

Fisheries Management Science Programme: assessing developmental impact

Special points of interest:

- > FMSP projects have been successful in generating, sharing and achieving use of information leading to improved management and increased benefits to the poor in a number of cases.
- > Research and further uptake promotion is still required to maximize the impact of the existing outputs and to maintain momentum. This should seek to match outputs to demand and ensure that information is provided in appropriate and accessible formats.
- > The emphasis on uptake should be maintained in any future research funding to maintain a focus on research for development, rather than academic research achieved with development funds.



Working in collaboration with fishers to determine improved management strategies.

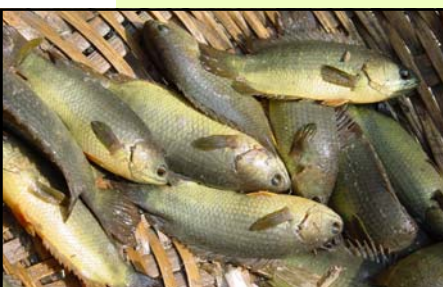
Assessing the impact of the FMSP

This brief describes the results of the recently completed Fisheries Management Research Programme (FMSP) impact assessment. It outlines the approach taken to impact assessment, provides some examples of the impacts achieved and highlights some of the lessons learned about achieving positive developmental impact through a research Programme.

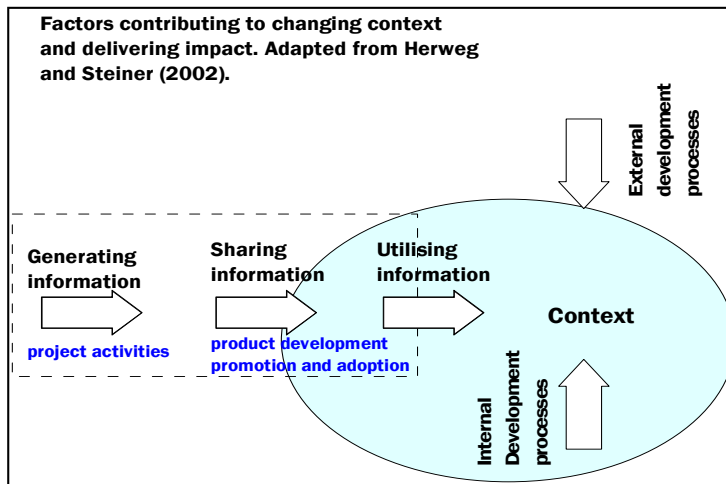
The impact assessment study commissioned by the FMSP is intended to complement the recent RNRRS evaluation, not to repeat it. The focus is instead on lessons learned from the Programme's experiences that can contribute to more positive developmental impacts from future research.

Measuring impact

While the idea of measuring impact appears fairly straightforward, this is in



Fish can provide a range of direct and indirect benefits to the poor based on their nutritional and economic value.



fact often not the case. Difficulties arise because of the nature of the research process. As the diagram illustrates, to achieve impact (a change in context of the poor), information needs to be effectively generated (through research), shared (transforming information to knowledge in the process) and utilised (within box). However, as illustrated:

- Context is affected by other factors both internal (e.g. changing fisher priorities) and external (other development projects and economic pressures).
- The impacts of the outputs of fisheries management research are often indirect, again making attribution of impact difficult.

The FMSP assessment process

In order to address the difficulties, the FMSP undertook a two-stage assessment comprising:

- 1) An assessment of impact based on a review of project literature combined with

an in-depth examination of a cross-section of FMSP projects. This sought to assess the benefits to intermediary and target beneficiaries that the projects had brought about through discussions with those involved, including collaborating organisations, extension agents and the target beneficiaries.

2) A wider overview of the overall contribution of the FMSP from the viewpoint of a cross-section of those involved in the information generating, sharing and utilising process. This involved researchers, collaborating organisations and targets of project communications activities and included important international, regional and national, users and generators of fisheries management science.



Increasing fish yields from applying FMSP methods in enhanced inland fisheries in West Bengal, India.

This brief reports some of the results from this process and highlights some of the more important lessons learned and indicates where more detailed information from the assessment can be found.

F MSP: Successfully generating new information

The first step in achieving developmental impact through research is generating credible and relevant information by applying rigorous scientific methods. In this respect, all of the RNRRS Programmes have been found to have produced quality science through the efforts of both UK and Southern researchers.

“The F MSP has produced some of the most useful, rigorous and innovative research in tropical fisheries management”

Kai Lorenzen, Imperial College

The RNRRS review found that several F MSP scientists are at the forefront of research in their fields, producing cutting-edge science and high-quality peer-reviewed publications.

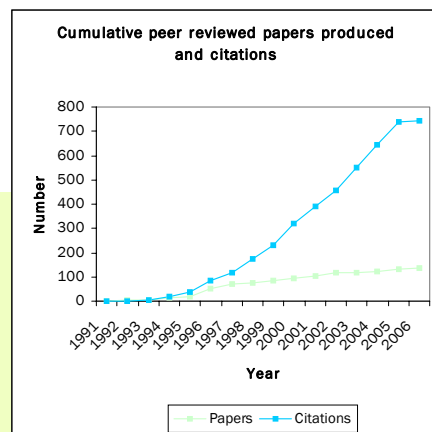
Peer-review provides quality

assurance. A measure of success in generating quality information is the F MSP publishing and citation record (see graph). A total of 136 articles have been produced to date and are widely cited. The impact factors of the journals in which F MSP research has been published are also amongst the highest of any of the RNRRS Programmes.

The view from F MSP researchers

A cross-section have indicated that the F MSP has been highly valued by those involved. It was felt that the F MSP has produced some of the most useful, rigorous and innovative research in tropical fisheries management. The positioning of the F MSP at the development/science interface has also been appreciated and is considered to have been productive in terms of both developmental impact

and the advancement of science. As one said: “Other funding sources tend to support exclusively either scientific research without reference to development issues or development without provision for rigorous research”.



Cumulative peer reviewed papers produced by F MSP researchers and citations

Sharing information and developing capacity

Effective sharing of information is vital both to research and to the management process. F MSP projects have included participatory research processes, helping ensure the relevance of research to poverty alleviation.

Researchers have made use of a wide variety of means to make their outputs available and accessible. While peer-reviewed papers are important for researchers, other means of communication are also valued and the F MSP, certainly in recent years, has encouraged the use of varied and innovative approaches. These appear to have been successful in raising awareness and increasing availability of outputs. However, communication

between partners on projects has remained the most effective way to transfer knowledge.

The process of sharing information has helped to link organisations and individuals and to build networks of researchers and practitioners. In some cases links between researchers and practitioners and fishers have also been strengthened. Where sharing of information has required or included participatory methods or an emphasis on ‘learning by doing’ there have been additional benefits. Organisational and individual capacity to undertake more participatory approaches to research and management planning, undertake stock assessments or analyse data is said to have increased.

As an information supplier, the F MSP has, in the view of international and regional fisheries agencies, demonstrated an awareness of other development initiatives, ensuring that the Programme has minimised the risk that it has been competing with other efforts. Indeed the F MSP has been viewed as complementary to other efforts in many cases.



Use of innovative methodologies have been effective in developing management capacity.

Effective sharing of information is vital both to research and to the management process.

Utilising information...



Using information about the most suitable species combinations to stock allowed villagers in Lao PDR to improve their stocking strategies.

All the national, regional and international organizations contacted during the impact assessment indicated that they had adopted or planned to adopt a range of outputs from the FMSP. Use of products ranged from informing research through developing training materials to use in management planning. Some examples follow.

The WorldFish Center have indicated that outputs from the FMSP have been highly

beneficial in the strategic planning of their future research programmes.

Universities and training colleges, including Plymouth University, Asian Institute of Technology and Bangladesh National University, have included outputs in their course materials.

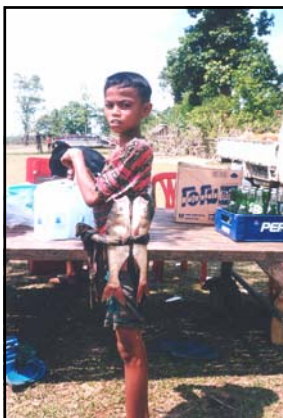
FAO's Inland Fisheries Department (FIRI) is planning to use outputs in a Programme to improve the resource assessment and management

of Lake Victoria, and also within co-management projects in Brazil.

In India the West Bengal Department of Fisheries have started to use outputs in their self funded fish stock assessments.

At the local level, in countries including Bangladesh, Lao PDR and India have been able to access and make use of information to change and improve the way in which they manage their fisheries.

...and making a real difference to peoples lives



Realising the benefits: one young fisher reaps the rewards of better fisheries management.

FMSP research has contributed to developmental impact in different ways. Some projects have been able to work in a more focused way, i.e. directly with fishers and communities while others, because of the scale of the fishery have worked in a more enabling way, i.e. improving the capacity and capabilities of intermediaries such as management agencies. The benefits from these projects are more difficult to attribute but appear no less real.

Focused projects have been able to produce a variety of benefits. In Zanzibar fisherman were able to successfully develop new fishing techniques that enabled them to fish in areas that they would never have gone to otherwise.

In the Pacific research FAD research by the FMSP has been built upon by the Secretariat of the Pacific Community and they recently assisted Nauru to deploy two FADs specifically to assist local small-scale fishermen, as food security has become a major

issue. While it is still early days, the FADs were the only real option for Nauru for food security as there are very few other marine resources for the local people to harvest. As one researcher commented of the FMSP research "I personally feel that all of the early work on FADs and the outputs produced have been to the benefit of Pacific islanders and to food security".

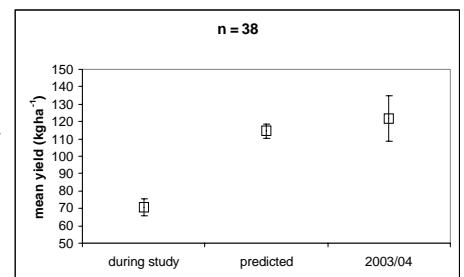
In Lao PDR experiments on appropriate combinations of fish to stock under different conditions suggested that mean yields could be increased significantly (from 'during study' to 'predicted' points on graph). A further evaluation two years later showed that the information had been used and that both yields and village incomes had increased as a result ('2003/04' point on graph).

At the enabling level, as an example, FMSP projects have developed a novel

"The FMSP required us to do research that makes a difference"
Caroline Garaway,
UCL

and innovative method for evaluating the benefits from licensing foreign fishing, guiding the decision making process. Application has led to substantial increases to coastal state revenues from fisheries, increased arrests and convictions of illegal foreign vessels, increased employment and increased local processing capacity due to increased use of port services and increased

"I personally feel that all of the early work on FADs and the outputs produced have been to the benefit of Pacific islanders and to food security"
Lindsay Chapman,
SPC



Predicted and realized increases in yields from 38 village managed fisheries resulting from improved access to information generated by research funded through the FMSP.

Achieving developmental impact: some lessons from the FMSP

The FMSP has proved successful in generating, sharing and achieving use of information that has contributed to increased management capacity and, in turn, led to improved management of fisheries and increased benefits to those dependent on the fisheries, including the poor. The assessment of the Programme has also highlighted a number of lessons that can inform any future research Programme:

- The FMSP has achieved positive developmental impact and it is important to maintain a Programme that continues to achieve research for development rather than academic research achieved with development funds. There is a potential conflict between the need for research messages to be available in accessible formats and the emphasis for researchers to produce peer-reviewed outputs and the incentive structures for researchers should be considered.
- Uptake is most effective when the supply of information coincides with local demand. Demand assessments, raising awareness of issues, demonstrating the potential benefits from adoption are all important in achieving adoption and use. To be effective, it is important that southern partners are actively involved in the conceptualisation of the research as well as its implementation.
- It takes time to achieve impact. This is particularly true where products are aimed at an enabling level and have an indirect effect on the target beneficiaries. Attention needs to be given to the systematic monitoring of impact and monitoring beyond the lifespan of the research project.
- In terms of time an aspect of the Programme that was appreciated was the continuity, allowing research in a number of areas to develop over the course of a series of projects. In this respect it is important that the momentum developed is not lost if impact is to be maximised.

- Uptake promotion became more important in the latter years of the FMSP with increased attention paid to communication. Experiences showed that for uptake promotion, passive methods such as a website are not enough and promotional activities also need to be organised around a Programme promotional framework to ensure coherence across the products and messages being communicated to assist potential users to select the products or suites of products most relevant to their needs.



Fishing vessel in Zanzibar. The FMSP has, through rigorous and innovative research projects, benefited fishers in Africa, Asia the Caribbean and the Pacific.

MRAG

DFID Department for International Development

**FMSP Projects
database:
www.fmsp.org.uk**

References and further information

Further information on the impact of the FMSP is available from the Programme website.

Arthur, R.I., Fisher, E., Mwaipopo, R., Irz, X and Thirtle, C. 2004. Developmental impact of the FMSP to 2005. MRAG Ltd.

Halls, A.S. and Arthur, R.I. 2006 Assessment of the impact of the FMSP: an assessment of the developmental impact of the FMSP from the perspectives of key fisheries institutions and researchers. MRAG Ltd.

Herweg, K. and Steiner, K. 2002 Impact monitoring and assessment: instruments for use in rural development projects with a focus on sustainable land management.

Volume 1: procedure. Buri Druck, Switzerland