

fisheries

research findings for development policymakers and practitioners

Women's role in fish conservation in Bangladesh

Women in Bangladesh are often excluded from fishing, and from the institutions that manage fisheries. Including women in community-based management institutions is crucial for improving their livelihoods.

Fish are a vital source of food for poor rural people. About 80 percent of rural households in Bangladesh catch fish for food or to sell, and people receive about 60 percent of their animal protein from fish. Fishing has traditionally been men's work, but women and children have increasingly become involved in fishing activities.

Research from the Flood Hazard Research Centre in the UK examined three community-based organisations (CBOs) that manage fisheries: a women-only CBO, a men-only CBO and a mixed gender CBO. The researchers compared them in terms of their resource management and the changes they brought to livelihoods and assets.

In Maliate, women have found that they struggle to find acceptance of their rules for fisheries management; in Shuluar, men were opposed to women's participation in fisheries management

In Maliate, women are responsible for managing fisheries. However, they have found that they need to include men on the advisory committee, otherwise they struggle to get their rules for fisheries management accepted. In Shuluar, a Muslim community, men were opposed to women's participation in fisheries management. After a year, and pressure from a non-governmental organisation, men allowed women to form some fisheries groups, but they do not make decisions. In Goakhola-Hatiara, both men

and women are both present on the fishery management committee. Their main activity is fish conservation, but the committee also works with the local government to manage water.

Findings from these case studies show:

- Women-led community organisations can improve fisheries management. They are also associated with greater community-wide acceptance of management rules and less conflict over resources.
- Fish species diversity in all three sites has improved after management committees introduced conservation measures. The increased fish diversity in Maliate shows that women are just as capable of conserving fish as men.
- The effectiveness of management committees depends partly on social relationships. This helps to explain why the Shuluar committee is the least effective of the three, as women have little involvement.
- People widely agree that they now participate in managing common resources, and that poorer households were benefiting. However, less than half of the women interviewed think that management decisions considered their opinions.
- People agree that strong leadership is the most important factor in successful management committees. For women, the second most important factor is the need to establish the legitimacy of the CBO for resource management. For men, it is establishing a fund for future activities.

The ability to establish CBOs where women play a leading role is influenced by local community norms and culture. For example, all local people must accept women's involvement in economic



A woman and her children catch small fish in the Turag River in rural Bangladesh
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activities outside the home. If a culture does not allow this, it is harder to involve women in resource management.

The researchers suggest that policymakers and organisations planning to support community-based management of natural resources should:

- use processes that enable women to take a leading role
- help both men and women to recognise the uses and relevance of natural resources to women.

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Farming fish in cities

Cultivating fish and aquatic vegetables is common in many Asian cities. In fast-changing urban environments, what are the risks and benefits of this?

The potential of aquaculture in urban areas is poorly understood. Researchers from the University of Essex and the University of Stirling, both in the UK, investigate different approaches to farming fish and aquatic vegetables in these areas.

The research shows:

- Urban farmers use both freshwater and marine environments, and range from using extensive to intensive production systems.
- Intensive systems rely on introducing feed for fish and applying fertilisers. Less intensive systems use by-products and waste instead of manufactured fertilisers.
- Different systems rely on different forms of resource ownership and tenure, from common property rights and co-operatives to private ownership of resources.

Urban aquaculture has some advantages over rural aquaculture. Farmers are closer to markets, which means that they can deliver fresh products quickly and get a better price. Access to wastewater can increase the production season, meaning that farmers

can sell fish throughout the year. This benefits consumers as well as producers. It can also provide income and employment for large numbers of people.

Using wastewater and agricultural by-products also reduces pressure on scarce freshwater and mineral resources. Diverting wastewater for use in aquaculture could also become important in sanitation for poor communities and improve health, including the reduction of infant mortality. Urban aquaculture also contributes significantly to food security in some places, because fish and aquatic vegetables are nutritious.

However, alongside these benefits, there are many constraints and risks in urban aquaculture. The research shows:

- Increased rural-urban migration creates unregulated settlements near urban areas. Ineffective planning means people are unwilling to invest in land management or efficient urban aquaculture practices.
- In peri-urban Kolkata, India, many households are abandoning farming of all kinds because they can find more highly paid work in the city. This creates labour and skills shortages for farming.
- In Hanoi and Ho Chi Minh City, Viet Nam, increasingly efficient infrastructure, particularly roads, means that distant producers can reach cities more easily. In these circumstances, urban fish producers lose their competitive advantage.
- In Viet Nam, China and India, pollution

from homes and industry threatens urban aquaculture. There are also health risks involved in consuming products grown using waste resources.

Urban aquaculture has enormous potential for poverty reduction, but there are knowledge gaps and policy decisions that need resolving. Urban planners rarely consider aquaculture when planning uses of urban water. They also usually lack information about the relative importance and benefits associated with urban aquaculture.

The researchers suggest:

- Using urban wastewater for aquaculture can only continue if city planners separate industrial effluents from domestic sewage.
- Urban development policies must consider and include the cultivation of fish and plants in cities.

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A better deal for the African fish industry

The changing nature of international trade has created new challenges and opportunities for fishing industries in sub-Saharan Africa. However, the many different agreements, frameworks and regulations used make this a complicated process.

The value of fishery exports in sub-Saharan Africa has doubled in the past decade, and they were worth US\$3.2 billion in 2002. The increasing need of the European Union (EU) to import fish (due to declining stocks in its own waters) represents a great opportunity for Africa.

However, African governments face complex negotiations when dealing with the EU and the World Trade Organization (WTO). They also need to comply with strict food safety standards from both the public and private sectors.

WTO negotiations on fisheries are being addressed by the Doha Development Round. One implication of discussions and potential rules on fisheries subsidies in the WTO could be that EU pays less money to access fish in African waters. Current proposals under negotiation threaten to make Africa-based fish processors non-competitive in EU markets.

In addition, the trade-related aspects of the Cotonou Agreement between African, Caribbean and Pacific (ACP) countries and the EU are being renegotiated. Until the end of 2007, this provides 'one-way' tariff-free access to EU markets, if fish

exports comply with strict 'Rules of Origin' conditions. However, to make this duty-free trade relationship compatible with the WTO, the ACP must negotiate new two-way Economic Partnership Agreements by 2008. To do so, the ACP has been divided into six sub-regional groupings, which has reduced its collective bargaining power.

The negotiating position of African countries in these agreements is mainly defensive. They want to preserve their preferential access to EU markets and the fees paid by EU countries to access their fisheries. Because of this, negotiations could have several outcomes:

- African nations may accept continued EU subsidies to their fishing industries, which provide access fees – as long as these fees increase over time.
- If negotiations choose to reduce subsidies, this would limit the amount of foreign fishing fleets. These currently hinder the competitive development of domestic fishing fleets and threaten fish stocks.
- The EU's need for fish products for its processing industries and domestic markets means African countries have more power in negotiations than they sometimes recognise.

The current demand for fish products in the EU offers an opportunity for Africa's fishing

nations. The researchers recommend:

- using catches from EU fleets in African waters to stimulate processing industries in African countries, which will create employment
- using by-catch (species not wanted for commercial purposes) for local markets
- negotiating at regional or sub-regional levels, rather than at the level of individual countries, so that stronger countries (such as South Africa) can help weaker countries.

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© Institute of Development Studies 2007 ISSN 1746-8655
Printed on paper produced from sustainable forests

Keywords: community-based management, conservation, fisheries, gender, trade negotiations, urban aquaculture