

*GEF BALTIC SEA REGIONAL PROJECT
PHASE 1: 2003 – 2005*

BSRP/HELCOM COASTAL FISH MONITORING WORKSHOP

Report of the Third Meeting

**Helsinki, Finland,
6 – 8 February 2006**



BSRP Large Marine Ecosystem Component implemented by:
International Council for the Exploration of the Sea

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**MINUTES OF THE THIRD MEETING OF
BSRP/HELCOM COASTAL FISH MONITORING WORKSHOP
(HELCOM COASTAL FISH MONITORING WORKSHOP 3/2006)**

INTRODUCTION

0.1 With reference to the Second Coastal Fish Monitoring Workshop, the Eighth Meeting of HELCOM MONAS, and the Eighteenth Meeting of the Heads of Delegation to HELCOM, the Third BSRP/HELCOM Coastal Fish Monitoring Workshop was held in Helsinki, Finland, from 6 to 8 February 2006.

0.2 The Workshop was co-chaired by Mr. Magnus Appelberg, Sweden, and Mr. Henn Ojaveer, Estonia. Mr. Juha-Markku Leppänen, Professional Secretary, acted as the Secretary assisted by Ms. Minna Pyhälä and Ms. Satu Tofferi-Bishai.

0.3 The List of Participants is contained in the Annex to these Minutes.

Agenda Item 1 Opening of the Meeting

1.1 The Meeting was welcomed by the Chairmen as well as the HELCOM Executive Secretary, Ms. Anne Christine Brusendorff.

1.2 The Meeting took note of the appreciation expressed by HELCOM MONAS 8/2005 regarding the assessment of coastal fish in the Baltic Sea by this group as well as that HELCOM MONAS 8/2005 and HELCOM HOD 18/2005 approved its publication in the Baltic Sea Environment Proceedings. HELCOM MONAS also welcomed the plans of this group to develop fish indicators.

Agenda Item 2 Adoption of the Agenda

Documents: 2/1

2.1 The Meeting adopted the Agenda of the Workshop.

**Agenda Item 3 Evaluation of selected indicators and indicator performance for
Baltic coastal fish communities**

Documents: 3/1

3.1 Mr. Magnus Appelberg presented Swedish power analyses used for assessing the capacity of monitoring programmes to detect temporal changes using different sampling designs (document 3/1 and presentation 1). The studies revealed that some of the collected datasets failed to meet the required performance. The Meeting encouraged the Contracting Parties to use power analysis for evaluating the performance of all indicators.

3.2 In Denmark, statistical power analysis has been used to evaluate the usability of long-term time series for monitoring purposes, for example for hazardous substances according to ICES guidelines.

**Agenda Item 4 Revision of the HELCOM coastal fish monitoring and
assessment programme**

Documents: 4/1

4.1 The Meeting took note that HELCOM MONAS 8/2005 agreed on the principles of the HELCOM Monitoring Scheme for ecosystem assessment to link the monitoring to EcoOs, categories of parameters and the types of monitoring and that HELCOM MONAS was not

able to decide on any new monitoring obligations before the finalisation of the EU WFD monitoring.

4.2 The Meeting took note of the proposals of the ICES/BSRP Study Group on Baltic Fish and Fisheries Issues (SGBFFI) for methodological development of future thematic fish assessments which should target in details the following important sub-topics:

- analysis of comparability of different methods used in coastal fish monitoring
- perform sub-regional comparisons by similar time periods
- detailed analysis of impact of fisheries
- detailed analysis of impact of abiotic factors on monitoring results
- to present CPUE analysis by different mesh sizes applied and/or fish length groups
- development of species distribution maps.

4.3 The Meeting requested that Component 1 of the Baltic Sea Regional Project, dealing with the marine ecosystem, should consider including the aforementioned items in the second phase of the project e.g. as topics for a PhD study.

4.4 Mr. Kari Lehtonen presented an overview on biomarkers tested in the Baltic Sea (presentation 2). The Meeting took note that biological effect monitoring parameters are included in OSPAR environmental monitoring and that several fish biomarkers are currently monitored regularly in Sweden and Denmark. The Meeting was of the opinion that biomarkers fit well in the coastal fish monitoring and expressed the wish that in the future biomarker research could be financed via BONUS-169. The Meeting emphasised that a set of priority biomarkers would help to promote biological effect monitoring but was aware that the selection of biomarkers should be based on the environmental concerns at the monitoring site. The Meeting recommended that the coastal fish experts should actively participate in relevant research projects and workshops.

4.5 The Meeting took note that molecular biomarkers could be appropriate tools for early warning of environmental pressures but not usable to indicate pressure caused by e.g. over fishing and eutrophication, thus emphasising the need for various variables, ranging from molecular to community levels, to be included in environmental monitoring.

4.6 Mr. Jakob Strand introduced the draft background document on reproductive success in eelpout presented at ICES/WKIMON in January 2006 (document 4/1) as an example of a biological effects indicator.

4.7 The Meeting took note that several countries are using the HELCOM Guidelines, however with modifications. Therefore, the Meeting was of the opinion that the present Guidelines for Coastal Fish Monitoring, included in the COMBINE Manual, should be made more concise and updated based on the current scientific knowledge on sampling and analysis methods.

4.8 The Meeting welcomed the offer of Sweden to produce an outline for new Guidelines. Sweden will submit the outline to the experts listed in paragraph 5.6 by **6 March 2006** and the experts were requested to submit their amendments to Mr. Magnus Appelberg (magnus.appelberg@fiskeriverket.se) by **1 September 2006**.

4.9 The Meeting hoped that the joint HELCOM/OSPAR/ICES Steering Group on Quality Assurance of Biological Measurements (STGQAB) could provide assistance in the finalisation of the guidelines.

Agenda Item 5 Production of HELCOM Fish Indicator Fact Sheets

Documents: 5/1

5.1 The Meeting took note of the current status of the HELCOM system of Ecological Objectives, especially related to biodiversity (presentation 3).

5.2 The Meeting agreed that the following objectives reflecting good ecological status are still relevant for coastal fish species and communities:

- restore and maintain structure and functioning of coastal fish communities;
- restore and maintain species and genetic diversity of coastal fish, including commercial species;
- healthy fish causing no harm neither to marine biota nor human population and ensure healthy fish populations (all fish safe to eat).

5.3 The Meeting considered the list of indicators produced by the Second Coastal Fish Monitoring Workshop and decided that the following community and species level indicators (listed in priority order, community level obligatory, species level optional) should be tested using the available national data (COBRA and other appropriate data):

Community level

Total number of species and number of species by categories (marine and freshwater origin)
Total biomass
Species diversity based biomass (Shannon & Weaver index)
Slope of size spectrum
Average trophic level of catch based on biomass
Number of alien species

Species level

Species abundance
Species biomass
Mortality
Size and age structure of population (median size and age \pm 90 percentiles)
Growth rate
Slope of size spectrum.

5.4 The Meeting decided that data on at least one of the following species should be used for the draft indicators: perch, pikeperch, flounder, eelpout (viviparous blenny).

5.5 The Meeting welcomed the offer of Sweden to produce (by **6 March 2006**) examples for community level indicators which could be followed by the others.

5.6 These first draft indicators should be prepared by each country for a joint performance evaluation. The following experts volunteered to be responsible for the indicator production:

Mr. Jakob Strand, Denmark
Mr. Redik Eschbaum, Estonia
Mr. Kaj Ådjers, Finland
Mr. Atis Minde, Latvia
Mr. Rimantas Repecka, Lithuania
Mr. Wojciech Pelczarski, Poland
Ms. Natalia Krasovskaya, Russia
Ms. Kerstin Söderberg, Sweden.

5.7 The Meeting decided that the deadline for the submission of the first drafts to the Secretariat is **31 May 2006** and will be followed by an eMeeting for joint commenting and evaluation of the performance of the indicators.

5.8 The Meeting decided to select some of the draft indicators for a coastal fish indicator fact sheet to be published on the HELCOM web site (cf. http://www.helcom.fi/environment2/ifs/en_GB/cover/). The indicator fact sheet should be ready by **1 September 2006** for submission to HELCOM MONAS 9/2006 for approval.

5.9 The Meeting took note that the outline of HELCOM indicator facts sheets is available on the HELCOM website: (<http://sea.helcom.fi/Monas/IndicatorFactSheetProcedure.htm>).

5.10 The Meeting was of the opinion that setting targets or precautionary levels for coastal fish indicators is currently difficult due to the lack of suitable long-term datasets to

determine reference conditions. Instead “directions”, i.e. positive or negative trends could be a better solution. The Meeting noted that historical data on catches is available.

5.11 The Meeting admired the coastal fish indicators prepared for various counties in Sweden by the Swedish Board of Fisheries as presented by Ms. Kerstin Söderberg (document 5/1). The Meeting took note that the reference for comparing long-term changes has been set individually for each area. The indicators (in Swedish) are accessible via the internet: http://www.fiskeriverket.se/laboratorier/kust/verksamhet/databas/kust_karta.htm

Agenda Item 6 Harmonisation and improvement of common regional and Baltic wide assessments

Documents: None

6.1 The Meeting appreciated the information on the Russian coastal fish monitoring programme which has been going on since the 1960s in the Curonian and the Vistula Lagoons as presented by Ms. Natalia Krasovskaya (presentation 4) and emphasised the value of these long-term datasets for future thematic assessments.

6.2 The Meeting took note of the fish monitoring currently carried out in Denmark including also biological effect parameters, such as dead and malformed embryo and larvae of eelpout, as presented by Mr. Jakob Strand (presentation 5). Currently the fish communities are monitored every six year as required by the EU Habitats Directive while contaminants and biological effects are monitored annually. The Meeting recommended that the corresponding eelpout data from various countries should be pooled for a comprehensive assessment.

6.3 Ms. Dorota Wroblewska informed the Meeting that Poland will start the EU WFD monitoring on fish in the transitional waters of the Vistula and Szczecin Lagoons as well as Gulf of Gdansk and Puck Bay.

6.4 The Meeting took note of the invitation to the joint ICES/BSRP/HELCOM Workshop on Developing a Framework for an Integrated Assessment of the Baltic Sea and was of the opinion that the workshop provides a good opportunity to make the coastal fish monitoring activities of this expert group known to ICES, and recommended coastal fish monitoring experts to participate in this Workshop.

Agenda Item 7 Evaluation of sampling gears and procedures to fulfil the requirements of each specific region/habitat

Documents: None

7.1 The Meeting took note of the Estonian study on the selectivity of gillnets in sampling perch and roach as well as other studies on sampling methods (e.g. seining) used in Estonian coastal fish monitoring as presented by Mr. Redik Eschbaum. The Meeting recognised that data exist in most of the participating countries for gillnet selectivity studies. Seining surveys are also carried out under a LIFE project (presentation 6) in Estonia, Latvia and Lithuania to produce data for fish species inventories in Natura 2000 sites (more information: <http://www.bef.lv/?s=129&t=284>). The Meeting invited Mr. Markus Vetemaa to report on the fish results to the next meeting of this group.

7.2 The Meeting encouraged the Contracting Parties to submit also the seining data to the COBRA co-ordinator, Mr. Kaj Adjers (kaj.adjers@ls.aland.fi).

7.3 The Meeting was of the opinion that gillnet selectivity correction can be done to the whole time series using the data collected during the most recent years.

7.4 Mr. Wojciech Pelczarski informed that Poland has currently no regular coastal fish monitoring programme and that work is carried out on a project basis. The Meeting took note of a one year Polish project using gear similar to the Nordic gillnets which hopefully will give more comparable data.

Agenda Item 8 Harmonisation of data exchange to COBRA database by including data from the non-COBRA monitoring stations

Documents: None

8.1 The Meeting took note of the HELCOM database created for the Baltic Sea Protected Areas (<http://bspa.helcom.fi>) which allows the Contracting Parties to update information on existing sites and add new ones. The database contains also the lists of threatened and declining species (including fish) and biotopes/habitats. The database will be linked to HELCOM GIS (presentation 7) in order to provide spatial information on the pressures to, and components of, the marine environment. The Secretariat expressed its wish to include information on e.g. important coastal spawning sites and distribution of species in the HELCOM GIS.

8.2 The Meeting was of the opinion that the coastal fish monitoring metadatabase (Minutes of HELCOM Coastal Fish Monitoring Workshop 3/2006, Annex 4) could be linked to HELCOM GIS to provide information on the sampling sites and data collected. The Meeting requested the participants to submit amendments to the January 2005 database to the Secretariat by **15 March 2006**.

8.3 Sweden informed that she might not be able to host the present MS Access COBRA database in the future due to the construction of a new national database. Sweden, however, promised to continue to host COBRA at least for an additional year.

8.4 The Meeting was hesitant to make any decisions on the future joint coastal fish database due to the uncertainties concerning future national and international data exchange obligations and decided to postpone further discussions to the next meeting of this group. Meanwhile, the Meeting agreed to include additional datasets from some areas in Finland, Lithuania and Sweden into the present COBRA database.

8.5 The Meeting was concerned that including data from several non-COBRA monitoring stations would require a considerable amount of work since electronic data transfer is currently not possible. Therefore the Meeting postponed decisions to include further data sets in the COBRA database until its future is clear.

Agenda Item 9 Any other business

Documents: None

9.1 The Meeting decided to organise the Fourth BSRP/HELCOM Coastal Fish Monitoring Workshop from 12 to 14 February 2007 at the HELCOM Secretariat in Helsinki, Finland. The Terms of References for the Workshop were identified as:

- Development and performance of indicators;
- HELCOM indicator fact sheets;
- Future of coastal fish monitoring database;
- Updating monitoring guidelines;
- Experiences related to monitoring programmes under the EU Directives;
- Integrated assessments, especially relating biological effects to coastal fish;
- Overview of international research projects (financed, pending, planned) where coastal fish aspect is included and ways how to increase involvement (e.g., through database & Human Resources and Mobility Activity).

Agenda Item 10 Outcome of the Meeting

Documents: 10/1

10.1 The Meeting adopted the Outcome of the Third HELCOM/BSRP Workshop on coastal fish monitoring (Coastal Fish Monitoring Workshop 3/2006, 10/1). The Minutes of the Meeting will be finalised by the Secretariat in consultation with the Chairmen of the Meeting and made available in the HELCOM Document Publishing System (DPS) on the HELCOM website.

10.2 The slide presentations given at the Meeting will also be available in the DPS.

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