ষ হতে
সচিব বা ক্ষমতাপ্রাপ্ত বৈধ প্রতিনিধি

..... দ্বিতীয় পক্ষ

যেহেতু দেশের সকল সরকারী জলমহালের মালিকানা এবং কর্তৃত্ব ভূমি মন্ত্রণালয়ের (১ম পক্ষ) অধীন এবং যেহেতু মৎস্য ও পশুসম্পদ মন্ত্রণালয় (২য় পক্ষ) সরকারী জলমহালের মাচ প্রকল্পের আওতায় নির্বাচিত ৭টি জলমহাল ব্যবস্থাপনার আগ্রহ প্রকাশ করেছে সেহেতু নিম্নবর্ণিত শর্তসাপেক্ষে প্রথম পক্ষ কর্তৃক দ্বিতীয় পক্ষকে নির্বাচিত রেকর্ডভুক্ত জলমহালে (বর্তমান ইজারা মেয়াদ শেষে) সমাজভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার অধিকার প্রদান করা হলো।

প্রথম পক্ষ ও দ্বিতীয় পক্ষ নিম্নোবর্ণিত শর্তাবলীর অধীনে এই চুক্তিনামা সম্পাদন করছে।

১। রেকর্ডভুক্ত সরকারী জলমহালের মালিকানা প্রথম পক্ষ ভূমি মন্ত্রণালয়ের থাকবে এবং দ্বিতীয় পক্ষ মৎস্য ও পশুসম্পদ মন্ত্রণালয় নির্বাচিত জলমহালে আধুনিক প্রযুক্তি ভিত্তিক জৈবিক ব্যবস্থাপনা কার্যক্রম সুনির্দিষ্ট সময়ের জন্য বাস্তবায়ন করবে।

সত্যায়িত
২৬/০৫/০৩
বদরুদ্দিন আহমদ
সহকারী সচিব
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

২। প্রথম পক্ষ সরকারী জলমহাল সমূহের মধ্য হতে নির্বাচিত উক্ত ৭টি জলমহাল আধুনিক প্রযুক্তিভিত্তিক জৈবিক ব্যবস্থাপনা ও উন্নয়নের লিখিতে দ্বিতীয় পক্ষ মৎস্য ও পশুসম্পদ মন্ত্রণালয়ে ১০ (দশ) বছরের জন্য ন্যস্ত করবে। প্রয়োজনে নবায়ন করতে পারবে।

৩। নির্বাচিত জলমহালসমূহের মধ্যে যেসব জলমহাল ইতিমধ্যে প্রথম পক্ষ কর্তৃক ইজারা দেয়া হয়েছে সেসব জলমহালের ইজারা মেয়াদ শেষ হওয়ার পর পুনরায় ইজারা দেয়া যাবে না। যেসব জলমহাল এরূপভাবে ইজারা দেয়া হয়েছে সেসব জলমহালের ইজারা মেয়াদ উত্তীর্ণ হওয়ার পর উৎপাদনভিত্তিক জৈবিক ব্যবস্থাপনায় আলোচ্য প্রকল্পভুক্ত করা হবে।

৪। প্রথম পক্ষ জলমহাল হস্তান্তরের পূর্বে সীমানা ও আয়তন নির্ধারণ করবে এবং দ্বিতীয় পক্ষ তা বুঝে নেওয়ার পর জলমহালের পরিসীমা অটুট রাখবে এবং তা সুষ্ঠুভাবে সংরক্ষণ করবে।

৫। দ্বিতীয় পক্ষ নির্বাচিত ৭টি জলমহালে মৎস্য ও পশুসম্পদ সংরক্ষণ, মৎস্য উৎপাদন বৃদ্ধি ও জীব বৈচিত্র্য রক্ষার উদ্দেশ্যে উপযোগী মুক্ত জলমহালে সম্পূর্ণ বা অংশ বিশেষ সংরক্ষিত মৎস্য অভয়াশ্রম গড়ে তুলবে এবং এ সংরক্ষিত মৎস্য অভয়াশ্রম ইজারা দিতে পারবে না। মৎস্য মন্ত্রণালয়, ইউ এস এইড-এর সহায়তায় সমাজভিত্তিক মৎস্যজীবি সংগঠন ও স্থানীয় প্রশাসন সমূহের মাধ্যমে নির্বাচিত জলমহাল সমূহের রক্ষণাবেক্ষণ ও ব্যবস্থাপনার দায়িত্ব পালন করবে। প্রয়োজনবোধে জলমহালের সীমানা অভ্যন্তরে ভরাট হয়ে যাওয়া অংশ দ্বিতীয় পক্ষ পুনঃখনন বা সংস্কার করতে পারবে।

৬। দ্বিতীয় পক্ষ যেসব জলমহালে জৈবিক ব্যবস্থাপনায় উৎপাদন কার্যক্রম গ্রহণ করবে সেসব জলমহালে মৎস্যজীবি সংগঠন এবং মৎস্যজীবি পেশার সাথে জড়িত বেসরকারী উদ্যোক্তাদের কারিগরী ও আর্থিক প্রস্তাবের ভিত্তিতে নিম্নবর্ণিত কমিটির মাধ্যমে প্রতি বছর ৩০শে চৈত্রের মধ্যে ইজারা প্রদান করা হবে। দ্বিতীয় পক্ষ "ইজারালব্ধ অর্থ জলমহাল ও পুকুর ইজারা কোড নম্বর (১/৪৬০৪/১২৬১) ভূমি রাজস্ব জলমহাল হতে আয়" খাতে ইজারার তারিখ হতে ৩০ (ত্রিশ) দিনের মধ্যে জমা দিবে এবং পরবর্তী প্রতি বছর ৩০শে চৈত্রের মধ্যে জমা দিবে। উল্লেখ্য যেসব জলমহাল ইজারাধীন ছিল না, কমিটি সেসব জলমহালের ইজারামূল্য জলমহালের বর্তমান বাস্তব ভৌত অবস্থার ভিত্তিতে নির্ধারণ করবে। যে কমিটির মাধ্যমে ব্যবস্থাপনা করা হবে তার গঠন নিম্নরূপ:

সত্যায়িত
২৬/০৫/০৩
মুহাম্মদ জাহেদ
সহকারী সচিব
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

(১)	উপজেলা নির্বাহী অফিসার	--	সভাপতি
(২)	উপজেলা সমবায় কর্মকর্তা	--	সদস্য
(৩)	উপজেলা প্রকৌশলী	--	সদস্য
(৪)	উপজেলা কৃষি কর্মকর্তা	--	সদস্য
(৫)	উপজেলা পশুসম্পদ কর্মকর্তা	--	সদস্য
(৬)	সহকারী কমিশনার (ভূমি)	--	সদস্য
(৭)	সংশ্লিষ্ট ইউনিয়ন পরিষদ চেয়ারম্যান	--	সদস্য
(৮)	সংশ্লিষ্ট ওয়ার্ড কমিশনার/মেম্বার	--	সদস্য
(৯)	উপজেলা মৎস্য কর্মকর্তা	--	সদস্য সচিব

৭। জলমহালের ইজারা মূল্য হবে প্রচলিত নীতিমালা অনুযায়ী ১ম বছর পূর্ববর্তী ইজারা মূল্যের ২৫% উর্দ্ধে এবং তা পরবর্তী পাঁচ বছর বহাল থাকবে। জলমহালের মাছের উৎপাদন ক্ষমতা এবং আনুসাঙ্গিক অন্যান্য বৈশিষ্ট্যের ভিত্তিতে উপজেলা জলমহাল ব্যবস্থাপনা সমন্বয় কমিটি কর্তৃক জলমহাল মূল্যায়নের প্রেক্ষিতে জেলা জলমহাল ইজারা প্রদান কমিটি জলমহালের পাঁচ বছর ইজারার পরবর্তী বছর সমূহের রাজস্বের (ইজারা মূল্যের) হার নির্ধারণ করবে। ভবিষ্যতে বন্দোবস্ত নীতিমালার পরিবর্তন হলে উভয় পক্ষের সম্মতি সাপেক্ষে তা বাস্তবায়ন করতে হবে। প্রতিবছর ১৫ই বৈশাখের মধ্যে রেভিনিউ ডিপুটি কালেক্টর ঐ বছরের লীজভুক্ত সমুদয় অর্থ সরকারী খাতে জমা হওয়ার সর্বশেষ তথ্য সম্বলিত একটি প্রতিবেদন জেলা প্রশাসক ও সভাপতি, জেলা জলমহাল কমিটির নিকট দাখিল করবেন। প্রতিবেদন অনুযায়ী কোন জলমহালের ইজারা মূল্য বাবদ অনাদায়ী থাকে তাহলে জেলা প্রশাসক ঐ জলমহালের ইজারা বাতিলের ব্যবস্থা নিবেন।

৮। দ্বিতীয় পক্ষ জলমহালের মৎস্য সম্পদের সর্বোত্তম ও সর্বোৎকৃষ্টভাবে উন্নয়ন নিশ্চিত করবে। জলমহালের উৎপাদনশীলতা বৃদ্ধির নিমিত্তে জলমহাল সংস্কার ও উন্নয়ন করা যাবে। তবে জলমহালের প্রকৃতি পরিবর্তন বা খণ্ড খণ্ড করা যাবে না। জলমহালসমূহে মৎস্য সম্পদ উন্নয়নের লক্ষ্যে প্রয়োজনীয় অবকাঠামো নির্মাণ করা যাবে। প্রবাহমান জলমহালসমূহে পানি প্রবাহ ও নৌ চলাচল ব্যাঘাত সৃষ্টি করতে পারে এমন কোন অবকাঠামো নির্মাণ করা যাবে না অথবা পানি দূষিতকরণসহ জনস্বাস্থ্য ও পরিবেশ হানিকর কোন কর্মকাণ্ড পরিচালনা করা যাবে না। কৃষি কাজের জন্য পানি ব্যবহার করা যাবে, তবে মৎস্য চাষ যাতে ব্যাহত না হয় সে বিষয়ে নিশ্চয়তা বিধান করতে হবে।

সত্যায়িত
২৬/০৬/১৩
বদরুদ্দিন আহমেদ
সহকারী সচিব
কৃষি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

৯। বাস্তবতার নিরিখে ভূমি মন্ত্রণালয় (১ম পক্ষ) উন্নয়ন পরিকল্পনাধীন জলমহাল দশ বছরের জন্য লীজ দিতে সম্মত হলেও বর্তমান নীতি অনুসারে একসাথে পাঁচ বছরের জন্য লীজ দেয়া হবে। প্রথম পাঁচ বছরের মৎস্য সম্পদ উন্নয়ন প্রচেষ্টা ও তার ফলাফল বিবেচনা করে যদি যুক্তিসঙ্গত বলে স্থিরীকৃত হয় তাহলেই কেবল লীজ গ্রহীতা (২য় পক্ষ) কে আরও পাঁচ বছরের জন্য এবং পরবর্তীতে একই পদ্ধতিতে লীজ দেয়া হবে। এ বিষয়ে ও হস্তান্তর প্রক্রিয়ায় কোনরূপ জটিলতার সৃষ্টি হলে, প্রথম পক্ষ দ্বিতীয় পক্ষের সাথে আলোচনার মাধ্যমে যৌথভাবে সিদ্ধান্ত নিবে।

১০। প্রথম পক্ষ জলাশয়সমূহ সময় সময় পরিদর্শন করতে পারবে, দ্বিতীয় পক্ষ এ ব্যাপারে প্রথম পক্ষকে সর্বাত্মক সহায়তা প্রদান করবে।

১১। প্রয়োজনবোধে চুক্তির মেয়াদকালীন সময়ে উভয় পক্ষের সম্মতিক্রমে এ সমঝোতা স্মারক পরিবর্তন, পরিবর্ধন ও সংশোধন করা যাবে।

১২। ২নং পর্তমতে হস্তান্তরিত জলমহালসমূহ প্রযুক্তিভিত্তিক জৈবিক ব্যবস্থাপনার কার্যক্রম সঠিকভাবে বাস্তবায়িত হওয়ার বিষয়ে মনিটর করার জন্য নিম্নোক্তভাবে গঠিত মনিটরিং কমিটি কাজ করবে :

(১)	যুগ্ম-সচিব (প্রঃ), ভূমি মন্ত্রণালয়	-	আহ্বায়ক
(২)	মৎস্য ও পশুসম্পদ মন্ত্রণালয়ের একজন প্রতিনিধি (উপ-সচিবের নীচে নয়)	-	সদস্য
(৩)	উপ-সচিব (সায়রাত), ভূমি মন্ত্রণালয়	-	সদস্য
(৪)	কৃষি মন্ত্রণালয়ের একজন প্রতিনিধি (উপ সচিবের নীচে নয়)	-	সদস্য
(৫)	পরিবেশ ও বন মন্ত্রণালয়ের একজন প্রতিনিধি (উপ সচিবের নীচে নয়)	-	সদস্য
(৬)	চীফ অব পার্টি, মাচ প্রকল্প	-	সদস্য
(৭)	সংশ্লিষ্ট জেলা প্রশাসক বা তার প্রতিনিধি	-	সদস্য
(৮)	সিনিয়র সহকারী সচিব (সায়রাত), ভূমি মন্ত্রণালয়	-	সদস্য

মোঃ বদরুদ্দিন আহমদ
সহকারী সচিব
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

কমিটির কার্যপরিধি

(ক) মনিটরিং কমিটি নির্বাচিত জলমহালসমূহের হস্তান্তর যথাযথভাবে সম্পন্ন হচ্ছে কিনা তা পর্যবেক্ষণ করবে এবং নিয়মিতভাবে সরকারের (ভূমি মন্ত্রণালয় এবং মৎস্য পশুসম্পদ মন্ত্রণালয়) নিকট প্রতিবেদন দাখিল করবে।

(খ) কমিটি মৎস্য পশুসম্পদ মন্ত্রণালয়ে হস্তান্তরিত জলমহাল সমূহের উন্নয়ন কার্যক্রম ও কর্ম সম্পাদন বিশেষ করে জলমহালের আয় ও উৎপাদন সম্পর্কে বছরে অন্ততপক্ষে একবার স্থানীয়ভাবে পরিদর্শনপূর্বক পর্যালোচনা করবে এবং সরকারের (ভূমি মন্ত্রণালয় এবং মৎস্য পশুসম্পদ মন্ত্রণালয়) নিকট প্রতিবেদন দাখিল করবে।

(গ) হস্তান্তরিত জলমহাল সমূহের মেয়াদ উত্তীর্ণ হওয়ার পূর্বে সেগুলোর নবায়ন/পুনঃহস্তান্তরের বিষয়ে মতামত প্রদান করবে।

(ঘ) কমিটি জলমহাল সমূহের ব্যবস্থাপনা ও উন্নয়ন সংক্রান্ত প্রাসঙ্গিক বিষয়ে দৃষ্টি আকর্ষন করে সরকারের (ভূমি মন্ত্রণালয় এবং মৎস্য পশুসম্পদ মন্ত্রণালয়) নিকট সুপারিশসহ প্রস্তাব পেশ করবে।

(ঙ) কমিটির সদস্যগণ প্রতি ছয় মাসে অন্ততঃ একবার বৈঠকে মিলিত হবে।

প্রথম পক্ষ

সচিব ২৬/০৫/২০১৫
ভূমি মন্ত্রণালয়
অথবা
ক্ষমতাপ্রাপ্ত প্রতিনিধি
মোঃ জেমুর রহমান
যুগ্ম-সচিব (প্রশাসন)
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার।

দ্বিতীয় পক্ষ

সচিব ২৬/০৫/১৫
মৎস্য পশুসম্পদ মন্ত্রণালয়
অথবা
ক্ষমতাপ্রাপ্ত প্রতিনিধি
মোঃ এস ইব্রাহিম হোসেন
যুগ্ম-সচিব
মৎস্য ও পশু সম্পদ মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

সাক্ষীগণের স্বাক্ষর

১। এ.কে.এম. সালাহউদ্দিন আহমেদ
উপ-সচিব (প্রশাসন)
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

২। মোঃ ফরহাদ হোসেন
উপসচিব
মৎস্য ও পশু সম্পদ মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

২৬/০৫/১৫

বদরুদ্দিন আহমদ
সহকারী সচিব
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

২৬/০৫/১৫

মৎস্য ও পশুসম্পদ মন্ত্রণালয়াধীন মাছ প্রকল্পের আওতায় সমাজভিত্তিক জলাভূমি ব্যবস্থাপনার নিমিত্তে বাতিল হস্তান্তরিত জলমহালের তালিকা :

ক্রমিক নং	জলমহালের নাম	আয়তন (একর)	জেলা	উপজেলা	বর্তমান লীজ শেষ হওয়ার তারিখ
১।	বড়খাঁইয়া খাল	১০.৫৪	মৌলভীবাজার	শ্রীমঙ্গল	পতিত খাস জমি। প্রকল্পের অধীনে উন্নয়নকৃত। জেলা প্রশাসক বিল হিসাবে ঘোষণা প্রদানপূর্বক ১৪১০ হইতে ইজারা দিবেন।
২।	বড়খাঁইয়া (কাকলাদি)	১০.২৫	"	"	
৩।	সাগের জোয়া (আশনীকেড়ী সহ)	৬১৮.৮০	"	"	৩১শে চৈত্র ১৪০৯
৪।	শিপলী	৩৫.২৫	"	"	"
৫।	রানাই	৬.২৪	"	মৌলভীবাজার সদর	৩১শে চৈত্র ১৪১০ বাং
৬।	মোরি	১১.৯৮	"	"	"
৭।	বাইয়া	৯.০০	"	"	"

২৭/০৫/০৩

মোঃ ইউ. [illegible]
যুগ্ম-সচিব (প্রশাসন)
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার।

২৭/০৫/০৩
মোঃ এনামুল ইসলাম মোল্লা
যুগ্ম-সচিব
মৎস্য ও পশু সম্পদ মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

সত্যায়িত
২৫/০৫/০৩
বদরুদ্দিন আহমেদ
সহকারী সচিব
ভূমি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
ভূমি মন্ত্রণালয়
শাখা নং-৭

স্মারক নং-ভূমি/শা-৭/বিবিধ-১৯/৯৯/৫০৫/(৩) তারিখ : ২৬/০৭/২০০১ ইং।

প্রাপক : জেলা প্রশাসক,
..... জেলা।

বিষয় : MACH প্রকল্পের অন্যতম নির্বাচিত ১১টি জলাশয়ের ব্যবস্থাপনা প্রসঙ্গে।

উপরোক্ত বিষয়ে সমঝোতা স্মারকটি ভূমি মন্ত্রণালয় এবং মৎস্য ও পশুসম্পদ মন্ত্রণালয়ের মধ্যে বিগত ১৫/০৩/২০০১ ইং তারিখে স্বাক্ষরিত হয়েছে। সমঝোতা স্মারকের প্রেক্ষিতে উক্ত জলাশয়সমূহ MACH প্রকল্পে ন্যস্ত করার সমঝোতা স্মারক মোতাবেক জলাশয়গুলির ব্যবস্থাপনা হস্তান্তরের পরবর্তী কার্যক্রম গ্রহণের জন্য নির্দেশক্রমে এতদ্‌সঙ্গে সমঝোতা স্মারকের অনুলিপি প্রেরণ করা হলো।

সংযুক্তি : বর্ণনামোতাবেক।

(মোঃ মুস্তাফিজুর রহমান)
সিনিয়র সহকারী সচিব

স্মারক নং-ভূমি/শা-৭/বিবিধ-১৯/৯৯/৫০৫/১ তারিখ : ২৬/০৭/২০০১ ইং।

সদয় অবগতির জন্য অনুলিপি প্রেরিত হলো :-

১। সচিব, মৎস্য ও পশু সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
(দৃঃ আঃ- সিনিয়র সহকারী সচিব, মৎস্য শাখা-৩)
- স্বাক্ষরিত সমঝোতা স্মারকের একটি কপি সংরক্ষণের জন্য এতদ্‌সঙ্গে প্রেরণ করা হলো।

(মোঃ মুস্তাফিজুর রহমান)
সিনিয়র সহকারী সচিব

১১/৫

মৎস্য ও পশু সম্পদ মন্ত্রণালয়াধীন MACH প্রকল্পের আওতায় সমাজ ভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার নিমিত্তে ১১টি জলমহালের ব্যবস্থাপনা হস্তান্তরকল্পে ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের মধ্যে সমঝোতা স্মারক

মৎস্য ও পশু সম্পদ মন্ত্রণালয় কর্তৃক গৃহীত উপরোক্ত প্রকল্প ব্যবস্থাপনার স্বার্থে নির্বাচিত ১১টি জলমহাল (তালিকা সংযুক্ত) মৎস্য ও পশু সম্পদ মন্ত্রণালয়ে ন্যস্ত করার লক্ষ্যে ২০০১ইং সালের তারিখ ১৮/০৩/২০০১ইং তারিখ রোজ বৃহস্পতিবার নিম্ন বর্ণিত শর্তসাপেক্ষে দুই পক্ষের মধ্যে সমঝোতা স্মারক স্বাক্ষরিত হয়।

পক্ষসমূহ

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের ভূমি মন্ত্রণালয়ের পক্ষ হতে গঠিত বা ক্ষমতাপ্রাপ্ত বৈধ প্রতিনিধি

----------প্রথম পক্ষ

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের মৎস্য ও পশুসম্পদ মন্ত্রণালয়ের পক্ষ হতে গঠিত বা ক্ষমতাপ্রাপ্ত বৈধ প্রতিনিধি

----------দ্বিতীয় পক্ষ

যেহেতু দেশের সকল সরকারী জলমহালের মালিকানা এবং কর্তৃত্ব ভূমি মন্ত্রণালয়ের (১ম পক্ষ) অধীন এবং যেহেতু মৎস্য ও পশুসম্পদ মন্ত্রণালয় (২য় পক্ষ) সরকারী জলমহালে MACH প্রকল্পের আওতায় নির্বাচিত ১১টি জলমহাল ব্যবস্থাপনার অধীনে ন্যস্ত করার লক্ষ্যে যেহেতু নিম্নবর্ণিত শর্তসাপেক্ষে প্রথম পক্ষ কর্তৃক দ্বিতীয় পক্ষকে নির্বাচিত রেকর্ডভুক্ত জলমহাল (বর্তমানে ইজারা মেয়াদ শেষে) সমাজ ভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার অধিকার প্রদান করা হল।

প্রথম পক্ষ ও দ্বিতীয় পক্ষ নিম্নবর্ণিত শর্তাবলীর ভিত্তিতে এই চুক্তিনামা সম্পাদন করিতেছে;

শর্তাবলী

১। রেকর্ডভুক্ত সরকারী জলমহালসমূহের মালিকানা প্রথম পক্ষ ভূমি মন্ত্রণালয়ের থাকবে এবং দ্বিতীয় পক্ষ মৎস্য ও পশুসম্পদ মন্ত্রণালয় নির্বাচিত জলমহালে আধুনিক প্রযুক্তি ভিত্তিক জৈবিক ব্যবস্থাপনা কার্যক্রম মুনাফাই সম্পদের জন্য বাস্তবায়ন করবে।

২। প্রথম পক্ষ সরকারী জলমহাল সমূহের মধ্য হতে নির্বাচিত উক্ত ১১টি জলমহাল আধুনিক প্রযুক্তিভিত্তিক জৈবিক ব্যবস্থাপনা ও উন্নয়নের নিমিত্তে দ্বিতীয় পক্ষ মৎস্য ও পশু সম্পদ মন্ত্রণালয়ে ১০ (দশ) বছরের জন্য ন্যস্ত করবে। প্রয়োজনে নবায়ন করতে পারবে।

৩। নির্বাচিত জলমহালসমূহের মধ্যে যেসব জলমহাল ইতোমধ্যে প্রথম পক্ষ কর্তৃক ইজারা দেয়া হয়েছে যেসব জলমহালের ইজারা মেয়াদ শেষ হওয়ার পর পুনরায় ইজারা দেয়া যাবে না। যেসব জলমহাল একপক্ষভাবে ইজারা দেয়া হয়েছে যেসব জলমহালের ইজারা মেয়াদ উত্তীর্ণ হওয়ার পরে উৎপাদন ভিত্তিক জৈবিক ব্যবস্থাপনার আওতায় হস্তান্তর করা হবে।

৪। প্রথম পক্ষ জলমহাল হস্তান্তরের পূর্বে সীমানা ও আয়তন নির্ধারণ করবে এবং দ্বিতীয় পক্ষ তা বুঝে নেবার পর জলমহালের পাড়সীমা আটুট রাখবে এবং তা সুচারুরূপে সংরক্ষণ করবে।

৫। দ্বিতীয় পক্ষ নির্বাচিত ১১টি জলমহালে মৎস্য সম্পদ সংরক্ষণ, মৎস্য উৎপাদন বৃদ্ধি ও জীববৈচিত্র রক্ষার উদ্দেশ্যে উপযোগী মুক্ত জলমহালে সম্পূর্ণ বা অংশ বিশেষ সংরক্ষিত মৎস্য অভয়াশ্রম গড়ে তুলবে এবং এ সংরক্ষিত মৎস্য অভয়াশ্রম ইজারা দিতে পারবে না। মৎস্য মন্ত্রণালয় ইউ এস এইড -এর সহায়তায় সমাজভিত্তিক মৎস্যজীবি সংগঠন ও স্থানীয় প্রশাসন সমূহের মাধ্যমে নির্বাচিত জলমহালে সমূহের মনিটরিং ও ব্যবস্থাপনার দায়িত্ব পালন করবে।

৬। দ্বিতীয় পক্ষ যেসব জলমহালে জৈবিক ব্যবস্থাপনার উৎপাদন কার্যক্রম গ্রহণ করবে সেসব জলমহালের মুনাফাভোগী মৎস্যজীবি দল, সমাজভিত্তিক মৎস্যজীবি সংগঠন এবং মৎস্যজীবি পেশার সাথে জড়িত বেসরকারী উদ্যোক্তাদের কারিগরী ও আর্থিক প্রস্তাবের ভিত্তিতে নিম্নবর্ণিত কমিটির মাধ্যমে প্রতি বছর

৩০শে চৈত্রের মধ্যে ইজারা প্রদান করবে। ২য় পক্ষ ইজারালব্ধ অর্থ "জলমহাল ও পুকুর ইজারা কোড নম্বর (১/৪৬৩৪/০০০০/১২৬১) ভূমি রাজস্ব জলমহাল খাতে আয়" খাতে ইজারার তারিখ হতে ৩০ (ত্রিশ) দিনের মধ্যে জমা দিবে এবং পরবর্তী প্রতি বছর ৩০শে চৈত্রের মধ্যে জমা দিবে। উল্লেখ্য যেসব জলমহাল ইজারাধীন ছিল না, কমিটি সেসব জলমহালের ইজারামূল্য নিকটবর্তী বন্দোবস্তকৃত জলমহালের ইজারা মূল্যের ভিত্তিতে নির্ধারণ করবে। যে কমিটির মাধ্যমে মূল্যায়ন করা হবে তার গঠন নিম্নরূপ :-

(১)	উপজেলা নির্বাহী অফিসার	-	সভাপতি
(২)	উপজেলা সমবায় কর্মকর্তা	-	সদস্য
(৩)	উপজেলা প্রকৌশলী	-	সদস্য
(৪)	উপজেলা কৃষি কর্মকর্তা	-	সদস্য
(৫)	উপজেলা পশু সম্পদ কর্মকর্তা	-	সদস্য
(৬)	সহকারী কমিশনার (ভূমি)	-	সদস্য
(৭)	সংশ্লিষ্ট ইউনিয়ন পরিষদ চেয়ারম্যান	-	সদস্য
(৮)	সংশ্লিষ্ট ওয়ার্ড কমিশনার/মেম্বার	-	সদস্য
(৯)	উপজেলা মৎস্য কর্মকর্তা	-	সদস্য-সচিব

৭। জলমহালের ইজারা মূল্য কোন অবস্থাতেই পূর্ববর্তী বছরের চেয়ে কম হবেনা। প্রচলিত নীতিমালা অনুযায়ী ১ম বছর পূর্ববর্তী ইজারা মূল্যের ২৫% উর্ধ্বে এবং পরবর্তী প্রতি বছর পূর্ববর্তী বছরের চেয়ে ১০% উর্ধ্বে ইজারা নবায়ন করতে হবে। ভবিষ্যতে বন্দোবস্ত নীতিমালার পরিবর্তন হলে উভয় পক্ষের সম্মতি সাপেক্ষে তা বাস্তবায়ন করতে হবে। প্রতিবছর ১৫ই বৈশাখের মধ্যে রেভিনিউ ডিপুটি কালেক্টর ঐ বছরের লীজভুক্ত সমুদয় অর্থ সরকারী খাতে জমা হওয়ার সর্বশেষ তথ্য সম্বলিত একটি প্রতিবেদন জেলা প্রশাসক ও সভাপতি, জেলা জলমহাল কমিটির নিকট দাখিল করবেন। প্রতিবেদন অনুযায়ী কোন জলমহালের ইজারা মূল্য বাদ অনাদায়ী থাকে তাহলে জেলা প্রশাসক ঐ জলমহালের ইজারা বাতিলের ব্যবস্থা নিবে।

৮। দ্বিতীয় পক্ষ জলমহালের মৎস্য সম্পদের সর্বোত্তম ও সর্বোৎকৃষ্টভাবে উন্নয়ন নিশ্চিত করবে। জলমহালের উৎপাদনশীলতা বৃদ্ধির নিমিত্তে জলমহাল সংস্কার ও উন্নয়ন করা যাবে। তবে জলমহালের প্রকৃতি পরিবর্তন বা খণ্ড খণ্ড করা যাবে না। জলমহালসমূহে মৎস্য সম্পদ উন্নয়নের লক্ষ্যে প্রয়োজনীয় অবকাঠামো নির্মাণ করা যাবে। প্রবাহমান জলমহাল সমূহে পানি প্রবাহ ও নৌ-চলাচলে ব্যাঘাত সৃষ্টি করতে পারে এমন কোন অবকাঠামো নির্মাণ করা যাবে না অথবা পানি দূষিতকরণসহ জনস্বাস্থ্য ও পরিবেশ হানিকর কোন কর্মকাণ্ড পরিচালনা করা যাবে না। কৃষি কাজের জন্য পানি ব্যবহার করা যাবে, তবে মৎস্য চাষ যাতে ব্যাহত না হয় সে বিষয়ে নিশ্চয়তা বিধান করতে হবে।

৯। বাস্তবতার নিরিখে ভূমি মন্ত্রণালয় (১ম পক্ষ) উন্নয়ন পরিকল্পনাধীন জলমহাল দশ বছরের জন্য লীজ দিতে সম্মত হলেও প্রকল্পের সাফল্যের তিন বছরের জন্য লীজ দেওয়া হয়। প্রথম তিন বছরের মৎস্য সম্পদ উন্নয়ন প্রচেষ্টা ও তার ফলাফল বিবেচনা করে যদি যুক্তি সঙ্গত বলে স্থিরকৃত হয় তাহলেই কেবল লীজ গ্রহীতা (২য় পক্ষ) কে আরও তিন বছরের জন্য এবং পরবর্তীতে একই পদ্ধতিতে লীজ দেওয়া হবে। এই পদ্ধতি অনুসরণের ফলে লীজ গ্রহীতা কর্তৃক সঠিক পরিপালন ও রাজস্ব আদায় নিশ্চিত করা সহজতর হবে। এ বিষয়ে ও হস্তান্তর প্রক্রিয়ায় কোনরূপ জটিলতার সৃষ্টি হলে প্রথম পক্ষ দ্বিতীয় পক্ষের সাথে আলোচনার মাধ্যমে যৌথভাবে সিদ্ধান্ত নিবে।

১০। প্রথম পক্ষ জলাশয়সমূহ সময় সময় পরিদর্শন করতে পারবে, দ্বিতীয় পক্ষ এ ব্যাপারে প্রথম পক্ষকে সর্বাত্মক সহায়তা প্রদান করবে।

১১। প্রয়োজনবোধে চুক্তির মেয়াদকালীন সময়ে উভয় পক্ষের সম্মতিক্রমে এ সমঝোতা স্মারক পরিবর্তন, পরিবর্ধন ও সংশোধন করা যাবে।

১২। ২ নং শর্তমতে হস্তান্তরিত জলমহালসমূহ প্রযুক্তিভিত্তিক হিসাব ব্যবস্থাপনা কার্যক্রম

সঠিকভাবে বাস্তবায়িত হওয়ার বিষয়ে মনিটরিং করার জন্য নিম্নোক্তভাবে গঠিত মনিটরিং কমিটি কাজ করবে :

(১)	যুগ্ম-সচিব(প্রঃ), ভূমি মন্ত্রণালয়	-	আহবায়ক
(২)	মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের একজন প্রতিনিধি (উপ-সচিবের নীচে নয়)	-	সদস্য
(৩)	উপ-সচিব(সাধারণ), ভূমি মন্ত্রণালয়	-	সদস্য
(৪)	কৃষি মন্ত্রণালয়ের একজন প্রতিনিধি (উপ-সচিবের নীচে নয়)	-	সদস্য
(৫)	পরিবেশ ও বন মন্ত্রণালয়ের একজন প্রতিনিধি (উপ-সচিবের নীচে নয়)	-	সদস্য
(৬)	চিফ অব পার্টি, MACH প্রকল্প	-	সদস্য

(খ) [illegible] - সদস্য

(গ) সিনিয়র সহকারী সচিব (আইসিটি), ভূমি মন্ত্রণালয় - সদস্য-সচিব

কমিটির কার্যপরিধি

(ক) মনিটরিং কমিটি নিবন্ধিত জলমহাল সমূহের হস্তান্তর সম্পর্কিতভাবে সমস্যা হলে তা পর্যালোচনা করবে এবং নির্ধারিত সরকারের (ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়) নিকট রিপোর্ট দাখিল করবে।

(খ) কমিটি মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের হস্তান্তরিত জলমহাল সমূহের উন্নয়ন কার্যক্রম ও কর্ম সম্পাদন (পারফরমেন্স) বিশেষ করে জলমহালের আয় ও উৎপাদন সম্পর্কে সংশ্লিষ্ট বছরে একবার স্থানীয়ভাবে পরিদর্শন পূর্বক পর্যালোচনা করবে এবং সরকারের (ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়) নিকট প্রতিবেদন দাখিল করবে।

(গ) হস্তান্তরিত জলমহাল সমূহের যেসব উন্নয়ন হওয়ার পূর্বে প্রেক্ষাপটের সমস্যা/পুনর্বিবেচনার বিষয়ে মতামত প্রদান করবে।

(ঘ) কমিটি হস্তান্তরিত জলমহাল সমূহের ব্যবস্থাপনা ও উন্নয়ন সংক্রান্ত প্রাসঙ্গিক বিষয়ে দৃষ্টি আকর্ষণ করে সরকারের (ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়) নিকট সুপারিশসহ প্রস্তাব পেশ করবে।

(ঙ) কমিটির সদস্যগণ পরিচয় পত্র সাথে আনবেন এবং এর কার্যাবলী বৈধকে নির্বাহিত হবেন।

প্রথম পক্ষ

সচিব পক্ষে
ভূমি মন্ত্রণালয়

২য় পক্ষ

সচিব পক্ষে 25/10/2000
মৎস্য ও পশু সম্পদ মন্ত্রণালয়
(মোহাম্মদ শাহ্ আলম)
যুগ্মসচিব
মৎস্য ও পশু সম্পদ মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

সাক্ষীগণের স্বাক্ষর :

১। 25/10/2000
[illegible]

২। [illegible]

৩। [illegible]

মৎস্য ও পশু সম্পদ মন্ত্রণালয়ধীন MACH প্রকল্পের আওতায় সমাজভিত্তিক জলাভূমি ব্যবস্থাপনায় নিমিত্তে ১১টি হস্তান্তরিত জলমালের তালিকা

হস্তান্তরের তারিখঃ ....১৫/০৩/২০০১ ইং .

ক্রমিক নং	জলমালের নাম	আয়তন(একর)	জেলার নাম	থানার নাম
০১।	বল্লা বিল	৭০.৭৩	ঝিনাইদাহবাজার	শ্রীমঙ্গল
০২।	আগারি বিল	৭২.৮৬	ঐ	ঐ
০৩।	কদুরা বিল	.৪০	ঐ	ঐ
০৪।	মুকুস বিল	৩০.৯৮	গাজীপুর	
০৫।	কালিয়াদোহা বিল	১৫.২২	ঐ	
০৬।	অজুরা বিল	১০.০৭	ঐ	
০৭।	আওরা যাওরা বিল	৩৪.১২	দেরপুর	সদর
০৮।	কেওয়াটা বিল	৯৯২	ঐ	সদর
০৯।	ধলি বিল	৩৪.০০	ঐ	ঝিনাইগাতী
১০।	বাইলা বিল	২০.০০	ঐ	ঝিনাইগাতী
১১।	বাইলসা বিল	৭০৪	ঐ	ঝিনাইগাতী

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
ভূমি মন্ত্রণালয়
শাখা-৭

স্মারক নং- ভূঃমঃ/শা-৭/বিবিধ-৪০/২০০২- তারিখ ঃ ০৪/০৮/২০০৩ খৃঃ।

বিষয় ঃ মৎস্য পশু সম্পদ মন্ত্রণালয়াধীন মাচ প্রকল্পের আওতায় সমাজভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার নিমিত্তে ১১টি জলমহালের ব্যবস্থাপনা হস্তান্তরকল্পে ভূমি মন্ত্রণালয় এবং মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের মধ্যে বিগত ১৫/৩/২০০১ তারিখে স্বাক্ষরিত সমঝোতা স্মারকের আংশিক সংশোধনী প্রসংগে।

মৎস্য ও পশু সম্পদ মন্ত্রণালয়ের ১৮/৩/২০০৩ ইং তারিখের পত্র নং-মপশ/ম-৩ বিবিধ-৫/১৮/১৬৮ এর সূত্রে আদিষ্ট হয়ে জানাচ্ছি যে ভূমি মন্ত্রণালয় বিবেচ্য বিষয়গুলির উপর সিদ্ধান্ত গ্রহণ করেছেন যে মৎস্য ও পশু সম্পদ মন্ত্রণালয়াধীন 'মাচ' প্রকল্পের আওতায় সমাজ ভিত্তিক জলাভূমি সম্পদ ব্যবস্থাপনার নিমিত্তে বিগত ১৫/৩/২০০১ইং তারিখে ভূমি মন্ত্রণালয়ের সহিত স্বাক্ষরিত সমঝোতা স্মারকটি উভয় পক্ষের সম্মতিক্রমে নিম্নলিখিতরূপে সংশোধিত করা হইল ঃ

(ক) ১৫/০৩/২০০১ ইং তারিখে স্বাক্ষরিত মুল সমঝোতা স্মারকের সংলগ্নীতে মৌলভীবাজার জেলার শ্রীমংগলস্থ হাইল হাওড়ের সানন্দা, জেঠুয়া বিল অন্তর্ভূক্ত করা হইল।

(খ) ২৬/৫/০৩ ইং তারিখের সমঝোতা স্মারকের অনুচ্ছেদ ৬ ও ৭, ১৫/০৩/২০০১ইং তারিখের মূল সমঝোতা স্মারকের ৬ষ্ঠ ও ৭ম অনুচ্ছেদের স্থলে প্রতিস্থাপিত হইল।

স্বা:
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোনঃ ৭১৬১১৭৫

সচিব,
মৎস্য ও পশু সম্পদ মন্ত্রণালয়,
বাংলাদেশ সচিবালয়,
ঢাকা।
(দৃঃআঃ সিঃসহকারী সচিব, মৎস্য শাখা-৩)।

স্মারক নং- ভূঃমঃ/শা-৭/বিবিধ-৪০/২০০২- ৪২৮/১(৪) তারিখ ঃ ০৪/০৮/২০০৩ খৃঃ।

সদয় অবগতির জন্য অনুলিপি প্রেরণ করা হলো ঃ-

১। জেলা প্রশাসক, মৌলভীবাজার/শেরপুর/গাজীপুর,

২। চীফ অফ পার্টি, মাচ প্রকল্প, বাড়ী নং-২, রোড নং-২৩/এ, গুলশান-১,ঢাকা।

০৪/০৮/০৩
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোনঃ ৭১৬১১৭৫

213

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
ভূমি মন্ত্রণালয়
শাখা-৭

স্মারক নং- ভূমঃম/শা-৭/বিবিধ-৪০/২০০২- তারিখ : ০১/০৭/২০০৩ খৃঃ।

প্রাপক : জেলা প্রশাসক,
মৌলভীবাজার/শেরপুর/গাজীপুর।

বিষয় : অভয়াশ্রম ঘোষনা প্রসংগে।

উপর্যুক্ত বিষয়ের বরাতে জানানো যাচ্ছে যে, মৎস্য প্রকল্পের আওতাধীন এ যাবৎ স্থাপিত মৎস্য অভয়াশ্রমগুলো পুরো প্রকল্প এলাকাকে প্রভাবিত করার জন্য যথেষ্ট নয় বিধায় উক্ত প্রকল্পভূক্ত ৩ (তিন)টি এলাকায় যথা মৌলভীবাজার জেলার শ্রীমংগল, গাজীপুর জেলার কালিয়াকৈর এবং শেরপুর জেলার ঝিনাইগাতীতে অবস্থিত বিল, বিলের অংশ, নদীর কুম এবং ফুরাকে কতিপয় শর্ত সাপেক্ষে স্থায়ী মৎস্য অভয়াশ্রম ঘোষনা করতঃ সরকারী রেকর্ডের অন্তর্ভূক্ত করার জন্য সরকার সিদ্ধান্ত গ্রহন করেছে।

২। উপরোক্ত সিদ্ধান্ত মোতাবেক যে সকল বিল, বিলের অংশ, নদীর কুম/ফুরাকে অভয়াশ্রম ঘোষনা করার সিদ্ধান্ত গ্রহন করা হয়েছে। সেগুলোর বিস্তারিত তপসিল নিম্নে পেশ করা হলো:-

সম্পূর্ন বিল

(ক) যাদুরিয়া বিল (হাইল হাওড়) আয়তন-১০০.৫০ একর। আর,এস দাগ নং-৯, মৌজা-হাবিবপুর, উপজেলা-শ্রীমংগল, জেলা-মৌলভীবাজার।

(খ) চাপরা মাওরা বিল (হাইল হাওড়) আয়তন ২১.৮৮ একর (৪৭৭, ৪৭৮ নং দাগে ৩.৯৬ একর এবং ৪৯২ নং দাগে ১৭.৯২ একর) মৌজা-হাবিবপুর, উপজেলা-শ্রীমংগল, জেলা-মৌলভীবাজার।

বিলের অংশ

(গ) মাকশ বিলের সোয়াখোলা-ধলিজাহা, আয়তন-২.২৪ একর, আর, এস দাগ নং-৩৮০২, মৌজা-সাটুরিয়া, সোলাহাটি, উপজেলা-কালিয়াকৈর, জেলা-গাজীপুর।

(ঘ) আউলা বিলের বারোজাহা আয়তন-৪.৪৪ একর, আর,এস দাগ নং-১৪৩, বড় গবিন্দপুর মৌজা, উপজেলা-কালিয়াকৈর, জেলা-গাজীপুর।

নদীর কুম/ফুরা

(ঙ) মালিজি নদীর খেয়ার কুম, ২৫৫৬, ২৫৫৭, ২৫৫৮, ২৫৫৯, ২৫৬৫, ২৫৭৭, ২৫৭৮, ২৫৭৯ নং দাগের অংশ, (উক্ত স্থান হতে ২০০ মিটার উজান এবং ২০০ মিটার ভাটিস্থান পর্যন্ত) মৌজা মালিজিকান্দা, উপজেলা-ঝিনাইগাতী, জেলা-শেরপুর।

(চ) কালিয়াকৈর উপজেলার তুরাগ এবং বানশি নদীর কুম।

(১) গলাটিপা কুম (আর,এস দাগ নং-২২৩৩) (কুমের ২০০ মিটার উজান এবং ২০০ মিটার ভাটি স্থান পর্যন্ত) মৌজা-বোয়ালী, কালিয়াকৈর, গাজীপুর।
(২) লালখার কুম (আর,এস দাগ নং-৬৭০) (২০০ মিটার উজান ও ২০০ মিটার ভাটি স্থান পর্যন্ত)

(৩) গাবতলী এবং সৈয়দপুর কুম (আর এস প্লট নং-১) (কুমের ২০০ মিটার উজার ও ২০০ মিটার ভাটি স্থান পর্যন্ত) মৌজা-শক্তিপুর, এস,এ দাগ নং-১২০, মৌজা-গাবতলী, কালিয়াকৈর, জেলা-গাজীপুর।

৩। ঢাপড়া মাওরা এবং যাদুরিয়া বিল দুটি বর্তমান ইজারা মেয়াদ কাল শেষ হওয়ার পর মাচ প্রকল্পের সংগঠনের নিকট নামমাত্র মূল্যে ইজারা প্রদান করতে হবে।

৪। নদীর অংশ এবং জলাভূমিগুলি নামমাত্র খাজনা (নদীর ক্ষেত্রে বাৎসরিক ১০১/- (একশত এক) টাকা এবং বিলের ক্ষেত্রে বাৎসরিক ৫০১/- (পাঁচশত এক) টাকা খাজনায় কেবলমাত্র সংরক্ষণ ও রক্ষনা বেক্ষনের জন্য মাচ প্রকল্প দ্বারা সংঘটিত সম্পদ ব্যবস্থাপনা সংগঠনের জন্য লীজ প্রদান করা যাবে। এ পদক্ষেপ স্থানীয়ভাবে সংগঠনগুলোকে সংরক্ষনের অধিকার প্রদান করবে।

৫। কোন সংগঠন সংরক্ষন ও রক্ষনা বেক্ষনে ব্যর্থ হলে সংশ্লিষ্ট সংরক্ষিত জলাভূমি সরকারে প্রত্যাবর্তিত হবে।

৬। সংশ্লিষ্ট উপজেলা নির্বাহী অফিসারের নেতৃত্বে উপজেলা পর্যায়ে গঠিত জলাভূমি মূল্য নির্ধারন কমিটি এ কার্যক্রম তদারকি করবে এবং জেলা প্রশাসকের মাধ্যমে অত্র মন্ত্রণালয়কে অবহিত রাখবে।

উপরোক্ত সিদ্ধান্তের আলোকে আইনানুগ প্রয়োজনীয় ব্যবস্থা গ্রহনের জন্য নির্দেশক্রমে অনুরোধ করা হলো।

স্বা:
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোনঃ ৭১৬১১৭৫

স্মারক নং-ভূম/শা-৭-বিবিধ-৪০/২০০২/ ৬৭৬ /১(৩) তারিখ : ০৬/৭/২০০৩ইং

অনুলিপি সদয় অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহনের জন্য প্রেরন করা হলো :-

১। সচিব, মৎস্য ও পশু সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
(দৃঃআঃ জনাব মোঃ মজরুল ইসলাম খান, সিনিয়র সহকারী সচিব, মৎস্য শাখা-৩)।

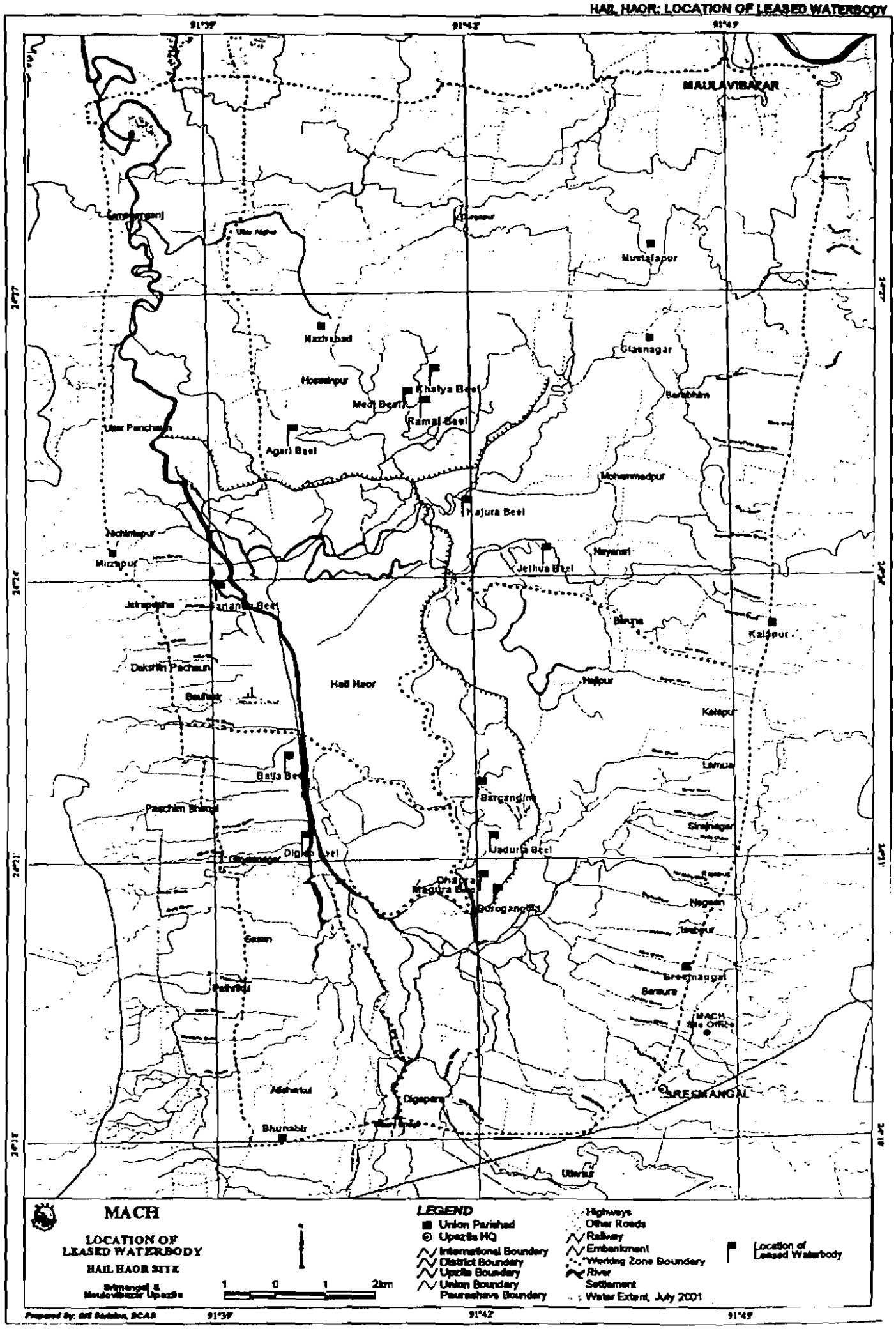
২। Chief of Party, MACH Project, Bangladesh Office, House No.2 (4th floor), Road No.33/A, Gulshan, Dhaka-1212.

৩। প্রকল্প পরিচালক, মাচ কার্যক্রম, বিনিয়োগ সহায়তা প্রকল্প, বাড়ী নং-২, রোড নং-২৩/এ, গুলশান-১, ঢাকা-১২১২।

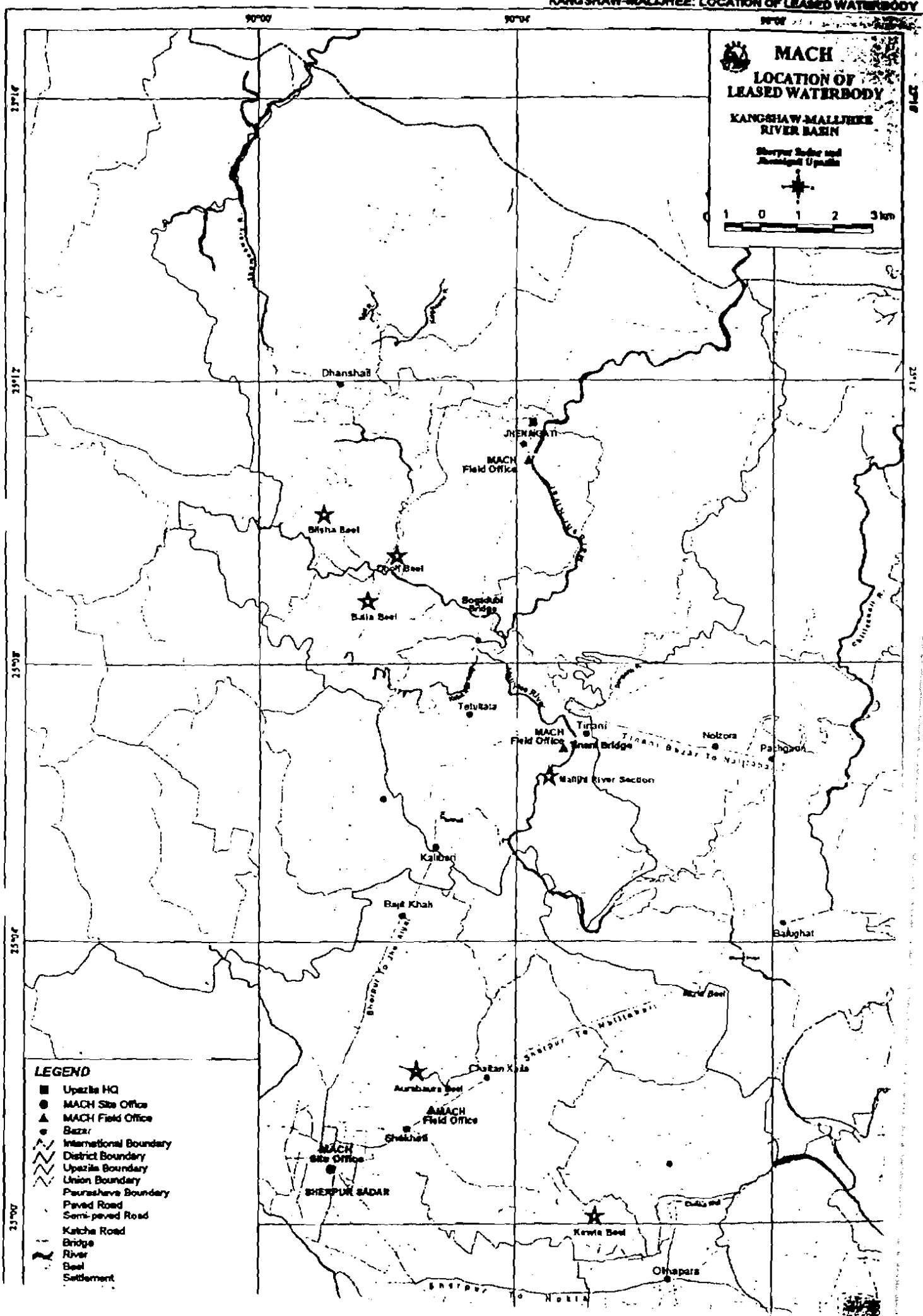
০৭/০৭/০৩
(বদরুদ্দিন আহমেদ)
সহকারী সচিব
ফোনঃ ৭১৬১১৭৫

০২/৭/২০০৩

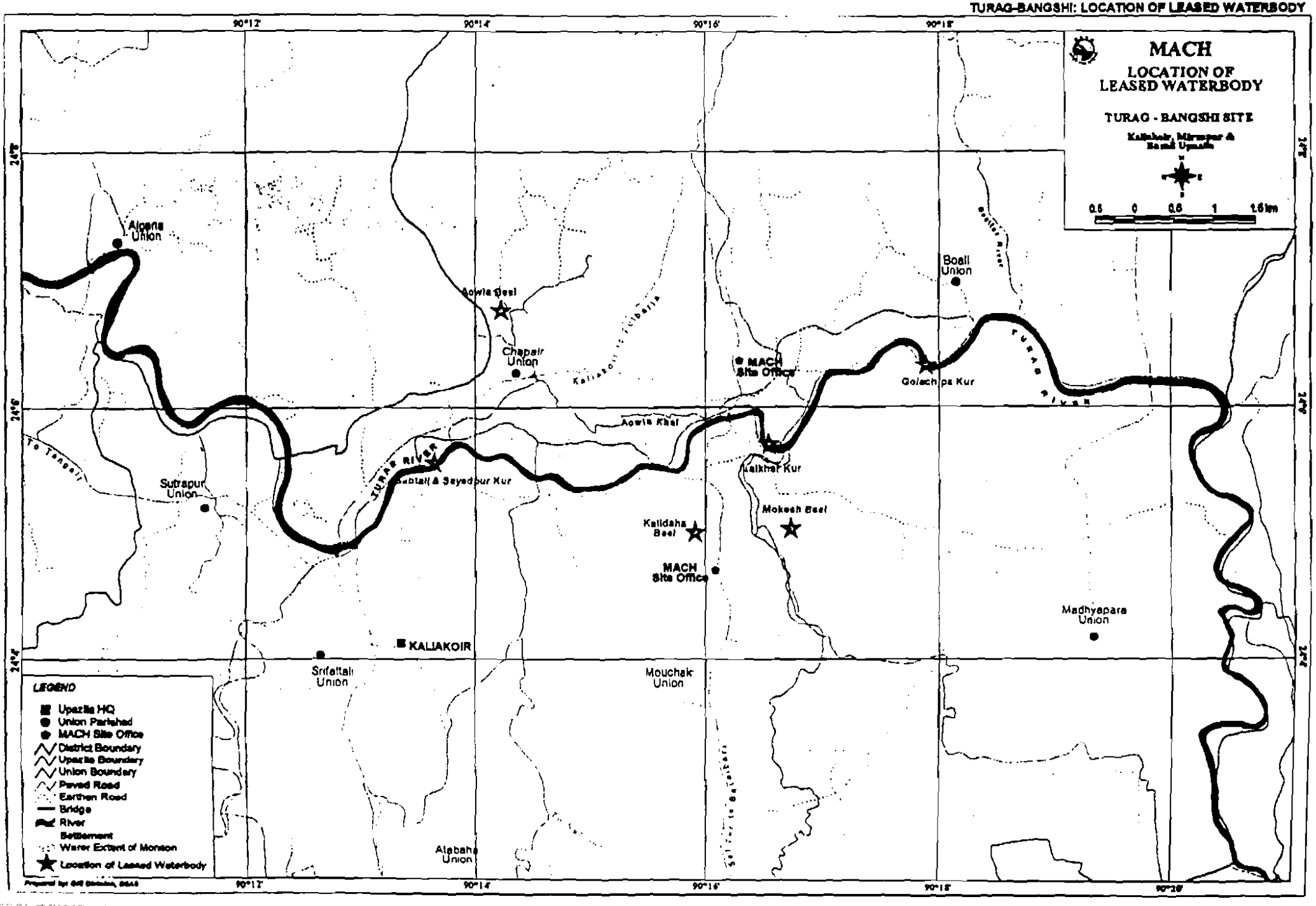
HAIL HAOR: LOCATION OF LEASED WATERBODY



KANGSHAW-MALLIHEE: LOCATION OF LEASED WATERBODY



TURAG-BANGSHI: LOCATION OF LEASED WATERBODY



Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.3.b: Number of communities adopting two or more of the following key regulations in target areas:

- Restrictions on the use of inappropriate fishing gear
- Restrictions on the fishing season and harvesting of fish fry
- Restrictions on the area of fishing

October 2003

Winrock International

CNRS

Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.3: Select Policies Implemented that Support IRs 1 and 2

Indicator 6.3b: Number of communities adopting two or more of the following key regulations in target areas:

- Restrictions on the use of inappropriate fishing gear
- Restrictions on the fishing season & harvesting of fish fry and
- Restrictions on the area of fishing

A. Description

Precise Definition of Indicator: This indicator measures the number of target communities adopting select natural resources and best management practices and policies. Communities include all the people who directly and/or indirectly depend on the natural resources base, whose actions have an impact on the natural resources. To be counted a community must adopt at least two practices.

Unit of Measure: Number of communities

Disaggregate by: N/A

Justification/Management Utility: Indication of local level adoption of sustainable management of natural resources by the communities is a direct measure of policies implemented at the community level.

'lan for Data Collection

Data Collection Method: Direct enumeration by Winrock and partners

Method of Collection by USAID: Reports from Winrock

Data Source(s): Winrock and its partners

Frequency/ Timing of Data Collection: Annual

Estimated Cost of Collection: Nominal.

Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: none undertaken to date

Known Data Limitations (if any): maintenance of restrictions, once imposed, will be crucial.

Actions Taken or Planned to Address Data Limitations: Regular monitoring

Date of Future Data Quality Assessments: TBD

Procedures of Future Data Quality Assessments: TBD

D. Plan for Data Analysis, Reporting, and Review

Data analysis: SO team will review trends of adoption of the key regulations.

Presentation of Data: Table

r iew of Data: Semi-annual mission portfolio review, and regular implementation .nitoring.

Reporting Data: Internal mission report, R-4 and CBJ reports.

E. Other Notes:

Notes on the Baselines/Targets: Baseline was established in July/2001.

Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP

Comments: Community self-enforcement of best management practices is crucial to overall, long-term success. The communities must be fully aware of the practices most suitable for their areas and willing to enforce the regulations they agree to.

Unit of measure:		
Year	Planned	Actual
Baseline 2000		0
2001	50	60
2002	70	86
2003	76	103
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objective 6:
Indicator 6.3b: Number of communities adopting two or more of the following key regulations in target areas:

- Restrictions on the use of inappropriate fishing gear
- Restrictions on the fishing season & harvesting of fish fry and
- Restrictions on the area of fishing

Regulations adopted by the Community Organizations

The MACH project works with communities and local government to improve management over large areas of degraded or non-functional wetlands in Bangladesh. The community organizations are formed with all types of stakeholders including wetland resource users particularly the poor fishers. To ensure sustainable management of the wetland resources the community organizations adopt regulations in the areas under their management. The major regulations adopted by the communities are given below.

MACH has helped in the formation of more than 40 community based wetland/riparian/Doha/Kum resource management organizations in three MACH sites. The organizations have restricted the use of inappropriate fishing gears particularly the small mesh size of current *Jal* and have protected riparian areas.

The communities have adopted time closures for fishing during the critical pre-monsoon season for varying periods of up to three months. The time closure varied among the sites as there is a variation of the inundation period. In Hail Haor the time closure is typically for a period of three months from March to May while in the Turag – Bangshi and Kangsha Malihjee from April to June.

The communities have also instituted regulations on harvesting of fish fry within their management areas. The communities have monitored and regulated the destructive harvest of certain species that have schooling young. The communities with local government support are limiting small mesh gill nets according to the country-wide ban.

Communities through resource management organizations have adopted regulations preventing fishing in sanctuary areas and secured a minimum buffer of 200 ft around the beel sanctuary. This has been done to prevent the gill netting of species coming in and out of sanctuary areas. In the river sanctuary, the community has regulated fishing within the sanctuary and 200m on either side of the sanctuary.

Within the managed water bodies the communities have stopped fishing through de-watering in the dry season. The de-watering was particularly destructive as it claimed all species and generally all fish in an area.

In addition to the establishment of community regulations, MACH has promoted community re-introduction of threatened local species. The species re-introduced were selected by the community organizations. These species were historically present in the areas. The species of fish so far re-introduced are *meni, gazar, dsehi swarputi, pabda, kalibaus, fali and gainna.* The community organizations organize and participate in the re-introduction of lost fish species and then regulate and conserve these in the sanctuaries as well as in the areas under their management. The communities also announce widely and release those species during the months following their stocking if caught.

In the tables that follow the project has shown the number of villages/communities that are now practicing regulated fishing in their managed areas.

Regulations adopted by the Communities

Name of Community Organizations	Regulations adopted by the communities
Hail Haor	
1. Sananda RMO (4 villages: Mirjapur, Jatrapasha, Kashipur and South Pachuan)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Sananda RMO • Stop fishing in the specified 2-sanctuaries areas within the Sananda beels
2 Jethua RMO (6 villages: Ranguria,Ranavim,Bobasara, Mohammadpur, Nayanshree, and Boruna North)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears • Stop fry/brood fishing • Stop fishing through de-watering in the management areas under Jethua RMO • Conserve re- introduced species • Totally stop fishing in the sanctuaries areas within the Jethua beels
3. Balla RMO (3 villages: Gondhorbopur*, Vimshi and Vunabir*)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears like current jal and light fishing • Stop fry/brood fishing • Stop fishing through de-watering in the management areas under Balla RMO • Totally stop fishing in the sanctuaries areas within the Balla beels
4. Kazura RMO (2 villages: Anekelibuda and Anekeliboro)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Kazura RMO • Totally stop fishing in the sanctuaries areas within the Kazura beels
5. Agari RMO (3 villages: Atghor, Hossenpur and Manik Haor)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Agari RMO • Totally stop fishing in the sanctuaries areas within the Agari beels
6. Duamuria RMO (3 villages: Rustumpur, Badealisha* and East Laiyerkul)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Duamuria RMO • Totally stop fishing in the sanctuaries areas within the Duamuria

Name of Community Organizations	Regulations adopted by the communities
	beels
7. Baragangina RMO (3 villages: Hazipur, South Boruna, and Mid Boruna)	• Time closure (dry season – March-May) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Baragangina RMO • Totally stop fishing in the sanctuaries areas within the Baragangina beels/canals
8. Alia Chhara RMO (2 villages: Alisarkul and Badealisha*)	• Conservation of swamp & riparian plants • Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife
9. Joita Chhara RMO (2 villages: Shasan and Vunabir*)	• Conservation of swamp & riparian plants • Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife
10. Boula Chhara RMO (2 villages: Boulashir and Gondhorbopur*)	• Conservation of swamp & riparian plants • Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife
11. Jaag Chhara RMO (2 villages: Ishabpur and Naogaon)	• Conservation of swamp & riparian plants • Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife
12. Ful Chhara Committee (2 villages: Islampur, Amaratpur)	• Conservation of swamp & riparian plants • Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife
Sub-total:31 Villages	
Turag Bongshi	
1. Mokesh Beel RMO (16 villages: Kouchakuri, Amdoir, Sinaboho, Bashtali*, Saturia-solahati, Majukhan, Nagchala, Taltoli, Kaliadoha*, Boroibari*, Haturia Chala, Rangamati, Baganbor, Buluia, Kacharosh, and	• Time closure (dry season – March-May) for fishing • Stop partially use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Mokesh RMO • Totally stop fishing in the specified 9 small sanctuaries areas within the beel

Name of Community Organizations	Regulations adopted by the communities
Bangar Jangal)	• Conservation of riparian and swamp plants
2. Turag River RMO (17 villages: Galachipa, Boali, Modankhali, Kundagata, Oliarchala, Gapinpur, Boroibari*, Kaliadoha*, Dhighibari, Bashtali*, Gabtali, Syedpur, Namashulai, Kaliakoir, Sutrapur, Ragunathpur and Shailakhali)	• Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Totally stop fishing in the 3 nos. of specified sanctuaries areas within the river • Conservation of riparian and swamp plants
3. Alua RMO (6 villages: Madiashulai, Asharria Bari, Azgana, Kanchanpur, Rashidpur and Beelbaria)	• Time closure (dry season – April-June) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Stop fishing through de-watering in the management areas under Alua RMO • Totally stop fishing in the specified 5 sanctuaries areas within the beel • Conservation of riparian and swamp plants
Sub-total:36 Villages	
Kongshow Malijhee	
1. Kewta Beel RMO (7 villages: Pakuria, Tirchha, Bakar Kanda, Tilkandi (Tarakandi), Barogoria, Haora Nij and Surjadi uttor para)	• Time closure (dry season – April-June) for fishing • Stop partially use of destructive gears like current/katha jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Kewta beel RMO • Totally stop fishing in the sanctuaries areas within the Kewta beel • Conservation of riparian and swamp plants
2. Takimari-Dara Bashia RMO (5 villages: Jolgaon, Changuria, Baniapara, Malijhekanda and Hasligaon)	• Time closure (dry season – April-June) for fishing • Stop use of destructive gears like current/katha jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Takimari-Dara Bashia RMO • Totally stop fishing in the sanctuaries areas within the Takimari-Dara Bashia beel • Conservation of riparian and swamp plants
3. Dhali-Baila RMO (5 villages: Balia Chandi, Konagaon, Darikalinagar, Paikura and Sarikalinagar)	• Time closure (dry season – April-June) for fishing • Stop use of destructive gears like current/katha jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Dhali-Baila RMO • Totally stop fishing in the sanctuaries areas within the Dhali-Baila beel • Conservation of riparian and swamp plants
4. Bailsha RMO (3 villages: Kanduli,Dariar par and	• Time closure (dry season -April-June) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing

Name of Community Organizations	Regulations adopted by the communities
Bagervita)	• Conserve re- introduced species • Stop fishing through de-watering in the management areas under Bailsha RMO • Totally stop fishing in the sanctuaries areas within the Bailsha beel • Conservation of riparian and swamp plants
5. Kalaghosa-1 JRMO (2 villages: Kangsha and Gandhigaon)	• Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife • Conservation of riparian and swamp plants
6. Kalaghosa-2 JRMO (1 villages: Dhansail)	• Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife • Conservation of riparian and swamp plants
7. Nakshi JRMO (3 villages: Naokuchi, Deplai and Nunkhola)	• Maintenance of vegetation along the edge of chhara/jhara for reducing erosion • Periodical removal of silt from chhara to keep them open toward wetland • Protection of habitat for wildlife
8. Kur Committee (6 villages: Nakshi, Balurghate, Gaglajani, Shalchura, Gugra Kandi and Pepuleshar)	• Time closure (dry season – April-June) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Kur Committee • Totally stop fishing in the sanctuaries areas within the river
9. Nizla Beel Committee (2 villages: Chakpara and Gajaria)	• Time closure (dry season – April-June) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Nizla Beel Committee • Totally stop fishing in the sanctuaries areas within the Nizla beels
10. Chira Beel Committee (2 villages: Chak Andaria and Sutir Par)	• Time closure (dry season – April-June) for fishing • Stop use of destructive gears like current jal • Stop fry/brood fishing • Conserve re- introduced species • Stop fishing through de-watering in the management areas under Chira Beel Committee • Totally stop fishing in the sanctuaries areas within the Chira beels
Sub-total:36 Villages	
Total (three sites):103 Villages	

**Villages associated with more than one resource management areas.*

Number of Communities adopting two or more of the following key regulations in target area:

- Restrictions on the use of inappropriate fishing gears
- Restriction on fishing season and harvesting of fish fry and
- Restriction on the area of fishing

Name of the Villages and address	Name of the Resource Management Area	No. of Village	Population
	Hail Haor		
Mirjapur,Jatrapasha,Kashipur and South Pachuan	Sananda RMO	4	6080
Ranguria,Ranavim,Bobasara,Mohammadpur, Nayanshree, and Boruna North	Jethua RMO	6	5917
*Gondhorbopur, Vimshi and *Bhunabir	Balla RMO	3	6603
Anekelibuda and Anekeliboro	Kajura RMO	2	2997
Atghor, Hossenpur and Manik Haor	Agari RMO	3	3304
Rustumpur, *Badealisha and East Laiyerkul	Duamuria RMO	3	6176
Hazipur, South Boruna, and Mid Boruna	Baragangina RMO	3	5715
Alisarkul and *Badealisha	Alia Chhara RMO	2	3006
Shasan and *Bhunabir	Joita Chhara RMO	2	1077
Boulashir and *Gondhorbopur	Boula Chhara RMO	2	2740
Ishabpur and Naogaon	Jaag Chhara RMO	2	2480
Islampur, Amanatpur	Ful Chhara Committee	2	375
Total		31	46470
	Turag Bongshi		
Kouchakuri, Amdoir, Sinaboho, *Bashtali, Saturia-solahati, Majukhan, Nagchala, Taltoli, *Kaliadoha, *Boroibari, Haturia Chala, Rangamati, Bagambor, Buluia, Kacharosh, and Bangar Jangal	Mokesh Beel RMO	16	18096
Galachipa, Boali, Modankhali, Kundagata, Oliarchala, Gapinpur, *Boroibari, *Kaliadoha, Dhighibari, *Bashtali, Gabtali, Syedpur, Nama Ashulai, Kaliakoir, Sutrapur, Ragunathpur and Shailakhali	Turag River RMO	17	13135
Madiashulai, Asharria Bari, Azgana, Kanchanpur, Rashidpur and Beelbaria	Alua RMO	6	13342
Total		36	44573

Kongshow Malijhee			
Pakuria, Tirchha, Bakar Kanda, Tilkandi (Tarakandi), Barogoria, Haora Nij and Surjadi uttor para	Kewta Beel RMO	7	14520
Jolgaon, Changuria, Baniapara, Malijhekanda and Hasligaon	Takimari-Dara Bashia RMO	5	14250
Balia Chandi, Konagaon, Darikalinagar, Paikura and Sarikalinagar	Dhali-Baila RMO	5	9878
Kanduli,Daniar par and Bagervita	Bailsha RMO	3	6499
Kangsha and Gandhigaon	Kalaghosa-1 JRMO	2	5566
Dhansail	Kalaghosa-2 JRMO	1	5276
Naokuchi, Deplai and Nunkhola	Nakshi JRMO	3	5488
Nakshi, Balurghate, Gaglajani, Shalchura, Gugra Kandi and Pepuleshar	Kur Committee	6	15411
Chakpara and Gajaria	Nizla Beel Committee	2	2271
Chak Andaria and Sutir Par	Chira Beel Committee	2	4500
Total		36	83659
Total (three sites)		103	174,702

**Villages associated with more than one resource management areas. Population considered with concerned Beel RMOs total (103) villages stands on counted once only.*

Reference Indicators 6.3b

Communities adopting Fishing Regulations in Management Areas

Name of the Community	RMO take resolution regarding fishing regulations	Communities are aware about regulations	Reduce use of destructive fishing	Stop de-watering in the target areas	Stop fishing in the sanctuaries	Stop fish fry and brood catch	Periodical impose on fishing-breeding season
Hail Haor							
Sananda	√	√	√	√	√	√	√
Jethua	√	√	√	√	√	√	√
Balla	√	√	√	√	√	√	√
Kazura	√	√	√	√	√	√	√
Agari	√	√	√	√	√	√	√
Dumuria	√	√	√	√	√	√	√
Bargangina	√	√	√	√	√	√	√
Turag Bangshi							
Mokesh	√	√	√	√	√	√	√
Turag	√	√	√	√	√	√	√
Alua	√	√	√	√	√	√	√
K-M site							
Kewta	√	√	√	√	√	√	√
Takimari Darabashia	√	√	√	√	√	√	√
Dhali-Baila	√	√	√	√	√	√	√
Bailsha	√	√	√	√	√	√	√

Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Indicator 6.4a: Number of individuals reached by public awareness activities

October 2003

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Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.4: Public Awareness of Key Issues Increased

Indicator 6.4a: Number of individuals reached by public awareness activities

A. Description

Precise Definition of Indicator: This is a process indicator that will record the number of people attending or participating in selected awareness generation activities. Public awareness activities include community training activities, attendance at MACH-sponsored cultural events (e.g., village theatre) with environmental messages and similar events.
Unit of Measure: Number of persons
Disaggregate by: N/A
Justification/Management Utility: This is an output indicator that will be measured over the life of the SO. Its limitations are well understood. This will be augmented by a future indicator to measure impact or changed behavior.

B. Plan for Data Collection

Data Collection Method: Counting of participants in the meetings by Winrock and partners.
Data Source(s): Winrock and its partners.
Method of Collection by USAID: Reports from Winrock
Timing/Frequency of Data Collection: Semi-annual
Estimated Cost of Collection: Nominal.
Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues

Date of Initial Data Quality Assessment: none undertaken to date
Known Data Limitations (if any): does not measure real impact Actions Taken or Planned to Address Data Limitations: none planned for this specific indicator
Date of Future Data Quality Assessments: none planned
Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review

Data analysis: N/A
Presentation of Data: Table
Review of Data: Semi-annual mission portfolio review, R4 review, and individual review with recipient.
Reporting Data: Internal mission report, R-4 report and CBJ report.

E. Other Notes:

Notes on the Baselines/Targets: Baseline was established in March/2000. The figure shown for 2002 actual in this report differ from the May 2003 report. The figure reported in the May report represented a figure that was only through June of 2002. This figure was mistakenly carried forward into the May 2003 reporting. The figure shown here is the actual for the entire year through Dec 2002.
Location of Data Storage: P:\MissionSharable\EGFEpub\Environment\PMP
Comments: This indicator, designed as a proxy for public awareness, will need further refinement. We expect this indicator to be complimented by: a) implementers' information via project activities; and b) a rapid appraisal or a sample survey to examine the affect of public policy awareness activities on the objectives outlined in the results framework. In addition, by developing public awareness strategies, the program would like to determine which approaches are most successful in pilot activities, for replication in later stages.

Cumulative Unit of measure: Number of people

Year	Planned	Actual
Baseline	5,000	9,966
2000	20000	25,099
2001	50,000	82,815
2002	100,000	197,000
2003	125,000	306,448
2004		
2005		

This Sheet Last Updated On: 10/21/03

Strategic Objectives 6:
Indicator 6.4a: Number of individuals reached by public awareness activities

Public awareness of the decline and or change in status of their natural resources and their environment is an important first step on the road to improving the management through community-based organization and co-management solutions. The ultimate goal is to build locally a consensus on the issues and problems and then develop the capacity to conserve and maintain wetland resources for the continuous benefit of the poor. MACH has taken many steps at the local level to achieve the increased awareness of the wetland issues. The major activities and awareness program tools of MACH are described below.

1. Project Introductory Meetings: Project introductory meetings were done at different levels during the inception of the project. These meetings were conducted at the Upazila, Union, Village and Para level. The objectives were to generate awareness in the communities about their local wetland including its value and function. These meetings also provided the opportunity to open up discussion on the environment and related issues. It provided for discussion of the problems and how they could address them with the support of the project. This introductory meeting is normally a full day program and depending on the location there were anywhere from 30 to 200 people participating.

2. Uthan Baithak (small meetings in village courtyards): These are small, informal but effective meetings conducted to further explain the resource situation in relation to the livelihood of the people in the village. The individuals in the Uthan Baithak are encouraged to discuss environmental problems and ways that a sustainable resource management solution can be put in place. During these meetings the project objectives, approach and their role is further explained. They are also encouraged to participate in the community-based activities. Normally 10 to 30 people participate in the Uthan Baithak.

3. Knowledge Sharing with NGOs and Local Elites: Local NGOs and elites are invited to share and disseminate local issues, project concept and activities. Ten to 15 persons participate in these sorts of meetings.

4. Village Drama: A very effective awareness tool has been the MACH village environmental/wetland drama. These dramas or village theatre has generated very wide awareness about wetlands, the status of the fishery within the wetland and the problems and solutions recommended. With the drama the coverage and effectiveness is very high. MACH has been able to reach many thousands of people through this effective method. It is observed that about 300 to more than 1000 people can attend at a time. MACH has found the effect to be long lasting. Fishermen still talk about the items portrayed in the drama and it does have an impact on the individual resource user. Because of the strong and powerful message, resource users have a very high degree of probability of improving poor resource use practices.

5. Folk Songs (Baul songs): This is another popular media used in rural Bangladesh. The singer explains problems of the people and the resources and the linkages in a very emotional way. These "Baul" songs come up with ways of overcoming the problems of the wetlands and what will be the result if implemented properly. Normally 200 to 400 people participate in the singing functions.

6. Day Observance: Environment and related days are observed through special events/functions in all the 3 project sites. These observances have already sent awareness messages to thousands of school students in MACH project areas. Relevant environmental, natural resource and other relevant information are given through different functions during the "Rally", discussion, learning activity, drawing and quiz competition among students. Also folk songs, drama and other awareness activities are done in relation to the theme of the occasion. Depending on the type of activity, from 100 to more than 1000 people participate.

7. School Program: In selected schools MACH staff provide environmental and natural resource related education directly. So far 6 schools and 600 students are covered in MACH sites, and it is an expanding activity. Through this program the future generation of the country is reached and through them their parents are also reached.

8. Bill-Boards and Sign-Boards: Sign boards placed strategically around the resource area carry messages on resources, conservation and its need, how to stop destructive resource use activities. These are installed in public places (Hat, Bazar), roadside, and tea shops for example. These are for the wider public and have been found to be very useful.

9. Exhibitions: In different occasions exhibitions are organized at the Upazila and district levels where MACH Site Offices take part and make presentations giving a wider coverage to resource conservation and the methods. These are well-attended activities that last 3 to 7 days.

10. Through Resource User Groups (RUG): MACH RUG groups comprise 4,500 families that fish in the water of the wetlands being managed. These groups of poor fishermen receive weekly awareness briefings on improved fishing practices and the need for management planning for the maintaining of the fishery.

In addition to the above, MACH has been conducting a continual awareness campaign at the central government level which has resulted in some very significant policy changes particularly at the Ministry of Land. MACH has worked extremely hard at educating senior officials in government on the benefits of proper resource management through workshop and field visits for the officials. MACH has conducted awareness building field visits and made critical presentations seeking policy changes particularly with regard to land and water leasing policies. MACH through its awareness programs has achieved permanent sanctuary status for 8 water bodies in the three project sites. This is the first time ever that the Land Ministry has foregone revenue for a conservation measure.

MACH has also worked very hard and has through constant workshops, cross visits, special functions and Local Government Committee meetings been able to change the minds and convince local administrators of the need and value of community-based co-management of natural resources.

Awareness Program by MACH
Summary statement
Number of Participants of different Activities

Sl. No.	Activities/Tasks	HH Sites		TB Sites		KM Sites		All Total (3 Sites)	
		Caritas	CNRS	Caritas	CNRS	Caritas	CNRS	Caritas	CNRS
1.	Introductory meeting:								
	• Uthan boithak/Para	170(5,595)	118 (5,260)	176(4,009)	91 (3,659)	137(4,633)	272 (3,929)	483(14,237)	481 (12,848)
	• Village Meetings/Programs	-	141 (5,275)	14(2,969)	90 (5,548)	38(7,125)	162 (5,602)	52(10,094)	393 (16,425)
	• UP, Upazilla and District level meetings	3(1,950)	20 (456)	2(861)	13 (324)	6(4,500)	11 (507)	11(7,311)	44 (1,287)
2.	School level programs	-	5 (1,727)	-	1 (500)	-	2 (200)	-	8 (2,427)
3.	School level Class Session	-	-	-	226 (631)	-	58 (162)	-	284 (793)
4.	Day observance/Art & Quiz competition/Fish week (Fish Fortnight)/Field day	15(8,150)	16 (9,769)	4(2,481)	13 (7,145)	6(4,020)	13 (9,400)	25(14,651)	42 (26,314)
5.	Boul Song, Video Shows and community miking	29(21,921)	93 (24,974)	40(25,388)	40 (1,4017)	40(48,099)	38 (27,747)	109(95,408)	171 (66,738)
6.	Knowledge Sharing community level among GO/NGOs/workshop	-	18 (65)	-	25 (1,590)	-	2 (469)	-	45 (2,124)
7.	Village Level Meetings (Watershed Management)	-	77 (715)	-	-	-	-	-	77 (715)
8.	Exhibition in Fair	-	3 (14,445)	-	2 (5,738)	-	2 (14,893)	-	7 (35,076)
	Total	217(37,616)	491 (62,686)	236(35,708)	501(39,152)	227(68,377)	560 (62,909)	680(141,701)	1,552 (164,747)

Note: Number of participants is in parenthesis

Awareness Program by MACH-CNRS

Summary statement

Number of Participants of different Activities

Sl. No.	Activities/Tasks	HIII Sites		TB Sites		KM Sites		All Total (3 Sites)	
		Jan '03-Aug '03	Since inception Upto August'03	Jan '03-Aug '03	Since inception Upto August'03	Jan '03-Aug '03	Since inception Upto August'03	Jan '03-Aug '03	Since inception Upto August'03
1.	Introductory meeting:								
	• Uthan borthak/Para	33 (925)	118 (5,260)	10 (265)	91 (3,659)	75 (1,011)	272 (3,929)	118 (2,201)	481 (12,848)
	• Village Meeting	16 (465)	141 (5,275)	9 (660)	90 (5,548)	69 (1,552)	162 (5,602)	94 (2,677)	393 (16,425)
	• UP, Upazilla and District level meeting	3 (85)	20 (456)	2 (64)	13 (324)	3 (290)	11 (507)	8 (439)	44 (1,287)
2.	School level program	4 (552)	5 (1,727)	-	1 (500)	-	2 (200)	4 (552)	8 (2,427)
3.	School level Class Session	-	-	10 (253)	226 (631)	26 (155)	58 (162)	36 (408)	284 (793)
4.	Day observance/Art & Quiz competition/Fish week (Fish Fortnight)	4 (2,900)	16 (9,769)	3 (2,415)	13 (7,145)	2 (1,700)	13 (9,400)	9 (7,015)	42 (26,314)
5.	Boul Song, Video Shows and community miking	77 (8,993)*	93 (24,974)	25 (8,400)*	40 (1,4017)	21 (3,759)*	38 (27,747)	123 (21,152)	171 (66,738)
6.	Knowledge Sharing community level among GO/NGOs/workshop	-	18 (65)	14 (1,446)	25 (1,590)	2 (469)	2 (469)	16 (1,915)	45 (2,124)
7.	Village Level Meeting (Watershed Management)	9 (65)	77 (715)	-	-	-	-	9 (65)	77 (715)
8.	Exhibition in Fair	-	3 (14,445)	-	2 (5,738)	-	2 (14,893)	-	7 (35,076)
	Total	146 (13,985)	491 (62,686)	73 (13,503)	501(39,152)	198 (8,936)	560 (62,909)	417 (36,424)	1,552 (1,64,747)

Note. Number of participants is in parenthesis

* Only video show

Awareness Program by MACH-CARITAS

Summary statement

Number of Participants of different Activities

Sl. No.	Activities/Tasks	HH	TB	KM	All Sites
		Caritas	Caritas	Caritas	Caritas
1	Introductory meeting:				
	• Uthan boithak/Para	170(5,595)	176(4,009)	137(4,633)	483(14,237)
	• Village Meetings/Programs	-	14(2,969)	38(7,125)	52(10,094)
	• UP, Upazilla and District level meetings	3(1,950)	2(861)	6(4,500)	11(7,311)
2.	Day observance/Art & Quiz competition/Fish week (Fish Fortnight)/Field day	15(8,150)	4(2,481)	6(4,020)	25(14,651)
3	Boul Song, Video Shows and community miking	29(21,921)	40(25,388)	40(48,099)	109(95,408)
Total		217(37,616)	236(35,708)	227(68,377)	680(141,701)

Note: Number of participants is in parenthesis

Information on awareness raising campain
MACH project, Caritas .
Turag - Bongsi River Basin, Kaliakoir site

Reporting period : May, 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Union Parishad level program	16/05/99	Mouchak	461	
				461	

Reporting period : June 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	21/6/99	Gopinpur Majipara	20	
				20	

Reporting period : July 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	20/7/99	Sinabaho Madhapara	17	
2	Para level program	20/7/99	Sinabaho Dhakkhinpara	14	
3	Para level program	21/7/99	Sinabaho Paschimpara	21	
4	Para level program	24/7/99	Bastali Madhapara	18	
5	Para level program	25/7/99	Bastali Paschimpara	13	
	Para level program	26/7/99	Bastali Purbopara	16	
7	Para level program	31/7/99	Gopinpur Majipara	15	
8	Village level program	29/7/99	Sinabaho	545	
9	Village level program	3/7/1999	Haturiachala	650	
				1309	

Reporting period : August 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	22/8/99	Solahati Hindupara	25	
2	Para level program	23/8/99	Solahati Purbopara	19	
3	Para level program	25/8/99	Solahati Dhakkhinpara	24	
4	Para level program	28/8/99	Chouchakuri Uttarpara	22	
5	Para level program	29/8/99	Chouchakuri Dhakkhinpara	21	
6	Para level program	29/8/99	Chouchakuri Purbopara	23	
7	Village level program	21/8/99	Chouchakuri Village	560	
				694	

Reporting period : September 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	15/9/99	Bagambar Madhapara	14	
	Para level program	16/9/99	Bagambar Purbopara	24	
3	Para level program	18/9/99	Bagambar Paschimpara	21	
4	Para level program	20/09/99	Taltai	32	
				91	

Reporting period : October 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/10/1999	Haturiachala Vhuyapara	16	
2	Para level program	5/10/1999	Taltali Hindupara	23	
3	Para level program	6/10/1999	Taltali Madhapara	19	
4	Para level program	16/10/99	Haturiachala Vhuyapara	25	
5	Para level program	17/10/99	Haturiachala Uttarpara	17	
6	Para level program	22/10/99	Haturiachala Uttarpara	18	
7	Para level program	5/10/1999	Taltali Paschimpara	21	
8	Para level program	19/10/99	Amdair Jelapara	18	
9	Para level program	20/10/99	Amdair Dhakkhinpara	13	

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10	Para level program	21/10/99	Amdair Purbocara	20	
11	Para level program	19/10/99	Amdair Majpara	18	
12	Village level program	4/10/1999	Taltali	505	
				712	

Reporting period : November 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	8/11/1999	Ashariabari Jelapara	20	
2	Para level program	15/11/99	Ashariabari Jelapara	18	
3	Para level program	13/11/99	Vangar Jangal Jelapara	16	
4	Para level program	15/11/99	Vangar Jangal Madhapara	19	
5	Para level program	17/11/99	Vangar Jangal Uttarpara	12	
				85	

Reporting period : December 99

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	7/12/1999	Medi Ashulai Jelapara	15	
2	Para level program	14/12/99	Medi Ashulai Jelapara	23	
3	Union Parishad level program	9/12/1999	Boali School Ground	427	
				465	

Reporting period : January 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/1/2000	Derchala	21	
2	Para level program	15/01/00	Baniarchala	45	
				66	

Reporting period : February 2000

Sl	Nature of program	Date	Venue	o. of participants attend	Remarks
1	Para level program	27/2/00	Derchala	17	
2	Para level program	29/2/00	Medi Ashulai Paschimpara	22	
3	Para level program	31/2/00	Medi Ashulai Paschimpara	16	
				55	

Reporting period : March 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	5/3/2000	Betara Dhakkhinpara	20	
2	Para level program	16/3/00	Amdair Hindupara	22	
3	Para level program	16/3/00	Amdair Uttarpara	24	
4	Union Parishad level program	7/3/2000	Chapair Union Parishad	460	
				526	

Reporting period : May 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	20/5/00	Betara Dhakkhinpara	19	
				19	

Reporting period : July 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	7/6/2000	Ajgana Uttarpara	21	
2	Para level program	21/6/00	Ajgana Uttarpara	17	
3	Para level program	26/6/00	Teckpara	20	
4	Para level program	28/6/00	Ajgana Dhakkhinpara	15	
5	Union Parishad level program	4/6/2000	Haturiachala School Grour	494	
				567	

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Reporting period :July 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	3/7/2000	Ajgana Dhakkhinpara	23	
2	Para level program	4/7/2000	Kaliadhaha Madhapara	26	
3	Para level program	5/7/2000	Kaliadhaha Purbopara	23	
4	Para level program	6/7/2000	Kaliadhaha Paschimpara	21	
5	Para level program	17/7/2000	Baniarchala	20	
6	Para level program	20/7/00	Baniarchala	18	
7	Para level program	24/7/00	Baniarchala	15	
8	Para level program	5/7/2000	Teckpara	19	
9	Para level program	8/7/2000	Haturiachala Purbopara	25	
10	Para level program	3/7/2000	Boali Banpara	23	
11	Para level program	15/7/00	Boali Banpara	22	
12	Para level program	20/7/00	Boali Majipara	25	
13	Para level program	25/7/00	Boali Majipara	15	
	Para level program	28/7/00	Boali Bazer	12	
				287	

Reporting period : August 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	15/8/00	Boali Bazer	15	
2	Para level program	16/8/00	Sutrapur Jelapara	18	
3	Para level program	19/8/00	Sutrapur Jelapara	21	
4	Para level program	24/8/00	Sutrapur Jelapara	17	
5	Para level program	25/8/00	Golachipa	12	
6	Para level program	30/8/00	Golachipa	18	
				101	

Reporting period : September 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	25/9/00	Sinabaho Gaiderchala	31	
2	Para level program	26/9/00	Sinabaho Madhapara	14	
3	Para level program	27/9/00	Sinabaho Purbopara	13	
4	Para level program	1/9/2000	Vhuyapara	20	
5	Para level program	13/9/00	Vhuyapara	18	
	Para level program	6/9/2000	Media Ashulai Uttarpara	24	
7	Para level program	13/9/00	Media Ashulai Uttarpara	16	
8	Para level program	21/9/00	Media Ashulai Uttarpara	21	
9	Para level program	25/09/00	Bagambar	32	
10	Para level program	29/09/00	Haturiachala	45	
				234	

Reporting period : October 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	5/10/2000	Tan Boroibari	17	
2	Para level program	19/10/00	Tan Boroibari	18	
3	Para level program	24/10/00	Ajgana	46	
4	Para level program	26/10/00	Solahati	36	
				117	

Reporting period :November 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	8/11/2000	Boroibari Majipara	20	

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2	Para level program	22/11/00	Boroibari Majipara	25	
3	Para level program	24/11/00	Nama Boroibari	20	
4	Para level program	30/11/00	Nama Boroibari	18	
5	Para level program	12/11/2000	Hares Memberbari	30	
6	Para level program	22/11/00	Hares Memberbari	25	
				138	

Reporting period : February 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Village level program	18/02/01	UNO Compound	762	Live drama show on MACH
2	Village level program	18/02/01	Tallali School Ground	712	Do
3	Village level program	19/02/01	Sinabaho School Ground	755	Do
4	Village level program	19/02/01	Bastali School Ground	640	Do
5	Village level program	20/02/01	Kouchakuri Village	589	Do
6	Village level program	20/02/01	Mazukhan Village	737	Do
7	Village level program	21/02/01	Amdair School Ground	722	Do
8	Village level program	21/02/01	Solahati School Ground	530	Do
9	Village level program	22/02/01	Boroibari Village	645	Do
10	Village level program	22/02/01	Boali Village	446	Do
11	Village level program	23/02/01	Roghunathpur School Gro	510	Do
12	Village level program	23/02/01	Golachipa School Ground	556	Do
13	Village level program	24/02/01	Medi Ashulai Union Office	520	Do
14	Village level program	24/02/01	Nama Ashulai School Gro	716	Do
15	Village level program	25/02/01	Beel Baria	620	Do
				9460	

Reporting period : March 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	8/3/2001	Aliarchala	15	
2	Para level program	14/3/01	Aliarchala	18	
3	Para level program	27/3/01	Solahati Hindupara	19	
4	Para level program	28/3/01	Solahati Dhakkinpara	21	
5	Para level program	17/03/01	Ajgana	26	
6	Para level program	30/03/01	Dairchala	51	
				150	

Reporting period : April 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/4/2001	Nama Ashulai Purbopara	23	
2	Para level program	19/4/01	Nama Ashulai Purbopara	17	
3	Para level program	21/4/01	Rashidpur	15	
4	Para level program	30/4/01	Rashidpur	25	
				80	

Reporting period : May 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	4/5/2001	Haturiachala (Paschim)	17	
2	Para level program	14/5/01	Haturiachala (Paschim)	18	
3	Para level program	5/5/2001	Beel Baria	14	
4	Para level program	8/5/2001	Beel Baria	27	
5	Para level program	15/5/01	Sinabaho	18	
6	Para level program	22/5/01	Sinabaho	23	

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Reporting period : June 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	12/6/2001	Media Ashulai Chilartek	22	
2	Para level program	20/6/01	Media Ashulai Chilartek	18	
3	Para level program	21/6/01	Rashidpur Purbopara -	25	

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Reporting period : July 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/7/2001	Rashidpur Purbopara	46	
2	Para level program	8/7/2001	Ashariabari Paschimpara	20	
3	Para level program	15/7/01	Ashariabari Paschimpara	19	
4	Para level program	25/7/01	Modankhali Purbopara	20	
5	Para level program	30/7/01	Majukhan Jelapara	22	
6	Para level program	30/7/01	Majukhan Purbopara	18	
	Para level program	31/7/01	Majukhan Paschimpara	23	
8	Para level program	31/7/01	Majukhan Uttarpara	21	

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Reporting period : August 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/8/2001	Modankhali Purbopara	18	
2	Para level program	10/8/2001	Modankhali Paschimpara	20	
3	Para level program	23/8/01	Modankhali Paschimpara	42	

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Reporting period : September 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	25/9/01	Kundakata Purbopara	18	
2	Para level program	28/09/01	Matikata	29	

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Reporting period : October 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	7/10/2001	Kundakata Purbopara	23	
2	Para level program	17/10/01	Kundakata Paschimpara	44	
	Para level program	28/10/01	Kundakata Paschimpara	40	

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Reporting period : November 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	11/11/2001	Kanchanpur	16	
2	Para level program	22/11/01	Boro Kanchanpur	24	
3	Para level program	26/11/01	Boroibari	36	

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Reporting period : December 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	2/12/2001	Boro Kanchanpur	21	
				21	

Reporting period : January 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jan. 03	Suttrapur	19	
2	Para level program	Jan. 10	Suttrapur	41	
3	Village level program	Jan. 07	Majukhan	35	
				95	

Reporting period : February 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Feb. 11	Amdair	32	
2	Para level program	Feb. 24	Solahati	18	
3	Village level program	Feb. 11	Chouchacuri	32	
				82	

Reporting period : March 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Mar. 11	Boali	42	
2	Para level program	Mar. 18	Boali	38	
3	Village level program	Mar. 12	Majukhan	53	Awareness on plantation
4	Upazila level/Annual gathering	Mar. 31	Taltoli	1100	
				1233	

Reporting period : April 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Apr. 06	Namasulai	22	
2	Para level program	Apr. 15	Betara	26	
3	Para level program	Apr. 04	Modonkali	23	
4	Para level program	Apr. 11	Galachipa	21	
5	Para level program	Apr. 10	Boali	25	
6	Para level program	Apr. 24	Mediashulai	18	
7	Village level program	Apr. 23	Haturiachala-Sholahati	99	Awareness on plantation
				234	

Reporting period : May 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Village level program	May 06	Rashidpur	35	Group formation
2	Village level program	May. 23	Kanchanpur	30	Group formation
3	Village level program	May. 30	Kanchanpur	40	Awareness on plantation
				105	

Reporting period : June 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jun. 20	Kutamoni	20	
2	Para level program	Jun. 23	Ajgana	22	
3	Para level program	Jun. 22	Bastali	25	
4	Para level program	Jun. 29	Kaliadhaho	20	
				87	

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Reporting period : July 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
	None	None	None	None	

Reporting period : Aug. 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
	None	None	None	None	

Reporting period : Sept. 2002 12/237

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Sept. 01	Modankhali	19	
2	Para level program	Sept. 02	Sholahati	16	
3	Para level program	Sept. 06	Namaashulai	20	
4	Para level program	Sept. 08	Boroibari	21	
	Para level program	Sept. 08	Taltoli	19	
6	Para level program	Sept. 09	Ratanpur	18	
7	Para level program	Sept. 10	Couchakori	20	
8	Para level program	Sept. 14	Vangarjangal	19	
9	Para level program	Sept. 15	Bagambar	23	
10	Para level program	Sept. 18	Majukhan	22	
11	Para level program	Sept. 29	Bashtoli	21	
12	Para level program	Sept. 30	Madiashulai	19	
				237	

Reporting period : October. 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	5/10/2002	Haturiachala	23	Harmful affect of curent Jal
2	Para level program	20/10/02	Haturiachala	28	Do
3	Para level program	1/10/2002	Chatal Solahati	22	Female group fromation
4	Para level program	7/10/2002	Rashidpur	19	Female group fromation
5	Para level program	17/10/02	Kanchanpur	21	Resource management
6	Para level program	29/10/02	Chatal Solahati	20	
				133	

Reporting period : November. 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	5/11/2002	Bastoli	18	Harmful effect of curent Jal
2	Para level program	13/11/02	Bastoli	13	
3	Para level program	18/11/02	Baniarchala	19	
4	Para level program	25/11/02	Baniarchala	15	
5	Para level program	5/11/2002	Bowali bazer	20	
6	Para level program	5/11/2002	Bowali Paschimpara	15	
7	Village level program	19/11/02	Modankhali	155	
8	Village level program	21/11/02	Kanchanpur	150	
				405	

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Reporting period : December 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
	None	None	None	None	None

Reporting period : January 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	12/1/2003	Solahati	40	Awareness on plantation
2	Para level	13/01/03	Sinaboho	40	Awareness on plantation
3	Para level	21/01/03	Chatal Solahati	40	Awareness on plantation
				120	

Reporting period : February 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	19/02/03	Haturiachala	45	Awareness on plantation
2	Para level	26/02/03	Suttrapur	47	Awareness on plantation
				92	

Reporting period : March 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Village level	6/3/2003	Kanchanpur	138	Awareness on plantation
2	Village level	22/03/03	Mazukhan Primary School	550	Live drama show on MACH approach
3	Village level	22/03/03	Amdair Primary School	950	Live drama show on MACH approach
4	Village level	23/03/03	Sinaboho school	650	Live drama show on MACH approach
5	Village level	23/03/03	Sunchala village	1050	Live drama show on MACH approach
6	Village level	24/03/03	Ajgana Bazer	800	Live drama show on MACH approach
7	Village level	24/03/03	Kanchanpur primary school	350	Live drama show on MACH approach
8	Village level	25/03/03	Boroibari school ground	675	Live drama show on MACH approach
9	Village level	25/03/03	Bastali	625	Live drama show on MACH approach
10	Village level	26/03/03	Sutrapur	700	Live drama show on MACH approach
11	Village level	27/03/03	Rashidpur school	550	Live drama show on MACH approach
12	Village level	27/03/03	Shafipur primary school	400	Live drama show on MACH approach
13	Village level	27/03/03	Kaliakoir Bazer	650	Live drama show on MACH approach
14	Village level	29/03/03	Mediasulai U/P ground	405	Live drama show on MACH approach
15	Village level	29/03/03	Namasulai Jelepara	650	Live drama show on MACH approach
16	Village level	29/03/03	Sayedpur primary school	900	Live drama show on MACH approach
17	Village level	30/03/03	Solahati primary school	575	Live drama show on MACH approach
18	Village level	31/03/03	Taltali Primary school	1100	Live drama show on MACH approach
19	Upazila level/Annual rally	30/03/03	Taltali Primary school	785	
				12503	

Reporting period : April 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	21/04/03	Majukhan	40	Awareness on plantation
2	Para level	20/04/03	Kulurchala	40	Awareness on plantation
3	Village level	13/04/03	Solahati	80	Awareness on plantation
4	Village level	1/4/2003	Golachipa primary school	350	Live drama show on MACH approach
5	Village level	1/4/2003	Bowali school	775	Live drama show on MACH approach
6	Village level	1/4/2003	Cha Bagan bazer	1100	Live drama show on MACH approach
7	Village level	2/4/2003	Hatu vanga Bazer	475	Live drama show on MACH approach

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2	Village level	2/4/2003	Kaliakoir UNO office	325	Live drama show on MACH approach
9	Village level	3/4/2003	UNO office Mirzapur	400	Live drama show on MACH approach
10	UP level	30/04/03	Aygana	400	Goal & objectives of MACH project
				3985	

Reporting period : May 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	12.5.2003	Sciahati	58	
				58	

Reporting period : June 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
	None		None	None	

Summary of TB site

Total Program	236	Participants	35,708	

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Hail Haor, Sreemongol Site

Reporting period : June 1999

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Union Parishad level program	5/6/1999	Vunobir Dasorat High School, Vunobir	1500	World environmental day observance
				1500	

Reporting period : July 1999

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Union Parishad level program	5/7/1999	Fajur Rhaman Government Primary School, Hajipur, Kalapur	1500	MACH project introduction : goal & objectivities
				1500	

Reporting period : March 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Village level program	22/3/00	Hajipur, Kalapur	300	Field day on Wheat cultivation demo.
	Village level program	23/3/00	Bolasir, Kalapur	300	Field day on Wheat cultivation demonstration.
				600	

Reporting period : June 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Union Parishad level program	6/6/2000	Rustampur Government Primary School, Rustampur, Vunobir	1000	World environmental day observance
				1000	

Reporting period : January 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	5/1/2001	Paschim Sreemongol, Sreemongol	35	Goal & objectivies of MACH project
2	Para level program	5/1/2001	Uttar Uttarsur, Sreemongol	37	Goal & objectivies of MACH project & motivation for IGA
3	Para level program	13/1/01	Uttar Uttarsur, Sreemongol	42	Goal & objectivies of MACH project & motivation for IGA
4	Para level program	18/1/01	Kalapur Field Office, Kalapur	30	Goal, objectivies & role of RUG
5	Para level program	26/1/01	Mordonal, Nazirabad	28	Goal & objectivies of MACH project
6	Para level program	27/1/01	Anikali Boro, Gyasnagar	37	Goal & objectivies of MACH project
7	Para level program	30/1/01	Paschim Varaura, Sreemongo	25	Goal & objectivies of MACH project
				234	

Reporting period : February 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	2/2/2001	Gram Sreemongol,Gyasnagar	33	Awareness on wetland resources
2	Para level program	10/2/2001	Mordonal, Nazirabad	40	Goal & objectivies of MACH project
3	Para level program	10/2/2001	Gram Sreemongol,Gyasnagar	27	Awareness on wetland resources & goal & objectivies of MACH
4	Para level program	14/2/01	Jatarpur, Nazirabad	29	Awareness on wetland resources & goal & objectivies of MACH

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MACH project, Caritas
Hail Haor, Sreemongol Site

5	Village level program	2/2/2001	Bolasir Bazar, Mirzapur	1400	Drama on wetland resource management
6	Village level program	3/2/2001	Satgao Bazar, Vunobir	1500	Drama on wetland resource management
7	Village level program	4/2/2001	Sarkar Bazar, Vunobir	900	Drama on wetland resource management
8	Village level program	5/2/2001	Krishi Mela, Sreemongol Upazila Parishad	400	Drama on wetland resource management
9	Village level program	8/2/2001	Mirzapur Bazar, Mirzapur	1000	Drama on wetland resource management
10	Village level program	9/2/2001	Vimsi Babur Bazar, Vunobir	1700	Drama on wetland resource management
11	Village level program	10/2/2001	Motigong Bazar, Vunobir	1000	Drama on wetland resource management
12	Village level program	11/2/2001	Jibangong Bazar, Vunobir	1200	Drama on wetland resource management
13	Village level program	12/2/2001	Gyasnagar Bazar, Gyasnagar	800	Drama on wetland resource management
14	Village level program	13/2/01	Atghar Bazar, Nazirabad	900	Drama on wetland resource management
15	Village level program	13/2/01	Gobindapur Bazar, Nazirabad	600	Drama on wetland resource management
				11629	

Reporting period : March 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	25/3/01	Banika, Gyasnagar	37	Goal & objectivies of MACH project
2	Para level program	29/3/01	Motigong, Ashidron	32	Goal & objectivies of MACH project & difference of MACH among other NGOs
3	Para level program	30/3/01	Anikali Boro, Gyasnagar	18	Goal & objectivies of MACH project & motivation for IGA
4	Para level program	31/3/01	Paschim Varaura, Sreemongol	34	Goal & objectivies of MACH project & motivation for IGA
5	Village level program	20/3/01	Jatrapasa, Mirzapur	200	Field day on Wheat cultivation demonstration.
	Village level program	27/3/01	Bilasher Par, Ashidron	200	Field day on Wheat cultivation demonstration.
	Village level program	31/3/01	Vimsi, Vunobir	200	Field day on Wheat cultivation demonstration.
				721	

eporting period : April 2001

	Nature of program	Date	Venue	Participants attended	Remarks
	Para level program	3/4/2001	Anikali Boro, Gyasnagar	35	Motivation for group formation & savings regulation
	Para level program	4/4/2001	Ghorachao, Nazirabad	28	Motivation for group formation & savings regulation
	Para level program	23/4/01	Gandorbapur, Vunobir	24	Goal & objectivies of MACH project
	Para level program	23/4/01	Uttarsur, Sreemongol	30	Useful aspect of guti urea
	Para level program	28/4/01	Paschim Varaura, Sreemongo	39	Motivation on poultry training & farming

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6	Para level program	30/4/01	Motgong, Vunobir	19	Goal & objectivies of MACH project & motivation for IGA
7	Village level program	24/4/01	Mirnagar, Kalapur	200	Field day on useful aspect of guti urea
8	Village level program	25/4/01	Uttarsur, Sreemongol	200	Field day on useful aspect of guti urea
9	Village level program	27/4/01	Bade Alisha, Vunobir	200	Field day on useful aspect of guti urea
10	Village level program	29/4/01	Gondorbazur, Vunobir	200	Field day on useful aspect of guti urea
				975	

Reporting period : May 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	13/5/01	Gyasnagar Union Parishad	30	Awareness raising on roadside plantation
	Para level program	18/5/01	Nayansree, Gyasnagar	29	Awareness raising on roadside plantation
3	Para level program	21/5/01	Paschim Varaura, Sreemongol	32	Awareness raising on roadside plantation
				91	

Reporting period : June 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	22/6/01	Nayansree Lamba Ati, Gyasnagar	36	Awareness raising on roadside plantation
2	Para level program	20/6/01	Boruna Migar Ati, Kalapur	25	Harmful effect of excess fishing
3	Para level program	30/6/01	Boruna, Kalapur	37	Primary health care
4	Para level program	27/6/01	Sabujbug, Sreemongol	32	Awareness raising on roadside plantation
5	Union Parishad level program	7/6/2001	Dankapal Mohila Collage, Sreemongol	2000	World environmental day observance
				2130	

Reporting period : July 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/7/2001	Sabujbug, Sreemongol	40	Awareness raising on roadside plantation
				40	

Reporting period : August 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	30/8/01	Hajipur, Kalapur	46	Motivation on IGA
2	Para level program	18/08/01	Jatrapasa, Mirzapur	55	
				101	

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Reporting period : September 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	10/9/2001	Boruna, Kalapur	32	Motivation on adult education
2	Para level program	22/9/01	Boruna, Kalapur	34	Awareness on arsenic
3	Para level program	29/9 01	Anikalibuda, Gyasnagar	38	Awareness on arsenic
				104	

Reporting period : October 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Oct. 15	Dhakkin Boruna, Kalapur	37	Awareness on arsenic
2	Para level program	Oct. 15	Hajipur, Kalapur	41	Motivation on adult education
				78	

Reporting period : November 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Nov 10	Hajipur, Kalapur	36	
2	Para level program	Nov. 11	Gram Sreemongol, Gyasnagar	38	
				74	

Reporting period : December 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Dec. 02	Sabujbug, Sreemongol	40	Motivation on IGA
2	Para level program	Dec. 05	Hajipur, Kalapur	40	
3	Para level program	Dec. 12	Amanathpur, Ashidron	36	
				116	

Reporting period : January 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jan. 03	Vimsi, Vunobir	29	
2	Para level program	Jan. 05	Kalapur Field Office, Kalapur	34	
3	Para level program	Jan. 09	Anikali Boro, Gyasnagar	19	
4	Para level program	Jan. 10	Motigong, Ashidron	36	
5	Para level program	Jan. 13	Sreemongol site office	27	
6	Para level program	Jan. 15	Bade Alisha, Vunobir	27	
7	Para level program	Jan. 18	Hajipur, Kalapur	24	
8	Para level program	Jan. 20	Uttar Uttarsur, Sreemongol	31	
9	Para level program	Jan. 23	Mirzapur Field Office	21	
10	Para level program	Jan. 25	Hajipur, Kalapur	35	
11	Para level program	Jan. 25	Hajipur, Kalapur	25	
				308	

Reporting period : February 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Feb. 06	Kalapur Field Office, Kalapur	32	
2	Para level program	Feb. 12	Boruna, Kalapur	19	
3	Para level program	Feb. 14	Motigong, Ashidron	37	
4	Para level program	Feb. 14	Paschim Varaura, Sreemongol	25	
5	Para level program	Feb. 18	Sabujbug, Sreemongol	35	
6	Para level program	Feb. 23	Anikali Boro, Gyasnagar	23	
				172	

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Reporting period : March 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Mar. 04	Hajipur, Kalapur	26	
2	Para level program	Mar. 08	Kalapur Field Office, Kalapur	27	
3	Para level program	Mar. 11	Vimsi, Vunobir	37	
4	Para level program	Mar. 20	Amanathpur, Ashidron	21	
				111	

Reporting period : April 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Apr. 07	Hajipur	34	Benefit of savings
2	Para level program	Apr. 10	Rajanigoncha samity	26	
3	Para level program	Apr. 10	Gondorbapur, Vunobir	38	
4	Para level program	Apr. 13	Vunobir	28	Pure drinking water, Plantation
5	Union level program	Apr. 22	Gyasnagar Union Parishad	234	
6	Union level program	Apr. 19	Jattrapasa, Mirzapur	216	
				576	

Reporting period : May 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	May. 10	Amanathpur, Ashidron	36	
2	Para level program	May. 13	Hajipur, Kalapur	26	
3	Para level program	May. 16	Hajipur, Kalapur	23	
4	Para level program	May. 30	Rajpara, Vunobir	39	
				124	

Reporting period : June 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jun. 06	Undarpar Ashidron	26	
2	Para level program	Jun. 15	Boruna, Kalapur	26	
3	Para level program	Jun. 19	Hajipur, Kalapur	25	
4	Para level program	Jun. 20	Boruna, Kalapur	24	
5	Para level program	Jun. 20	Caritas TS, Sreemongol	28	
6	Para level program	Jun. 20	Hajipur, Kalapur	35	
7	Para level program	Jun. 22	Emam Para, Vunobir	36	
	Para level program	Jun. 22	Jattrapasa, Mirzapur	31	
	Para level program	Jun. 23	Kaliargao, Gyasnagar	22	
10	Para level program	Jun. 25	Jattrapasa, Mirzapur	38	
11	Para level program	Jun. 27	Anikali Boro, Gyasnagar	26	
12	Para level program	Jun. 29	Sharsri, Mirzapur	34	
13	Para level program	Jun. 29	Undarpar Ashidron	35	
14	Annaul rally/Upazila level	Jun. 30	Sreemongol Sadar	750	
				1136	

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Reporting period : July 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jul. 01	Rupnagar, Hajipur	30	
2	Para level program	Jul. 11	Varaura, Sreemongal	43	
3	Para level program	Jul. 14	Manikhaor, Najirabad	42	
4	Para level program	Jul. 27	Maddha Boruna, Kalapur	25	
5	Para level program	Jul. 30	Dash Khania, Najirabad	40	
6	Para level program	Jul. 31	Manikhaor, Najirabad	27	
				207	

Reporting period : Aug. 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Aug. 15	Kaliargaown, Gyasnagar	22	Haor resources
2	Para level program	Aug. 18	Alghar, Najirabad	22	Sanctuary
3	Para level program	Aug. 20	Pachaun, Mirzapur	41	
4	Para level program	Aug. 21	Hajipur, Kalapur	30	Homesetad resources
5	Para level program	Aug. 27	Dash Khania, Najirabad	30	
				145	

Reporting period : Sept. 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Sept. 08	Hajipur, Kalapur P. School	25	Education
2	Para level program	Sept. 08	Boruna, Kalapur P. School	110	Education
3	Para level program	Sept. 11	Kalapur Field Office	42	
4	Para level program	Sept. 15	Ranavim, Gyasnagar	17	
5	Para level program	Sept. 21	Mardanhal, Najirabad	45	
6	Para level program	Sept. 28	Hajipur, Kalapur	38	RMO
				277	

Reporting period : October 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Oct. 08	W. Varaura, Sreemangal	29	Sustainability of RUG
2	Para Level Program	Oct. 12	Mardanhal, Nazirabad	36	Vegetable cultivation
3	Para Level Program	Oct. 21	Kalapur Field Office	40	Loan for AIGA
4	Para Level Program	Oct. 26	Baruna, Kalapur	41	Sustainability of RUG
			Total	146	

Reporting period : November 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Nov. 01	Sabujbag, Sreemangal	42	RUG inclusion in RMO
2	Para Level Program	Nov. 19	Daskahnia, Nazirabad	37	RUG inclusion in RMO
3	Para Level Program	Nov. 26	Baruna, Kalapur	35	Relationship RUG & RMO
4	Para Level Program	Nov. 27	Banika, Gasnagar	21	Sustainability of RUG
5	Para Level Program	Nov. 28	Rupnagar, Kalapur	18	Family Planing
6	Para Level Program	Nov. 30	Shaharsree, Mirzapur	30	Sustainability of MACH Project
				183	

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Reporting period : December 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Dec. 04	Anikaliboro, Grasnagar	21	RMO activities
2	Para Level Program	Dec. 09	Udharpar, Ashidrone	33	Motivation on Savings
3	Para Level Program	Dec. 20	Hazipur, Kalapur	27	Skill Development for AIGA
4	Para Level Program	Dec. 22	Nairabad	34	Savings and AIGA
5	Para Level Program	Dec. 22	Rustampur, Bhunobir	40	Group formation
6	Para Level Program	Dec. 29	Baruna, Kalapur	28	Dewatering of beel
				183	

Reporting period : January 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Jan. 03	Rustampur, Bhunobir	42	Rules regarding RUG
2	Para Level Program	Jan. 14	Bilasher Par, Ashidrone	37	Importance of savings
3	Para Level Program	Jan. 15	Jatarpur, Nazirabad	25	Savings and AIG
4	Para Level Program	Jan. 25	Bhunabir	40	Goals of MACH Project
5	Para Level Program	Jan. 30	Baruna, Kalapur	46	AIGA
				190	

Reporting period : February 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Feb. 09	Baruna, Kalapur	30	Adult education
2	Para Level Program	Feb. 10	Uttarshur, Sreemangal	34	Adult education
3	Para Level Program	Feb. 22	Hazipur, Kalapur	42	Resource awareness
4	Para Level Program	Feb. 22	Shaharsree, Mirzapur	35	AIGA
5	Para Level Program	Feb. 25	Rajpara, Bhunobir	42	Savings and AIGA
6	Village level program	18/02/03	UTDC hall , Sreemongal	95	Drama show on MACH approach
7	Village level program	19/02/03	Uttarshur, Sreemangal	550	Drama show on MACH approach
8	Village level program	19/02/03	Shahjibazer	300	Drama show on MACH approach
9	Village level program	20/02/03	Paschim Sreemongal	460	Drama show on MACH approach
10	Village level program	20/02/03	Paschim Varaura	350	Drama show on MACH approach
11	Village level program	21/02/03	Layerkul, Bhunobir	635	Drama show on MACH approach
12	Village level program	21/02/03	Salgoan	1050	Drama show on MACH approach
13	Village level program	22/02/03	Badealisha	870	Drama show on MACH approach
14	Village level program	22/02/03	Jibongong bazer	700	Drama show on MACH approach
15	Village level program	23/02/03	Vimshi, Vunobir	550	Drama show on MACH approach
16	Village level program	23/02/03	Bolashir, Vunobir	600	Drama show on MACH approach
17	Village level program	24/02/03	Mirzapur Bazer	650	Drama show on MACH approach
18	Village level program	24/02/03	Pachaun, Mirzapur	600	Drama show on MACH approach
19	Village level program	25/02/03	Gobindapur Bazer, Nazirabad	478	Drama show on MACH approach
20	Village level program	25/02/03	Alghar Bazer	736	Drama show on MACH approach
21	Village level program	25/02/03	Rustampur,	938	Drama show on MACH approach
22	Village level program	25/02/03	Shamsergong	500	Drama show on MACH approach
23	Village level program	27/02/03	Kalapur	359	Drama show on MACH approach
				10604	

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Reporting period : March 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Mar.15	Hazipur, Kalapur	48	Adult education
2	Para Level Program	Mar.22	Mordanhal, Nazirabad	42	BRMO formation
3	Para Level Program	Mar.27	Hazipur, Kalapur	35	Importance of BRMO
4	Para Level Program	Mar.28	Motigonj, Bhunobir	46	Adult education
5	Para Level Program	Mar.29	Kashipur, Mirzapur	41	Adult education
6	Para Level Program	Mar.31	Alipur, Ashidrone	45	Groups and AIGA
7	Annual rally	Mar.20	Boruna, Kalapur	500	RUG annual gathering
				757	

Reporting period : April 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Apri.03	Amanatpur, Ashidrone	40	Importance of savings
2	Para Level Program	Apri.04	Lalbag, Sreemangal	39	Reource awareness
3	Para Level Program	Apri.07	Hazipur, Kalapur	38	Sanctuary
4	Para Level Program	Apri.10	Hazipur, Kalapur	40	Skill development and AIGA
5	Para Level Program	Apri.15	Motigonj, Ashidrone	41	Plantation
6	Para Level Program	Apri.27	Baruna, Kalapur	45	Skill development and AIGA
7	Para Level Program	Apri.28	Lamapara, Mirzapur	41	Savings and AIGA
8	Para Level Program	Apri.29	Kalapur Field Office	34	Skill development and AIGA
9	Annual rally	Apr. 12	Boulashir, Mirzapr	400	RUG annual gathering
				718	

Reporting period : May 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	May.07	Gandharbapur, Bhunobir	39	Health and savings awareness
2	Para Level Program	May.08	Baroiuri, Nazirabad	40	BRMO
3	Para Level Program	May.11	Alghar, Nazirabad	40	Rules of RUG
4	Para Level Program	May.13	Ghorachaw, Nazirabad	40	BRMO
5	Para Level Program	May.20	Mordanhal, Nazirabad	57	BRMO
6	Para Level Program	May.20	W. Varaura, Sreemangal	38	AIGA
7	Para Level Program	May.22	Baroiuri, Nazirabad	20	Formation of RUG
8	Para Level Program	May.24	Hazipur, Kalapur	37	Adult education
9	Para Level Program	May.28	Banika, Giasnagar	33	AIGA
10	Para Level Program	May.28	Kalapur Field Office	32	Development allies
				376	

Reporting period : June 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Jun. 03	Andkalibuda, Giasnagar	30	Illegal fishing
2	Para Level Program	Jun. 18	Manik Haor, Nazirabad	36	AIGA
3	Para Level Program	Jun. 20	Baroiuri, Nazirabad	20	Formation of RUG
4	Para Level Program	Jun. 21	Udnarpar, Ashidrone	42	Importance of savings & credit
5	Para Level Program	Jun. 21	Bhunobir	39	Plantation
6	Para Level Program	Jun. 24	Baruna, Kalapur	30	BRMO
				197	

Reporting period : July 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level Program	Jul. 12	Baruna, Kalapur	22	Group
2	Para Level Program	Jul. 14	Rupnagar, Kalapur	23	Family planning

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3	Para Level Program	Jul 16	Hazipur, Kalapur	14	BRMO
4	Para Level Program	Jul. 23	Atghar, Nazirabad	35	Plantation
5	Para Level Program	Jul 29	Baruna, Kalapur	17	BRMO
6	Para Level Program	Jul 31	Mirzapur Field office	31	Development allies
				142	

Reporting period August 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	4/8/2003	Pachim Sreemongal	25	
2	Para level program	12/8/2003	Pachim Varaura	25	
3	Para level program	20/8/03	Pachim Varaura	13	
4	Para level program	21/08/03	Ronovim	16	
5	Para level program	27/08/03	Ronovim	16	
6	Para level program	16/08/03	Boruna	22	
7	Para level program	27/08/03	Boruna	15	
8	Para level program	30/08/03	Udnarpar	33	
				171	

Summary of HH

	Total program	217	Participants	37616	

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Reporting period : September 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	18/9/00	Hasligao	32	
2	Para level program	29/9/00	Baniapara	36	
3	Village level program	2/9/2000	Hasligao	330	
4	Village level program	5/9/2000	Baniapara	435	
5	Village level program	10/9/2000	Julgao	430	
6	Union Parishad level p	15/9/00	Malijee Kanda UP Ground	565	
				1828	

Reporting period : October 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	19/10/00	Julgao	28	
2	Village level program	27/10/00	Sankalinagar	430	
3	Union Parishad level p	30/10/00	Dhansail UP Ground	772	
				1230	

Reporting period : November 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	1/11/2000	Hasligao	32	
2	Para level program	11/11/2000	Hasligao	39	
3	Para level program	14/11/00	Julgao	30	
4	Para level program	22/11/00	Julgao	34	
5	Para level program	26/11/00	Sarikalinagar	35	
6	Para level program	30/11/00	Dariarpar	35	
9	Union Parishad level p	20/11/00	Jhenaigati UP Ground	768	
				973	

Reporting period : December 2000

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	3/12/2000	Malijeekanda	35	
				35	

Reporting period : January 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	15/1/01	Vatiapara	35	
2	Para level program	29/1/01	Sonaborkanda	36	
3	Union Parishad level p	30/1/01	Pakuria	750	
				821	

Reporting period : February 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	7/2/2001	Baniapara	31	
2	Para level program	17/2/01	Tirsa	35	
3	Para level program	23/2/01	Changuria	24	
4	Para level program	30/2/01	Bakarkanda	35	
				125	

Reporting period : March 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	8/3/2001	Dariarpar	35	
2	Para level program	10/3/2001	Pakuria	25	
3	Para level program	15/3/01	Protabia	27	
4	Para level program	20/3/01	Tatalpur	35	

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5	Para level program	27/3/01	Tatalpur	35	
6	Para level program	30/3/01	Pakuria	35	
7	Para level program	2/3/2001	Darikalinager	29	
8	Para level program	23/3/01	Changuria	28	
9	Para level program	24/03/01	Julgao	30	
10	Para level program	20/3/01	Khamarpara	30	
11	Village level program	18/3/01	Jhenaigati Upazila parishac	455	Drama on wetland resource Management
12	Village level program	18/3/01	Kalibari Bazar, Chenguria	442	Drama on wetland resource Management
13	Village level program	19/3/01	Sherpur Upazila Parishad	435	Drama on wetland resource Management
14	Village level program	20/3/01	Dorikalinagar Primary Scho	445	Drama on wetland resource Management
15	Village level program	20/3/01	Hasligao Primary School	430	Drama on wetland resource Management
16	Village level program	21/3/01	Tirsa High School	435	Drama on wetland resource Management
17	Village level program	21/3/01	Degharpar	450	Drama on wetland resource Management
18	Village level program	22/3/01	Kanduli Primary School	375	Drama on wetland resource Management
19	Village level program	22/3/01	Dariarpar Primary School	434	Drama on wetland resource Management
20	Village level program	23/3/01	Pakuria Union Parishad	450	Drama on wetland resource Management
21	Village level program	24/3/01	Baliachandi Primary Schoo	436	Drama on wetland resource Management
22	Village level program	24/3/01	Balia Primary School	432	Drama on wetland resource Management
23	Union Parishad level p	25/3/01	Sonaborkanda	680	Drama on wetland resource Management
				6208	

Reporting period : April 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	2/4/2001	Khamarpara	26	
2	Para level program	15/4/01	Digarpar	38	
3	Para level program	10/4/2001	Khamarpara	37	
4	Para level program	27/4/01	Digarpar	35	
5	Para level program	12/4/2001	Darikalinagar	35	
6	Village level program	6/4/2001	Khamarpara	432	
7	Village level program	15/4/01	Konagao	436	
8	Village level program	20/4/01	Matiapara	430	
9	Union Parishad level p	11/4/2001	Mlijeekanda UP Ground	895	
10	Union Panshad level p	20/4/01	Bakarkanda	750	
				3114	

Reporting period : May 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	3/5/2001	Darikalinagar	23	
2	Para level program	12/5/2001	Konagao	29	
3	Para level program	15/5/01	Matiapara	30	
4	Para level program	20/5/01	Baluchar	32	
5	Para level program	22/5/01	Kandapara	36	
6	Para level program	20/5/01	Kamaria	35	
7	Para level program	1/5/2001	Bakarkanda	32	
8	Village level program	8/5/2001	Kamaria	438	
				655	

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Reporting period : June 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	4/6/2001	Baluchar	25	
2	Para level program	26/6/01	Darikalinagar	32	
3	Para level program	12/6/2001	Matiapara	35	
4	Para level program	2/6/2001	Khamarpara	35	
5	Para level program	18/6/01	Sonaborkanda	35	
6	Para level program	12/6/2001	Khamarpara	30	
7	Para level program	27/6/01	Sonaborkanda	32	
8	Village level program	20/6/01	Katakhali	400	
9	Village level program	20/6/01	Konapara	369	
10	Village level program	20/6/01	Sonaborkanda	350	
11	Village level program	22/6/2001	Changunia	450	
				1793	

Reporting period : July 2001

	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	3/7/2001	Darikalinager	30	
2	Para level program	7/7/2001	Konapara	25	
3	Para level program	9/7/2001	Katakhali	31	
4	Para level program	12/7/2001	Changuria	32	
5	Para level program	4/7/2001	Martinpar	38	
6	Para level program	15/7/01	Gunai Mominkanda	22	
7	Para level program	20/7/01	Bade Teghoria	35	
8	Para level program	10/7/2001	Martinpar	37	
9	Para level program	29/7/01	Bade Teghoria	38	
10	Union Parishad level p	2/7/2001	Pakuria	820	
				1108	

Reporting period : August 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	2/8/2001	Sarikalinagar	31	
2	Para level program	2/8/2001	Uttar Kandull	30	
3	Para level program	22/8/01	Sarikalinagar	25	
4	Para level program	22/8/01	Hasligao	30	
[illegible]	Para level program	24/8/01	Darikalinagar	26	
[illegible]	Para level program	25/8/01	Chatal	32	
7	Para level program	26/8/01	Konagao	30	
8	Para level program	5/8/2001	Vatiapara	29	
9	Para level program	17/8/01	Protabia	35	
				268	

Reporting period : September 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	8/9/2001	Nonkesor	29	
2	Para level program	27/9/01	Konagao	30	
3	Para level program	10/9/2001	Haoraniz	27	
				86	

Reporting period : October 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	24/10/01	Chatal	25	
2	Para level program	15/10/01	Kandapara	33	

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Reporting period : November 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	2/11/2001	Sarikalinagar	29	
2	Para level program	14/11/01	Khamarpara	30	
3	Para level program	4/11/2001	Haoraniz	25	
4	Para level program	17/11/01	Surjadi	27	
5	Para level program	25/11/01	Haoraniz	30	
6	Para level program	Oct. 15	Chatal	25	
7	Para level program	Oct. 24	Kandapara	33	

199

Reporting period : December 2001

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Nov. 11	Sarikalinagar	29	
2	Para level program	Nov. 14	Khamarpara	30	
3	Para level program	Nov. 04	Haoraniz	25	
4	Para level program	Nov. 17	Surjadi	27	
5	Para level program	Nov. 25	Haoraniz	30	

141

Reporting period : January 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jan. 03	Sonaborkanda	33	
2	Para level program	Jan. 26	Khamarpara	46	
3	Para level program	Jan. 16	Sharikalinagar	29	
4	Para level program	Jan. 08	Darikalinagar	40	
5	Para level program	Jan. 12	Bakuchar	51	
6	Para level program	Jan. 15	Darikalinagar	29	
7	Para level program	Jan. 16	Mid kanduli	37	
8	Para level program	Jan. 18	Sharikalinagar	49	
9	Para level program	Jan. 20	Sharikalinagar	46	
10	Para level program	Jan. 01	Tatalpur	39	
11	Upazila level program	Jan. 30		677	Annual Gathering
12	Upazila level program	Jan. 31		623	Annual Gathering

1699

Reporting period : February 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Feb. 14	Konagaown	19	
2	Para level program	Feb. 10	Darikalinagar	15	
3	Para level program	Feb. 12	Darikalinagar	27	
4	Para level program	Feb. 15	Darikalinagar	22	
5	Para level program	Feb. 16	Konagaown	25	
6	Para level program	Feb. 24	Maddhakanduli	28	

136

Reporting period : March 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Mar. 31	Gunoi Moninkanda	22	

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2	Para level program	Mar. 31	Pakuria	28	
4	Village level program	Mar. 10	Chatal	195	
5	Village level program	Mar. 12	Chatal	126	
6	Village level program	Mar 01	Kandapara	158	
				529	

Reporting period : April 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Apr 30	Kamana	26	
2	Para level program	Apr. 04	Baniapara	28	
3	Para level program	Apr 16	Bonga Chatal	31	
				85	

Reporting period : May 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	May. 14	Kandapara	26	
2	Para level program	May. 28	Tilkandi	24	
	Village level program	May. 10	Maddhakandulı p school	41	
5	Village level program	May. 12	Dorikalnagar	42	
6	Village level program	May. 26	Sarikalinagar	31	
				164	

Reporting period : June 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jun. 27	Talalpur	20	
2	Village level program	Jun. 19	Talalpur	30	
3	Village level program	Jun. 30	Jhenergali	35	
				85	

Reporting period : July 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Jul. 29	Badategoria	15	
2	Village level program	Jul. 15	Pakuria	25	
				40	

Reporting period : August 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
	Para level program	Aug 25	Baliachondi	32	
2	Village level program	Aug 20	Ramkhila	35	
				67	

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Reporting period : Sept. 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	Sept. 10	Salda	42	
2	Para level program	Sept. 15	Bakarkandi	28	
3	Para level program	Sept. 18	Vatiapara	35	
4	Village level program	Sept. 27	Baluchar	74	
5	Village level program	Sept. 29	Chalal	76	
6	Village level program	Sept. 30	Kandapara	64	
7	Village level program	Sept. 30	Badalegoria	71	
				390	

Reporting period : October 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	18/10/02	Ramkhila	52	Plantation & group fromation
2	Para level program	20/10/02	Hoaraniz	30	Plantation & group fromation
3	Village level program	12/10/2002	Ramkhila	50	Goal & objectives of MACH for group.
4	Village level program	25/10/02	Bakarkanda	60	Goal & objectives of MACH for group
				192	

Reporting period : November 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	13/11/02	Purbo Pakuna	45	
2	Para level program	18/11/02	Hoara niz	30	
3	Para level program	27/11/02	Pakuria	18	
4	Para level program	30/11/02	Darikalinagar	35	
5	Village level program	28/11/02	Sadar primary school	70	
6	Village level program	18/11/02	Hoara niz	120	
7	Village level program	30/11/02	Konagao Chowrasta	150	
				468	

Reporting period : December 2002

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	18/12/02	Purbopakiluna	45	
2	Para level program	28/12/03	Bakarkanda	28	
3	Para level program	31/12/02	Pakuria	39	
4	Village level program	22/12/02	Kanduli primary school	50	
5	Village level program	4/12/2002	Salda	46	
6	Village level program	30/12/02	Hoara niz	50	
7	Village level program	10/12/2002	Twcha	46	
				304	

Reporting period : January 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	15/01/03	Tialkandi	39	
2	Para level	29/01/03	Hoawra niz	48	
3	Upazila level/ rally	19/01/03	Protabia Primary school	800	
4	Upazila level/ rally	20/01/03	Gagrapara primary school	950	
				1837	

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Reporting period : February 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level program	24/02/03	Dariarpar	30	
2	Para level program	24/02/03	Darikalinagar	54	
3	Para level program	25/02/03	Dariarpar	36	
				120	

Reporting period : March 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	10/3/2003	Tatalpur	43	
2	Para level	16/03/03	Ramkila	34	
3	Para level	12/3/2003	Kamarpara	45	
4	Para level.	9/4/2003	Pakuria	49	
5	Para level	19/03/03	Tilkandi	39	
6	Para level	24/03/03	Hoawra niz	56	
7	Village level	4/3/2003	UNO office Sadar	1200	Dara show on MACH approach
8	Village level	5/3/2003	Tatalpur	1000	Dara show on MACH approach
9	Village level	5/3/2003	Protabia	1600	Dara show on MACH approach
10	Village level	6/3/2003	Digarpar	1500	Dara show on MACH approach
11	Village level	6/3/2003	Mandakhali	3000	Dara show on MACH approach
12	Village level	7/3/2003	Bakarkanda	1300	Dara show on MACH approach
13	Village level	7/3/2003	Badategoria	1350	Dara show on MACH approach
14	Village level	8/3/2003	Tircha	1100	Dara show on MACH approach
15	Village level	8/3/2003	Pakuria	1500	Dara show on MACH approach
16	Village level	9/3/2003	Tilkandi	1800	Dara show on MACH approach
17	Village level	9/3/2003	Pakuria Kamarpara	1800	Dara show on MACH approach
18	Village level	10/3/2003	Balurghat	1200	Dara show on MACH approach
19	Village level	10/3/2003	Gazirkhamar	4000	Dara show on MACH approach
20	Village level	13/3/03	Bakakura	1200	Dara show on MACH approach
21	Village level	13/3/03	Naukuchi	900	Dara show on MACH approach
22	Village level	14/03/03	Sharikalinagar	1500	Dara show on MACH approach
23	Village level	14/03/03	Dhansail	1250	Dara show on MACH approach
24	Village level	15/03/03	Dariarpar	1300	Dara show on MACH approach
25	Village level	15/03/03	Kanduli	1000	Dara show on MACH approach
26	Village level	16/03/03	UNO office Jheneigati	1100	Dara show on MACH approach
27	Village level	17/03/03	Paglarmuk	1100	Dara show on MACH approach
28	Village level	17/03/03	Paikura Bazer	3200	Dara show on MACH approach
29	Village level	18/03/03	Julgaon	1100	Dara show on MACH approach
30	Village level	18/03/03	Kalibari Bazer	2300	Dara show on MACH approach
31	Village level	19/03/03	Dorikalinagar	800	Dara show on MACH approach
32	Village level	19/03/03	Baliachandi	2000	Dara show on MACH approach
33	Village level	20/03/03	Baniapara	1100	Dara show on MACH approach
				42466	

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Reporting period : April 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	10/4/2003	Ramkhila	49	
2	Para level	16/04/03	Badetegoria	53	
3	Para level	8/4/2003	Martinpar	52	
4	Para level	23/04/03	Protabia	41	
5	UP level	22/04/03	Bakarkanda	150	
				345	

Reporting period : May 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para level	6/5/2003	Protabia	42	
2	Para level	25/05/03	Howra niz	56	
3	Village level	5/5/2003	Sarikalinagar	230	
4	Village level	14/05/03	Salda	150	
				478	

Reporting period : June 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Village level	22/04/06	Howra niz	170	
				170	

Reporting period : August 2003

Sl	Nature of program	Date	Venue	Participants attended	Remarks
1	Para Level	18/008/03	Tatalpur	85	
2	Para Level	21/08/03	Martinpar	75	
				160	

Summary of KM site

Total Program	227	Participants	68,377	

Management of Aquatic Ecosystems through Community Husbandry (MACH)

Strategic Objective 6

Intermediate Result 6.5: Improved Institutional Capacity

Indicator 6.5a: Number of local government meetings where resource management issues discussed and processes institutionalized.

October 2003

Winrock International

CNRS

CARITAS BANGLADESH

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Strategic Objective 6: Improved Management of Open Water and Tropical Forest Resources

Intermediate Result 6.5: Improved Institutional Capacity

Indicator 6.5a: This is a "marker" indicator yet to be defined:

A. Description
Precise Definition of Indicator: To be defined.
Unit of Measure:
Disaggregate by:
Justification/Management Utility: Institutional capacity enhancement, particularly at the local level, is critical to improved resource management over the long term.

B. Plan for Data Collection
Data Collection Method: TBD
Data Source(s): TBD
Method of Collection by USAID: TBD
Timing/Frequency of Data Collection: TBD
Estimated Cost of Collection:
Responsible Individual(s) at USAID: Team Leader

C. Data Quality Issues
Date of Initial Data Quality Assessment: TBD
Known Data Limitations (if any): None
Actions Taken or Planned to Address Data Limitations: N/A
Date of Future Data Quality Assessments:
Procedures of Future Data Quality Assessments:

D. Plan for Data Analysis, Reporting, and Review
Data analysis: TBD
Presentation of Data: TBD
Review of Data: Semi-annual mission portfolio review, individual activity monitoring.
Reporting Data: Semi-annual report, R4 and CBJ reports.

E. Other Notes:
Notes on the Baselines/Targets: Grantee(s) will establish baseline data. Local level resource management skills were very limited at the beginning of the project.
Location of Data Storage: M:\EGFEpub\Environment\PMP\Data
Comments: This indicator needs some further thought. Institutional capacity building will be targeted at various levels: local governments, NGOs and the tropical forest foundation. One option is to use an index with some very simple criteria across the board: e.g., technical capacity, managerial capacity (clear roles, responsibilities, procedures, etc), and implementation/enforcement. Another is to use an already existing index for the NGO portion, and select a representative sample of NGOs. On completion of the implementation design for the tropical forest component, the SO Team will develop and begin reporting on a suitable indicator.

Unit of measure: TBD

Year	Planned	Actual
Baseline 2000		
2001		
2002		
2003		
2004		
2005		

This Sheet Last Updated On: 11/05/01

Strategic Objective 6:
Intermediate Result 6.5: Improved Institutional Capacity
Indicator 6.5a: Number of Local Government meetings where resource management issues discussed and processes institutionalized.

Draft

Reference Indicator 6.5a

Improved Wetland Management Organizational Capacity

1. Introduction: The goal of MACH project is to promote ecologically sound management of floodplain resources for the sustainable supply of food to the poor of Bangladesh. In achieving sustainable local management of wetland resources, MACH forming Resource Management Organizations (RMOs) comprising of local user communities. These organizations would manage the natural wetland resources within their locality in sustainable manner and continue to derive benefits even after the project support is over. The RMOs participate in a co-management setup with local government and manage the resources with local government.

2. The RMOs: RMOs are formed in each of the water-bodies where MACH made interventions for restoration, enhancement and conservation of wetland's biodiversity and productivity. The RMOs are heterogeneous group consisting of people from different social and occupational hierarchies having stake in the respective wetlands. However, to adopt pro-poor resource management strategy, higher numbers of poor and fishers are incorporated in the RMOs. As a rule, each RMO should not have less than 60% of RUG members who are fishers, not less than 30% poor people preferably from RUGs and not more than 10% local elite. The respective UP Chairmen are associated with RMOs as adviser.

3. Good Practices
Over the last three years RMOs adopted some good practices towards improved management of wetland resources in their respective areas. As of now, the accomplishment of the RMOs in sustainable NR management included:

- Establishment & management of Sanctuaries
- Periodical closing of fishing (breeding season)
- Stopping of use of destructive gears for fishing
- Conflict resolution at the community level
- Re-introduction and conservation of locally threatened species
- Preparation wetland resource management plan
- Habitat restoration through re-excavation and tree plantation
- RMO's institutional linkages with UP, UZ and district levels
- Awareness building among the communities about the wetlands
- Contour cultivation of pineapples in the hill slopes

MACH has taken up various initiatives and interventions to make each of the RMOs capable so that they can continue to mange their own resources on sustainable manner. The RMOs are linked with RUGs and local government bodies and agencies. RMO members regularly attend MLGC meetings at Upazila level. Process has been initiated to facilitate participating RMO representatives in UP monthly meetings and discuss various issues related to wetland resources management. They also attend UP A framework has been thought to make the RMOs sustainable as local cómmunity institutions for wetland resources management.

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3. Sustainability of RMOs

MACH is a process project and demonstrating community-based wetland resource management approaches. The RMOs under MACH are now in formative stage and need at least 7 years for building their capacity and keep under close observation on their performance towards sustainable wetland management. MACH is providing necessary support services for building capacity of RMOs in improved management of wetland resources.

MACH has worked toward institutionalizing the following into the resource management organization and their linkages and co-management with local government.

Organizational aspects

- Registered with government agencies and have legal status
- Perform regular organizational activities, viz. meetings, group and community actions .
- Have fund flow and financial activities
- Maintain transparent financial management
- Rapport and linkage development with concerned agencies viz. UPs, UZs & district administration and GOB agencies, NGOs and other related bodies

Technical aspects

- Understand wetland resources management problems and issues
- Skills in identifying problems and making consensual interventions plans
- Capable of implementing wetland management interventions
- Capable of monitor changes in productivity (quality and quantity) due to management interventions
- Capable generate community awareness about sustainable use of resources

Governance aspects

- Adopt and practice pro-poor management and benefit distribution of approaches
- Ensure access to wetland resources by the poor and fishers
- Accountable and transparent in all aspects
- Wider acceptance among the communities as their own institutions
- Practice and value participatory decision making for all aspects of management issues

4. Capacity Building

The RMO meets at two levels one being the general body consisting of anywhere from 50-200 individuals from the community of the target area. The RMO does most of it planning and building capacity through executive committee meetings and training sessions. Decisions and plans are approved by the general body with quite often the Union Chairman as advisors. Special meeting of the UP are held to secure plans and gain support for the measures to be placed before the local government committee which includes all the UP chairmans, RMO representatives and the Upazila officials including the UFO. During the LGC's or Local Government Committee Meeting the resource users, the local elected officials (UP chairman) and the upazila authorities increase their capacity to manage wetland resources by discussion and planning. Their knowledge and capacity is enhanced through meeting procedures established first by the project and now taken on by them.

This indicator reports on the members of those on the job (meetings) capacity building experiences for local government officials and community based management organization members.

Indicator 6.5a

Number of Upazila level Local Government meetings

Site	Upazilla	2001	2002	2003	Total
HH	Sreemongol	3	4	2	9
TB	Kaliakoir	2	4	2	8
KM	Jhinaigati	3	4	3	10
	Sherpur	3	4	3	10
	Sub-Total	6	8	6	20
Total (3 sites)		11	18	8	37

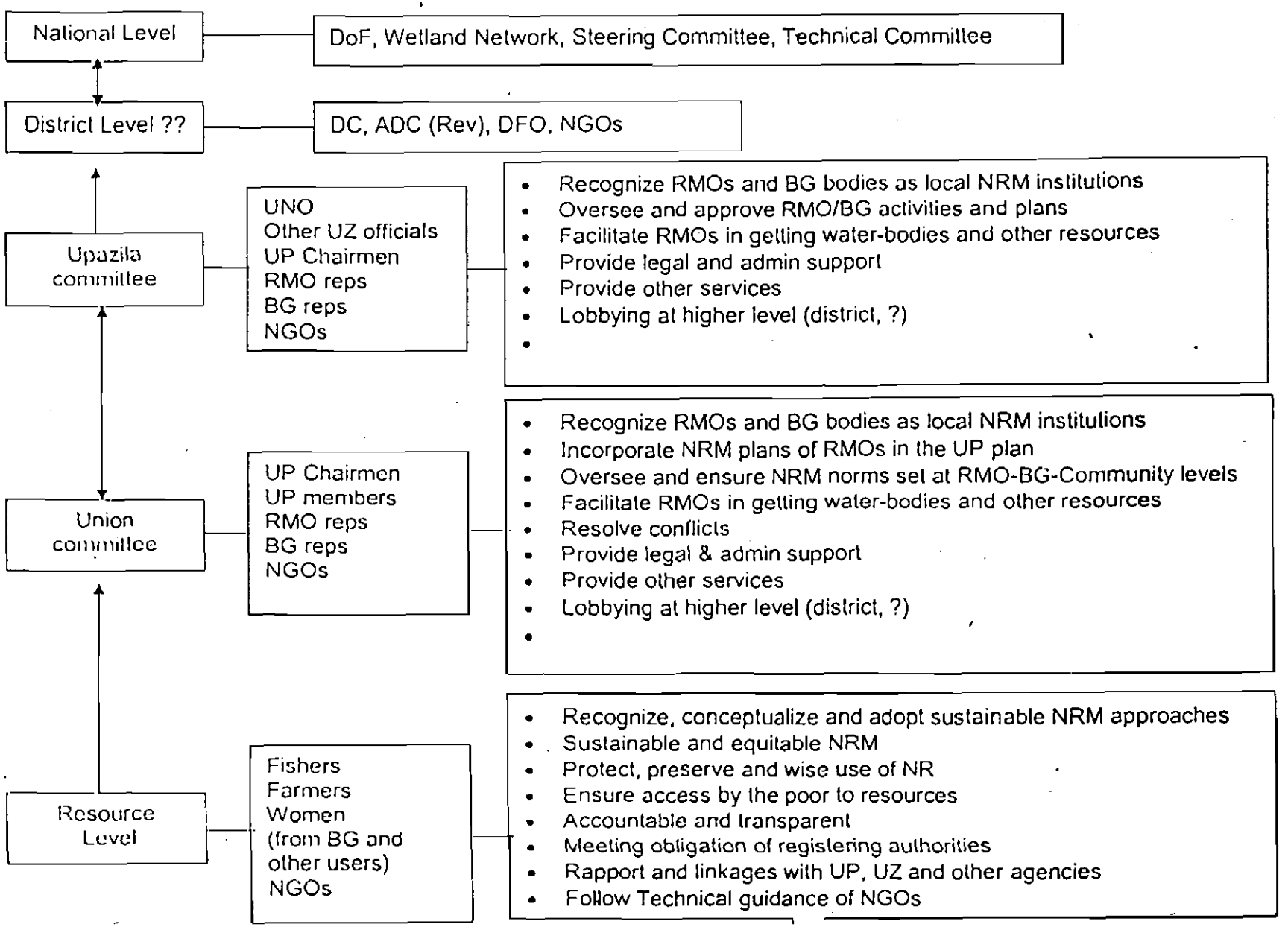
Number of Union level Local Government meetings attended by RMO/MACH

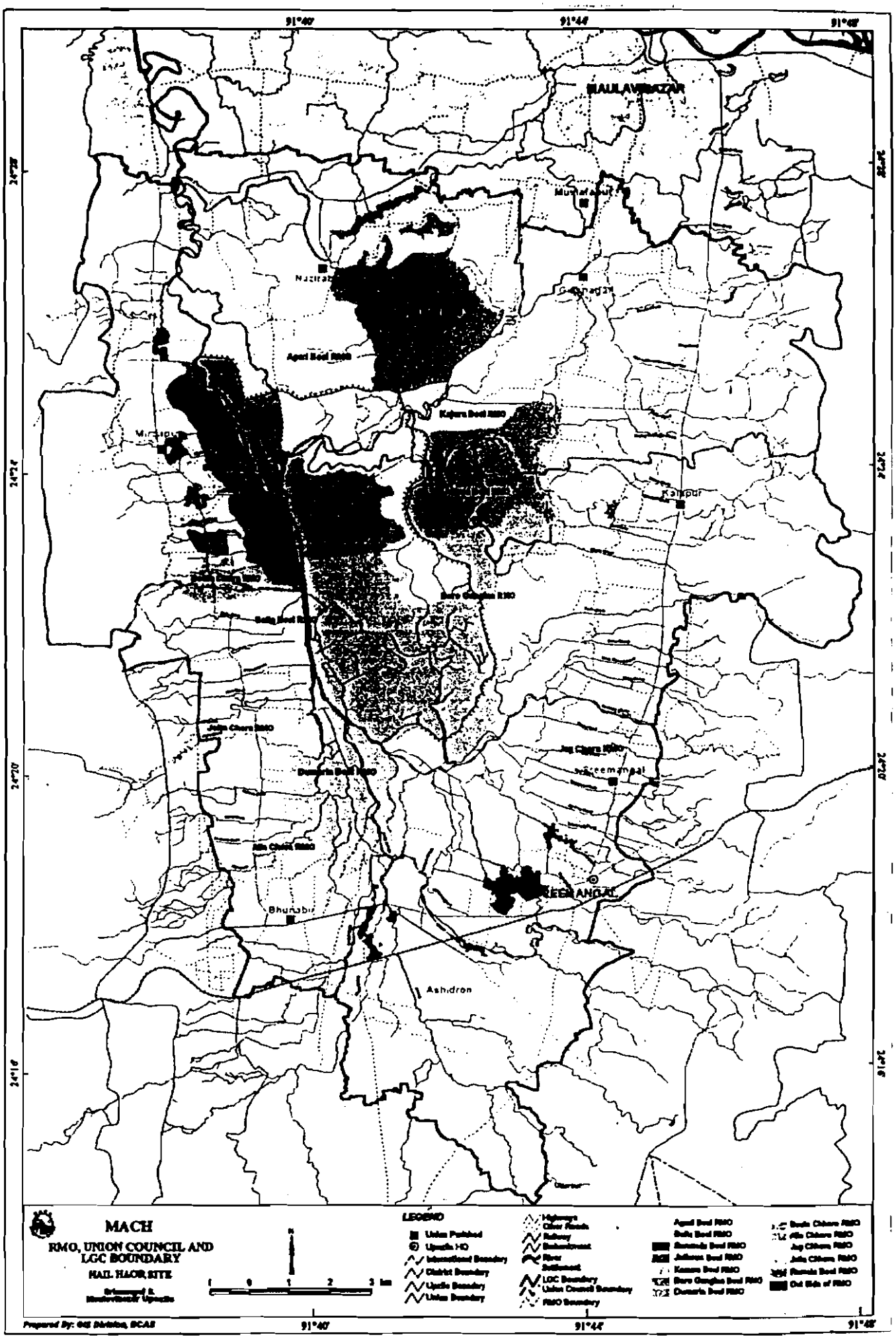
Site	RMO	2001	2002	2003	Total
HH	Sananda	3	6	5	14
	Balla	3	4	5	12
	Dumuria	-	6	4	10
	Jethua	-	10	9	19
	Kajura	-	9	7	16
	Agari	-	10	8	18
	Sub-Total	6	45	38	89
TB	Alua	1	2	4	7
	Mokosh	3	4	2	9
	Turag	2	5	3	10
	Sub-Total	6	11	9	26
KM	Takimari-Dharabashia	6	10	5	21
	Bailsha	6	5	3	14
	Dholi-Baila	6	9	4	19
	Kewta	10	10	5	25
	Sub-Total	28	34	17	79
Total (3 sites)		40	90	64	194

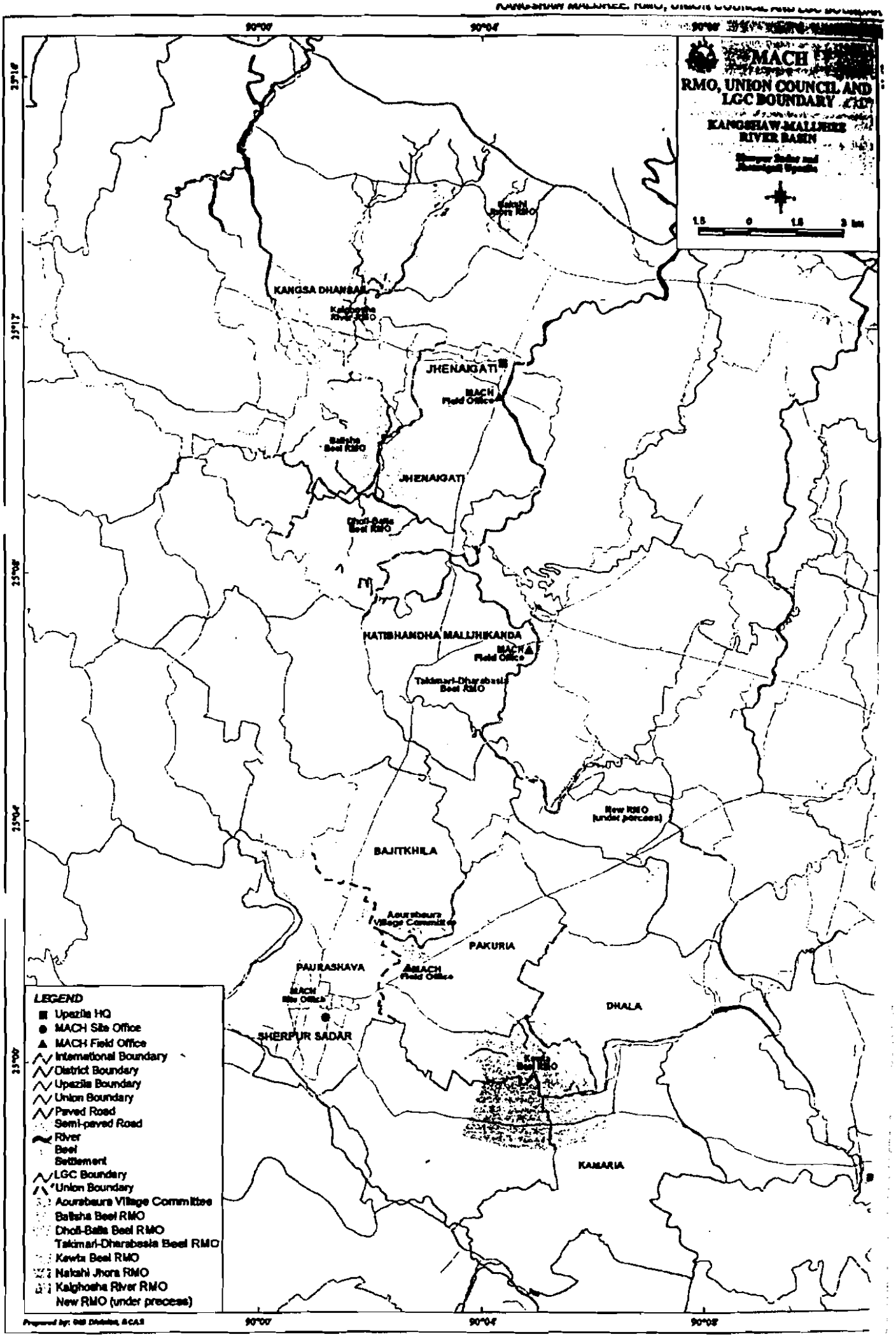
Number of RMO level meetings

Site	2001		2002		2003		Total	
	EC	GB	EC	GB	EC	GB	EC	GB
HH	72	6	96	12	54	23	222	41
TB	12	4	18	6	19	8	49	18
KM	36	7	40	12	24	8	100	27
Total (3 sites)	120	17	154	30	97	39	371	86

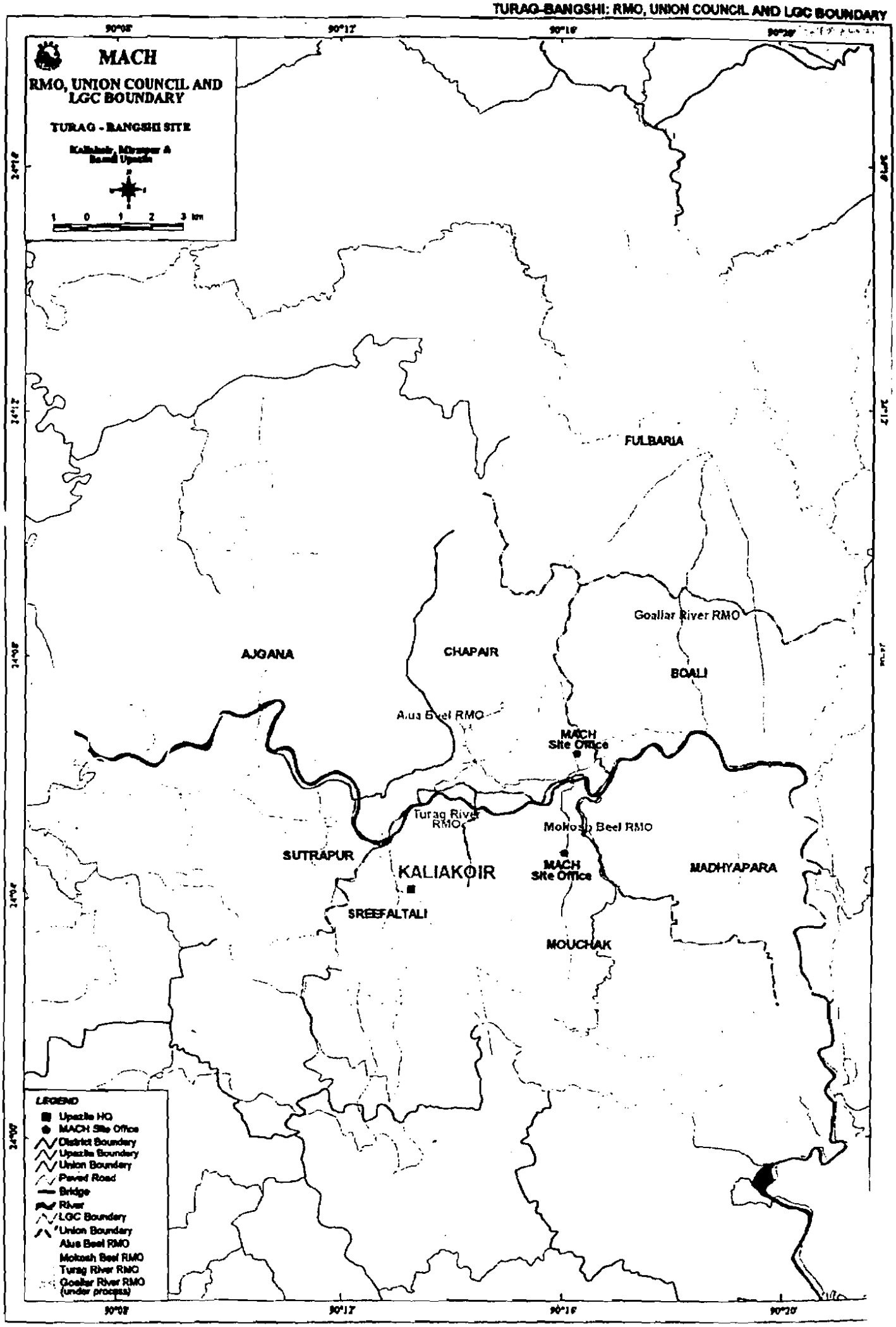
RESOURCE MANAGEMENT ORGANIZATION'S STRUCTURE AND INSTITUTION LINKAGES




MAULAVIBAZAR
Kajipur
Bhunabir
Ashidron
MACH
RMO, UNION COUNCIL AND LGC BOUNDARY
HAIL HAOR SITE
LEGEND
Union Parished
Upazila HQ
International Boundary
District Boundary
Upazila Boundary
Union Boundary
Highways
Other Roads
Railway
Embankment
River
Settlement
LGC Boundary
Union Council Boundary
RMO Boundary
Agail Beel RMO
Bella Beel RMO
Bamanda Beel RMO
Jalkuna Beel RMO
Kanara Beel RMO
Bara Gangha Beel RMO
Dumaria Beel RMO
Old Site of RMO
Prepared By: GIS Division, BCAS
91°40'
91°44'
91°48'


MACH
RMO, UNION COUNCIL AND LGC BOUNDARY
KANGSHAW-MALLIHRE RIVER BASIN
KANGSA DHARBAR
JHENAIGATI
MACH Field Office
JHENAIGATI
HATIBHANDHA MALLIKHANDA
MACH Field Office
BAJITKHILA
PAKURIA
PAURASHAVA
MACH Field Office
MACH Site Office
SHERPUR SADAR
DHALA
KAMARIA
LEGEND
Upazila HQ
MACH Site Office
MACH Field Office
International Boundary
District Boundary
Upazila Boundary
Union Boundary
Paved Road
Semi-paved Road
River
Beel
Settlement
LGC Boundary
Union Boundary
Aourabaura Village Committee
Ballsha Beel RMO
Dhoti-Balla Beel RMO
Takimari-Dharabasia Beel RMO
Kewta Beel RMO
Nalahi Jhora RMO
Kalghosha River RMO
New RMO (under process)
90°00'
90°04'
90°08'
25°18'
25°17'
25°08'
25°04'
25°00'

TURAG-BANGSHI: RMO, UNION COUNCIL AND LGC BOUNDARY



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Project Partners:

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