



Baltic Marine Environment Protection Commission

Working Group on the State of the Environment and Nature
Conservation

STATE & CONSERVATION
10-2019

Hamina, Finland, 6-10 May 2019

Document title	EN-HZ request for support for a review of hazardous substances biological effects
Code	7J-9
Category	CMNT
Agenda Item	7-9 – Progress of relevant HELCOM expert groups and projects
Submission date	18.4.2019
Submitted by	EN-HZ
Reference	EN-HZ 10-2019 Outcomes paragraph 5.3, bullet point IX

Note that this document was submitted after the established deadline. It will be decided by the Meeting whether the document can be discussed or is postponed to the next meeting.

Background

At the EN-HZ 10-2019 meeting the topic of biological effects of hazardous substances was raised. The group discussed this topic during the development of the workplan associated with their Terms of Reference. The group considered this topic to be important as the development of such indicators and assessments provide a direct link between the pressures of hazardous substances and their impact on biota in the marine environment. Biological effects assessments are currently not broadly carried out, with a supplementary indicator assessment of [reproductive disorders in amphipod embryos](#), a spatially limited assessment related to [TBT and imposex](#) (see biota part), and the assessment of the White-tailed sea eagle (though via more indirect linkages of productivity and breeding success), being the only assessments.

The EN-HZ group discussed options for how to further develop biological effects and considered that a future workshop on the topic, potentially back-to-back with a future physical meeting of the EN-HZ group, could be relevant to initiate development work. To support such an approach the group considered that a review of current data and knowledge in the Baltic Sea region would be valuable, and the group proposed to prepare a document to State and Conservation enquiring regarding availability of national resources for an 'ICES special request' to WGBEC (the ICES Working Group on Biological Effects). Attached to this document is the proposal drafted by EN-HZ for such a request to ICES WGBEC, using the ICES special request format.

Information on the estimate cost for such a Special Request was requested from ICES, which provided information that costs of previous similar requests have ranged from 26-40,000 Euros.

Action requested

The Meeting is invited to:

- Consider if such a review would be valuable
- Consider if national resources would be available to support an ICES Special Request on the topic.

ICES Request Form

Request from	HELCOM EN-HZ
Committee making the request	HELCOM STATE and CONSERVATION (if approved and funded with national resources)
Contact within organisation	EN-HZ
Content contact person	Chairs of EN-HZ, HELCOM Secretariat
Request announced	May 2019 (TBC)
Request received	[completed by ICES]
Outcome of request required by client	Report
Request code (client)	
Request code (ICES)	[completed by ICES]
Request title	Potential for Biological effect indicators for the Baltic Sea
<p>HELCOM EN-HZ would like WGBEC to look into the evaluation of biological effects in the Baltic Sea area, i.e. are the currently developed EACs applicable to species and biological effects methods in the Baltic Sea area, and are there other biological effect methods in use in the Baltic Sea area that would fit into the WGBEC advice for OSPAR, e.g. <i>1.5.5.1 ICES Advice 2010, Book 1</i>.</p> <p>In addition to the OSPAR list, Eelpout and European Perch are particularly interesting to the HELCOM area, particularly if any</p> <ul style="list-style-type: none"> • Vitellogenin in blood, gonad size in Perch for reproduction and endocrine disruption, • visible fish disease, • blood chemistry (Hematocrit, hemoglobin, number of red blood cells, plasma Cl⁻, Na⁺, K⁺ and Ca²⁺) • Immunodeficiency (Lymphocyte, granulocyte, thrombocyte, number of white blood cells) • Liver functions (Liver somatic index, EROD, GT, GST, metallothionine) • Growth, energy and metabolism (scope for growth, condition index, liver size, lipid level, blood glucose, blood lactate) 	
Intended use of the request output	The request output will be used as a basis for revising the COMBINE monitoring program with inclusion of relevant biological effects, where it is cost-effective and gives a basis for evaluating the state of the HELCOM areas
Planning ICES	
Request (budget) accepted	[completed by ICES]
ICES contact person	[completed by ICES]
WG(s) involved	[completed by ICES]
Preparation timing	[completed by ICES]
Review group	[completed by ICES]
Advice drafting group	[completed by ICES]
ACOM Webex	[completed by ICES]

Release date	[completed by ICES]

Grey cells are to be filled in by ICES Secretariat.

Additional notes/background can be added as free text below.