

BIBLIOGRAPHY OF DFID FISHERIES MANAGEMENT SCIENCE PROGRAMME

FROM 1990 TO March 2004

This Bibliography of FMSP publications is extracted and amended from: BEDDINGTON, J.R., SANCHEZ, J.G. and MUIR, J.F. (2002) *Bibliography of DFID Fisheries Research Programmes from 1990 to 2001*. Natural Resources International Ltd., Aylesford, UK. 95 pp. First published 1999, Second edition 2002. It has been updated to include publications produced in 2002 and up to March 2004.

The Department for International Development (DFID) is the UK Government department responsible for promoting development and the reduction of poverty. The Government is committed to halve, by 2015, the proportion of the world's poor whose income is less than one dollar a day; the proportion of people who suffer from hunger, and the proportion of people who lack safe drinking water. Other associated targets include basic health care provision and universal access to primary education. DFID works in partnership with the governments of developing countries, international organisations, voluntary bodies, the private sector and the research community. DFID's Strategy for renewable natural resources for the period 1995–2005 aims to reduce poverty by enhancing productive capacity in the RNR sector in an economically and environmentally sustainable way. There are ten DFID research programmes, of which three belong to the Fisheries Programmes: Aquaculture Research and Fish Genetics, Fisheries Management Science, and Post-Harvest Fisheries Research. These are managed by Stirling University, Marine Resource Assessment Group Ltd., and Natural Resources International Ltd., respectively. The Strategy aims to generate replicable new technologies and improved knowledge in natural and social sciences through a rigorous scientific approach to problem solving. It promotes the uptake and application of research products for the removal of constraints to sustainable development and management of renewable natural resources in tropical developing countries.

The producers of this publication have made every attempt to ensure that all entries to the Bibliography are as detailed and as consistent as possible.

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INTRODUCTION

The central aim of the UK Government's Department for International Development (DFID) is to eliminate poverty by improving the livelihoods of poor people in developing countries. One of the means by which DFID addresses this aim is through its strategy for research in renewable natural resources strategy. The purpose of the Strategy is to create benefits for poor people by generating and promoting the use of new knowledge in natural resources management.

Fisheries play an important part in the social and economic lives of vast numbers of people around the world, many of whom are amongst the poorest and most marginalised people in rural communities. The International Fund for Agricultural Development (IFAD) specifically singles out fisherfolk as one of the key groups of the poor¹. In many cases fish harvesting, processing and trade is seen as the employment of last resort when other economic opportunities have run out. Fish farming is also a growing contributor to both employment and food for the poor. There are no accurate figures for the number of people involved in fisheries but it is estimated that, globally, there are tens of millions of people dependent on fisheries for their main source of income for at least some of each year – and this number is rapidly increasing.

Research into increasing the productivity and productive potential of poor fisherfolk is an important part of DFID's knowledge strategy.

DFID funds three fisheries research programmes. The programmes and the institutions which manage them are:

- Aquaculture and Fish Genetics Research (University of Stirling)
- Fisheries Management Science (Marine Resource Assessment Group Ltd.)
- Post-Harvest Fisheries Research (Natural Resources International Ltd.)

Each of these management institutions is contracted by DFID to commission research which will help to deliver the development objectives of the strategy. Research institutions in the academic, non-governmental and commercial sectors are sub-contracted by the programme managers to carry out the research. All research is conducted in close collaboration with partners in developing countries. This collaboration both increases the likely uptake of research outputs and promotes capacity in those countries.

A recent review of the efficiency and impact of the programmes concluded that the research was both cost-effective and has a significant positive impact on the lives of the poor.

As part of the research validation process, the outputs from research are published in peer-reviewed journals. Other dissemination products are also produced which address the needs of a wider audience. This Bibliography brings together the publications of the DFID funded fisheries research for the Fisheries Management Science Programme over the period 1990–2001. It is designed to provide a source of information about the new fisheries knowledge which DFID has generated through its fisheries research programmes.

If fisheries research is to contribute significantly to the elimination of poverty then:

- researchers need to co-ordinate their activities with each other

¹ JAZIRY, I., ALAMGIR, M. and PANUCCIO, T. (1992) *The State of World Rural Poverty: An Inquiry into its Causes and Consequences*. IFAD, Rome.

- practitioners in the field need to be kept informed of new knowledge and technologies
- policy makers need to be fully informed
- research outputs must provide a strong basis upon which to plan development programmes.

It is hoped that this Bibliography will contribute to that process. The publications produced by the Programme are arranged by year, then project and then by peer-reviewed and other publications.

In a few instances, where there are multiple authors, a publication may appear under more than one project. Please note that in this Bibliography some project titles have been shortened.

FISHERIES MANAGEMENT SCIENCE PROGRAMME

Programme Manager **Professor J. Beddington**
Marine Resource Assessment Group Ltd., London

1991

1991

R4682 Principles of management and conservation of coral reef fisheries

Peer Reviewed

ROBERTS, C.M. and POLUNIN, N. (1991) Are marine reserves effective in management of reef fisheries? *Reviews in Fish Biology and Fisheries*, 1: 65–91.

1992

1992

R4517 Development of computer aids for fish stock assessment and management policy

Other Publications

MRAG (1992) Catch and Effort Data Analysis, The CEDA Package version 2 User Manual. Marine Resources Assessment Group Ltd., London, UK.

MRAG (1992) Length Frequency Distribution Analysis, The LFDA Package version 4 User Manual. Marine Resources Assessment Group Ltd., London, UK.

R4682 Principles of management and conservation of coral reef fisheries

Peer Reviewed

POLUNIN, N.V.C and KLUMPP, D.W. (1992) A trophodynamic model of fish production on a windward reef tract. pp. 213–233. In: *Plant-Animal Interactions in the Marine Benthos*. Hawkins, D.J., Hawkins, S.J. and Price, J.H. (Eds.). Systematics Association Special Vol. 46. Clarendon Press, Oxford, UK.

ROBERTS, C.M. and POLUNIN, N.V.C. (1992) Effects of marine reserve protection on northern Red Sea fish populations. pp. 969–977. In: *Proceedings of the Seventh International Coral Reef Symposium, 23–26 June 1992, Guam*. Vol. 2. University of Guam Marine Laboratory, Mangilao, Guam.

R4691 Effects of parasitism on reservoir fisheries in South Asia

Other Publications

DES CLERS, S., SOMMERVILLE, C. and WOOTTEN, R. (1992) Effects of Parasitism on Reservoir Fisheries in South Asia, Final Report. Institute of Aquaculture, University of Stirling, UK.

R4776 Shrimp management

Other Publications

GEORGE, K., CANNON, J. and KIRKWOOD, G. (1992) Tropical shrimp production and market prices – A demand analysis. September. Internal Report. Marine Resources Assessment Group Ltd., London, UK. 77 pp.

1993

1993

R4775 Control of foreign fishing

Other Publications

MRAG (1993) Decision modelling and the optimisation of benefits to coastal state developing countries from the control of foreign fisheries. Control of Foreign Fisheries Research Report. Marine Resources Assessment Group Ltd., London, UK. 30 pp.

R4778 Programme development

Peer Reviewed

ROSENBERG, A.A., FOGARTY, M.J., SISSEWINE, M.P., BEDDINGTON, J.R. and SHEPHERD, J.G. (1993) Achieving sustainable use of renewable resources. *Science*, **262**: 828–829.

R5024 Multispecies response of reef fisheries to exploitation

Peer Reviewed

POLUNIN, N.V.C. and ROBERTS, C.M. (1993) Greater biomass and value of target coral-reef fishes in two small Caribbean marine reserves. *Marine Ecology Progress Series*, **100**: 167–176.

ROBERTS, C.M. and POLUNIN, N.V.C. (1993) Marine reserves: simple solutions to managing complex fisheries? *Ambio*, **22** (6): 363–368.

R5048 Optimisation of reef fisheries

Other Publications

MRAG (1993) Optimisation of reef fisheries. Report. Marine Resources Assessment Group Ltd., London, UK. 123 pp.

R5484 Management of multispecies tropical fisheries

Peer Reviewed

MEES, C.C. (1993) Population biology and stock assessment of *Pristipomoides filamentosus* on the Mahé Plateau, Seychelles. *Journal of Fish Biology*, **43**: 695–708.

1994

1994

R4283 Guidelines for harvesting species of different lifespans

Peer Reviewed

BEDDINGTON, J.R. and BASON, M. (1994) The limits to the exploitation of the sea. *Philosophical Transactions of the Royal Society B*, **343**: 87–92.

KIRKWOOD, G., BEDDINGTON, J.R. and ROUSSOW, J. (1994) Harvesting species of different lifespans. pp.199–227. In: *British Ecological Society Symposium on Large-Scale Ecology and Conservation Biology*. Edwards, P.J. May, R. and Webb, N.R. (Eds.). Blackwell Science, Oxford, UK.

R4683 Impact of species changes in African lakes

Peer Reviewed

PITCHER, T.J. and BUNDY, A. (1994) Species introduction in the African Lakes: assessment, uncertainties and strategies for fishery management. pp. 545–570. In: *Management Strategies for Exploited Fish Populations*. Kruse, G., Eggers, D.M., Marasco, R.J., Pautzke, C. and Quinn, T.J. (Eds.). Alaska Sea Grant College Program 93-02. Fairbanks, Alaska, USA. 825 pp.

R5023 Potential yield of small reservoir fisheries in South East Asia

Other Publications

LORENZEN, K. (1994) Dynamics and management of Asia culture-based reservoir fisheries. *Aquaculture News*, **18**: 20.

R5048 Optimisation of reef fisheries

Peer Reviewed

WATSON, M. and ORMOND, R. (1994) Effect of an artisanal fishery on the fish and urchin populations of a Kenyan coral reef. *Marine Ecology Progress Series*, **109**: 115–129.

R5484 Management of multispecies tropical fisheries

Other Publications

MRAG (1994) The Tongan deep reef slope fishery – An analysis of data from 1987–91 fishery. Technical Report to Government of Tonga, Ministry of Fisheries for the ODA FMSP Management of Multispecies Tropical Fisheries project. Marine Resources Assessment Group Ltd., London, UK.

R5953 Fisheries dynamics of modified floodplains in southern Asia

Peer Reviewed

HOGGARTH, D.D. (1994) Management strategies and their sensitivity to parameter uncertainties in a model of artisanal river fisheries. International Council for the Exploration of the Seas (ICES) Consultative Meeting, 1994 Session T, No. 30.

HOGGARTH, D.D. and UTOMO, A.D. (1994) The fisheries ecology of the Lubuk Lampam river floodplain in South Sumatra, Indonesia. *Fisheries Research*, **20**: 191–213.

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R4683 Impact of species changes in African lakes

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R4777 Analysis of fish aggregating devices

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R5049 Control of foreign fisheries – adaptive research

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R5484 Management of multispecies tropical marine fisheries

Peer Reviewed

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R5485 River and floodplain fisheries

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R4778 Programme development*Peer Reviewed*

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R5050 Computer aids in fisheries management – adaptive research

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R5484 Management of multispecies tropical fisheries

Other Publications

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LIST OF PROJECTS

Contact: Professor J. Beddington
Marine Resources Assessment Group Ltd.
47 Prince's Gardens
London, SW7 2QA, UK

j.beddington@ic.ac.uk

- R4283 Guidelines for harvesting species of different lifespans
- R4517 Development of computer aids for fish stock assessment and management policy
- R4682 Principles of management and conservation of coral reef fisheries
- R4683 Impact of species changes in African lakes
- R4691 Effects of parasitism on reservoir fisheries in South Asia
- R4775 Control of foreign fishing
- R4776 Shrimp management
- R4777 Analysis of fish aggregating devices
- R4778 Programme development
- R5023 Potential yield of small reservoir fisheries in South East Asia
- R5024 Multispecies response of reef fisheries to exploitation
- R5048 Optimisation of reef fisheries
- R5049 Control of foreign fisheries
- R5050 Computer aids in fisheries management – adaptive research
- R5484 Management of multispecies tropical fisheries
- R5485 River and floodplain fisheries
- R5953 Fisheries dynamics of modified floodplains in southern Asia
- R5958 Culture fisheries assessment methodology
- R6267 Enhancement of a lagoon prawn fishery at Rekawa, Sri Lanka
- R6338 Reservoir fisheries management in Savannakhet Province, Laos PDR
- R6436 Performance of customary marine tenure (CMT) in the management of community fishery resources in Melanesia
- R6437 Management strategies for new or lightly exploited fisheries in developing countries
- R6465 Growth parameter estimation and the effect of fishing on size composition and growth of snappers and groupers implications for management
- R6494 Evaluation of floodplain enhancement
- R7041 Software for estimating potential yield under uncertainty
- R7042 Information systems for co-management of artisanal fisheries
- R7043 Selection criteria and co-management guidelines for harvest reserves in tropical river fisheries
- R7334 Management of conflict in tropical fisheries
- R7335 Adaptive learning approaches to fisheries management
- R7336 Sustainable livelihoods from fluctuating fisheries resources
- R7917 Self recruiting species in aquaculture - their role in rural livelihoods
- R7947 Integrated fisheries management using Bayesian multi-criterion decision making

- R8118 Understanding livelihoods dependant on inland fisheries in Bangladesh and Southeast Asia.
- R8196 Understanding Fisheries Associated Livelihoods and the Constraints to their Development in Kenya and Tanzania.
- R8210 The use of sluice gates for stock enhancement and diversification of livelihoods
- R8249 Livelihood assets required for an East Africa FADs Programme.
- R8285 Fisheries data collection and sharing mechanisms for (co-) management.
- R8292 Uptake of adaptive learning approaches for enhancement fisheries.
- R8294 Enabling better management of fisheries conflicts
- R8331 Promoting Livelihood Benefits from Fish Aggregation Devices
- R8360 Synthesis and uptake promotion of FMSP stock assessment tools and guidelines
- R8397 Uptake of Participatory Fisheries Stock Assessment (PFSA) Tool Kit