



Document title	Update on data arrangement work for core indicators through BalticBOOST WP 2.2
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Agenda Item	4 – Follow up on core indicator work
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Background

The first meeting of the HELCOM expert network on hazardous substances ([EN-HZ 1-2016](#)), held 2-4 February 2016, welcomed the aim to develop an assessment system for hazardous substances similar to the system developed for eutrophication assessments in EUTRO-OPER for [dataview](#) and [national data check-up](#) (point 12).

Through the HELCOM BalticBOOST project work package 2.2 the ICES Secretariat have developed a data model for the assessment system. Implementing the assessment system will improve the transparency of data handling in carrying out the assessment and automate some of the necessary processing steps.

Action required

The Meeting is invited to

- take note of the development of data-arrangements for the core indicators and consider the proposed steps for checking the data used in the assessment database to be carried out by HELCOM EN-HZ, and
- finalize the table on species, matrices and basis to be used in the extraction and assessment scheme.

Update on data arrangements work for core indicators through BalticBOOST WP 2.2

As Lead Partner of HELCOM BalticBOOST WP 2.2 the ICES Secretariat has developed a data model for the hazardous substance assessment system in line with the EUTRO-OPER model (Figure 1). The aim of the assessment system is to develop a transparent workflow beginning when Contracting Parties report data into COMBINE and ending in the visualization of assessment results.

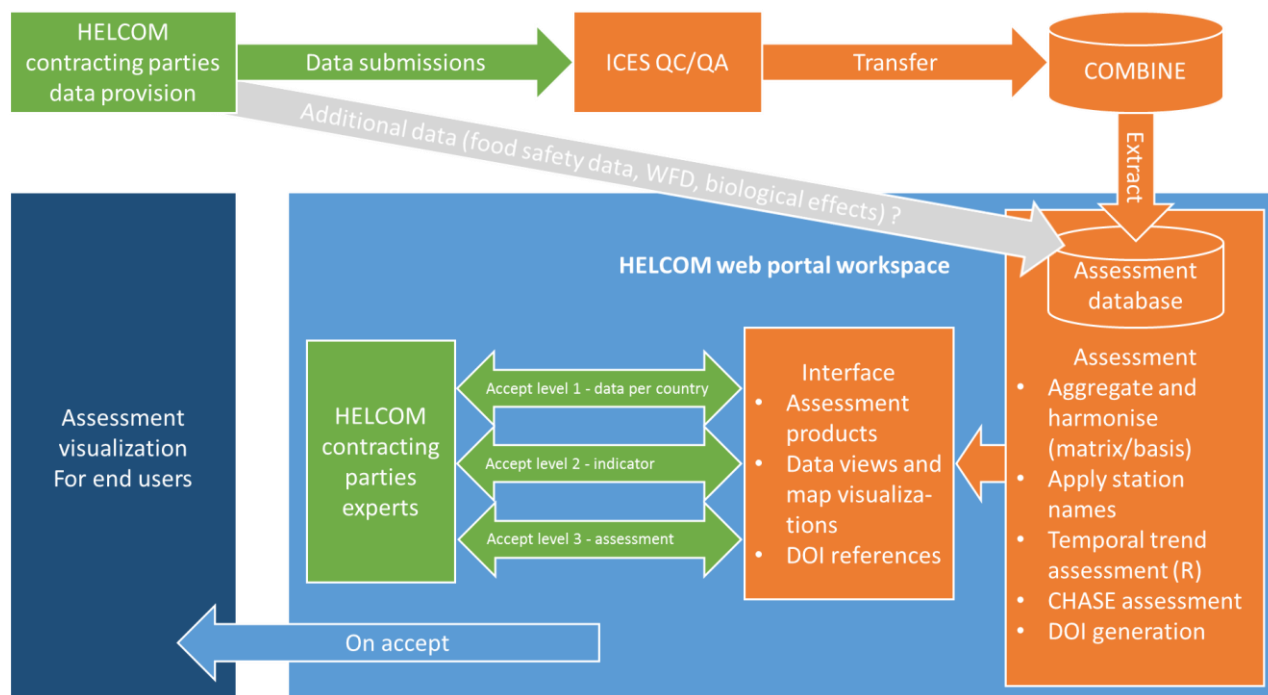


Figure 1. Data model for the HELCOM hazardous substance core indicators outlining the assessment system structure. Green boxes indicate actions to be carried out Contracting Parties of HELCOM and orange boxes indicate actions to be carried out by ICES Secretariat.

The HELCOM contracting parties experts indicated in green corresponds to the experts nominated as representatives in the HELCOM expert network on hazardous substances. In the operational assessment system the nominated experts will have the responsibility to ‘check’ the data, indicator evaluations and the hazardous substance assessments. Assigning the responsibility of specific checks to specific experts can be agreed nationally. The checks will be documented, and once completed the documented checks will be locked and stored together with the assessment outcome. This will form the documentation of any errors found and corrected in the data during the assessment process.

The assessment system will automate some of the assessment steps by implementing scripts on data extracted according to predefined formats. It is of fundamental importance to define the data extracts precisely and correctly for the system to function. The extraction from combine to the assessment database (Figure 1) is to serve the needs of the core indicators. The parameters to be extracted have been proposed (Table 1). The specifications of data to be extracted needs to be completed so that the development of the assessment system can be continued within the schedule of the BalticBOOST project.

Proposal of needed parameters, matrix and basis for comparison with GES (indicators) for each core indicator

The hazardous substance assessment system requires the extraction of data from the COMBINE database to be precisely defined to provide the data required for the core indicators. Table 1 was developed during the first meeting of the expert network on hazardous substances (EN-HZ 1-2016).

Issues still to be clarified have been highlighted in yellow by ICES Secretariat. Lead Country representatives are encouraged to check that the proposed parameters, matrix and basis correctly reflects the data to be extracted to evaluate the agreed GES boundaries.

Table 1. Overview table of the parameters, matrices and basis selected for extraction from the COMBINE database to evaluate the core indicators

NB: For sediment measurements lithium (LI), aluminium (AL), organic carbon content (CORG) and grain sizes should be included in addition to "main" parameters for normalisation

Indicator	Parameters (PARAM) / Parameter groups (PARGROUP) (see also http://vocab.ices.dk/)	Primary matrix / GES	Species	Matrix	Basis	Secondary matrix / GES	Species	Matrix	Basis	Comment
Metals	PARAM = CD, PB	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	LI & MU ('fillet') TL4 normalization?	W	Sediment		All		Water should be reconsidered as the chosen primary GES
			Molluscs (M edulis + M. baltica)	SB	D					
Metals	PARAM = HG	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	MU ('fillet') TL4 normalization?	W	Sediment		All		
			Molluscs (M edulis + M. baltica)	SB	W					
HBCDD	PARAM = HBCD, (HBCDA,HBCDB, HBCDG)	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	MU ('fillet') TL4 normalization?	W	Sediment?		All		Sediment to be considered for secondary GES
PBDE	PARAM = BD28, BD47, BD99, BD100, BD153, BD154	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	MU ('fillet') TL4 normalization?	W					Output individual concentrations and sum
PFOS	PARAM = PFOS	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	MU ('fillet') TL4 normalization?	W	Water		WT		
PCB and dioxins and furans	Dioxins and furans: PARGROUP = OC-DX Non-dioxin (PCB): PARGROUP = OC-CB	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	MU ('fillet') TL4 normalization?	W					
PAH	Primary GES: PARAM = BAP	Biota	Molluscs & Crustaceans (M. edulis, M. baltica & Saduria entomon)	SB, TM	W					
PAH	Secondary GES only: PARAM = FLU	-	-	-	-	Sediment Biota	Molluscs & Crustaceans (M. edulis, M. baltica & Saduria entomon)	All SB	D D/W ?	
PAH	Secondary GES only: PARAM = ANT	-	-	-	-	Sediment		All	D	
PAH	Effects: PARAM = PYR1OH	Biota	Herring & cod (open sea) Flounder & Perch (coastal)	BI	-					

TBT and imposex	PARAM = TBTIN, TBSN+	Sediment		All	D	Biota	Molluscs (M edulis + M. baltica)	SB	D																									
TBT and imposex	Imposex: PARAM = VDS, VDSI, INTS, INTSI, IMPF% Assisting parameters: PARAM = MBTIN, MBSN+, DBTIN, DBSN+, TBTIN, TBSN+, TPTIN, TPTSN+	Biota	Gastropods	All	D					To be clarified if parameters are to be from Gastropods or Sediment or both?																								
Fish Disease Index	PARAM's as used in present Fish Disease Index calculation: <table border="0"> <thead> <tr> <th>PARAM</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ACAN THO</td> <td>Acanthochondria sp.</td> </tr> <tr> <td>EPID PAP</td> <td>epidermal hyperplasia/papilloma</td> </tr> <tr> <td>FROT</td> <td>fin rot/erosion (acute/healing)</td> </tr> <tr> <td>HPIGM</td> <td>hyperpigmentation (stages 1-3 or affected number - specify in units)</td> </tr> <tr> <td>LEPE OPH</td> <td>Lepeophtheirus sp.</td> </tr> <tr> <td>LIVE NOD</td> <td>nodule/tumour</td> </tr> <tr> <td>LYMP CYS</td> <td>Lymphocystis</td> </tr> <tr> <td>SKEL DEF</td> <td>Skeletal deformity</td> </tr> <tr> <td>SKIN ULC</td> <td>Skin ulcer (acute/healing ulcers)</td> </tr> <tr> <td>STEP STO</td> <td>Stephanostomum sp</td> </tr> <tr> <td>XGIL LES</td> <td>X-cell gill lesions</td> </tr> </tbody> </table>	PARAM	Description	ACAN THO	Acanthochondria sp.	EPID PAP	epidermal hyperplasia/papilloma	FROT	fin rot/erosion (acute/healing)	HPIGM	hyperpigmentation (stages 1-3 or affected number - specify in units)	LEPE OPH	Lepeophtheirus sp.	LIVE NOD	nodule/tumour	LYMP CYS	Lymphocystis	SKEL DEF	Skeletal deformity	SKIN ULC	Skin ulcer (acute/healing ulcers)	STEP STO	Stephanostomum sp	XGIL LES	X-cell gill lesions	Biota	Fish	-	-					
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