Document title	Outcomes of the EN-HZ 7-2017 meeting.
Submission date	19.10.2017

Outcomes

1. The meeting was attended by representatives of Denmark, Estonia, Finland, Germany, Lithuania, and Sweden. Representatives from ICES and the HELCOM Secretariat were also present.
2. The Meeting was informed that the representative from Poland was unfortunately unable to join due to work responsibilities but that they were interested to review the documents and outcomes.

Agenda item 1

3. The Meeting adopted the agenda, noting one change, that no document was submitted for Agenda item 8 and that this item was to be opened for discussion later.

Agenda item 2

4. The Secretariat informed of new staff with specific relevance to the EN, Jannica Haldin (Professional Secretary) and Owen Rowe (Coordinator of HELCOM indicators).
5. The Secretariat expressed the hope that this meeting would also serve to inform the new staff on pertinent issues and welcomed and advice on direction or aspects of importance from the group.

Agenda item 3

6. A brief summary of issues relating to the work of the EN-HZ group was given by the Secretariat.
7. Germany highlighted that State and Conservation 6-2017 outcomes had proposed that the EN-HZ group carry out work on developing new Monitoring and Assessment Guidelines where they are currently lacking, as shown below:

2MA.28 The Meeting took note of the Lead and Co-Lead countries for specific HELCOM monitoring guidelines and links to existing HELCOM monitoring guidelines as included in document 2MA-2. The Meeting took note of the following updates (document 2MA-2-Rev.1):

- Germany will provide updated guidelines for contaminants for the next State & Conservation meeting, and it is planned to circulate the document to the HELCOM EN-HZ as well,
- the HELCOM EN-HZ is invited to develop monitoring guidelines for PFOS in biota and water and for HBCDD in biota and sediments

The Meeting noted that the first point has been addressed.

8. The Meeting noted that the second point has not been addressed, but the group has now been informed. It is proposed that this work should be discussed at the next meeting and a plan for the development of appropriate guidelines should be made.

Agenda item 4

Indicator deadlines

9. The meeting took note of the indicator deadlines as proposed by the Secretariat (Document 4-1).
10. The meeting discussed the proposed deadlines and will plan suitable timelines to meet the December 1st deadline for indicator evaluations to be complete.
11. The Meeting proposed discussion with ICES regarding when detailed data output could be accessed as a basis for this discussion (pending the delivery of a final extraction table by EN-HZ).

12. The Secretariat informed that ICES had earlier stated that the data for EN-HZ would still be undergoing database work and checking till the end of October.
13. The Chairs proposed that a workshop (potentially hosted at the Natural History Museum, Stockholm) in the second week of February could be a useful way to check data and develop indicator assessments.
14. The Meeting agreed that such a workshop would be valuable.
15. The Meeting requested that the Secretariat explore the opportunity to request the national checking process of indicator evaluations (proposed by Secretariat to take place between January 15 and February 23rd) be completed by the end of January 2018 for the EN-HZ indicators, to enable the above work to be carried out.
16. The Meeting took note of the information from the Secretariat that workshops (likely hosted at the Secretariat) had bene proposed to discuss the findings of the integrated assessments (CHASE). The proposed dates were March 21st or 28th and that confirmation would be made after approval at State and Conservation 7-2017.

Data reporting status

17. The Meeting discussed the status of current data reporting for indicators hosted by EN-HZ.
18. The Secretariat informed that once the extraction table had been completed then the Secretariat (with support of ICES) would update the document and submit a revised version to State and Conservation 7-2017.
19. Germany informed that the PO (pending originator in the HELCOM COMBINE database) tag assigned some data in this first version of the document had now been solved.
20. Denmark informed that no further data for 2016 would likely be added.
21. Sweden informed that due to problems with their national data hosting facilities no data was likely to be available for 2015 or 2016.

Indicator leads and update

22. The meeting discussed the plan for updating the indicators and indicator leads confirmed they intended to continue their work in updating the indicators.
23. The following indicators were designated to be followed up, as leads were not present to answer directly:
    - Metals – Poland (note: on reading of provisional meeting outcomes Poland confirmed they are ready to continue this work)
    - PAHs – a lead is required for this indicator, confirm position of Denmark (Germany will assist with metabolites)
    - TBT – Denmark
24. The PCB indicator was to be supported by Germany (other members of the group) if the current lead was unable to continue.

Agenda item 5

25. The Meeting took note of information from the Secretariat that alterations to certain HELCOM assessment areas had been carried out based on the agreement of State and Conservation 6-2017.
26. The Secretariat informed that this information was by way of updating the group and that any changes should be accounted for within the HELCOM COMBINE database and station dictionary.

Agenda item 6

27. The Meeting discussed the extraction table and proposed finalisation of it.
28. The Meeting discussed if parameters for normalization listed above the table should be included in the specific 'supporting parameters' column within the table and requested the Secretariat to update the table.

29. The Meeting discussed the supporting parameters lithium and aluminium and took note of the fact that lithium was the compound of choice for normalisation in some countries. The Meeting agreed that this –should become a topic for discussion at a future meeting of EN-HZ.
30. The Meeting noted that this should be a discussion for the future and that care should be taken to ensure the Monitoring and Assessment Guidelines match the requirements and that in doing so it should not result in the exclusion of good quality data from any Contracting Party.
31. The Meeting discussed the use of surface sediments and concluded that this was important to not bias the results with lower sediment layers in which high historic contaminant loads may occur. However, selection of surface sediments should be done using the data included in the HELCOM COMBINE database (upper layer samples being the 0-X cm depth layer added by Contracting Parties) so as not to exclude high quality data from any country.
32. Estonia commented that the study reservation defined for Cd should not prevent the use of data. The Meeting discussed this issue and Denmark informed that they will also discuss options (lifting of study reservation – use by other countries and leaving unfilled in Danish waters) with the relevant Ministry, and inform of the outcome shortly.
33. ICES informed that data extraction is done for all data of relevance and the listed supporting parameters will then be included for all samples where they are available.
34. The Meeting discussed the normalisation of HBCDD, PBDE and PCBs and dioxins with a 5% lipid content. The Meeting agreed this was a valid approach and should be carried out. The Meeting discussed the practicalities of doing so such as the Lithuanian point that it may be required to use a suitable proxy value so as not to excluded data from any Contracting party and the Danish comment that data availability may also be an issue as such normalisation vales were species specific.
35. The meeting discussed the preferred matrix for the organic contaminant indicators “HBCDD”, “PBDEs” and “PCBs, dioxins and furans” and agreed to include also results for whole fish (WF), and muscle with skin (MU&EP).
36. The Meeting discussed PFOS data and agreed that all data should be taken from the HELCOM COMBINE database and that while unfiltered samples were the primary choice options to display two maps (unfiltered and filtered) or exclusion of unsuitable data at a later stage could be considered.
37. The Meeting agreed that PAH metabolite information will be included in the extraction table so that data is available pending the above described information that Denmark will clarify the current study reservation.
38. An updated extraction table to reflect the discussion and agreements is included at the end of this document (Annex 2).

Agenda item 7

39. The Meeting discussed data reporting issues listed from the previous indicator update process. The Meeting was informed of the following status: Estonia – fixed, Finland – will seek further clarification, Germany – data had been re-submitted to solve issues and TBT issues are being addressed currently, Lithuania – many issues have been addressed and some final issues being addressed though LOQ discussion may be needed when MIME script is run, Poland – no representative present, Sweden – not able to solve due to problems with national data host.
40. Discussion was held regarding the use of all data available in the HELCOM COMBINE database and the consequences of excluding data not flagged within the database as COMB (illustrated by an additional document submitted by the Secretariat).
41. The Meeting agreed that all data should be taken and that it should be made clear at the national checking of indicator evaluations stage that this has been done. This will allow Contracting Parties to approve of the process or request changes.
42. The Secretariat will inform State and Conservation 7-2017 of the proposed process and inform of the issue relating to data availability relevance and flagging COMB in the HELCOM COMBINE database or

not. It was seen as important that this issue should be clarified, and data flagged COMB if necessary, to ensure all relevant data was easily available.

43. ICES agreed that when extracting the data the flagging of COMB or not would be summarised also so that this information can be presented to relevant Contracting Parties to illustrate the issue at the national checking of indicator evaluation stage.

Agenda item 8

44. The Meeting discussed the appropriate handling of initial data (less than 3 years of consecutive data at a station) in the indicator evaluations, noting that a process to include such data was used only in the integrated (CHASE) assessment stage in the first version of the State of the Baltic Sea report.
45. The Meeting was of the opinion that using more data where viable and not excluding good quality data should be considered as important.
46. The Meeting was of the opinion that initial data was generally carried out with the same high methodological standards and was previously shown to be of similar quality and values to full data (3 or more consecutive years of data at a station). It was thus seen as not a risk to include such data as the confidence in the data was high.
47. The Meeting emphasised the benefit of having higher visibility and better incorporation of the initial data into the indicator reports.
48. Lithuania expressed the opinion that it was important to include initial data.
49. Germany expressed the opinion that more data was beneficial, especially if data is of good quality, and any uncertainty could be reflected in a reduced confidence level of the indicator evaluation, if needed.
50. Germany proposed that one solution could be to use a lighter shade of red/green to indicate the inclusion of initial data. The Meeting noted that this solution was somewhat similar to the approach used for the assignment of confidence and the use of filled or open circles in the first version of the reports.
51. Estonia expressed the opinion that this was important as consecutive data of three years was not always available from their monitoring design and not including initial data could result in exclusion of good quality data from their waters.
52. Sweden supported the proposal to use initial data.
53. The Chairs proposed that EN-HZ members submitted proposals to the Secretariat (Owen.Rowe@helcom.fi), **by the end of Friday 20th October**, with proposals on how to incorporate initial data most appropriately into the indicator evaluations. The Secretariat would then compile and distribute the collated proposals for final agreement by EN-HZ.

Agenda item 9

54. The Meeting took note of the information from the Secretariat that there are ongoing discussions between the HELCOM Secretariat and ICES regarding the running of the MIME and CHASE scripts, both for the update process and in the future.
55. The Meeting briefly discussed the extraction of relevant data from the HELCOM COMBINE database at both level 3 and level 4 assessment units with the view that this could avoid manual aggregation of data from level 4 to level 3 (with possible mismatches between areas). The Meeting agreed that this approach could be tested.

Agenda item 10

56. The Meeting took note of the planned update procedure for the State of the Baltic Sea report as documented in a provisional document under discussion at State and Conservation 7-2017.
57. The Meeting took note of the invitation to comment on the State of the Baltic Sea report supplementary report on hazardous substances and the deadline (**21 November 2017**) for consideration of their comments by the HOLAS II team.

Agenda item 11

58. The Secretariat informed that meeting that a document was being prepared to present to the HELCOM Ministerial Meeting, describing action areas for hazardous substances and the implementation of national and regional action plans. The Secretariat informed that this document would shortly be sent to the EN-HZ group so that they could comment on the content and suggest further input. During finalisation of the meeting outcomes this document has been sent to the group. Please send any comments on this document to Ulla Li Zweifel **by 30 October** (ullali.zweifel@helcom.fi).
59. The Meeting took note of the need for future discussion on the use of supporting parameter Al and Li.
60. During preparation of the meeting outcomes the supporting parameters were identified as an item that should be discussed further at a future meeting of EN-HZ. The purpose of the discussion should be to define the specific parameters required for each of the substances (and relevant matrix, e.g. sediments) and ensure that this information matches the Monitoring and Assessment Guidelines. This was to ensure all relevant supporting parameters were included in national monitoring and data reporting.
61. The Meeting took note of the information by Germany that State and Conservation 6-2017 outcomes had proposed that the EN-HZ group carry out work on developing new Monitoring and Assessment Guidelines where they are currently lacking:

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- Germany will provide updated guidelines for contaminants for the next State & Conservation meeting, and it is planned to circulate the document to the HELCOM EN-HZ as well,
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The Meeting noted that the first point has been addressed.

62. The Meeting noted that the second point has not been addressed, but the group has now been informed. It is proposed that this work should be discussed at the next meeting and a plan for the development of appropriate guidelines should be made.

Annex 1: List of Participants

Representing	Name	E-mail
Sweden	*Sara Danielsson	sara.danielsson@nrm.se
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*Co-Chairs

Annex 2: Final extraction table:

Table 1. Overview table of the parameters, matrices and basis selected for extraction from the COMBINE database to evaluate the core indicators.
NOTE: supporting sediment parameter requirement for each specific substance will be clarified when the table is updated at a future EN-HZ meeting (see EN-HZ 7-2017 Outcomes point 60).

Indicator, threshold value and parameter			**Primary matrix or primary threshold**					**Secondary matrix or secondary threshold**				
Indicator	**Threshold value** (previously GES boundary)	**Parameters (PARAM) / Parameter groups (PARGROUP)** (see also http://vocab.ices.dk/)	**Primary matrix / GES**	**Species**	**Matrix**	**Basis**	***Supporting parameters and information***	***Secondary matrix / GES***	***Species***	***Matrix***	***Basis***	***Supporting parameters and information***

Metals (Cd)[1]	EQS water 0.2 µg/l **Secondary threshold** OSPAR BAC 960 µg/kg dw mussels. OSPAR proxy BAC 26 µg/kg ww fish liver. QS from EQS dossier 2.3 mg/kg sediment.	PARAM = CD	Water		WT (filtered, unfiltered if the concentration is below the EQS)		Surface water layer (≤ 5.5 m)	Biota Sediment (surface, ICES 'upper sediment layer - 0-X cm')	Molluscs (M edulis + M. baltica) Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal)	SB MU ('fillet') & LI	W W D	Dry weight Al Li CORG Grain size

[1] Denmark and Estonia have a study reservation on the secondary threshold OSPAR BAC 26 µg/kg ww fish liver.

Metals (Pb)	EQS water 1.3 µg/l **Secondary threshold** OSPAR BAC 1300 µg/kg dw mussels OSPAR proxy BAC 26 µg/kg ww fish liver QS from EQS dossier 120 mg/kg sediment	PARAM = PB	Water		WT (filtered, unfiltered if the concentration is below the EQS)		Surface water layer (≤ 5.5 m)	Biota Sediment (surface, ICES 'upper sediment layer - 0-X cm')	Herring & cod (open sea) Flounder, sole, eelpout & Perch(coastal) Molluscs (M edulis + M. baltica)	LI SB	W W D	Dry weight Dry weight Al Li CORG Grain size
Metals (Hg)	EQS biota secondary poisoning: 20 µg/kg ww	PARAM = HG	Biota	Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal) Molluscs (M edulis + M. baltica)	MU ('fillet') SB	W W	Dry weight Dry weight					

HBCDD	EQS biota human health: 167 µg/kg ww 5% lipid content **Secondary threshold** sediment	PARAM = (HBCD, HBCDA,HBCDB, HBCDG)	Biota	Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal)	MU, MU&EP, ('fillet'), LI or whole fish	W	Lipid content	Sediment (surface, ICES 'upper sediment layer - 0-X cm')		All		CORG Al Li Grain size
PBDEs	EQS biota human health 0.0085 µg/kg ww 5% lipid content **Secondary threshold**: sediment	PARAM = BD28, BD47, BD99, BD100, BD153, BD154	Biota	Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal)	MU, MU&EP, ('fillet'), LI or whole fish	W	Lipid content	Sediment (surface, ICES 'upper sediment layer - 0-X cm')		All		CORG Al Li Grain size
PFOS	EQS biota human health 9.1 µg/kg ww **Secondary threshold** EQS water	PARAM = PFOS	Biota	Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal)	MU, MU&EP, ('fillet'), LI or whole fish	W	(Lipid content is not used for normalisation of PFOS but it should be in extraction in case the data have been submitted on a different basis)	Water		WT (All – unfiltered is preference)		Surface water layer (≤ 5.5 m)

dl-PCBs, dioxins and furans[2]	EQS biota human health: 0.0065 TEQ/kg ww 5% lipid content fish, crustaceans or molluscs	Dioxins and furans: PARGROUP = OC-DX	Biota	Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal)	MU, MU&EP, ('fillet'), LI or whole fish	W	Lipid content					
Non dl-PCBs (PCBs)	EC 1881/2006 sum of congeners (28, 52, 101, 138, 153, 180) 75 µg/kg ww 5% lipid content fish muscle	Non-dioxin (PCB): PARGROUP = OC-CB	Biota	Herring & cod (open sea) Flounder, sole, eelpout & Perch (coastal)	MU, MU&EP, ('fillet'), LI or whole fish	W	Lipid content					
PAHs	EQS biota human health benzo(a)pyrene 5 µg/kg ww crustaceans and molluscs	PARAM = BAP	Biota	Molluscs & Crustaceans (M. edulis, M. baltica & Saduria entomon)	SB, TM	W	dw					
PAHs (fluoranthene)[3]	**Secondary threshold** EQS biota human health: 30 µg/kg ww crustaceans and molluscs	PARAM = FLU						Sediment (surface, ICES 'upper sediment layer - 0-X cm') Biota	Molluscs & Crustaceans (M. edulis, M. baltica & Saduria entomon)	All SB, TM	D W	CORG Al Li Grain size

[2] Denmark has a study reservation on secondary threshold EAC CB-118 24 µg/kg lw fish liver of muscle, the row is not included in the extraction table

[3] Denmark has a study reservation on the secondary threshold value for fluoranthene QS 2000 µg/kg dw sediment, and the parameters are not included in the extraction table.

PAHs (secondary anthracene)	**Secondary threshold** QS 24 ug/kg dw sediment	PARAM = ANT						Sediment (surface, ICES 'upper sediment layer - 0-X cm')		All	D	CORG Al Li Grain size
PAH Metabolite 1-hydroxypyrene[4]	**Primary threshold:** 483 ng/g fish bile	PARAM = PYR1OH	biota	Herring & cod, dab, Flounder, sole, eelpout & Perch	BI	W						
TBT and imposex	**Secondary threshold** EQS water (AA): 0.2 ng/l water	PARAM = TBTIN, TBSN+						Water		(All – unfiltered is preference)		Surface water layer (≤ 5.5 m)
TBT and imposex (DK study reservation in place, included as test see outcome point 11)	QS 1.6 µg /kg dw sediment (5% TOC)	PARAM = TBTIN, TBSN+	Sediment (surface, ICES 'upper sediment layer - 0-X cm')		All	D	CORG Al Li Grain size					

[4] Denmark has a study reservation on the threshold value for metabolite 1-hydroxypyrene (Davis&Vethaak 2012) 483 ng/g fish bile.

TBT and imposex (DK study reservation in place, included as test see outcome point 11)	Gercken & Sordyl 2009; Magnusson et al 2016 EAC: *Peringia ulvae*: 0.1 VDSI *Nucella lapillus*: 2.0 VDSI *Neptunea antiqua*: 2.0 VDSI *Hinia reticulata*: 0.3 VDSI *Buccinum undatum*: 0.3 VDSI *Littorina littorea*: <0.3 ISI	Imposex: PARAM = VDS, VDSI, INTS, INTSI, IMPF%, IMPS, IMPSI, PCI, %FemalePOP Assisting parameters: PARAM = MBTIN, MBSN+, DBTIN, DBSN+, TBTIN, TBSN+, TPTIN, TPSN+	Biota	Gastropods	All	D						