



## **Baltic Fisheries Research workshop: 19 - 20 April 2007 – Vilnius (Lithuania)**

### **CONCLUSIONS OF THE REFLECTIONS ON FUTURE RESEARCH NEEDS**

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#### **Introduction**

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This document presents a summary of the comments and answers from participants and panellists to the three questions (see below) they were asked to reflect upon during the course of the PROFET Policy workshop on fisheries research needs in the Baltic held on the 19/20 April in Vilnius, Lithuania.

It is important to remember that this document is not part of a scientific work but should be considered as an attempt to collect the main message and opinions from stakeholders in order to create a platform for discussion and to fuel the reflection on the priorities for fisheries research in the Baltic.

It provides leads to stakeholders involved in Baltic fisheries (fishermen, managers, researchers, NGO's) on where research should go in order to help Baltic fisheries move towards sustainability and to help devise an ecosystem approach to fisheries management.

Answers have been aggregated by themes and please note that only answers that specifically addressed the three questions raised have been considered for these conclusions.

For the readers' information, references have been made to existing EU funded research project whenever possible. More information on these research projects can be found in the Technical Leaflets compilation created by the PROFET Policy project that was distributed at the Vilnius workshop or on the respective web pages of these projects. These Technical Leaflets are also available online on the PROFET Policy website ([www.profetpolicy.info](http://www.profetpolicy.info)).

<b>How well does science address the fisheries problems (incl. ecological and socio-economic) in the Baltic Sea area?</b>
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Natural/physical science in the Baltic appears to be fairly well researched, but there is a feeling that it is at the expense of social sciences. Human dimension of fisheries should be taken more into consideration, as fish has been too much the focus over the past years.

Within natural physical science, validity of stock assessments are questioned, but this is to be linked with the validity of the data collected.

Generally speaking, there is a strong call to integrate different dimensions of sciences (environmental, social, political, economics...) into scientific advice to management, i.e. a call for more multidisciplinary advice to management.

The applicability and effectiveness of research as well as the translation of its result in a useful and understandable manner is questioned by some stakeholders, while on the other hand others highlight lack of political will as the main obstacle in tackling the problems that are otherwise well known and documented.

The proposal for increased dialogue between scientists, fishermen, local communities and policy makers is in the light of these comments of utmost importance, and the Baltic Sea RAC can be considered as a step in the right direction. The idea of cooperative research projects integrating fishing communities and scientists might be another way to help foster mutual trust and to therefore address the complaint that science does not belong only to scientists.

**What are the gaps in science (fundamental & applied) that hinder provision of better management advice to ensure sustainable fisheries in the Baltic Sea area?**

### **Natural/Physical Sciences**

There is a lack of studies on species interactions: interactions between fish species themselves, between fish and their food organisms, trophic interactions, from invertebrates to marine mammals. Also while main commercial species are well researched, there is a need for increasing knowledge on key components of the ecosystem (non commercially viable fish stocks, plankton communities,...) as well as a specific focus on coastal environment.

*(see FP5 – BECAUSE project with a specific case study in the Baltic)*

### **Socio-economic aspects**

Socio-economic aspects of Baltic fisheries seem to be a major gap within the current state of Baltic Science. More specifically, the following areas of socio-economic research need to be further developed:

- Socio-economic aspects of fisheries and socio economic impact of fisheries management.
- human dimension of fisheries and interactions between human activities and the environment (*theme that will be specifically addressed by the upcoming FP7 call 1 – theme 6*)
- Development of models setting desirable targets for society but that are possible biologically.
- Research on cultural and social aspects of fisheries that take regional differences into consideration.
- Research on how to ensure optimum use of the resource (byproducts, bycatch) and how to maximize value of a limited resource.

*(see FP5/6 – EAEF, MFBUNRR projects)*

### **Data collection**

Validity, quality and accessibility of data seem to be a problem in the Baltic, there is a call for, more specifically:

- longer time series to provide information on cycle and trends
- valid data on landings and discards.

- socio economic data, and more specifically data on human dimension of fisheries and on the interactions between human activities and the environment.
- recreational fisheries data.

And in order to provide valid data there is a need for active information exchange between all parties involved.

*(The data collection regulation is currently being revised by the EC)*

<p><b>What research needs to be developed in order to move towards an ecosystem approach to fisheries management?</b></p>
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*While most of the research to be developed derives of course from the gaps identified in question 2, the move towards an ecosystem approach to fisheries management also requires developing new areas of research and looking beyond traditional ways of doing research. The main research needs identified by research participants have been classified into 7 main categories presented below:*

**1. Research for increasing effectiveness and usefulness of research**

Research on how to integrate science into advice.

Development of cooperative research (scientist on commercial vessels, fishermen involved in planning,...).

Research on faster management systems. Develop fast track research to scientific advice in order to enable timely decision making.

Research on how to foster better cooperation between sciences, management and fishermen.

Research linkages between science, pollution, ecosystems and society.

*(see FP6 CEVIS, SAFMAMS, EFIMAS projects)*

**2. Development of tools for the ecosystem approach**

Research on the use of indicators for the management of the ecosystem (that could serve as early warning systems of ecosystem changes) and on the interaction of these indicators *(see FP6 INDECO, IMAGE projects)*

Research on MPA's and sensitive areas and population *(see FP6 PROTECT project .)*

Evaluation of long term management systems (effort regulation, property rights, territorial rights) *(see FP6 EFIMAS, COMMIT, CEVIS projects)*

Develop scenarios, options, predictions for ecosystems evolutions.

Develop models to include multi species and environmental data.

Gather ecosystem information using standard acoustic surveys.

*(See first call of FP7 – theme 2 address ecosystem approach at regional level.)*

### **3. Development of integrated research**

Need for an integrated, multi disciplinary research approach (biology, economics, ecology, sociology,...).

Integration of other fields of science into fisheries management, look at other fields of science than those studied today.

Evaluation of the interaction between other natural systems and their scientific resources base

Environment and climatic impact on fisheries *(see FP6 RECLAIM project)*.

Research the impact of different fishing methods on the ecosystem and their economic performance with the help of commercial fishermen.

*(See first call of FP7 – theme 2 address ecosystem approach at regional level.)*

### **4. Develop knowledge to tackle IUU**

Research on the use of existing methods in other management systems to estimate misreporting, discards, bycatch,...

Need for better estimates of IUU in the Baltic but the methods need to be credible, open and transparent to all stakeholders.

### **5. Fill gaps in natural Natural/Physical science**

Research on non commercial species, trophic interactions and species migrations *(see BECAUSE project FP6)*.

Research on coastal development and its interaction with nursery sites *(See SPICOSA project on ICZM)*.

Research on linkages between aquaculture and fisheries.

Research on spawning grounds.

Develop coastal fisheries research.

### **6. Develop socio-economic research**

As one of the major gaps in science within the Baltic ecosystem, socio-economic research need of course to be developed in order to move towards the ecosystem

approach, in addition to the research needs identify above we can add more specifically:

- Identify and analyze potential threats to fisheries and fishing communities.
- Identify and analyze the linkages between fisheries, fishing communities and other sectors.
- Develop impact assessment for management strategies.

#### **7. Research on data use and collection**

Research alternative ways requiring less data.

Development of more sophisticated methods and tools for data collection.

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