

# **PROPOSALS FOR IMPROVEMENT OF ACOUSTIC DATABASE OF THE BALTIC SEA SURVEYS**

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# Background

Implementation of acoustic data collection and processing by means of Sonar Data Echoview in the practice of the Baltic surveys raises the problem of the new Baltic acoustic database compilation.

The current trends in the acoustic surveys development and acoustic method integration into the methodology of bottom fish stocks assessment (*ICES WKSAD Report 2004; ICES WGFAST Report, 2003, 2004, Joint FTC-RMS Theme Sessions of ICES Symposium 1999, 2004; European research project CATEFA*) dictate the necessity of creation of the **multifunctional acoustic database of the Baltic surveys**

# OUR AIM

**Discuss the proposals for the database functional structure suitable both for archiving the Baltic survey data and conduction of a range of complex researches in relation to survey design and data analysis .**

# Database functional structure could be addressed towards :

- 1) Storage of the acoustic survey data,  
Storage of the acoustic data derived during of the bottom trawl surveys;
- 2) Inclusion of all parameters already included into the available databases BAD1 and BADII;
- 3) Correction of the acoustic survey results or repeated processing of the acoustic survey data since any step of data analysis , including echogram reconstruction and reintegration

- 4) Conduction of researches in compliance with the recommendations WGFAS<sup>T</sup>, WKSAD, as well as researches aimed to the future implementation of new approaches being developed by *ICES FTC* (e.g., multi-frequency methods of remote species identification, creation of the database of target strength measurement in situ, stimulation aimed at estimation of the survey results uncertainty, geostatistical methods of survey results analysis (*Theme Sessions of ICES Symposium 1999, 2004,2005; ICES FTC Report, 2004*) into the methodology of the Baltic surveys

**It is proposed to develop the multi-level acoustic database using the general formats of data storage and collection with Echoview:**

**Block of original data**

- Multi-frequency raw ping-by-ping data (ek5 files ) in binary format specified by Simrad ;
- EchoView Files (EV files) as virtual echograms generated from the raw data ek5 files and edited

**Block of output data**

- Comma Separated Output Files (csv files), presenting the results of integration of virtual echograms in compliance with selected variables of Output Spreadsheet.
- Excel format, representing the results of CVS files processing and analysis, including the summary tables of biomass estimates by fish species and parameters of **BADI and BADI**

**At the intermediate stage the database can be saved in CD with catalogue attached (for example database of CCAMLR surveys)**

**Original acoustic data**

residing on catalogued the Compact Discs held in secure storage in the Secretariat

Tables of link/reference

**Out put data and summary-type acoustic data**

held on Compact discs in secure storage as well as on the Secretariat's data servers

**The development of the up-to-day acoustic database probably must be done in the frames of a special international project.**

**Data sets of TS in situ measurements should be included in the Baltic acoustic database**

**The new database creation is reasonably to accompany with:**

- ❖ preparation of guidelines for acoustic data collection and processing by participants of BIAS
- ❖ holding of special workshops