

STREAM



Support to Regional Aquatic Resources Management

STREAM Journal

Learning and communicating about the livelihoods of fishers and farmers

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Note

What roles can a regional initiative like STREAM – based as it is in an intergovernmental organization like NACA – play in fisheries and aquaculture policy development in its member countries across Asia-Pacific? The articles in this special number of the *STREAM Journal* provide some answers to this question. In the first article, we write about the way our thinking progressed around STREAM's involvement with policy matters, and briefly introduce each of the contexts illustrated in the following articles.

From Cambodia, we learn about the perceived impacts, benefits and challenges from a major policy change concerning community fisheries, after several years of efforts by many stakeholders. The next two articles are from Indian colleagues who have been involved with another lengthy process which led to policy changes on the lease periods of ponds and setting up One-stop Aqua Shops across three states in eastern India.

In Pakistan, an FAO-supported project has been under way to reach out across the country's four provinces, to hear from as broad a range of stakeholders as possible, as a national fisheries and aquaculture policy and strategy has taken shape. We'll look forward to reporting in future *SJ* numbers on the impacts, benefits and challenges from its implementation.

The final article presents a clear case from Indonesia of the importance of listening to the voices of poor people involved in the international fish trade, to understand their lives and to seek ways of changing policy and practice so that their livelihoods can improve while also addressing concerns about the environment.

Happy reading!

Graham Haylor, STREAM Director
William Savage, *STREAM Journal* Editor

Policy Development as a Theme and Policy Briefs as a Genre

Graham Haylor and William Savage

A Theme on Policy Development

STREAM's four themes of livelihoods, institutions, policy development and communications emerged from discussions at our First STREAM Regional Conference in Bangkok in June 2002. For the most part, STREAM had not yet carried out many activities at the time, so we were generating ideas that led to the four themes without much experience to base them on.

Since then, the four-theme framework in which STREAM operates has proven its relevance as we have built up a body of work and experience in 12 countries and regionally. This is particularly true of the theme that eventually came to be called "policy development". We debated whether it should be called "policy" since all the other themes were just a single term. But we would not be making policy, would we? We thought about calling it "policy change". But then neither would we be in a position to be changing any policies. Choosing what was perhaps a more vague term, we settled on "policy development" as the name of that theme. This turned out to be an accurate label, reminded as we were on one occasion by a senior policy-maker colleague in one of the STREAM countries: "You don't make or change policy, governments do." We have, however, been involved in several policy development efforts.

Sensing and Responding to Opportunities

Our experience over these past four or five years is that an initiative like STREAM, as part of an intergovernmental regional entity like NACA, is really only in a position to be aware of and to respond to opportunities to be a partner in country-level policy development initiatives. We have been fortunate to have done this so far in Vietnam, Cambodia, India and Pakistan and through a regionally-focused project on international trade.

In Vietnam, colleagues in NACA and DFID who later became players in STREAM were invited by the Ministry of Fisheries to share in the task of developing the Sustainable Aquaculture for Poverty Alleviation (SAPA) Strategy. The very ideas that were giving rise to STREAM were put into practice in Hanoi in 2001 as the Fisheries Ministry began to commit more purposefully towards hunger eradication and poverty reduction. These included the adoption of livelihoods approaches that could empower local communities to input into fisheries and aquaculture development policies and processes. This led to getting government support to begin to address issues raised by livelihoods analyses in the northern mountains, the central coast and the Mekong delta.

In Cambodia, at the end of 2000, dramatic and difficult policy events were unfolding around the Tonle Sap Lake and issues of wider access to its enormous fishery. The DFID Aquatic Resources Management Program and the STREAM Initiative which it supported were able to provide crucial early help to the new Community Fisheries Development Office (CFDO) in the Department of Fisheries. STREAM rapidly mobilized early funding and a volunteer from Accenture to nurture the development of the CFDO itself, to help to attract staff to join, learn English, plan strategy and become organized to play its crucial role. The office would eventually oversee the development of a Sub-decree on Community Fisheries Management, enacted by the Council of Ministers, to share with local communities the management of fishing lots previously auctioned to commercial interests. The value of livelihoods studies undertaken in three provinces in informing policy and legal changes that would decriminalize family-scale fishers was later highlighted by the Cambodian Director of Fisheries during his endorsement of the *FAO/NACA-STREAM Statement on Aquatic Resources and Livelihoods: Connecting Policy and People*, in Los Baños, Philippines, during its adoption by the 16th NACA Governing Council Meeting in March 2005.

In India, in 2002 when the 10th national five-year plan was being discussed, with more developed ideas about ways of bringing the voices of fishers and farmers from scheduled castes and tribes into policy processes, STREAM negotiated with the DFID Natural Resources Systems Programme (NRSP), the Fisheries Commissioner, the Indian Council for Agricultural Research and many hundreds of fishers and farmers, their leaders and NGOs, a small *facilitated advocacy* role in policy development. Through project support from 2002-05, known to DFID as R8100 and R8334, fishers and farmers put into words their ideas for improved service provision and proposals for policy change, which were prioritized by government and NGO stakeholders and presented to policy-makers. By 2006, six of the policy changes highlighted by the facilitated advocacy process were being implemented in three eastern Indian states with demonstrable positive impacts on poor people's livelihoods.

In Pakistan, in 2005 the government embarked on the development of its first National Fisheries Policy with FAO project support (TCP/PAK/3005). This time STREAM was invited to share its experiences and ways of working in policy development in a new national context and help communities to debate and contribute to a National Policy Framework and Strategy for Fisheries and Aquaculture Development in Pakistan. A wide range of stakeholders in the country's four provinces have so far contributed to a process which, at the time of going to press, finds itself in a National Policy Workshop in Islamabad.

Carrying the process further, a recent regional EC-PREP project has begun looking at the role for poorer stakeholders in international trade in shrimp and marine aquarium fish, focusing on trade policy options between producers and collectors in Indonesia, the Philippines and Vietnam, and markets in the European Union. The integration of poverty alleviation opportunities into international trade in seafood and marine ornamental products is new and forms part of a wider policy development effort by NACA-STREAM, Poseidon Aquaculture and other partners.

A Way of Working

In addition to the subject specialization which STREAM has brought to the policy development processes in each country, an important contribution has also been introducing ways of working that enable poor people to have opportunities to express their views and make recommendations for policy change. A manual aimed at guiding policy development, co-authored by Poseidon Aquaculture and FAO, is now well advanced and will emerge later in 2006 from the work in Pakistan.

Policy Briefs: A STREAM Genre

To share policy developments, as well as outcomes and impacts, again with DFID-NRSP project support (known as R8363), STREAM has developed a new genre of short, 'quick-read' Policy Briefs. Existing titles include *Livelihoods Approaches in Fisheries and Aquaculture*, *Building Consensus, Development and Management of Aquaculture-based Fisheries Enhancements* and *Aquaculture in Watershed Development*. These are produced in 12 languages and are intended to inform policy professionals and provide links to wider related media. They can be viewed at <www.streaminitiative.org/Library/PolicyBrief/index.html>.

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The image shows a thumbnail of a policy brief. At the top left is the STREAM logo with the text 'STREAM Policy Brief' and 'Number 2'. Below the logo is a globe icon and the URL 'www.streaminitiative.org'. The main title of the brief is 'Livelihoods Approaches in Fisheries and Aquaculture', with a sub-note '... in two pages or less'. A red box highlights a key message: 'If you can only do one thing with this Policy Brief, do this ... Build skills and design ways of working in organizations that give fisheries professionals the capacity to understand and support aquatic resource management in people's livelihoods, especially people with limited resources.' Below this, there is a section titled 'The briefing ...' which contains several bullet points: 'Delivering good policies and services that effectively support people's objectives depends on many, sometimes conflicting, agendas. Three very important components are: the capacity to analyse and understand people's livelihoods, the consideration of national perspectives, and of initiatives by the international community, which increasingly call for Country-level Development Strategies.'; 'In Asia Pacific, national government support to aquatic resources management has tended to focus mainly on research and technology development. However, as we accept an increasingly important role for national fisheries administrations in poverty alleviation, we need to understand the role for fisheries in poor people's livelihoods.'; 'To do this, capacity must be built to understand livelihoods analysis and livelihoods approaches to development.'; 'Livelihoods analysis is a systematic yet flexible approach to understanding situations, access to resources, vulnerabilities, options and choices, which makes use of participatory approaches for learning from individuals and groups within communities. It is not complex but often involves people taking on roles that may be new to them.'; 'Taking a livelihoods approach involves considering the choices that people make, the resources they can command and the circumstances in which they can be woven into supporting livelihoods.'; 'Livelihoods analysis is a systematic yet flexible approach to understanding situations, access to resources, vulnerabilities, options and choices, which makes use of participatory approaches for learning from individuals and groups within communities. It is not complex but often involves people taking on roles that may be new to them.'; 'Taking a livelihoods approach involves considering the choices that people make, the resources they can command and the circumstances in which they can be woven into supporting livelihoods.'; 'Livelihoods analysis is a systematic yet flexible approach to understanding situations, access to resources, vulnerabilities, options and choices, which makes use of participatory approaches for learning from individuals and groups within communities. It is not complex but often involves people taking on roles that may be new to them.'; 'Taking a livelihoods approach involves considering the choices that people make, the resources they can command and the circumstances in which they can be woven into supporting livelihoods.'

Decriminalizing Cambodian Family-scale Fishers through a Livelihoods Approach to Law Reform

Nao Thuok and Chun Sophat

Released Lots and Reformed Laws

On 24 October 2000, fisheries policy reforms were initiated by the Prime Minister of Cambodia. As a result, 76 out of 239 fishing lots covering 953,740 hectares (56% of all fishing lots in Cambodia) were released from private companies for public use. This entailed changes in management personnel and a new unit was created within the Department of Fisheries (DoF): the Community Fisheries Development Office (CFDO). Its main tasks are to support communities in managing the released areas, to encourage more participatory management of fisheries country-wide, and especially, to develop a practical interpretation of such participatory, community-based management.

To establish basic legislative and administrative norms relevant to the reforms, a sub-decree on community fisheries management was enacted by the Council of Ministers. It incorporated opinions of a wide range of fisheries stakeholders expressed during consultations held by the DoF in each affected province. A new fisheries law providing a legal framework for the new management structure was drafted by the DoF with recommendations from ADB, FAO and other stakeholders. It was endorsed by the National Assembly on 30 March 2006.

Impacts, Opportunities and Benefits

Immediately after the policy reforms, communities located within or adjacent to released fishing lots perceived positive impacts on their livelihoods through:

- Easier and more secure access to fisheries resources
- Reduced costs due to the lifting of license fees on medium-scale fishing gear
- Improved income, and
- Improved food security.

The opening up of the fishing lots also created opportunities for new agricultural activity in low-lying areas where water drainage was improved after the removal of lot owners' barrages and as residual areas of flooded forest in some areas were cleared. The policy reforms have benefited:

- Small- and medium-scale farmers with the resources to cultivate the new lands
- Poor agricultural laborers for whom new work opportunities were created
- Migrant agricultural laborers with better access to fishing activities and the possibility of raising ducks
- Poor fishers and laborers who have been able to establish new settlements inside released areas
- Small-scale traders, and
- Women and children, who are reported to be experiencing easier and more secure access to fishing without fear of harassment by fishing lot guards.

Fisheries Resources

Access to fishing areas has improved, but there are concerns about the sustainability of the benefits, particularly for poorer groups who are increasingly suffering from high levels of competition in newly-opened fishing areas. The removal of fishing lots has also encouraged (but not caused) changes in fisheries habitats. It has facilitated cultivation in lowland areas of released lots, with the associated use of pesticides and fertilizers, and the clearance of some residual areas of flooded forest. This is likely to affect the fisheries environment, although many of these processes are on-going irrespective of the policy reforms.

Food Security

After initial improvements in food security for poorer fisheries resources users following the policy reforms, an overall decline in individual catches is now felt by most stakeholders to be leading to reduced fish consumption. Many factors besides the fisheries reforms may be playing a role in this, including fluctuating flood levels and changes in the fisheries environment. On the other hand, the implications for fish consumers, and fish prices, are not clear and require more study.

Policy Reform Implementation Mode

The speed with which the policy reforms were introduced, while important in creating an impetus for change, led to considerable confusion regarding the roles, rights and responsibilities of different actors involved in the process. These confusions are still in the process of being resolved. In working out the details of how to implement the fisheries policy reforms, and in the development of the Sub-decree on Community Fisheries Management, the role of NGOs has been important in representing the interests of broader groups of stakeholders. This role needs to be built up and strengthened to complement the activities of the DoF, particularly in view of the limited resources available within government to conduct the intensive capacity development that will be required to make community fisheries work.

Policy Reforms, Poverty Reduction and Fisheries Management

In the context of poverty reduction and equity, the policy reforms have done much to spread the benefits of the fisheries sector across a much larger group of people. The previous fisheries management regime provided large benefit flows to few people. The reforms were designed to increase the number of people benefiting from the resource, in line with the country's Poverty Reduction Strategy. There can be little doubt that this was achieved in the first year of the reforms. It is also likely that many who found it impossible to make a living from agriculture in recent years survived because there was more access to the fishery.

However, as greater access to the released fishing lots has allowed more people to enter the fishery and to use unsustainable and illegal fishing gear, the early benefits have come under more stress. The benefit flows are now being spread over a far greater number of people than was originally intended by the reforms. As the Poverty Reduction Strategy suggests, the future development of the fishery must be tackled on four fronts:

- Increasing alternative livelihoods to decrease exploitation of the fishery
- Strengthening community capacity to manage the fishery
- Developing institutional capacity to assist these processes, and
- Incorporating a cross-sector approach to enable fisheries to work in harmony with other sectors such as agriculture, forestry and water management.

Support for Policy Reforms

There needs to be much greater and faster emphasis on institutional and legislative reforms. The legislation for the formation of community-based fisheries management is complete. The institutional changes – especially community-, commune- and provincial-level capacities to implement fisheries co-management – require substantial and rapid input from government and civil society. This cannot be done quickly enough from existing domestic resources. The international donor community has a role to play in assisting this process through financial support, capacity development and knowledge-brokering, but responses need to be quick.

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Longer Pond Leases in Orissa

Reshmee Guha and Rubu Mukherjee

Fish and Water in India and Orissa

In India, fisheries occupy an important role in the socio-economic development of the rural sector. They are recognized as a powerful income and employment generator and a stimulant to other subsidiary industries. Fishing and small-scale aquaculture can be a local source of cheap and nutritious food as well as a foreign exchange earner. Most importantly, fish production has the capacity to provide livelihoods for a large section of the economically backward population of the country.

As in other parts of India, fish is a popular and important source of animal protein in Orissa, especially among tribal communities who consume a non-vegetarian diet. Many groups and individuals either capture fish from natural waters or practice fish culture.

Most of the watersheds in Orissa have at least one perennial tank, often a few built in each village to conserve water, as well as many seasonal tanks filled during the monsoon. The fishing rights of water bodies less than 40 ha are leased by the local government – the *Gram Panchayat* – while other farmers may have rights to use the water for irrigation and the whole village community may have rights to use it for domestic purposes such as washing and drinking and for bathing and watering livestock. These multiple demands can create problems for fish farmers.

Longer-term Pond Leases Develop New Interest

Aquaculture is widely practiced in the Indian states of Jharkhand, Orissa and West Bengal. Many people in rural areas knew that tanks were leased out for fish culture. They were equally aware that the annual lease period was too short to guarantee adequate growth of stocked fingerlings. Such a venture would only be worthwhile if the fingerlings were caught at the end of the rearing period. So when STREAM – with DFID support from the Natural Resources Systems Programme – began working with Self-Help Groups (SHGs) and individual farmers to identify their recommendations for changes to policies and service provision, the issue of extending lease periods was an important recommendation.



Workshop on policy change involving different stakeholders

The STREAM-managed DFID project also identified longer leasing as a priority of government and NGO service providers and soon recommendations from Delhi were sent to state governments to consider extending the lease period. When STREAM was later invited to play a role in the Western Orissa Rural Livelihoods Project (WORLP), it was clear that the change in

leasing policy was already having an impact on men's and women's SHGs interested in aquaculture, elevating it to a priority source of extra income, and in some cases, the main source.

Impact of Policy Change in Orissa

Acting on a directive in 2003 from policy-makers in Delhi that had been guided by the recommendations from farmers and fishers across eastern India, the Orissa government issued a circular to District Collectors to increase the lease period for ponds from the existing one year to three to five years.



SHG doing aquaculture in western Orissa

Groups came to know about this change in leasing period, and many SHGs became interested in bidding for leases and starting aquaculture as a group activity. This opened a new option for their livelihoods. For example, in watersheds managed by

WORLP, 150 SHGs, three-quarters of which are women's groups, took up aquaculture in 2005 in 530 ha of water bodies. A recent review estimated this to be contributing to the livelihoods of 12,000 poor people. One specific example are the members of *Jeeban Jyoti*, a women's SHG in Kandhkelgaon Village in Saintala Block of Bolangir District in Orissa, who learned of the policy change from the local Fisheries Supervisor and decided to go for aquaculture. As traditional weavers these families were finding it hard to make a living but aquaculture provided a lucrative alternative (for more details please see the Kandhkelgaon story at www.streaminitiative.org/Library/pdf/pdf-india/TheKandhkelgaonStory.pdf).

Another interesting example can be seen in Jhar Bolangir Village in Pointala Block of Bolangir District of Orissa, where a group was unable to earn any profit out of the activity in the first year. Rather they had suffered losses as members had no experience in practicing aquaculture. In the second year too, there was no profit as it was a break-even situation. The group started making profits only from the third year. As the lease period for the pond was previously one year, it was unlikely that new SHG entrants could have adopted aquaculture as a source of livelihood prior to the change in leasing policy. The group has now got an opportunity for an extension of the lease period of the same pond for another two years, which has brought smiles to the faces of the SHG members who are happy since they know that they will benefit immensely and make some profits.

People's Views

According to Mr G B Porida, Deputy Director of Fisheries cum Zonal Head, Northern Zone, Government of Orissa, SHG members normally make profits from the third year onwards as investments are more in the initial years. Further, by that time SHG members also gain experience and as the fertility of the pond gradually increases it enables them to make profits.

SHG members also hold a similar view and feel that the change in the leasing policy in Orissa has been a great step in the right direction, which will help not only those who are practicing aquaculture but would also open the doors for new entrants.

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One-stop Aqua Shop – A “One-window Delivery” Service Center for Aqua-farmers and Fishers

S D Tripathi, Rubu Mukherjee and Kuddus Ansary

Working Magic with Seasonal Ponds

While the central and state governments of India have been providing financial and technical assistance through the Fish Farmers’ Development Agencies for development of commercial aquaculture, the technology adopted has been capital- and input-intensive and meant only for perennial ponds. Seasonal ponds were rather neglected and remained an unutilized aquatic resource especially in tribal and less-developed districts of Bihar (now Jharkhand), Orissa and West Bengal. Working in collaboration with the UK government’s Department for International Development (DFID) and Krishak Bharati Cooperative Ltd (KRIBHCO) – and later with its autonomous wing, the Gramin Vikas Trust – farmers in these areas developed appropriate ways to utilize seasonal ponds for low-input aquaculture for which neither the technology nor financial support was available. Self-reliance and group formation through project support did the magic and the farmers not only produced fish for consumption but also for sale and soon found it quite lucrative. The activity earned the highest income among all development activities and farmer groups practicing aquaculture were thought to have the maximum bank balance and credibility.

From Recommendations for Policy Change to OASs in Three States

This experience called for a policy change which was realized through subsequent projects supported by DFID and managed by NACA’s STREAM Initiative. The recommendations for policy change were gathered through detailed case studies, film documentaries and street-plays, wide-ranging consultations and a series of workshops at local and state levels. Of the total of 42 recommendations, 13 were prioritized for implementation and presented to senior planners and policy-makers from the state and central governments and also from the Indian Council of Agricultural Research. The highlights of recommendations were increasing the lease period from one to five years and “one-window delivery.”

Taking forward the achievements of the earlier projects, the third DFID-supported project that concluded in September 2005 developed and promoted the recommendation on “one-window delivery,” popularly named as One-stop Aqua Shop (OAS). The first OAS was launched in May 2004 by the Department of Fisheries at Ranchi, Jharkhand, under the Fish Farmers’ Development Agency and is headed by a Fisheries Extension Officer. Besides being an information center on technical aspects of aquaculture and operational inputs, the OAS also provides facilities for analyses of soil and water quality of fish ponds on payment of nominal charges.

A different model altogether, the second OAS was established in June 2004 at Kaipara in Purulia District of West Bengal by a Federation of 70 Self-Help Groups (SHGs) comprising 174 men and 890 women, of which 14 SHGs are “Below the Poverty Line” (BPL). The OAS is receiving tremendous support from almost all the agencies involved in the promotion of aquaculture, especially the Fisheries Department, banks, Block Office and the *Panchayat*. Though all 70 SHGs are availing of the services of the OAS, only 20 have contributed Rs 2,000 each for its establishment. Kuddus Ansari, its manager, feels that enthusiastic and dynamic, dedicated and sincere, knowledgeable and experienced, humble and farmer-friendly young people who aspire to raise the economic standards of their fellow villagers are the ones to be staffing the OASs.

Besides information on aquaculture technologies and schemes of the Fisheries Department that support the farmers, application forms for bank loans and technical literature in Bangla are also available free of cost. A total of 135 farmers who have been enjoying the facilities available at the OAS were registered by 31 December 2005.

To be sustainable, the Kaipara OAS has leased a few ponds where it raises fingerlings under the supervision of experienced farmers of the federating groups and provides quality seed for which it has already earned a name. Mr Kuddus is now keen to install a portable hatchery and aims to meet at least half of the total seed demand of one million fingerlings of the Block locally. The OAS also provides *hundies* to rent for easy, economic and short-distance transport of fingerlings. Fishing costs being high, the OAS has purchased a drag net through a loan provided by STREAM. It rents out the net to SHGs to enable them to fish their ponds and save the fishing charge of Rs 250 or one-third of the catch which was a great drain on the groups' income. The OAS is also assisting six women SHGs to raise market-sized fish in ten ponds in a nearby village who would share 25% of their profits with the OAS in lieu of the supply of fingerlings. The OAS also facilitates other activities such as training for its members. Recently 20 SHG members were sent for training to the Fisheries Research and Training Centre, Kalyani, to undergo a course in aquaculture.

The benefits of the activity have been widely appreciated and so well taken up that, within a span of a little over one year, a total of eight OASs have sprung up, six of them in Orissa alone, four under the auspices of the Government of Orissa at Nuapara and Khariar in Nuapara District and Bolangir and Patnagarh in Bolangir District and two by an NGO (Sahabhangi Vikas Abhiyan) at Bilenjore in Nuapara and at Saintala in Bolangir District where the DFID-supported Western Orissa Rural Livelihood Project (WORLP) on watershed development is under operation with aquaculture as an additional component.

Through its One-stop Aqua Shop Information Service (OASIS), the STREAM India Communications Hub in Bhubaneswar, Orissa, is also sharing the knowledge and learning from other parts of India as well as Asia-Pacific countries by providing translations of articles from the *STREAM Journal*, Better-Practice Guidelines and Significant Change Stories into Bangla, Hindi and Oriya to support the OASs. Further, the STREAM Initiative has provided the OASs with forms for registration, identity cards, scanners and other requisite accessories to monitor the visits and collect relevant information and data. The OAS managers have also been trained to use these facilities. STREAM has developed a bar-coding system of its own and its whole range of literature is coded to facilitate recording without wasting time and with minimum use of manpower.

Inspiring and Influencing Farmers

The people of Kaipara Village have shown what can be achieved through determination and collective working and that measurable changes could be brought about when their voices are heard and policy support provided. This example could be emulated by poor people elsewhere, and also by policy-makers, to realize that a bottom-up approach that takes into consideration people's views and voices does make a difference.

The exemplary work of the collaborating SHGs has inspired and influenced many a farmer and quite a few requests are being received by STREAM for exposure to the Kaipara OAS. Some of these have included visits by the project staff of MPEDA in Andhra Pradesh, WORLP staff from Orissa, farmers of the DANIDA Patuakali Berguna Aquaculture Extension Project in Bangladesh, and SHG members from Jabarrah, who are also planning to establish an OAS.

It appears that at the present pace, a day might come when the OASs will be like malls or department stores in villages that have a potential for aquaculture. Besides all aquaculture inputs from seed and feed to fertilizers, manures, toxicants and chemicals, facilities for water and soil analyses and disease diagnosis would also be available. Fisheries experts would be running their own clinics and providing consultancy services for planning, monitoring and evaluation of projects and extension services for the development of aquaculture.

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Fisheries and Aquaculture Policy Formulation Process in Pakistan

Muhammad Junaid Wattoo and Dr Muhammad Hayat

Reports, Policies and Plans

Since the creation of Pakistan in 1947, there has been no national policy for fisheries and aquaculture. Fisheries issues were covered to various extents under agriculture or livestock policies. Although reports of the Agriculture Enquiry Committee in the 1970s and the National Agriculture Commission in 1987 gave some attention to the fisheries sector, they did not have a major impact because problems of the sector were only inadequately addressed. Policies were made for deep sea fishing in 1988, 1995 and 2001 but these were specifically aimed at the promotion of fishing under licensing arrangements in the Exclusive Economic Zone of Pakistan and marginally covered aspects of local fisheries.

In past preparations of Five-Year Plans, a separate committee for fisheries was constituted and its recommendations accommodated. However, none of the plans catered for the broad issues faced by fisheries and aquaculture. The result has been uneven growth and development in different parts of the country. Punjab is well developed in aquaculture and Sindh in fisheries. There is a nominal amount of aquaculture activity in North West Frontier Province (NWFP) and almost none in Balochistan, where fisheries is traditionally managed but facing problems.

A Task Force, A Project and Consultations

On the directive of the Prime Minister of Pakistan, the Ministry of Food, Agriculture and Livestock (MINFAL) constituted a task force under the chairmanship of the Minister of State to formulate a national fisheries and aquaculture policy. In its first meeting, two sub-groups (inland and marine) were constituted to give their recommendations for the policy.

At about the same time, MINFAL approached FAO to fund a project under the Technical Cooperation Program (TCP) to assist in the policy formulation process. An FAO-TCP Inception Workshop was conducted in June 2005, during which a detailed project implementation plan was prepared by a wide range of stakeholders. As per the plan, the outcomes from the two sub-groups were amalgamated. Then with the assistance of NACA-STREAM, a first round of community consultations across the four provinces was initiated. Based on what was learned and recorded during the first phase of community consultations, the first version of the policy document was drafted by FAO. It was next taken to the Task Force where observations were made on its contents, then further revised by FAO until a consensus was reached on the draft version.

A second round of provincial stakeholder consultations was focused on the revised draft version of the document. Participants were reminded that this process involved getting their inputs for prioritization of the various recommendations and on the implementation. Their contribution to the policy formulation process was appreciated.

Following the provincial stakeholder consultations in two districts of each of the four provinces, another round of modifications was made to the draft by the National Project Coordinator, three National Consultants, FAO colleagues and other international consultants. A National Workshop was held in May 2006, during which the modified version of the policy and strategy was presented to inform federal/national-level officials of relevant ministries about implementation difficulties, suggested prioritized interventions and requirements based on the findings and outputs of the community and provincial consultations.

Endorsement, Submission and Implementation

The legal implications of the final draft of the “National Policy Framework and Strategy for Fisheries and Aquaculture Development in Pakistan” will have to be evaluated by a fisheries legislation expert before its submission to MINFAL. Endorsement of the document and its contents was sought from members of the Task Force during a high-level meeting following the National Workshop and prior to its submission, along with suggested legislation amendments, to the Cabinet. Implementation of the policy, as per the plan of activities, will start with the government’s financial year in July 2006. A number of concept notes for umbrella projects will be prepared to strengthen the implementation of the policy so that it reaches its goals. It has been ensured that these projects coincide with activities and programs already in place in the country, and with the government’s emphasis on agri-businesses approaches to the development of the fisheries and aquaculture sectors.

Goals, Roles and Indicators

The three policy goals that the Government of Pakistan has set to achieve are to increase the contribution of the fisheries and aquaculture sectors to:

1. National economic growth
2. Poverty alleviation, and
3. Food security.

The roles of the three major players are:

Government of Pakistan: In addition to its position of facilitator and regulator, the Government of Pakistan’s role will be to create an enabling environment to allow private sector initiatives to thrive while protecting the interests of the most vulnerable groups; establish the necessary institutions and enhance human capabilities to implement the present policy and support the overall development of the fisheries and aquaculture sectors; and ensure coherence among measures adopted for the fisheries and aquaculture sectors with those in place in other sectors of the economy, in particular livestock and agriculture.

Private sector: As a key partner of the government in the development of the fisheries and aquaculture sectors, the private sector will shape the future growth of the fisheries, and in particular aquaculture, sectors in terms of output and value; and be sustainable vectors of economic and social development at community, district and provincial levels.

Producers’ organizations: Supporting private sector interests, producers’ organizations will build the necessary institutions for the representation of fishermen and fish farmers at provincial and national levels; be a force for collective access to knowledge, information and inputs; and influence the overall development of the fisheries and aquaculture sectors.

Key measurable indicators of progress towards the achievement of the three policy goals will include:

- Higher per capita fish consumption
- Improved fisher and fish-farmer incomes
- Creation of well-paid employment in the fisheries and aquaculture sectors, and
- Increased export earnings from aquatic products.

Hopefully the targets will be met under this policy and the fisheries and aquaculture sectors will grow as per the aspirations of the people of Pakistan.

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Improving the International Marine Ornamental Fish Trade to Sustain and Improve the Livelihoods of Poor People Involved in the Trade

Aniza Suspita, Michael J Phillips and Samliok Ndobe

International Marine Ornamental Fish Trade and Livelihoods of Poor People in Indonesia

The trade in wild-caught marine ornamental fish in Indonesia provides livelihoods for many people, including collectors, middlemen, crew of (non-collecting) initial buyer boats, and staff in holding and trading facilities. It is hard to estimate accurately the number of collectors or middlemen because the work is often seasonal, dependent on weather and fluctuating international demand, and is not an official category in government statistics. Many poor families involved have other livelihoods options, for example farming, food fisheries, transportation, trades and services.

Problems in Marine Ornamental Fish Collection and Trading

Collectors are key actors in the ornamental fish trade because the whole chain is based on their activities. Most have limited education and little or no knowledge or understanding of health risks associated with their activities. The use of cyanide is rampant in the ornamental fish trade, to catch as many fish as possible in as short a time as possible with as little effort and expense as possible. Sadly, many of these fish, although superficially recovered later die prematurely (in transit or even after sale to end consumers) from the cyanide damage to their internal organs. High mortality means ornamental fish caught with cyanide fetch a lower price than those which have been caught with nets or other legal means. Poor post-harvest handling and long stressful journeys further increase mortality rates. For some species, as many as 80% of fish caught die before reaching a major buyer or exporter, which is reflected in prices paid down the market chain.



Packers filling bags with oxygen

Illegal fishing degrades coral reefs, the habitat and life support system of ornamental fish, on which depend the trade and therefore the livelihoods of the stakeholders involved. As the numbers and variety of fish decrease, so do catches and collector incomes. Demand is rising and degradation is forcing collectors further afield.

Lack of awareness, law enforcement, skill and proper equipment all contribute to unsustainable practices. Some people say that putting a stop to the cyanide fishing without a workable alternative is putting the environment before people. The alternative which has been developed is net fishing.

A Desire to Change to a “Better Way”

As time goes by, resource depletion reduces collectors' incomes, increasing poverty for them and their families. Government and NGOs are trying to change how collectors think, giving them new knowledge, understanding and skills, so that they realize the effect of their actions on their environment and resource base and are able to change to a more sustainable way of life without losing their incomes. The skills needed for effective use of ornamental fish capture nets include

setting the net, getting fish to enter it and handling fish to avoid damage. The main investment needed is the net, which must be suited to the type of fish and the capture environment. As it is hard to obtain these nets commercially, some NGOs in Bali have started making nets available. Net collecting is better for the environment and the health of collectors.



Marine ornamental fish collectors on Banggai Island

STREAM and Yayasan Bahtera (a local NGO in Bali) conducted training for several collectors in Bangsring Village, Banyuwangi. Most collectors use simple compressors for hookah diving, and diving-related injuries and diseases are common (e.g., burst lung or eardrums, decompression sickness). To avoid or reduce these risks, collectors learned about time and depth limits, and proper ascent rates. They were also taught coral transplantation methods to rehabilitate habitat damaged by illegal collection.

Improving the Marine Ornamental Fish Trade System

The marine ornamental trade is big business with good profits for export companies, but most people in this area who rely on the trade for their livelihoods are poor. A trade system providing better livelihood opportunities to poor stakeholders involved is needed. Certification is one accepted way of improving the ornamental fish trade. The main goal of the certification process is to change the way in which people who are involved in the trade act.

Policy on the marine ornamental fish trade needs to start right from the village level where the collectors live and fish and continue all the way to export. The policy formulation process needs to involve all stakeholders in the trade so that they understand and support the policy, realizing that it will benefit their long-term livelihood interests. Following are some recommendations based on a case study undertaken in 2004-05 by STREAM in the Banggai Archipelago (in partnership with the local NGO Yayasan Palu Hijau) and in Banyuwangi (in partnership with Yayasan Bahtera):

- Form collector groups or organizations, preferably with tiered structures from village or sub-village to district levels (and possibly provincial and national levels)
- Develop capacity of group members in management skills (organizational and business); best practices in the capture and post-harvest treatment of ornamental fish; resource management, including fishing ground management, preferably as part of a wider community collaborative near-shore marine resource management system
- Make appropriate equipment available in collecting areas, especially nets, and where relevant introduce breeding of certain species and technology designed to replenish stocks and/or restore habitat
- Open up access to capital and develop systems for 'self-help'
- Improve market access
- Encourage exporters and major buyers to give greater support to the lower levels of the trade: collectors and other poor stakeholders whose livelihoods depend on them.

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About the STREAM Journal

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Purpose

The *STREAM Journal* is published quarterly to promote participation, communication and policies that support the livelihoods of poor aquatic resources users in Asia-Pacific, and to build links within the aquatic resources management and other sectors across the region. The *STREAM Journal* covers issues related to people whose livelihoods involve aquatic resources management, especially people with limited resources, and government, non-governmental and international practitioners who work with them in communities. Such issues include learning, conflict management, information and communications technologies, aquatic resources management, legislation, livelihoods, gender, participation, stakeholders, policy and communications.

Another equally important purpose of the *STREAM Journal* is to provide an opportunity for seldom-raised voices to be heard and represented in a professional publication that is practical yet somewhat academic. The contents of the *STREAM Journal* should not be taken as reflecting the views of any particular organization or agency, but as statements by individuals based on their own experience. While authors are responsible for the contents of their articles, STREAM recognizes and takes responsibility for any editorial bias and oversights.

Distribution

The *STREAM Journal* is available in three formats:

- An electronic PDF version which is printed and distributed by the STREAM Communications Hubs in each country
- A version which can be accessed and downloaded in PDF format from the Virtual Library on the STREAM Website at www.streaminitiative.org, and
- A printed version which is distributed by the NACA Secretariat.

Contribution

The *STREAM Journal* encourages the contribution of articles of interest to aquatic resources users and people who work with them. The *STREAM Journal* also supports community-level colleagues to document their own experiences in these pages.

Articles should be written in plain English and no more than 1,000 words long (about two A4 pages of single-spaced text).

Contributions can be made to William Savage, *STREAM Journal* Editor, at <savage@loxinfo.co.th>. For more information, contact Graham Haylor, STREAM Director, at <ghaylor@loxinfo.co.th>.

About STREAM

Support to Regional Aquatic Resources Management (STREAM) is an Initiative designed within the five-year Work Program cycle of the Network of Aquaculture Centres in Asia-Pacific (NACA). It aims to support agencies and institutions to:

- Utilize existing and emerging information more effectively
- Better understand poor people's livelihoods, and
- Enable poor people to exert greater influence over policies and processes that impact on their lives.

STREAM will do this by supporting the development of policies and processes of mediating institutions, and building capacity to:

- Identify aquatic resources management issues impacting on the livelihoods of poor people
- Monitor and evaluate different management approaches
- Extend information, and
- Network within and between sectors and countries.

The STREAM Initiative is based around partnerships, involving at the outset a coalition of founding partners (AusAID, DFID, FAO and VSO) supporting NACA. It has adopted an inclusive approach, reaching out to link stakeholders engaged in aquatic resources management and supporting them to influence the Initiative's design, implementation and management.

The partnerships' work is coordinated in each Country Office through a National Coordinator (a senior national colleague agreed with the government) and a Communications Hub Manager (a full-time national colleague supported in the first two years by STREAM), and linking a range of national stakeholders. The Communications Hub is provided with hardware, software, training, information-technology support, and networking and human resources support, and links national stakeholders through an internet-based virtual regional network.

National coordination is guided by an annually-reviewed Country Strategy Paper (CSP) drawn up by the Coordinator and Hub Manager in consultation with stakeholders with whom they regularly network. A CSP identifies key issues, highlights regional linkages, proposes and prioritizes key actions, and seeks funding for these from STREAM and elsewhere (with STREAM support).

The STREAM Regional Office (at the NACA Secretariat in Bangkok) directs the Initiative, provides a regional coordination function, and funds and manages cross-cutting activities dealing with livelihoods, institutions, policy development and communications, the four outcomes-based STREAM themes.

STREAM implementation is an iterative process, initially operating in Cambodia, India, Indonesia, Lao PDR, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Vietnam and Yunnan, China, and expanding within Asia-Pacific where opportunities exist to tackle poverty and promote good governance, as experience is gained, lessons are learned, impact is demonstrated and additional funding is secured. STREAM's communications strategy aims to increase impact by ensuring that existing knowledge and expertise inform ongoing change processes around the region, and that the lessons learned are disseminated throughout Asia-Pacific. The *STREAM Journal* and the STREAM website are components of this strategy.

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