Symposium on Participatory Approaches to Reservoir Fisheries Management: Issues, Challenges and Policies

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Session I: **Community-based fisheries management; experience in other countries**

'Adopting a STREAM approach for Inland Fisheries Management'

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Abstract

This paper advocates strategies, processes and practices that enable: livelihoods approaches rather than resource-based approaches, 'direct' institutional and policy development, rather than 'project demonstrations', and support for regional, national and local communications.

A resource-focused approach, can over simplify how (poor) people interact with (aquatic) resources (such as reservoirs). With a resource-focused approach, if people don't take up a technology, or a policy doesn't work, the approach will not tell us why and how to make changes. A livelihoods approach can identify people's access to resources, their objectives for the resources to which they have access, the desirable (and undesirable) properties of resources for particular activities, skills, and knowledge levels; support networks, infrastructure and services; interests, motivations, circumstances and what people can achieve, and the effect of policies and other factors which influence all of these. This can provide the detail that is needed to develop with stakeholders appropriate supporting institutions and policies.

Instead of projects, which aim to demonstrate new ways of working, governments sometimes seek support to change institutions and policies directly. The 'direct strategies' that are emerging bring together expertise, and relevant knowledge from farmers, fishers, people's organizations, local government and NGO service providers, state-level and national policy shapers and policy makers to identify and share better practices, and learning from elsewhere. Negotiating a direct role in change processes may have more impact than demonstrating an approach in a project context.

Finally, to facilitate participation in resource management, five communication elements are highlighted. The strategy here is to facilitate 'links': to information sources and media, to learning (research, development, networks, and other sectors), to service providers (Governments, non-government organizations), to policy makers (closing discourse gaps e.g. between fishers and policy makers) and to pay attention to sharing meaning across languages and cultures and with fishers and farmers who are poor (via networks of dedicated Communication Hubs).

The three main components of the STREAM approach discussed in this paper are not pursued separately, for they are closely interlinked. Understanding people's livelihoods helps to identify the important characteristics and requirements of supporting institutions and policies and where communications links must be built so that people can participate in shaping policies and institutions that support their objectives.

Key words: Livelihoods approaches, direct strategies, communication links, participation.

Participatory Approaches to Reservoir Fisheries Management

1 Introduction

When Dr Elmo Weerakoon invited STREAM to a Reservoir Fisheries Symposium to discuss what he called 'Adopting *a STREAM approach* for Inland Fisheries Management', my first response was to wonder if we had one. I am not going to discuss reservoir fisheries research: enhancing yields in lacustrine environments, stocking, catch composition, or carrying capacity.

It is almost 5 years ago that the Australian Centre for International Agricultural Research (ACIAR) organized an excellent workshop on reservoir fisheries, in Bangkok. Dr Barney Smith of ACIAR commented at the time, that it was the first such gathering for almost 10 years, 55 scientists from 16 countries discussed 'Biology and Management'.

This gathering which involves many of the participants of the previous meeting will discuss 'Issues, Challenges and Policies' relating to 'Participatory Approaches to Reservoir Fisheries Management'. Figure 1 compares the STREAM approach with the symposium topic.

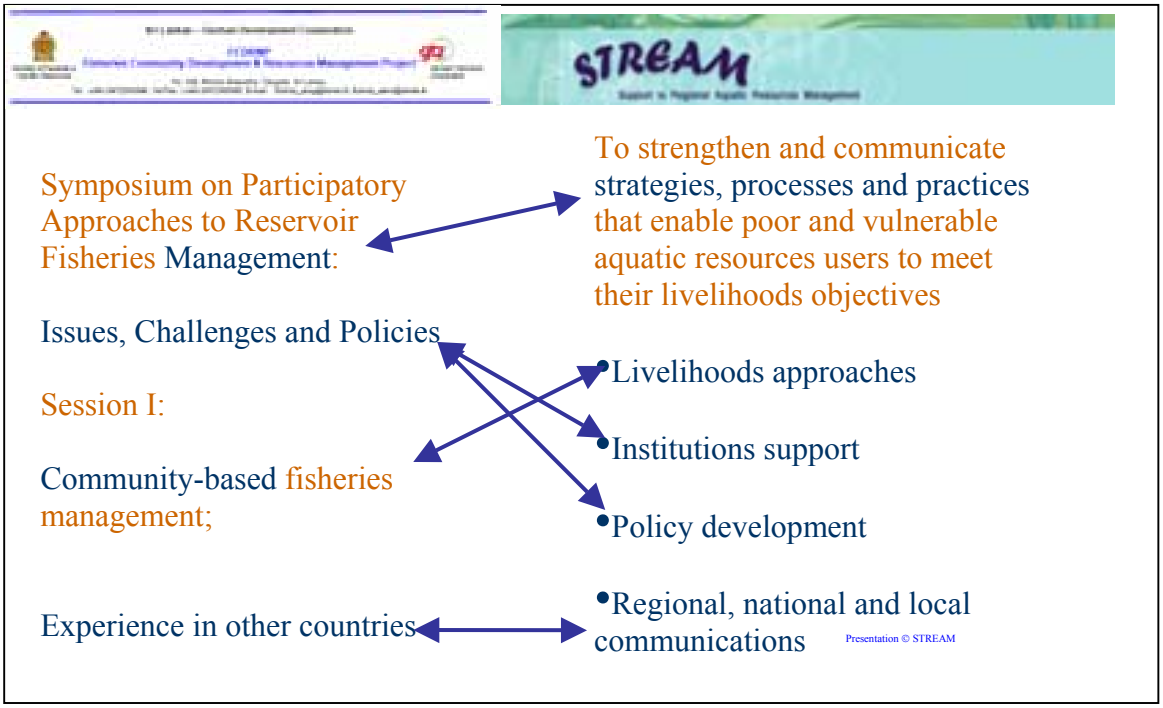

Figure 1: Relating the STREAM approach to the symposium topic

This symposium is interested in management, strategies, processes and practices. It looks at community-based approaches, which are related to livelihoods approaches. It will consider issues, challenges and policies, which should include institutional support and policy development. Finally, the symposium draws on experiences in other countries and STREAM is keen to share lessons regionally, nationally and locally. So maybe there is *a STREAM approach* in there somewhere to share with you. So with that in mind, this paper will discuss strategies, processes and practices that enable:

- Livelihoods approaches rather than resource-based approaches
- 'Direct' institutions and policy development rather than project demonstrations, and
- Regional, national and local communications.

2 Strategies, processes and practices that enable the promotion of 'livelihoods' approaches over 'resource-based' approaches

Resource-based approach

A resource-based approach is one which begins with the resource. For example, it might be the role of a Fisheries Department to increase the use of (e.g. so-called derelict water bodies); in this workshop we are considering reservoirs. The *line* might be, 'because it is there, we can use it', 'we should promote its use to others', including perhaps people who are poor, to help them to alleviate poverty.

Strategies developed by scientists, might include for example: enhancing yields (e.g. De Silva 2001), utilizing fish resources (e.g. Huang, Liu and Hu, 2001), defining carrying capacity (e.g. Vijverberg, Amarasinghe, Ariyaranta and van Densen, 2001), cage rearing (of fish) (e.g. Anh and Son, 2001), and so on. In a resource-based approach this information can be shared with extension services and promoted to farmers and fishers. Often the research undertaken, which develops into technologies, aims to maximize production or commercial benefit. Such technologies may, or may not, fit with the context in which particular socio-economic groups operate; without looking into this, we do not know. If the technology fits with farmer's and fisher's *objectives*, and the *resources* they have, and the factors which *influence* how they can use those resources, and the research-extension-farmer transfer works well, we will see an impact. If it does not, we will not know why a new technology has not been taken up.

Traditionally, farmers don't play a key role is setting agendas of research and development or (perhaps most surprisingly) extension organizations. Those agendas are more likely to be designed to fulfill the remit of, say a Fisheries Department, which could quite reasonably be 'to increase the use of water bodies for fish production'. This objective may or may not be the same as the farmer's or fisher's, who would be key stakeholders of the Fisheries Department.

So a resource-based approach may or may not *hit the mark*. If it does not, our capacity for learning *why* is limited.

Livelihoods-based approach

An organization with a poverty alleviation role, which might be a Fisheries Department, might take a livelihoods-based approach, which is one which begins with people, perhaps a specific geographic and/or socio-economic group of people. Because a livelihoods approach is a new way of working for many line agencies involved with fisheries and aquaculture in Asia Pacific, a first step would be "building capacity" of people and institutions (service providers) to understand the resources, influences, vulnerabilities and most importantly objectives of the people they serve. This might involve some kind of 'livelihoods analysis', there are many examples of approaches (e.g. livelihoods analysis in the Philippines, see BFAR/NACA-STREAM/FAO (2003) Workshop on Livelihoods Approaches and Analysis, Iloilo City, Philippines, 24-28 November 2003; in Laos see DLF/NACA-STREAM/FAO National Workshop on Livelihood Approaches and Analysis, Vientiane, Lao PDR 8-12 March. In India and Nepal see GVT/NACA-STREAM/FAO International Workshop on Livelihoods Approaches and Analysis, Ranchi, Jharkhand, India, 2-6. February 2004. In Myanmar see DOF/NACA-STREAM/FAO Myanmar Workshop on Livelihoods Approaches and Analysis Yangon on the 11-15 May 2004. For China see Yunnan Workshop on Livelihoods Approaches and Analysis, Mengzi, 6-10 September, 2004)

A livelihoods analysis might identify people's access to resources, their objectives for the resources to which they have access, the desirable (and undesirable) properties of resources for particular activities, skills, and knowledge levels; support networks, infrastructure and services; interests, motivations, circumstances and what people can achieve, and the effect of policies and other factors which influence all of these.

This would begin to give an insight, for people and service providers, into the well-being that people might seek, and succeed in achieving from reservoir fisheries.

The next step would be to pursue opportunities to support people who want to management reservoir fisheries:

- To access the resource.
- To understand the properties of the resource, including its utility for fisheries, as well as to understand the *functioning* it might permit. *Functioning* is an achievement of a person. It is different from having access to resources (which precedes it) and having utility in the form of well-being, which follows from that functioning.
- To generate benefit.

A resource-focused approach, can over simplify how (poor) people (can) interact with (aquatic) resources (such as reservoirs). If people don't take up a technology, or it doesn't work, we need to know why we are getting it wrong, and change.

Partitioning the reasons why some possible 'beneficiaries' of a technology, a policy or scheme, might not benefit, helps us to learn how an approach that fails to *hit the mark* might be changed.

Figure 2 summarizes the resource-based approach and the livelihoods based approach.

Resource-focused	Livelihoods-focused	Approaches
Resources exist	Resources exist	▪Who wants to use them?
Research has delivered technologies which are (commercially) successful Extension staff tells (poor) people ↓	*Some* people secure command over resources	•Who has: •Right of access? •Security of tenure? •Security from theft? •What are the social conventions of ownership [1]?
	Some resources have desirable properties	•Is there an appropriate natural environment (regarding: water quality, quantity, productivity, freedom from disease, not vulnerable to shocks such as floods, drought)? •Is there appropriate human and social capital (i.e. knowledge and networks of support)? •Is there connecting infrastructure (access to fish seed, access to inputs, and access to markets)? •Are there effective support services (financial, technical and institutional support)? •What policies or other influences affect resource properties?
	What can a person succeed in doing with resources at his or her command?	(In the context of motivations, interests and circumstances of people) •Can resources yield aquaculture / fisheries produce? •Can this produce provide improved nutrition?
(Poor) people manage reservoir fisheries / grow fish in reservoirs	The state of well-being generated from succeeding	•How can poor people improve well-being through fisheries/aquaculture? •How can assets be built up through fisheries/aquaculture (better used water resources, more effective infrastructure, savings, knowledge, useful links and relationships) •How can fisheries/aquaculture reduce vulnerability?

Figure 2: Resource-based and livelihoods-based approaches

1 Why is ownership (e.g. of a fish pond, reservoir or fishing right) accepted? – Because she got it through exchange through paying some money which she owned. Why is ownership of that money accepted? – Because she got it

3 Strategies, processes and practices that enable support to institutions and policy developments that improve the lives of people who are poor

So much development effort is channeled through projects, this section questions the use of project approaches in institutional and policy development.

Thinking beyond the project

If you have some development funds

- **You can run an fisheries project**
- **Perhaps in a country with an existing administration for reservoir fisheries**

If you are successful you will help some people directly

And maybe the reservoir administration will adopt or copy your project

This might involve new institutions

This might involve new policies

Is that the best approach?

Figure 3: Spending development funds? Are you thinking beyond the project?

Are projects the best strategy to improve the lives of people who are poor..?

- From the frequency of their use within the development sector, someone must think so. Projects are easily dispersible and containable development packages. That must seem good to 'donors', and their accountants. And, perhaps the concept of benevolence within development, of donation, disables criticisms amongst 'recipients'.

Projects are a way to chop up larger development budgets into separate units, with defined start and end points and their own small budgets. They constrain expectations, which can be a good thing, and they are commonly 2-5 years duration, with predefined hierarchies of objectives and indicators against which progress could be monitored.

Perhaps, the theory goes that by spending and administering well, a slice of a development budget, the results will be visible to governments or large non-government service providers, or policy makers, who will then replicate the successful projects within the context of their own systems.

But if our objective is institutional change or policy development perhaps for reservoir fisheries management, so that these tools can better serve the needs of people who are poor, it may be difficult to *demonstrate* our way to change, through projects? Projects often differ from established institutions in the timeframes over which they operate, the way they work, how they hire and pay people, their management, funding (level and mechanism), and monitoring.

Even large projects are not always visible to governments. Governments and the people who work within them are busy. If they are not involved in a project they may not have the time or cause to seek out what results from it.

Therefore, turning a project approach into the way that an institution works is complex, it is where the tough work begins (after the project ends). That seems less benevolent and would be destined to be less effective.

There are many systems of governance. In developing economies with limited taxation or income streams the mechanism of governance may be not well supported financially. As a result policy, the law and service provision may not be as well defined or documented as people would like. Changing policy or building new policy or services under these conditions is especially complex.

- Projects might be an important tool for some areas of technical co-operation, but can only part of the answer.

- They might not be the best way of working to change institutions or develop more inclusive policy making!

Instead of projects, governments sometimes seek support to change institutions and policies directly. In the fisheries sector there are some notable examples:

> E.g. from Vietnam, in 2000-2001 a wide ranging consultation process uniting provincial level and national level stakeholders and multiple donor and academic support to the Ministry of Fisheries (2001) in developing the 'Sustainable Aquaculture for Poverty Alleviation' (SAPA) Strategy and its implementation (Ministry of Fisheries, 2001), which is now a core piece of the Vietnamese government's much heralded 'Hunger Eradication and Poverty Reduction Program'.
>
> E.g. from India, wide ranging consultations in 2002-2003 involving farmers and fishers, state and national level government stakeholders, NGOs and academics, resulting in institutional changes within the Jharkhand, Orissa and West Bengal state Fisheries Departments, and in their leasing policy for water bodies and the way that information is made available to farmers. (STREAM, 2003)

The 'direct strategies' that are emerging, bring together expertise, and relevant knowledge from farmers, fishers, people's organizations, local government and NGO service providers, state-level and national policy shapers and policy makers to identify and share better practices, and learning from elsewhere.

The required skills turn out to be rather different from those commonly considered essential. Managing communication is in high demand, especially principled facilitation, to give (poor) people who fish and farm a voice in policy making.

Whilst tools are being developed and used to enhance new sets of skills to:

- Build consensus, sometimes in hierarchical institutional settings or where power-relations limit effective dialogue.
- Build human and technical capacity for communications and learning
- Prioritize issues
- Facilitating dialogue
- Engage in strategic planning
- Design effective programs

Apart from its important role in institutional and policy change, communications is a key enabling strategy in its own right; this is considered in section 4.

4 Strategies, processes and practices that enable regional, national and local communications that support the lives of people who are poor

Communications can be interpreted in many ways. Below are five communication elements which could support participation. The strategy here is to facilitate 'links':

- **Links to information sources and media (monitoring and sharing)**

There are many good (and sometimes expensive) databases of academic and media sources with search engines and automated search facilities for routine collation and updating of predetermined topic areas and their search terms. Combining these with a multi-lingual translation and communication network, and farmers and fishers without access to the Internet or the benefit of foreign language skills have up-to-date information sources on anything from disease outbreaks, to contemporary market price, to anti-dumping trade actions.

- **Links to learning (research, development, networks, other sectors)**

There are many academic institutions of one kind or another conducting research, and publishing in peer-reviewed journals (in complex language, usually in English), many of these works could benefit farmers and fishers and reservoir manager. Link these scientists (as well as farmers and fisher and service providers with something to say) into a different kind of communications vehicle such as a journal, of short articles in simple English, translated into local languages and printed from local Communications Hubs across the region and you have without transportation costs, accessible, up-to-date research in the hands of people who want to use it.

- **Links to Service Providers (Governments, non-government organizations)**

Extension services, as well as providers of other services, such as micro-credit and suppliers of goods, face a common constraint, that people in rural areas who are poor are commonly dispersed and difficult to access. Encourage the formation of self-selecting Self-Help Groups which save and work together on initiatives of their own choosing, and soon you have *beacons* attracting (and even supplying) good and services to their neighborhood. Encourage mature groups to form into federations and farmers and fishers and communities, including those around reservoirs, rapidly expand their own communications infrastructure and expand out to meet information providers, the rural banking sector, and other goods and services suppliers.

- **Links to policy makers (closing discourse gaps e.g. between fishers and policy makers)**

Those who carry the responsibility for policy making rarely find opportunities to get out to remote locations to meet with, and discuss with, the recipients of the policies they develop. Sometimes the resulting policies miss the needs of recipients. Recipients find it difficult to access policy makers; there are hierarchical barriers to communicating and often language differences. Effectively, the two groups occupy different 'discourse communities'. The transactional costs can be massively reduced by third party intermediaries, working with, for example farmers or fishers, and supporting them to tell their story, sometimes with the aid of video or drama or facilitating the development of short verbal statements and their presentation in policy making fora.

- **Attention to sharing meaning across languages and cultures and to fishers and farmers who are poor (Communication Hubs)**

Although projects are commonly of short duration (see previous), with little opportunity for relationship building, other ways of working, such as initiatives, which commit to longer-term relationships with stakeholders can successfully, over time, share meaning across languages and culture, including with farmers and fishers who are poor. Long-term Communications Hubs and information centers, of one kind or another, local to farmers and fishers, linking internet access with local, (and local language) information exchange can successfully bridge the so-called *digital divide*.

5 An interlinked approach

The three main components of the STREAM approach discussed in this paper, which could be applied to reservoir fisheries management are, understanding people's livelihoods, providing direct support to institutional and policy development and facilitating communication. These are not pursued separately, for they are closely interlinked. Understanding people's livelihoods helps to identify the important characteristics and requirements of supporting institutions and policies and where communications links must be built so that people can participate in shaping policies and institutions that support their objectives.

References

Anh B T and Son, N H (2001) Cage rearing of fry to Fingerlings of Carp species in Large Reservoirs in Northern Vietnam. In Sena S De Silva Ed (2001) Reservoir and culture-based fisheries: biology and management. Proceedings of an international Workshop held in Bangkok, Thailand from 15 – 18 February 2000.

BFAR/NACA-STREAM/FAO* (2003a) Workshop on Livelihoods Approaches and Analysis, Iloilo City, Philippines, 24-28 November 2003. STREAM Initiative.

DLF/NACA-STREAM/FAO* (2004a) National Workshop on Livelihood Approaches and Analysis, Vientiane, Lao PDR 8-12 March.

DOF/NACA-STREAM/FAO* (2004c) Myanmar Workshop on Livelihoods Approaches and Analysis Yangon on the 11-15 May 2004.

DOA/NACA-STREAM/FAO* (2004d) Yunnan Workshop on Livelihoods Approaches and Analysis, Mengzi, 6-10 September, 2004

GVT/NACA-STREAM/FAO* (2004b) International Workshop on Livelihoods Approaches and Analysis, Ranchi, Jharkhand, India, 2-6. February 2004.

Huang, D Liu J and Hu, C (2001), Fish resources in Chinese reservoirs and their utilization In Sena S De Silva Ed (2001) Reservoir and culture-based fisheries: biology and management. Proceedings of an international Workshop held i9n Bangkok, Thailand from 15 – 18 February 2000.

Ministry of Fisheries, Vietnam* (2001) 'Sustainable Aquaculture for Poverty Alleviation' (SAPA) Strategy and its implementation Ministry of Fisheries Hanoi.

Sena De Siva (2001) Reservoir fisheries: Broad strategies for Enhancing Yields. In Sena S De Silva Ed (2001) Reservoir and culture-based fisheries: biology and management. Proceedings of an international Workshop held i9n Bangkok, Thailand from 15 – 18 February 2000.

STREAM* (2003b) Research Learning and New Thinking DFID NRSP Research Project R8100 March 2002 – May 2003 Investigating Improved Policy on Aquaculture Service Provision to Poor People in Association with Gramin Vikas Trust (GVT)

Vijverberg, J Amarasinghe, P B Ariyaranta M G and van Densen, W L T (2001), Carrying Capacity of Small Pelagic Fish in three Asian Reservoirs. In Sena S De Silva Ed (2001) Reservoir and culture-based fisheries: biology and management. Proceedings of an international Workshop held i9n Bangkok, Thailand from 15 – 18 February 2000.

All the references marked with * are downloadable from WWW.STREAMINITIATIVE.ORG