

Common Pool Resources and Fisheries Management (3)

Key Sheet Series:

The purpose of these Key Sheets (Nos 1-4) is to ensure the effective dissemination of the findings of a research project funded under the DFID Fisheries Management Science Programme (FMSP) entitled 'Incorporating Common Pool Resource (CPR) Issues into Fisheries Management in Developing Countries: Key Lessons and Best Practice' (No. R8467). The main target audience are policy-makers and their advisers throughout the world with a responsibility for CPR management, especially fisheries.

DFID/FMSP Study on CPR Issues:

During 2005, IDDRA undertook this project (No. R8467) synthesising the results of 18 fisheries research projects undertaken in developing countries under the DFID Fisheries Management Science Programme (FMSP) (1992-2004) managed by MRAG Ltd. Further detailed information is available from these websites: (www.fmsp.org/FTRs.htm) (www.onefish.org.id/281354)



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APPROACHES TO IMPROVING CPR MANAGEMENT PERFORMANCE IN DEVELOPING COUNTRIES: BEST PRACTICE

Overview

The apparent and widespread lack of success over the past 50 years in attempting to manage the exploitation of Common Pool Resources in a sustainable manner is a serious concern for society. Governments recognise that they are losing out on potential benefits for development and growth, while primary stakeholders such as fishers and forest peoples recognise the threat to their livelihoods. In the specific case of fisheries, one of the major responses to the problem by scientists has been to attempt to better understand the factors affecting fisheries management performance, and in turn to develop new and alternative approaches to the challenges and opportunities presented. It is also important to review and learn from the experience of using these new approaches, and to establish 'best practice' for fisheries management across the world.

In this third Key Sheet, a range of new approaches which can contribute to improved fisheries management in Developing Countries will be considered, based on the findings of the FMSP. With a focus on experiences in the field the following key issues were identified:

Key Issues

1. The *Importance* of New Approaches to Fisheries Management

Historical perspective: Over the past 50 years, there has been a gradual evolution of global fisheries policy. Initially (1950-1980) fisheries production was expanded by 6% p.a. through a technocratic and productionist approach, reaching over 100 million tonnes in 1996. This was followed (1980-1990) by a phase of problem recognition, change and adjustment as over-exploitation became a serious problem and fisheries resources were transferred more to state control (1982, Law of the Sea Convention and declaration of 200-mile Exclusive Economic Zones). Since 1990, new perspectives on fisheries policy have emerged including more multi-disciplinary work, leading to the FAO Code of Conduct for Responsible Fisheries (1995) and calls to use these guidelines in developing new fisheries management systems.

Future prospects: However, the necessary changes required to manage fisheries more effectively have been slow in coming. In many Developing Countries, fisheries policy still emphasises expansionist and production-oriented objectives (as opposed to more broadly based ones), and fisheries management systems, often constrained by limited financial and

Box 1. Designing information systems for fisheries co-management: Bangladesh

In response to the need to help different stakeholders participate in co-management arrangements for fisheries in countries like Bangladesh, a set of guidelines (Halls *et al.*, 2005) have been developed to help design and implement simple cost-effective data collection and sharing systems. Four basic categories of information are included: (i) information to formulate and evaluate national fisheries policy including performance of co-management itself; (ii) information to formulate and adapt local management plans; (iii) information to implement management plans, including enforcing rules/regulations, coordinating management activities and monitoring and resolving conflict; and (iv) information to evaluate local management plans. The guidelines help with the selection of data types, sources and data collection methods appropriate for particular uses within fisheries management. In addition, an eight-stage participatory design process is included involving stakeholder analysis, local management plan formulation, identification of common stakeholder data needs and shortfalls, data collection and sharing strategy design, the development of information networks, the design of data recording and management systems, and finally implementation and refinement. [FMSP R8285, R8462]

Small-scale coastal fisheries in Asia use a range of



technologies including sail and engine power – keeping up-to-date information on these units is a major challenge for a management authority. Source: G. Bizzarri (1996), courtesy of FAO Media Archive.



The fish trade in West Africa is organised, profitable, and often 'informal' – the options for integration with 'formal' fisheries management systems will have to be carefully evaluated in the future.

personnel capacity, have been unable to control exploitation at all. In the worse cases, the fisheries are characterised by free and open-access conditions, accompanied by illegal, unregulated and unreported (IUU) fishing, resulting in severe overexploitation and resource degradation.

In such circumstances, the fisheries sector cannot contribute effectively to national development. At times, the challenges to improved fisheries management may seem insurmountable, but there are also examples of successful fisheries management systems. There is also a growing body of knowledge on the factors which affect fisheries management performance [Key Sheet No. 2]. This can provide a basis to build new approaches for more effective fisheries management in the future.

2. New Knowledge on Approaches to Improving Fisheries Management Performance

As a result of the work of the FMSP, it is possible to identify five major factors which affect fisheries management performance in developing countries [Key Sheet No. 2]. It is no surprise that these factors, in general, also commonly affect the management of other Common Pool Resources. The challenge is how to address these factors in order to improve fisheries management – capitalising on the opportunities presented, and reducing the effect of any constraints. The work of the FMSP has also helped to identify new approaches in this area, as well as investigating relevant initiatives undertaken by governments or agencies in particular countries. In the following section, a series of case-studies are presented which illustrate some of the main findings as follows:

Managing information and applying knowledge: The first approach focuses on the development and testing of a set of guidelines for information collection and sharing by different stakeholders within the context of co-management [Box 1]. This is based on field-work in a number of countries where co-management arrangements have been included in new fisheries policy, including Bangladesh, the Turks and Caicos Islands [Caribbean], and Cambodia. The guidelines are important since they address a wide range of issues and constraints within the domain of 'information' [Key Sheet No. 2]. The operationalisation of the guidelines through a participatory design process is recommended, and a pragmatic step-by-step pathway is described.

Encouraging participation: The second approach focuses on government attempts to encourage greater participation in fisheries management by local level stakeholders, mainly fishing communities, through local management units. The case study looks at Beach Management Units and Beach Management Committees in Kenya and Tanzania [Box 2]. The general approach is similar to other parts of the world, as an alternative to conventional, top-down, command and control fisheries management systems [Key Sheet No. 2]. In practice, however, the design and implementation of successful co-management arrangements in any fishery can be difficult and time-consuming, and there is no guarantee of success. Encouraging participation is just one component of the process of co-management. Others such as the development of new relationships and trust between existing stakeholders are also critical. Fundamentally, co-management is aiming for a change (improvement) in governance, and this will depend on greater transparency and accountability (of the process) and responsibility as well as participation (by stakeholders). Kenya and Tanzania provide important lessons from this first attempt at greater local level participation in fisheries. First, that changes in governance must be supported through investment and capacity-building. Second, that participation alone is not enough; it must be accompanied

Box 2. Local level fisheries management: Kenya and Tanzania

In Kenya and Tanzania, coastal people equal 13% and 9% of the population respectively. Fisheries resources are essential for food and income. However, poverty is widespread and fishing households are vulnerable to loss or mismanagement of the fisheries resources. Fisheries management performance has been generally weak so far due to a lack of enforcement capacity, limited resources and lack of coordination between institutions involved. In an attempt to encourage greater participation in fisheries management by local level stakeholders, government has attempted to devolve power to local beach management units (BMU) and beach management committees (BMC). However, success has been limited in both countries. This has been attributed to a lack of support from the national Fisheries Departments concerned, conflict between the members of the BMU/BMC themselves, and mistrust between district extension staff and BMC managers. To overcome these problems in the future is going to take time, more dedicated investment, and mechanisms to build trust and understanding between the stakeholders involved [FMSP Project No. R.8196]

Box 3. Formalising property rights in marine fisheries: Indonesia

In Indonesia, eight million people are employed in the fisheries sector [2% GDP, US\$3.7 billion]. Fish contributes 52% animal protein to diet. Many fishers are small-scale, fish stocks are heavily exploited, but most fishers are not impoverished. Traditional fisheries management systems (TMS) are common. Village leaders use these informal rights to lease fishing for revenue generation. However, TMS are under strain – influx of new fishers and the expansion of formal regulation and bureaucratic organisation – particularly the Autonomy law no. 22/1999 which assigns rights and responsibilities for district and provincial authorities to manage coastal fisheries. Fishers now also have legal rights to organise their own cooperatives, but involvement in regulation decisions is limited in practice. The new arrangements have overall created problems for TMS and mobile fishers (main fishing group). Each district has its own policies, in some outsiders are excluded, cutting across traditional *de facto* fishing rights. The Indonesian Government is committed to district level fisheries management. The challenge is to blend formal and informal institutions, based on different property rights, into a sustainable fisheries management system. [FMSP Project R.7336]

by other elements of good governance (transparency, accountability) if it is to be effective.

A basis of legal property rights: The third approach highlighted concerns the formalisation and allocation of property rights for fisheries, using Indonesia as a case study [Box 3]. Rights are an essential basis for fisheries management; underpinned by an appropriate legal system [Key Sheet No. 2]. For Indonesia, marine fisheries are important for thousands of people and there has been widespread regulation by traditional rights and management systems. More recent attempts at reform, however, show the challenge which this presents, and how a degree of flexibility in the approach adopted is required, otherwise it may be unworkable. At the same time, the creation of a legal basis for fisheries management and property rights at national level is an essential basis for further development (part of an enabling environment). The next step is to ensure that all the actors in the fisheries sector can access and use this framework to manage their rights (a question of capacity-building).

Creating appropriate institutions and organisations: The fourth approach focuses on institutions and organisations for fisheries management, often in complex situations such as tropical floodplains [Box 4]. A set of guidelines were developed for designing appropriate fisheries management organisations taking into account both ecological and social features. It is recognised that there is no 'blue-print' for floodplain fisheries management. Instead, it is important to find locally appropriate solutions. A 'nested' hierarchical organisational approach is proposed, with management rights and responsibilities divided between actors at different levels of government and society, and also spatially from basin-wide to local levels fisheries. The guidelines also set out the necessary steps for successful management, which requires a process of adaptive management, where each sub-unit of the organisation is dependent and interacts with others in a coherent and coordinated manner. The guidelines which build upon the results of a number of FMSP projects provide an alternative view to conventional fisheries management (top-down and command-and-control). They provide very practical advice on the opportunities and constraints to fisheries management when attempting to employ a co-management and adaptive approach. Finally, it should also be noted that subsequent FMSP research (FMSP R7335, R8292) has further developed these ideas leading to a set of adaptive learning guidelines which are highlighted in Key Sheet No.4.

Political will and changes in governance: The fifth and final approach focuses on ways in which 'political will' to bring about effective change to promote management for sustainable fisheries can be generated, encouraged and channelled. Lessons have emerged from many of the FMSP projects in four key areas – using policy spaces, exerting leverage, the role of champions and working towards empowerment [Box 5]. Entry-points depend on the nature of governance and the policy process [1]. In an open, democratic state the political process arbitrates the diverse values of society in the process of policy formation. In less open and less democratic states, the most powerful groups in a society will impose their values and preferences on the less powerful (usually the majority). However, all societies experience change and there are ways to influence policy in fisheries and other sectors. For example, through the use of information and knowledge in identifying choices and decision-making (the traditional role of the scientist). However, more pro-active approaches require actual engagement with specific actors (such as fisher communities and groups) to assist with a more effective engagement in the policy process itself (through capacity building, support for constituency formation and empowerment).

Box 4: Management organisation for floodplain fisheries: Asia (Bangladesh, India, Indonesia, Nepal and Thailand)

Floodplain fisheries in Asia provide livelihoods for thousands of people. However, their complex ecological and social characteristics require holistic and multi-disciplinary approaches for management. A set of guidelines (Hoggarth *et al*, 1999) were produced to identify the questions to be asked to find effective local solutions (there is no single 'right' answer which can be applied top-down). It is proposed that the fisheries should be sub-divided into a hierarchy of spatially defined 'management units' and locally appropriate tools used for adaptive management. Management responsibility should be divided between a 'catchment management authority' and a number of other co-management partners, managing a local sub-unit. Partnerships may be either village- or district-based depending on the size/types of water-bodies and on traditional and formal activities of existing institutions. The guidelines also outline the necessary steps for successful management through an adaptive management process at all levels of the hierarchy, where management rights and responsibilities of the different actors involved are recognised legally. [FMSP Projects R4791, R5485, R5953, R6494]

Box 5. Facilitating political will and change in fisheries: Bangladesh and SE Asia

In most Developing Countries, the policy process in fisheries is intensely political, and powerful actors (usually a minority) seek to exert their will and preferences over the less powerful (the minority). To gain support for new policy directions or to change the nature of the policy process (a major challenge) can be approached in various ways:

Using policy spaces – the policy process is dynamic and in all situations opportunities will arise to influence or capitalise on them. The challenge is to identify and then act appropriately. In Bangladesh, Laos, Cambodia and Vietnam, decentralisation reforms may provide the opportunity for stakeholders at local level to become more involved in fisheries management decision-making (FMSP R8118).

Exerting leverage – the policy process can be influenced. New information and analysis can change policy narratives and the ways in which decision-makers see particular problems and solutions (in Bangladesh, livelihoods analysis has further revealed the importance of fisheries and aquatic resources, and the threat posed by national policies which emphasise agriculture intensification, FMSP R8118).

Change agents – the policy process can be affected by different actors, including those within local communities and sectoral organisations (fishers organisations), and also external actors (donor agencies and NGOs) (in Bangladesh and SE Asia, fisher organisations are generally weak and not influential, FMSP R8118) (compared to Fisher Organisations in India which have impacted on policy [2]).

Empowerment - through capacity building and support for organisations and constituency formation, new actors can enter and influence the policy process. (Community-based Fisheries Management Programmes in Bangladesh and SE Asia can be effective if designed and implemented carefully, FMSP R8118).

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3. The Future Challenges for New Approaches to Fisheries Management

Despite the history of fisheries management – often characterised more by failure than success – there are possibilities for improving fisheries management performance in the future by adopting new approaches. Research programmes such as the FMSP have helped to identify and analyse the entry-points as described above. However, the further development of new approaches to fisheries management will need to overcome at least three challenges in the future, as follows:

- (i) How to overcome the resistance to change within fisheries management organisations?
- (ii) How to develop new fisheries management systems based on appropriate diagnosis and solutions to problems?
- (iii) How to disseminate and build capacity in new fisheries management approaches?

In Key Sheet No. 4, the manner in which research can contribute to addressing these future challenges will be explored through the identification of a series of research priorities.

Footnotes

¹ Keeley (2001) and Sutton (1999) provide further information on the policy process and policy analysis.

² In Kerala State (India), the National Fishermen's Forum was founded in the 1970s to voice the opinions and concerns of fishers at national level. Period of agitation by NFF pressured state and central governments to address impacts on fishers' livelihoods and fish resources leading to a series of partial victories, and some inclusion of fishers in the policy decision-making process (Reeves *et al*, 1997).