

“POORFISH”

Improving the scientific advice relating to data-poor fisheries

In fisheries management, the reliability of scientific advice is highly dependent on the quantity and quality of data that are available for stock assessment. In many areas these data are of poor quality and managers may only have indications about the status of the stocks to base their decisions on. Poor data could also mean that the options for practical management are restricted. Nevertheless, management must be operational in order to secure sustainable fisheries. To improve the quality of scientific advice relating to data-poor fisheries, further research is thus required.

There are basically at least three types of data poor situations:

- artisanal/local fisheries with usually several target species of otherwise mixed fisheries, where data collection is sparse (many coastal fisheries in Mediterranean and northern Baltic areas);
- industrial, but recently developed fisheries, where insufficient time series of information is available to develop reasonable assessments (many deep sea fisheries belong to this group); and
- industrial, well developed fisheries, where the quality of data is getting worse, due to e.g. misreporting and discarding.

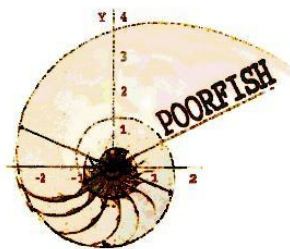
management and advice model (PAMAM). The strength of such a PAMAM is that it allows probabilistic advice, and thus enables the evaluation of management and assessment uncertainties. It also allows additional information to be incorporated, as fisheries develop and become less data poor.

POORFISH aims to improve the structure and reliability of this PAMAM model. It is continuing the work carried out within the EU-funded projects EFIMAS (FF-ALL-ADVICE-01) and COMMIT (FF-ALL-ADVICE-04), which have developed and used a simulation framework (FLR) to evaluate candidate management strategies before implementation. As a part of this, it will add mechanisms that will enable the framework to collect information from alternative scientific sources (meta-analysis) and stakeholders (e.g. fishers, assessment scientists and managers). This way, POORFISH will focus on those management measures that are likely to be effective given the practices and understanding of the stakeholders.

The PAMAM model will make it possible to examine the performance of alternative assessment and management approaches, compared to the current approach used. As the

The **POORFISH** project is focusing on each of these types and is undertaking a variety of case studies exemplifying data-poor fisheries around Europe, plus two off the coast of West Africa. For each of these cases, POORFISH is reviewing the assessment and management approaches applied, and obtaining expert opinions from actors within the case study fisheries, identifying key problems and issues.

This way, POORFISH is gathering information for utilisation within a **probabilistic assessment,**



Project acronym:

POORFISH

Full title of Project:

Probabilistic assessment, management and advice model for fishery management in the case of poor data availability.

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model outcomes are information dependent, i.e. dependent on the expert knowledge and published information available in addition to existing data sets, it should be noted that the information available is likely to define the assessment approach undertaken. But the quality of the data will also define the accuracy and precision of assessment outputs, which will have a knock-on effect to management, as it will define the level of precaution required.

In the last phase of the project, the cross-case study findings will be synthesized, operational management tools identified, the mutual dependencies of management and success will be evaluated and the benefits and failings of the approach within the case studies will be identified. As a result, **guidelines for assessment and management in data-poor fisheries will be developed.**

POORFISH will address issues relating to the problems in the International Council for the Exploration of the Sea (ICES) and the Scientific, Technical and Economic Committee for Fisheries (STECF) to give advice on poorly known fish stocks. More broadly, the project should contribute to the improvement of fisheries management all over the world. The tools and methodologies that are being developed will allow

management strategies to be formulated that ensure the sustainability of marine ecosystems at the highest level and provide greater security to fishers and fishing companies, enabling them to make the most appropriate investment or disinvestment decision. This, in turn, will allow greater stability in communities dependent upon fisheries and contribute to reducing their vulnerability.

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