



MACH (Management of Aquatic Ecosystems through Community Husbandry) is a Government of Bangladesh project supported by USAID. The project partners (Winrock International, Bangladesh Centre for Advanced Studies, Center for Natural Resources Studies, and Caritas Bangladesh) have worked closely with the Department of Fisheries since 1998. The aim was to establish community based co-management and restore and increase sustainable productivity at the ecosystem level in three large wetlands: Hail Haor in Sreemongal, Turag-Bangshi river and wetlands in Kaliakoir and the Kangsha-Malijhee basin in Sherpur. In the wet season these wetlands cover about 32,000 ha, and in the dry season they include over 100 distinct waterbodies. Over 110 villages inhabited by over 184,000 people are directly involved.

Improving Livelihoods of Wetland Users: MACH Lessons

Inland capture fisheries historically made an important contribution to the livelihoods of the rural poor of Bangladesh. Increased landlessness and poverty due to rapid population growth have increased fishing pressure contributing to depletion of fish stocks, which in turn has adversely impacted on the livelihoods of those dependent on inland capture fisheries. MACH project has worked to reverse this through interventions such as wetland restoration and livelihood diversification. This document brings together lessons drawn from over seven years developing and implementing community based approaches to improve wetland productivity and livelihoods of wetland users.

BACKGROUND

Over fishing, wetland loss and degradation, water pollution, and loss of water connectivity have adversely affected inland fish stocks and fish biodiversity, and the lives of people dependent on wetland resources. Between the mid 1960s, and the mid 1980s about 0.8 million ha of floodplain were drained, and this trend has continued. About 13 million people are estimated to depend for their livelihoods on the fishery sector, but half of all rural households living in floodplains catch fish for food or income, and about 80% of households fishing for an income are poor.

Recognizing that wetland restoration, sustainable management and reduction of fishing pressure are key elements to the revival of floodplain fisheries, the MACH approach included fish conservation techniques such as a closed season during the fish breeding period, gear restriction and sanctuaries. As a result the scope for poor people to fish was limited. To help reduce fishers' problems during this ban period and as a reduction of fishing pressure was likely to be a critical part of reviving floodplain fisheries, MACH included supplemental income-generating activities focused on the very poor. More than 30% of those who directly benefit from this are poor women. This paper focuses on the organizations of poor resource users created to develop alternative livelihoods, and on changes in livelihoods for those people and more generally from improved fishery management.



LESSONS LEARNT

Empowering and enabling the poor for livelihood improvement

Targeting poor for formation of livelihood support groups

People who directly or indirectly depended on the selected wetlands (fishers, people collecting aquatic resources, and landless people living close to the wetland) were targeted to join groups. To avoid overlap with other NGOs' activities, members of other NGO groups could not join Resource User Groups (RUGs - primary groups of 20-30 people). Observing these criteria was complicated, and only 58% of RUG member households earned an income from fishing. The concept of community involvement also left a space for better off people to become members. Through group activities, RUG members are able to understand the purpose of their involvement in wetland resource management. However, more affluent leaders of the Resource Management Organizations (RMOs), which lead in resource management, tended to dominate. The policy to ensure that 60% of RMO members are from RUGs helped address this issue, but the majority of RMO members from RUGs are still hesitant to express their

opinions for fear of losing elite favor.

- Poor resource users should be in the majority within RMOs.
- Local elites and local government representatives familiar with the community should advise during selection of RUG members.
- RMO leaders should be encouraged to listen to resource users and inform them of major decisions, and resource users should understand what they should expect from their leaders.

KEY MESSAGE

Correct targeting of poor wetland resource users was difficult. There is an untapped opportunity to cooperate with other NGOs to link existing micro-credit support with adopting better resource management, rather than competing to supply more micro-credit.

Sustainable institutions and management

MACH worked to ensure the sustainability of community-based organizations by building institutional capacities. MACH formed 250 RUGs comprising poor men and women from 5,194 households. MACH-Caritas built social awareness, improved literacy, addressed nutrition and health, and provided training and credit to RUG members. Although these RUGs are a strong base for alternate income generation activities, capacity building is a slow process and even after five years the majority of the RUGs could not operate on their own. For example, most RUGs have no literate member to keep records.

MACH strengthened RUGs by linking them in 13 Federations of RUGs (FRUGs). MACH is handing over all the revolving credit funds to the FRUGs which employ as needed their own staff. Representatives from each RUG form the general body of a FRUG, which selects an executive committee (EC). Issues in this system include: how to develop mechanisms to make general body and EC members accountable to the other RUG members, the capacity of EC members (about 20% of EC members are not able yet to perform their responsibilities well), and how to prepare for replacement of existing leaders.

- Projects that aim to establish organizations of poor people operating their own revolving funds should from the beginning emphasise exit plans for institutional sustainability, as this requires very different activities from traditional NGO managed micro-credit. Success criteria needed to be decided and updated through participation.

- Projects should educate group members so they can maintain their own records transparently and avoid any malpractice.
- Leadership training should be continuous so that FRUG leaders can perform their roles and responsibilities.
- It is essential to create a new generation of FRUG-aware RUG-members as future leaders.
- Elections by secret ballot are most appropriate for choosing office bearers.
- Sound financial management is essential. RUGs should be able to prepare appropriate annual budgets. A credit operation manual and training are preconditions for handover of funds.
- FRUG ownership of revolving funds is empowering, improving loan approval, visits by FRUG leaders to weaker RUGs to motivate members, and collection of overdue loans.
- Annual and monthly planning of activities at RUG and FRUG levels needs to be linked and the responsibility of the members, and not to serve outside needs.
- Projects should use regular assessments of RUGs as a tool to help RUGs improve their performance.
- Regular performance review by FRUGs would exert peer pressure and help them improve their performance.
- FRUGs need to have legal recognition, be able to recruit and manage efficient staff, have skills in identifying viable enterprises for loans, and understand their finances.

Membership and graduation

RUG members were selected on the basis of poverty. However, not all members were poor nor were all poor fishers included in the RUGs. One gap has been provision for exit and entry in the RUGs. In the FRUG constitution, there is mention of graduation of RUG members who move out of poverty and of recruiting new members. However, this has not been practiced and RUGs are more likely to continue to provide micro-credit to the existing members.

- FRUG constitutions should allow them to gradually recruit more poor people dependent on wetland resources in the RUGs.
- NGOs working within a community should coordinate so that everyone knows clearly about the future prospects and activities of the institutions to be

formed. Selection should not exclude the poor from benefits or limit benefits to a particular faction of the community.

- By forming independent community organizations there is no incentive for the members to graduate themselves (losing benefits) or to bring in new untried members (risk of defaulters).

Handicrafts are one of the most effective AIGAs.

Several members of Taitola Shapla Mohila Samity (Kaliakoir) produce handicrafts supported by loans and training, in collaboration with "CORR: The Jute Works" project of Caritas. CORR and the Samity have built a strong marketing channel. The average monthly income from this trade is Tk.2,000.

Capacity building of RUG members

Developing the capacity of poor people for professional income generating skills has been a major effort. More than 80% of RUG members reported that the trainings they received were useful and effective in bringing them out of poverty and reducing dependence on fishing.

- Skill training should be given prior to any loan.
- It is necessary to assess whether the prospective trainee has resources to use skill training, for example a tree nursery needs land.
- Poor fishers can use new skills to enhance their income and 35% of those receiving micro-credit apparently gave up fishing.
- Training is not enough, participants need help to analyze the costs and benefits of their planned enterprises, so that loans can be properly used and profitable alternative income generating activities (AIGAs) are adopted.

Participation of women

About one-third of RUG members are women and they are gradually taking part in decision making. Women expressed their satisfaction with the skills training they and their unemployed offspring received. Loans they took directly benefited their households. As women they are now more united than before.

- The capacity of women leaders should be strengthened. Gender relations training for both men and women is desirable.
- Part of the credit fund should be reserved for women groups.
- A quota (such as one third) of women in the decision making bodies should be ensured.

Livelihoods impacts

Alternate livelihoods and micro-credit

Up to late 2005 12,287 loans valued at Tk 69 million had been disbursed to RUG members for use in 35 different types of income generating activities. This helped fishers and the family members of fishers take up new occupations altogether, or at least earn an income from non-wetland sources that helps to compensate for refraining from fishing in protected areas and during closed seasons. Popular enterprises include cow rearing, poultry and aquaculture, but occupational skills have also been developed for example as mechanics and electricians. Net profits per AIGA averaged about Tk 5,600 in 2006. Almost all RUG members who received training reported increased incomes with only 10% in 2006 still in food deficit. However, risk factors for different activities and RUGs were not assessed sufficiently - some groups have been affected by flash floods and a locally depressed economy in Sherpur. Almost all borrowers received at least one skill

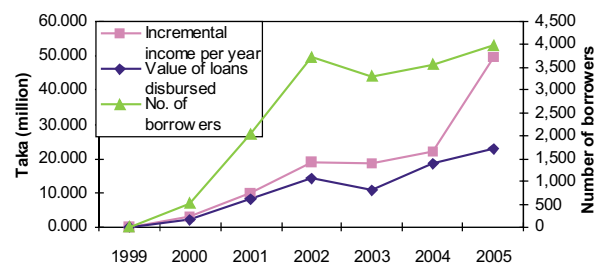


Figure 2: Micro-credit support through MACH

training, but only 38% of a sample of borrowers in 2006 had received training in the activity they used their last loan for.

- Training and micro-credit can be used by poor fishers for activities that increase their income.
- Introduction of people-owned and people-managed credit enhances the participants' sense of ownership and self-identity.
- Alternative means of earning reduced competition for fishing.

Savings and investment

Saving has become institutionalized in the RUGs. However, so far those savings are not re-invested in the FRUGs' micro-credit as security through the formal banking system was preferred.

- By transferring responsibility for their savings to the FRUGs, the savers can be empowered.
- Checks and guidelines on re-investing savings are needed if the additional benefits for poor people are to be achieved without risk of losing their savings.

Fishery based livelihood improvements

MACH recognized that restoring and sustaining fisheries would require limits on fishing, and this could adversely affect the poor. The project aimed to reduce fishing pressure, but when a fishery is restored more people may be attracted to fishing since more fish are available. Provided the catch per fisher and catch per hectare both increase it is likely that the fishery is sustainable and more productive, even if total fishing effort has also increased.

Wetland productivity was restored and increased: up to 2004-05 the fish catch per hectare increased by between 2 and 5.5 times over the baseline year in different MACH sites. Fishing households also reported a doubling in their income scores. However, the level of dependency on fishing among RUG members has fallen. This suggests that other households have gained from increased fish catches.

- Fish catches can increase substantially with better management, but members of AIGA groups may not be the beneficiaries of this.
- AIGA training and micro-credit reduced fishing effort for group members, but total effort increased in response to increasing fish stocks.

Improved nutrition

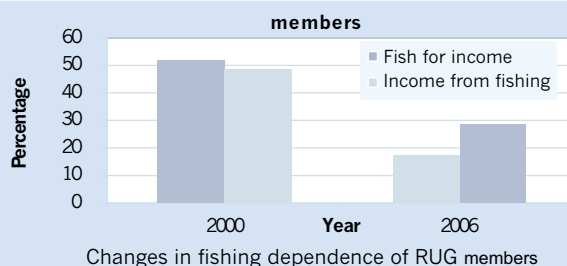
Regular monitoring of household fish consumption confirms livelihood gains from improved fishery management. Fish consumption in 2004-05 was 48% higher than the baseline data. Small beel resident fish and prawns dominate consumption by all households including the poor. Statistically significant increases in fish consumption were found for all levels of people. The landless increased their fish consumption by 45-50%.

- Benefits from increased fish catches have reached all categories of people including the landless.

- Increased subsistence catches and increased income can enhance nutrition through higher fish consumption.

POLICY RECOMMENDATIONS

1. Targeting poor fishers for livelihood support should be mandatory and all such fishers should gain from community organizations.
2. Successful alternate income generation activities need skill development, appropriate loans, and marketing channels.
3. Access to training should be a pre-requisite for any micro-credit based development work.
4. Assessment of the risks for poor participants related to alternative income generating activities and loans should be mandatory, and a coping strategy should be developed for each risk.
5. Mechanisms to ensure transparency and accountability of the office bearers should be established before handing over funds.
6. There should be provision for graduation as well as recruitment of new members in the groups.
7. To ensure organizational sustainability, new leaders should be developed through democratic changes in decision makers.
8. Group members need to be linked with local government programs to access training and government credit funds.
9. Projects should link micro-credit groups, resource management organizations and local government so that they share experience and have healthy relationships for the long term betterment of wetland resources.
10. Regular monitoring systems need to capture how different stakeholders are impacted.
11. Monitoring of institutions and credit management jointly by government and external reviewers is recommended.
12. Government should ensure cooperation between NGOs working in the same locality to maximize coverage of poor resource users linked with resource management.



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