

Indicators towards HOLAS 3

HOD 61-2021

(document 5-1 Rev.1 and 5-2 Rev.1)



General guide for presentation

- The aim is to provide an overview of all indicators expected to be available for HOLAS 3 purposes.
- Not all are fully operational or core indicators, that information is provided within the documents.
- Indicator names presented in *italics* are those where threshold values/threshold value setting methodologies approval is involved (i.e. document 5-1 Rev.1 and workspace).
- Titles presented in grey are included in the document list but not currently official indicators.
- In cases where some type of further work is planned in spring 2022 this has been indicated for the relevant indicator.



Addressing approval at HOD 61-2021 (i.e. for application in HOLAS 3)

- Indicators are divided up into three categories for this process:

Category 1: Those where no changes/issues since HOLAS 2 identified.

- No separate approval needed as approval was already given during HOLAS II and no changes have been introduced.

Category 2: Those where further development has occurred, but no issues have been raised at S&C 15-2021, GEAR 25-2021 or prior to HOD 61-2021.

- Proposed approach: provisional joint batch approval, noting DK study reservation.

Category 3: those indicators with known open issues (Category 3: 3a = solution proposed, 3b open issues).

- To be addressed individually, provisional approval, noting DK study reservation.



Any additional issues which needs attention at the Meeting

- Are there any indicators presented for approval for which no issues have been flagged prior to the meeting (i.e. Category 2) but for which a Contracting Party would like to highlight issues directly at the Meeting (i.e. should be lifted individually in the meeting and thus moved to Category 3)?



Category 1: No change since HOLAS 2.

- Distribution of Baltic seals
- Abundance of waterbirds in the breeding season
- Abundance of salmon spawners and smolt
- Abundance of sea trout spawners and parr
- ~~Fishing mortality (F/FMSY), Stock size (spawning stock biomass), D3C3 aspects such as size, age, condition.~~ Addressed elsewhere.
- State of the soft-bottom macrofauna community
 - Ongoing work related to testing new eutrophication-relevant assessment units.
- Inputs of nitrogen and phosphorous to the subbasins



Category 1: Continued...

- Hexabromocyclododecane (HBCDD)
- Perfluorooctane sulphonate (PFOS)
- Polychlorinated biphenyls (PCB) and dioxins and furans
- White-tailed sea eagle productivity
- Oil-spills affecting the marine environment
- Trends in arrival of new non-indigenous species



Category 2: Endorsed at S&C 15-2021 (no major issues raised and no individual study reservations).

- Nutritional status of seals
- Reproductive status of seals
- Harbour porpoise distribution
- Harbour porpoise abundance
 - Further information related harbour porpoise will be presented in 2022
- *Abundance of waterbirds in the wintering season*
- *Breeding success of waterbirds*
- *Abundance of coastal fish key functional groups*
- *Abundance of key coastal fish species*



Category 2: Continued...

- *Zooplankton mean size and total stock*
- *Diatom/Dinoflagellate index (Dia/Dino index)*
 - Further development towards test cases will be presented in 2022
- *Cumulative impact from physical pressures on benthic biotopes (CumI)*
- Condition of benthic habitats
- *Dissolved inorganic nitrogen (DIN)*
- *Dissolved inorganic phosphorus (DIP)*
- *Oxygen debt*
- *Water transparency*
- *Chlorophyll a*



Category 2: Continued...

- *Total phosphorus concentrations*
 - *Any progress related to threshold values for the Eastern Gotland Basin will be presented in 2022*
- *Shallow-water bottom oxygen*
 - Any further development will be presented in 2022
- *Phytoplankton spring bloom intensity based on chl-a*
 - Any further development will be presented in 2022
- Baltic Sea acidification
- *Metals*
- *Polybrominated biphenyl ethers (PBDE)*
- *Polyaromatic hydrocarbons (PAH) and their metabolites*



Category 2: Continued...

- *Reproductive disorders: Malformed amphipod embryos*
- *Diclofenac*
- Biological Effects
- *Radioactive substances: Cesium-137 in fish and surface waters*
- Hazardous substances screening
- *Beach litter*
- *Litter on the seafloor*
 - Study reservation #10 (PL) lifted via correspondence with Secretariat 17.11.21
- Microlitter in the watercolumn



Category 3a: Issues raised at S&C 15-2021; solutions proposed/discussed at EG/WG level.

- Population trends and abundance of seals – LRL related to harbour seal management units proposal
 - document 5-2 Rev.1 Annex 1 (solution), study reservation #2 (DK and SE).
- Waterbird habitat quality
 - document 5-2 Rev.1 Annex 3 (solution).
- *Size structure of coastal fish (L90)*
 - Apply trends where threshold values can not be developed.
- Cyanobacterial bloom index
 - document 5-2 Rev.1 Annex 5 (solution), study reservation #6 (PL and DE, and DK).
- *TBT and imposex*
 - document 5-1 Rev.1 ATT.21 (solution), study reservation #8 (SE).



Category 3a: Continued...

- *Copper*
 - document 5-1 Rev.1 ATT.26 (solution), study reservation #7 (DE and PL).
- *Continuous low frequency anthropogenic sound*
 - document 5-1 Rev.1 ATT.29 (solution), study reservation #11 (DE).
- *Distribution in time and space of loud low- and mid-frequency impulsive sounds*
 - DK comments email prior to HOD: support a qualitative assessment of the indicator for the HOLAS III, unless a threshold has been decided upon in EU.



Category 3b: Threshold value approval and/or open study reservations.

- *Number of drowned mammals and waterbirds in fishing gear*
 - document 5-1 Rev.1 ATT.3 and document 5-2 Rev.1 Annex 1 (LRL solution), study reservation #4 (DK, EE and FI), and DK comments email prior to HOD.
- *Abundance of non-commercial offshore species (three-spined stickleback, flounder, brill and dab)*
 - document 5-1 Rev.1 ATT.7 and ANNEX 1, and DK comments email prior to HOD.
- *Seasonal succession of dominating phytoplankton group*
 - document 5-1 Rev.1 ATT.9 and ANNEX 1, study reservation #3 (DE).
- *Total nitrogen concentrations*
 - document 5-1 Rev.1 ATT.12, 13 and 14, study reservation #5 (DE - Arkona).

