

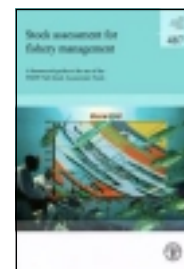
Fisheries stock assessment and management guides

New guides developed by FMSP Project R8468 available for Free download

Why these guides?

Most of the world's fisheries are now fully or over-exploited, with little capacity for increased production. However, there remain millions of people who rely on fisheries for their livelihoods, and who would be drastically impacted if their fish stocks collapsed. There is an urgent need for better fisheries management, in order to ensure that fisheries are sustainable, and to safeguard the livelihoods of those who depend on them.

The DFID-funded Fisheries Management Science Programme (FMSP) has developed a number of stock assessment tools and guidelines that can help to ensure sustainable fisheries management (see box below). They are appropriate for a range of different situations, including data-limited and small-scale fisheries. FMSP Project R8360 last year developed a summary guide about the different tools, which is now being published as **FAO Fisheries Technical Paper 487** (see right). This year, Project R8468 has reduced this material into a shorter two-part set that attempts to explain in simpler terms *how* and *where* stock assessment fits into the management process, and how managers and scientists can choose between the different tools that are available to them.



What are the new guides?

The two new guides outline the complementary roles of fisheries managers and scientists in the management planning, and stock assessment process. The guides were developed and tested by a team from India, the United Kingdom and the Caribbean. Although the subject is technical, the guides have been designed to be easy to read and understand.

I. How to manage a fishery – A simple guide to writing a fishery management plan

This guide is aimed principally at fishery managers. It goes step by step through a process of developing a fishery management plan. This includes setting the goals and objectives for your fishery, designing management measures to achieve those goals, and monitoring the fishery to provide necessary feedback and ensure success. It stresses the need for fishery managers and scientists to work together and the need for good scientific information to achieve sustainable fisheries and livelihoods. Examples are given of different summary management plans for a range of different biological, social and economic objectives.



II. A guide to fisheries stock assessment using the FMSP tools

This guide is aimed principally at stock assessment personnel, and shows where and how stock assessment information is needed for management, and how scientists should provide advice to managers. It emphasises the need to be able to predict the impact of different management alternatives, through using stock assessment tools. It provides illustrations of the use of different FMSP stock assessment tools (see below), and guides how and when these might be used in different situations. The latest FMSP stock assessment tools have significant advantages over some alternative products, allowing robust assessments, and incorporation of uncertainty and precaution, as required by the FAO Code of Conduct for Responsible Fisheries.



Where are these guides available?

The two new guides are available on the project R8468 page of the FMSP website – www.fmsp.org.uk. The FMSP software packages referred to in the guides (see below) are also available to download, free of charge, from the website. The detailed technical guide – FAO Fisheries Technical Paper 487 – will be available from FAO at http://www.fao.org/fi/eims_search/publications_form.asp.

What are the FMSP Stock Assessment Tools?

Software: (including help files and tutorials in download files)

- **CEDA** - Catch Effort Data Analysis: uses non-equilibrium methods to provide estimates of stock sizes, MSY reference points, catchability and other parameters;
- **LFDA** – Length Frequency Distribution Analysis: estimates growth parameters and total mortality;
- **Yield** software: estimates yield and biomass-based indicators and reference points, allowing for uncertainty in parameter inputs
- **ParFish** – Participatory Fisheries Stock Assessment: fits production model to standard fisheries and/or other data, using a Bayesian approach to integrate uncertainties.

Guidelines: (see FAO Fisheries Technical Paper 487 for further details)

- Costs and benefits of age and length based assessment methods
- Multi-species fisheries management
- Bayesian stock assessments for fisheries with limited data
- Estimating yield and stock status using life history parameters
- Empirical stock assessment approaches

The R8468 guides were written by a team from MRAG Ltd, Scales Consulting Ltd, the Field Studies Council (UK) and the Centre for Environmental Education (India), in collaboration with partners in West Bengal, Orissa and Andhra Pradesh (India), and the Caribbean.

For more information on FMSP projects, visit:
www.fmsp.org.uk

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