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<b>Document title</b>	Tentative outputs from HOLAS II project
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## Background

Proposals for how to present results from HOLAS II in paper and web-based products have been discussed at the previous meetings of HOLAS II, from different perspectives, e.g.:

- At its first meeting, HOLAS II (1-2015; para 4.1) discussed the format of the final products and agreed that an electronic version of the report is an evident format and that this should not simply be a pdf but a more elaborate web-based product. The Meeting also agreed that a printed paper copy of the report would be valuable and this product should aim at being an extract of the information included in the web-based product and that it could be constructed with the needs for translation to national languages in mind. Further, it should be relatively slim and support communication purposes while the web-based version could be more voluminous and detailed.
- HOLAS II 2-2015 developed further the draft proposed outline for the second holistic assessment (**Annex 2** of this document).
- Based on discussions at HOLAS II Biodiv WS 1-2015, HOLAS II 3-2015 (para 3.33) welcomed an initial graphical overview of how to present results from HOLAS at different levels of detail, in order to serve different groups of target audiences (figure 1 of this document).
- Proposals for how to potentially present results from the assessments have also been discussed at the HELCOM TAPAS Pressure Index WS 1-2016 and the HELCOM BalticBOOST Biodiv WS 1-2016.

The following document contains a summary and further development of these discussions, in order to show in more detail how the printed summary report and online product could potentially be structured and some potential key figures that could be developed. The ideas may also be used as inspiration and foundation for the design of a HOLAS II project web page, which will show HOLAS II results online.

This document was prepared for the HOLAS II 5-2016 (26-28 April). The outcome of the discussions at HOLAS II 5 will be presented to GEAR 14-2016.

## Action required

The Meeting is invited to:

- take note of the information;
- provide guidance on data products and key graphic outputs from HOLAS II.

## Potential visual content of the HOLAS II report, with an outline of potential maps, figures and tables to include in the printed summary report or online

The list below, of potential figures and tables, is structured in line with the proposed draft outline of the printed HOLAS II report (Annex 1). *The content in terms of text is not included in the list below, but is assumed to follow the general outline given in Annex 1.*

The list is a first draft proposal intended to be developed further. Elements that could potentially be included in the printed report are indicated by **(P)**. These should be considered further and prioritized, also remembering that the full written report is planned to have ca 90 pages in total. The results of the printed summary would also be included in the online results together with more detailed information.

The structure of the web-based version is proposed to as far as possible follow the structure of the printed report. In addition to showing the synthesised results, the web-based version enables describing more detailed assessment results, as well as methodological details and the data that is underlying the assessment. Hence, the web-based version would allow backtracking from the main outputs of the assessment to the assessment tools and the underlying indicators and datasets. A general overview of this scheme is given in figure 1 below. Elements proposed only for the web-based version are indicated by **(W)** in the list.

**Bolded examples** of potential key figures are given in **Annex 1**, having a number after the “P” or “W” in the list below, e.g. (P1).

### Summary

1. **Figure: Health barometer, synthesising the results of the GES assessment and the BSPII (P1)**
2. **Table: Key pressures influencing the Baltic Sea ecosystem and their ongoing trends (P2)**

### Introduction

3. Figure: Conceptual graph of the HOLAS II assessment, showing the relationship between different building blocks in line with the DPSIR framework (P)
4. Map: Baltic Sea and its main hydrological characteristics, with drainage basin (P)
5. Figure: Changes in climatic factors over time (P)

### Methods section

6. Map: HELCOM assessment units (P)
7. Information on the assessment tools and methods (W)

### Assessment of the status of ecosystem health

8. Results from the assessment of biodiversity (descriptors 1, 4, parts of 3 and 6):
  - a. **Integrated assessment figures:**
    - i. **GES map and associated map showing confidence in the assessment (P);**
    - ii. **Associated graphs showing number of indicators underlying the assessment per assessment unit and potentially more detailed results per assessment unit (P or W, depending on graphical solution),**
    - iii. **Summarizing figures showing overall results for the regional scale per species group (P3)**
  - b. Trends over time for selected indicators/species groups (P)
  - c. Interactive presentation of results e.g. possibility to zoom in on specific areas, to click on assessment units and get more detailed information on e.g. indicators, confidence (W).
  - d. Thematic fact sheets: More detailed results for key ecosystem components (W)
  - e. Core indicator reports; indicator results, GES boundary, methodology, underlying data (W)
9. Results from the assessment of hazardous substances, for descriptors 8 and 9 separately:

- a. Integrated assessment figures in similar style as for biodiversity (P)
  - b. Figure: Summary of trends over time in hazardous substances concentrations in the environment (P)
  - c. Interactive presentation of results similar as for biodiversity (W).
  - d. Thematic fact sheet: More detailed results from the integrated assessment (W)
  - e. Core indicator reports; indicator results, GES boundary, methodology, underlying data (W)
10. Results from the assessment of eutrophication (descriptor 5):
- a. Integrated assessment figures in similar style as for biodiversity (P)
  - b. Trends over time in the indicators (P)
  - c. Interactive presentation of results similar as for biodiversity (W).
  - d. Thematic fact sheets: More detailed results from the integrated assessment (W)
  - e. Core indicator report; indicator results, GES boundary, methodology, underlying data (W)
11. Results from the other pressure based descriptors (descriptor 2,3, 6, 7, 9, 10, 11):
- a. Figures: following a similar basic structure but customized as needed for: non-indigenous species, fisheries, sea floor integrity, alteration of hydrological conditions, marine litter and underwater noise. Potential components: GES assessment, map representing spatial distribution of the feature, trends over time when applicable (see also document 5-2). (P)
  - b. Thematic fact sheets: More detailed results per descriptor (W)
  - c. Core indicator reports (as far as available); indicator results, GES boundary, methodology, underlying data

#### Input and human activities acting on the environment

- 12. Results from the BSPII: Map with results from the cumulative impact assessment; list of key pressures influencing the index (P4)**
13. Figure: spatial distribution and/or trends over time of pressures of key interest (see document 5-3) (limited number of figures for P, possibly additional figures for W)
14. Results for the pressure core indicators (P)
15. Assessment of the economic importance of different human activities (tbd)
16. Maritime activities (tbd)
17. Thematic fact sheets: More detailed results for key pressures according to the BSPII (W)

#### Social and economic aspects

- 18. Cost-of degradation of the environment, benefits of mitigating environmental problems (tbd)**

#### Measures towards reaching GES (tbd)

- Existing and planned measures (inform on ongoing work focus on HELCOM work)
  - could include real examples/successful cases
  - could address sufficiency of measures to reach GES (“If GES has not been reached, why has it not been reached”, potentially including societal drivers)

#### Annex

- 19. GES-catalogue summarizing the results for all core indicators per assessment unit (P5)**
- 20. Spatial data set fact sheets: for the data sets on human activities and pressures included in the BSPII, aggregated as appropriate (W1, P6)**

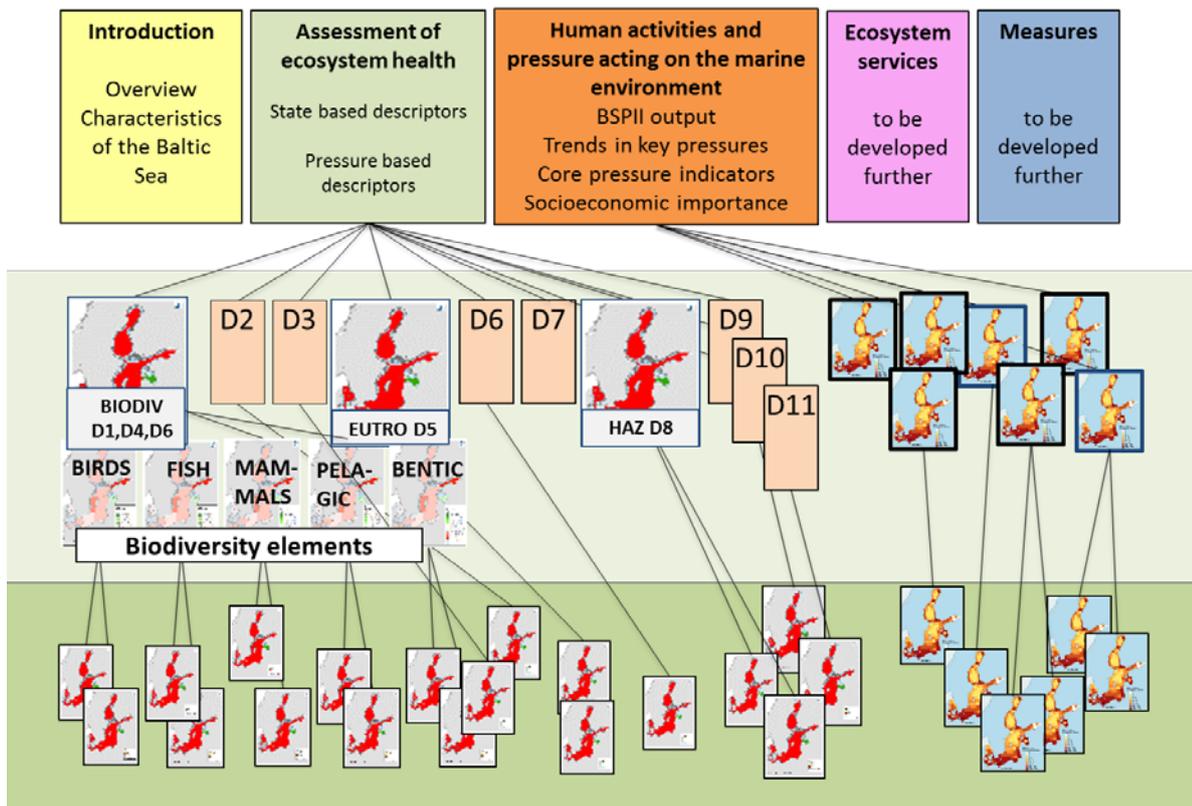
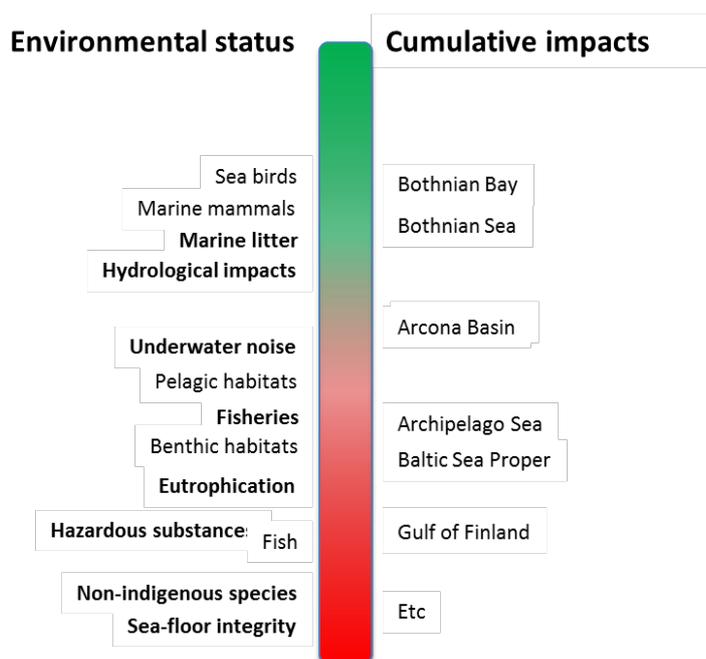


Figure 1. Draft overview of potential HOLAS II products. Based on a first draft developed by HOLAS II 3-2015 (presentation 5), elaborated in line with the draft outline agreed by HOLAS 2-2015 (Annex 2 of this report). The top row corresponds to the chapters in the report, the middle row corresponds to potential thematic fact sheets and in-depth assessment results that would be produced as part of HOLAS II for online presentation. The bottom row corresponds to the core indicator reports as available on <http://www.helcom.fi/baltic-sea-trends/indicators/>, and metadata of spatial datasets used. According to HOLAS II 3-2015 (paragraph 3.33), results in the three rows would be designed for different groups of target audiences; general, manager and expert.

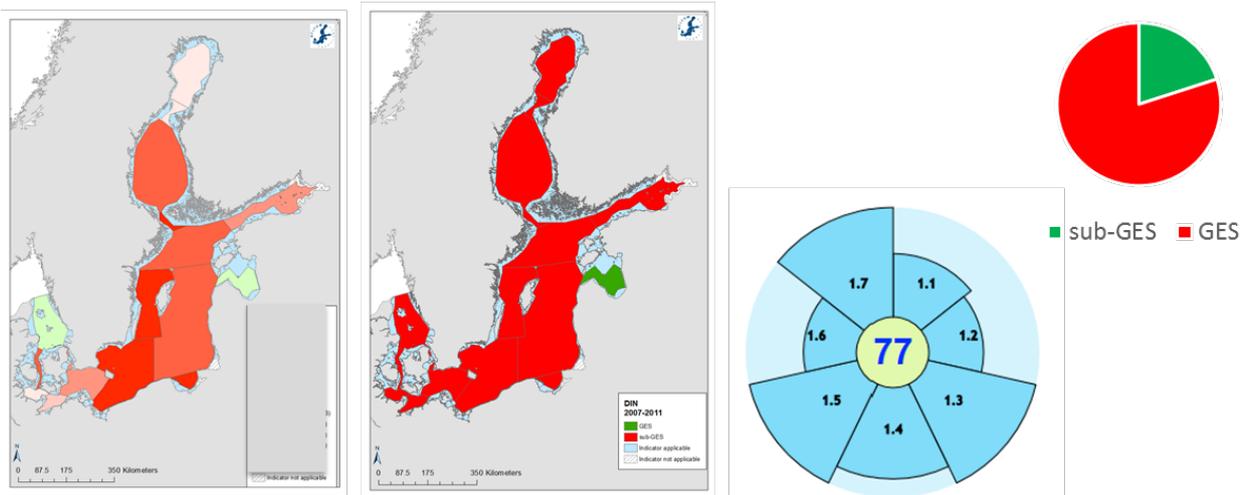
## Annex 1. Example of graphs and tables to include in the HOLAS II report



Potential figure, P1: Health barometer, summarizing the ecosystem health based on GES (left side) and cumulative impacts from pressures in different sub-basins based on e.g. the Baltic Sea Pressure and Impact index (right side). The position of different descriptors, ecosystem components and sub-basins in this graph are examples and are not based on assessment results.

Pressure	Relative importance	Current trend
Disturbance or damage to seabed	Xx	→
Extraction of fish species	Xx	↑
Marine litter	Xx	↑
Change of seabed substrate or morphology	Xx	↑
Inputs of hazardous substances	Xx	↓
Systematic and/or intentional release of substances	Xx	→
Input of nitrogen and phosphorus	Xx	→
Disturbance of species	Xx	↑
Climate change	xx	↑
Inputs of sound	XX	↑

Potential figure, P2: Top ten pressures acting on the Baltic Sea, with estimation of their current trend. Based on the Baltic Sea Pressure and Impact Index. The pressures listed are examples and are not based on assessment results.

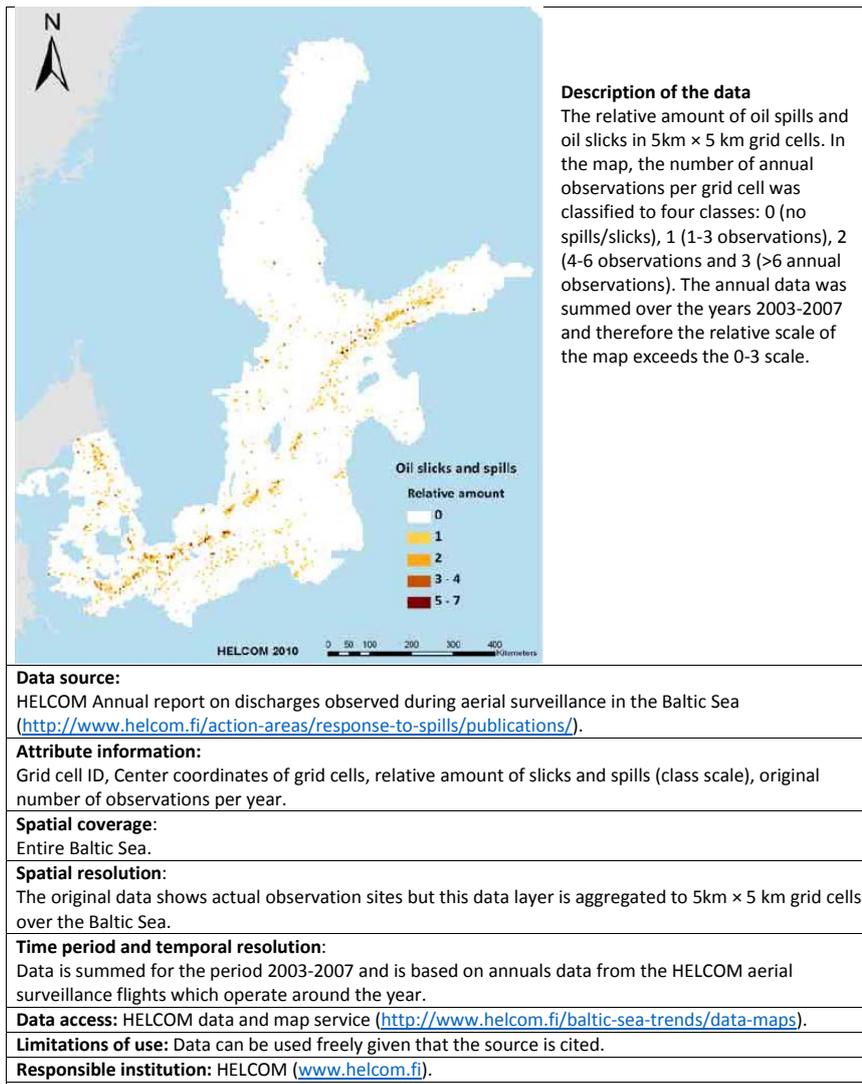


Potential figure, P3. Integrated assessment results presented GES results with 5 classes of detail, in order to indicate also distance to GES (left map) or with 2 classes showing GES or sub-GES (right map). Associated graphs could give more detailed results and also show how many indicators were included in the assessment (blue chart). For summarized results at the Baltic regional scale, pie charts could e.g. show the proportion of assessment units in GES for e.g. each species group.

Descriptor	Criterion	Indicator	Assessed at Baltic Sea scale	Kattegatt	Great belt	The sound	Kiel Bay	Bay of Mecklenbourg	Arkona Basin	Bornholm basin	Gdansk basin	E Gotland Basin	W Gotland basin	Gulf of Riga	Northern Balcti Proper	Gulf of Finlan	Åland Sea	Botnian Se	The Quark	Botnian Bay	
1	1.1	AA		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
1	1.2	AA		DD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
1	1.2	BB		NA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
1	1.2	BB		●●	●	●●	●●	●●	●●	●●	●	●●	●	●●	●●	●●	●●	●●	●●	●●	●●
2	2.X	BB	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	3.1	AA		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3	3.2	BB		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Potential figure, P4. GES catalogue showing summarized results for each core indicator per assessment unit: Red=sub-GES, Green=GES, DD=not assessed due to data deficiency, NA=indicator not applicable in this assessment unit. The table encompasses results for different assessment scales. Results for indicators assessed at the regional scale (HELCOM level 1) are shown in column 4 and for indicators assessed at levels 2 in columns 5-22. Columns 5-22 also show results for indicators assessed at level 3, which are shown as smaller circles within each cell, one for each assessment unit. Only the first rows of the table are shown. The final number of rows would equal to the number of core indicators assessed.

## Oil slicks and spills in the Baltic Sea 2003-2007



Potential figure, P5. Draft fact sheet for thematic spatial data sets. The draft was presented for TAPAS Pressure Index WS 1-2016 that gave the following additional recommendations:

- add documentation of the methods that were used in order to produce the layers and any interpolation methods etc.
- for aggregated layers, give information on what spatial data sets are included
- add information non the interpolation method used to produce the layer
- add information on activities that affect the pressure
- add information on how ecosystem components are foreseen to be affected, based e.g. on results from the impact scores
- explain if data is complete or not (make clear if any white parts mean zero or “no data”)
- add information on the temporal extent of the pressure (is it intermittent, periodical, or does the map of show cumulative permanent changes)
- add key words to help searches

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## Annex 2. Preliminary draft outline of the 2nd Holistic Assessment of Baltic Sea ecosystem health

As contained in Outcome of HOLAS II 2-2015, Annex 2.

### **0. Executive Summary**

#### **1. Introduction**

- Policy background (BSAP, MSFD, WFD, BD, HD, MSP/ICZM, CFP, CAP, highlighting the ecosystem approach) and international cooperation (IMO, CBD)
- include summary of characteristics of the Baltic Sea
- Previous assessments
- Reading instructions!

#### **2. Methods section**

- include conceptual outline showing the structure of the assessments in the report
- new developments of tools
- Methodology [short version in printed report, longer version in the web-version]

#### **3. Assessment of the status of ecosystem health**

- biodiversity assessed including status based GES descriptors (“pizza), showing for Descriptor 1 also separately the assessment of elements, differentiated as in monitoring programmes under Article 11
- assessment of pressure based descriptors (“satellites”) intact
- Selection of trends in key parameters
- Supporting parameters to interpret result of the assessment tools (e.g. change in climatic factors between assessment periods).

#### **4. Input and human activities acting on the environment**

- Spatial distribution and trends of main human activities and pressures, e.g. with pressure core indicators (shown individually) including maritime activities
- Cumulative assessment of pressures using the BSPI/BSII, including new pressure data layers, should be possible to assess changes in relation to the previous assessment
- Climate change – summary based on thematic assessment and new info, e.g. EMEP

#### **5. Social and economic aspects [consider title – more communicative]**

- Cost-of degradation of the environment, benefits of mitigating environmental problems

#### **6. Measures towards reaching GES (To be developed further)**

- Regionally agreed targets
- Existing and planned measures (inform on ongoing work focus on HELCOM work)
  - could include real examples/successful cases
  - could address sufficiency of measures to reach GES (“If GES has not been reached, why has it not been reached”, potentially including societal drivers)

#### **7. Conclusions and future outlook**