Identifying stakeholders and developing a means to enhance learning.

A summary of the implementation of adaptive learning methodologies in West Bengal, India.

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1 Introduction

This report describes the initial activities undertaken to enhance the learning potential of different groups of stakeholders involved in the adaptive learning approach in West Bengal. These activities were undertaken as part of the Uptake of Adaptive Learning for Fisheries Enhancements project (R8292) funded by the UK Department for International Development (DfID) as part of their Fisheries Management Science Programme (FMSP). Further details about the approach can be found in Garaway and Arthur (2002), available from the FMSP website at: http://dialspace.dial.pipex.com/town/green/gov67. This report describes the implementation of methodologies described in these guidelines and can be read in conjunction with them. The case study in West Bengal forms part of a process to increase the applicability of the guidelines that have been shown to have potential for increasing the benefits from natural resource management that reflect the priorities and concerns of those managing and/or affected by resource management.

1.1 The opportunities to enhance learning.

One of the principles of the adaptive learning approach is that learning processes and outcomes will be improved and more relevant if there is **meaningful** participation of those groups that are either involved in or affected by the resource management. Bringing together the different knowledge, skills and perspectives of different groups can increase both the quality and scope of what was learnt and ensure that it is relevant to those who were expected to benefit from it. Involving the groups at all stages of the process can increase the likelihood that those who need to learn are the ones doing so. In addition, involvement means that those who are expected to benefit are not just recipients of research products but are instrumental in the process itself. This can not only create ownership of the process and increase interest in the process and results but can also increase the capacity of the beneficiaries, thereby increasing the potential for more learning in the future.

On the basis of this principle and in the context of taking an adaptive learning approach to the management of rice-fish systems in West Bengal, three ways in which learning might be enhanced were identified. These were:

- To increase both the scope of learning and who learns;
- To improve/ensure the quality of any new information collected;
- Improve/ensure understanding of any information that was disseminated/shared.

It has been found in previous work in Lao PDR that close collaboration between, different groups has benefits, but can also be a great challenge given the frequently different perspectives, and ways of thinking and doing, of each. This report details activities undertaken in West Bengal to address part of the first of these and identify who should be learning and involved in the learning process. These activities were conducted in February 2004 in Kolkata together with staff from the Central Inland Fisheries Research Institute (CIFRI) and the West Bengal government Department of Agriculture. In addition, this report outlines how the identified stakeholders might be involved in the process and provides suggestions on the means by which this might happen.

2 Increasing the scope of learning and who learns.

In the adaptive learning approach learning has been considered as consisting of three stages: generating information, sharing information and utilising information. Thus learning is not only about the creating new information but also sharing. This is often overlooked but it is the case that much existing uncertainty results from poor access to existing information and therefore there is a need to improve existing systems of information sharing. Not only will this ensure that the most is made of what information and knowledge already exists, it can also ensure new information is received by those who need it. Creating new information in a way that also allows enables existing information to be shared was found to be effective in increasing what was being learnt in the case of community fisheries in Lao PDR.

The steps that have been identified and that provide opportunities for increasing who learns and what is learned are:

1. Identifying stakeholders involved in, or affected by the management of resources in question, and characterise the types of knowledge and skills they have.
2. Identifying current systems of information flow, where constraints lie and where new linkages should be made.
3. Integrating these linkages into the overall adaptive learning approach.

2.1 Identifying stakeholders, their knowledge and experience

Stakeholder analysis (see for example, Laws *et al.* 2003, ODA 1995) is useful tool for systematically identifying who could and should enhance learning. It is used here in:

- Identifying the current interests of those involved in research and/or management, their strengths and weaknesses and any conflicts of interest;
- Understanding the existing relationships between stakeholders that can be built on.

This is the starting point for developing an understanding of the roles of the key stakeholders in the research/management process. This will, along with discussions with the groups identified, help to identify what their respective knowledge base and skills are.

The table below (Table 1) shows the results for the stakeholder analysis conducted for the rice-fish systems in West Bengal. As can be seen, seven key stakeholder groups were identified, all of whom had different but complimentary roles, knowledge and skills.

Table 1 The roles, knowledge and skills of different stakeholders in West Bengal

Main stakeholders	Current role in the management of rice-fish systems	Relevant knowledge	Relevant skills and experience	Possible limitations and risks
External researchers[1]	Conduct research on rice-fish systems.	Technical knowledge of rice-fish culture, general knowledge of management systems and constraints. Knowledge of other projects.	Researching rice-fish systems and facilitating information exchange between projects.	Research and dissemination role only. Have little influence over the activities of state government.
West Bengal government agriculture and fisheries departments.	Conduct research on rice fish systems and coordinate research and development activities in West Bengal, employ district and block staff.	Technical knowledge of rice-fish culture, general knowledge of management systems and constraints. Knowledge of other projects and of staff problems and priorities	Researching rice-fish systems. Extending technical knowledge, facilitating information exchange between projects.	Lack of resources including money and equipment. Staff and constant staff input not guaranteed.
District and block extension staff.	Provide technical advice to managers where available. Provide a link between the managers and state departments.	Some technical knowledge and some knowledge of the opportunities and constraints faced by resource managers.	Working with villagers and extending technical knowledge to the resource managers.	Technical research capacity low and knowledge of, and experience with, rice-fish systems varied between blocks, districts and departments. Constant staff input not guaranteed.
Village Panchayats	Provide technical advice and permission to managers, link between the managers, villagers and Govt. Departments.	Knowledge of local resources and village conditions, rice-fish culture and the opportunities and constraints faced by managers.	Monitoring and enforcing rules, identifying village priorities.	Capacity low and dissemination of information on rice-fish cultivation varies from place to place. Social control on the village people may be affected by political allegiances.
Village Fish Clubs	Provide technical advice to the beneficiaries, organise meetings with the villagers and rice-fish cultivators.	Opportunities and constraints faced by resource managers. Some technical knowledge.	Working with villagers and rice-fish growers and identifying management priorities. Groups extend technical information on rice-fish cultivation and have an organising capability.	Low capacity. Experience, knowledge, skills and leadership ability varies from place to place. Often lack funds.
Fisheries managers[2]	Manage the resources and provide some money to villages for village development. Beneficiaries of management.	Local resources and management, management constraints and problems. Some technical knowledge.	Managing rice-fish systems, identifying management priorities and monitoring and enforcing rules. Marketing.	Experience, interest, knowledge and skills vary greatly. Lack funds and have only a limited ability to endure short-term costs for longer term gains.
Fishers and villagers	Role and responsibility is determined by the fisheries managers.	Local resources, village conditions, individual household conditions and priorities.	Fishing, marketing, affected by management decisions and possibly benefiting.	Unable to make decisions affecting management so there is a risk that not all their priorities are being considered by managers.

1. Includes MRAG Ltd., WorldFish Center, CIFRI and ICAR.
2. Can be individual landowner, cooperative society or leaser.

2.2 Opportunities and constraints existing in the current systems of information flow.

Once the stakeholders have been identified and what they do and know established, it is necessary to establish how information flows between them. One way of doing this, as was done in the Lao case, is to draw diagrams of current information networks and flows and then use these as a basis for discussion with stakeholders. Having assessed what currently happens, they can be built on to include desired flows, based on the knowledge skills and experience of each. The existing and proposed information flows for rice-fish systems in West Bengal are shown below in Figure 1. This is intended to create an 'information network' that enhances the communications between stakeholders and involves all in the learning process.

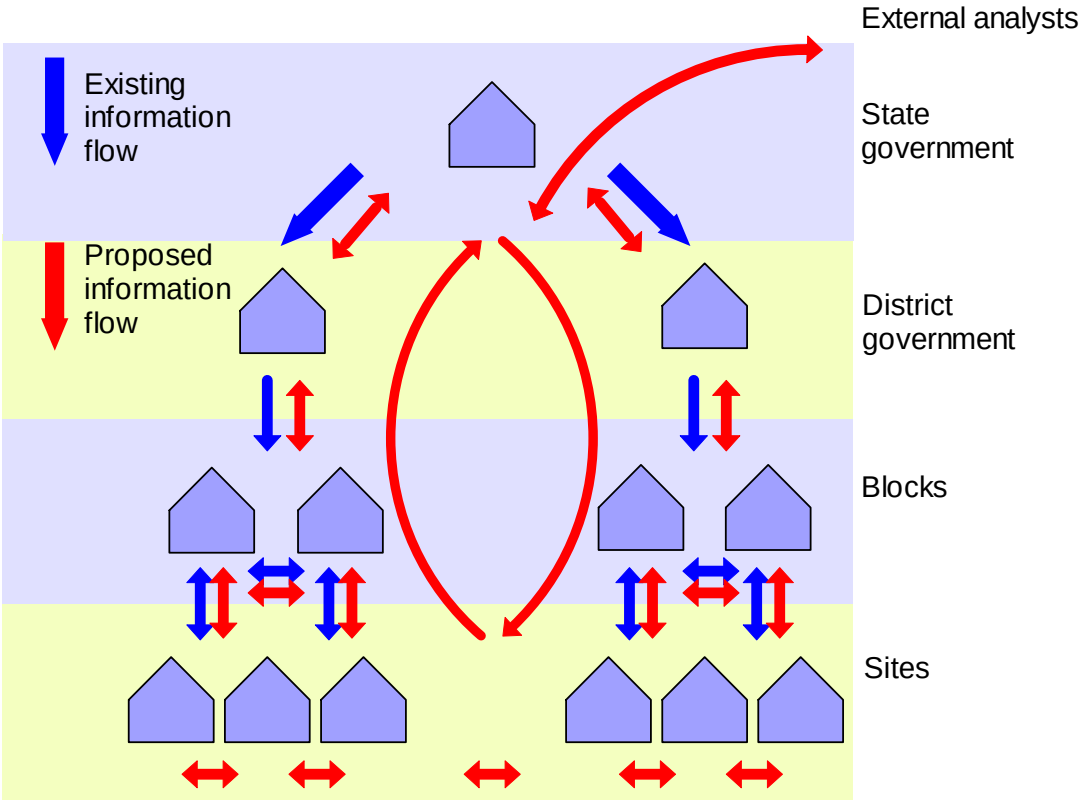

Figure 1 Existing and proposed information flows in West Bengal.

As can be seen, in relation to rice-fish culture, the majority of information flow was downward with very little sideways communication systems at all. Most of the information flowing downwards at present is technical advice but there is little evidence of upward communication. Communication between villages and block level extension staff is an exception to this. Because of this, it is hard for those in the upper levels of the hierarchy to provide what the villages need. Improving the sideways flow of information could be highly beneficial as it is the case that the resource managers and extension staff have differing experiences. Opportunities to share their knowledge and experiences could result in learning by these groups.

Those at the base of the hierarchy are the ones with the most management experience and an understanding of where the problems lie (see also Table 1). However, these groups or individuals are managing in isolation, with little knowledge about what others are doing. This means that their leaning about what works and

what does not in management is relatively slow. It was found in Lao PDR that providing access to information regarding others' experiences was a key role of the information network. Likewise, giving extension staff the opportunity to discuss ideas and experience with each other and with state level staff and external researchers provides more opportunities for learning and information share at that level.

Apart from enabling the sharing of existing information, thus increasing what can be learned, the network is intended to form the basis for sharing any **new** information arising from any experiments conducted as part of the adaptive learning process. This network will be integrated into the overall adaptive learning approach. How these information flows might be realised is discussed below in Section 4.

3 Improving and/or ensuring the quality of new information collected.

Having examined involvement in the process and how information might be shared between stakeholder groups, this section will consider how in the initial stages of the process the quality of information collected can be assured and/or improved.

One of the fundamental principles of the adaptive learning approach is that learning must be both demand-led and appropriate. This requires that stakeholder groups, and in particular those managing the resources, are able to effectively communicate their priorities and constraints. In this respect it is often the case (as is illustrated in Figure 1) that information flows do not enable the managers of the resource systems, those having the most experience of the systems, to discuss their objectives and constraints to those who could help them. Assistance to resource managers currently appears to be very much of a technical nature, reflecting state and national priorities and objectives to a greater extent than those of the resource managers. While resource managers are able to discuss their circumstances with the block level extension staff (who often have considerable knowledge of the systems) this information is not necessarily passed up to those at the state level. This is by no means unusual but in order to ensure that the learning is indeed demand led and relevant, the priorities of those affected by resource management and/or those managing resources (this can include landowners, leasers and those working in the fishery) need to be used as the basis for learning. Information is recognised as contextual and information collection methods need to be able to capture the different perspectives on issues relating to the resource systems.

To elicit information regarding the priorities, objectives and constraints of those managing or affected by management, Participatory Learning and Action (PLA) tools, including semi-structured interviews and a number of visualisation methods such as timelines and matrices, were used to enable the identification and prioritisation of both objectives and constraints (see Maine *et al.* 1996, Pretty *et al*. 1995 and PLA notes for details of methods that can be used). This is the first step in realising the proposed information flows between stakeholder groups and enabling information to be communicated up the hierarchy. Participatory methods such as these can reveal more about a situation and provide an opportunity to use the knowledge and intelligence of the resource managers and enable them to share their perceptions (e.g. Laws *et al.* 2003). Every attempt was made to ensure the quality of information collected, for example by ensuring that the questioning was limited to aspects of the resource system about which the respondents had knowledge and avoiding the use of leading questions. Information collection and the findings reported in more detail in the initial appraisal report.

Consultation with resource users in this way brings with it responsibilities to ensure that the findings are reported fairly and accurately and that the findings are shared with those who have provided the information. This in itself can ensure quality as it enables those supplying the information to comment on the findings and correct any misinterpretation.

4 Improve/ensure understanding of any information that was disseminated/shared.

When it comes to ensuring understanding of information there are certain key principles associated with the adaptive learning approach. In the first place, and as has been discussed, the issue of who learns is critical. In the second place, information needs to be generated and shared in an appropriate and timely fashion. Facilitating learning in locally appropriate ways and developing mechanisms for people to develop their own understanding and knowledge need to be incorporated. Understanding how people can best share information is as important as the information. There needs to be clear communications between all the stakeholder groups that were identified in section 2.1. Section 2.2 described the required information flows and the information network will have a key role in information sharing. However, to ensure understanding it is also critical that the process is coordinated and that information is provided in a manner that ensures the information is fully accessible to the different stakeholder groups involved. As a first step, an assessment was made of the means of communicating that were felt to be most appropriate for different types of information. The results of this assessment are shown in Table 2.

Table 2 Proposed means of communication between stakeholders in West Bengal.

Communication pathways	Type of information			
	Sharing information with resource managers	Technical findings	Policy recommendations	Coordinating activities
Lunchtime discussions			Y	
One-to-one meetings	Y			Y
Group meetings	Y	Y	Y	Y
Workshops/ conferences	Y	Y	Y	Y
Study tours or exchanges	Y	Y		
Website		Y	Y	
Database/ CD ROM		Y		
Online listserv				
Video conference				
Real time net meeting				
E-mail		Y	Y	Y
Telephone			Y	Y
Conference Proceedings		Y	Y	
Project mail shot				
Journal article		Y		
Newspaper article	Y	Y		
Technical report		Y	Y	
Other				

5 The next steps in the process.

As outlined in the adaptive learning guidelines, the next step in the process is to develop an understanding of the resource systems (see Garaway and Arthur 2002 for details). This is important if insight into the relationship between the people, the resource, the decision-making arrangements and the management outcomes in these systems, including why current outcomes are as they are, is to be achieved. The understanding that this should provide will enable key issues regarding management to be identified. In turn this understanding will be used to develop learning strategies that will be discussed with the stakeholders identified here through the mechanisms highlighted in order to begin a management experiment that should provide benefits for those involved and others managing similar systems.

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