Baltic Marine Environment Protection Commission

Fifth Meeting of the Working Group on Reduction of Pressures from the Baltic Sea Catchment Area
Warsaw, Poland, 25-27 October 2016

PRESSURE 5-2016

Document title	Data verification process for reported data on dredged material
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Agenda Item	5 - Dredging/depositing operations and mining on the sea floor
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Background

The first expert meeting on dredged material (Online, 23 May 2016) suggested to organize a procedure of verification of the reported data stored in the HELCOM database with the national experts. The meeting requested the Secretariat to elaborate a technical solution for verification of the reported data by national experts. The Secretariat produced a proposal for the review process for the Second expert meeting on dredged material (Online, 13 September 2016). The meeting agreed to test the data review process during 2016 reported data and requested the Secretariat to compile the reported data to a workspace and collate Baltic-wide dataset for verification.

The expert meeting also agreed that data verification procedures require establishing a database, as well as development of automated verification and reporting tools. These developments require significant resources which cannot be provided by the expert group or the Secretariat without additional support. The experts also took note of the ongoing work on data verification and handling tools in OSPAR and agreed that the experiences gained by OSPAR might be utilized for HELCOM purposes.

This document contains an outline of the suggested process on how to organize verification of reported data, utilizing practices developed in other HELCOM data reporting streams. The document contains a process description on how the verification could be organized, requiring actions from both the data host (HELCOM Secretariat) and national experts on dredged material.

Action requested

The Meeting is invited to <u>consider</u> the proposed procedures and <u>provide feedback</u> on the suggested data verification process and suggested quality assurance procedures.

The Meeting is also invited to <u>conclude</u> on the need for a project to facilitate the development of the information resources and data handling procedures as well as potential leadership by the countries in this development.

Management of dredged material data reporting

Data verification process description – draft suggestion

Background

HELCOM Recommendation 36/2, adopted at HELCOM 36-2015 on 4 March 2015, recommends that the Contracting Parties follow the HELCOM Guidelines for Management of Dredged Material at Sea and that the Contracting Parties report on the national data on management of dredged material according to the Reporting Format of the HELCOM Guidelines. Information on dredging and deposit activities has been reported by the Contracting Parties also before the adoption of Recommendation 36/2, following the superseded Recommendation 13/1.

This document outlines a suggestion for data verification process by the Secretariat, as requested by the First meeting of the nominated experts on dredged material, online on 23 May 2016.

Data verification process – overview

Data verification process would be integrated into the reporting cycle (Figure 1), where countries submit data to the Secretariat, data is collated by the Secretariat, quality assured in two stages and published as accepted data product. The reporting can be divided in to 4 steps:
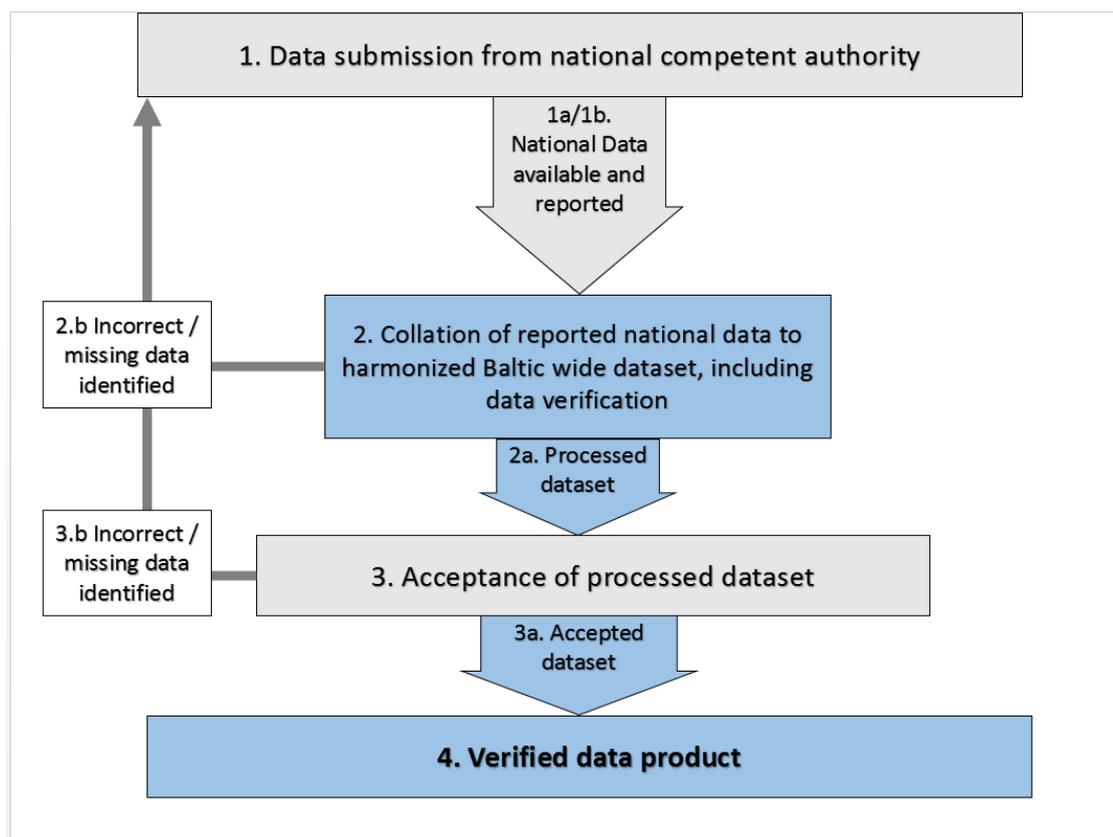

Figure 1.   Stepwise process description of dredged material data reporting including data verification steps. Different colors represent responsible actors: Grey=Contracting Part Blue=HELCOM Secretariat (acting as data host).

Data verification process steps described in more detail:

1. **Data submission by national competent authority** to the data host (HELCOM Secretariat) using the [described file format as outlined in the Guideline](#) (to be updated, see document 5-1). In this process stage it is important that the reporting format outlined in the guideline is clear and understandable for the persons carrying out the reporting, and that the requested format is followed accordingly. In case of unclarity or any questions, reporters are encouraged to contact HELCOM Secretariat (joni.kaitaranta@helcom.fi)
   - Data submission can be done either
     a) Submission by email
     b) Using the HELCOM meeting portal workspace document library where files can be inserted by the expert group members https://portal.helcom.fi/workspaces/DREDGED-1-118/default.aspx (restricted access only to dredged material experts) (Figure 2). Instructions on workspace use would be made available to expert group members reporting data.
   - Annual data submission deadline is **September 30.**
2. **Collation of reported national data** will be done by the Secretariat acting as data host for the Dredged material dataset. Collation of the data means merging all national datasets to a Baltic-wide annual data product, keeping all attribute information. This process can include various quality assurance procedures to the national datasets, such as:
   - **Spatial accuracy**. In case of excel file reporting, manual checking on usage of correct coordinate systems and checking whether there is observations on land;
   - **Completeness.** Check is spatial data included and all mandatory fields populated with information (e.g. contaminant loads if there is no exemption);
   - **Content types.** Is all fields populated with correct data types (e.g. numeric fields contain numbers);
   - **Reference codes.** Reference codes (Deposit site codes and dredging site codes) are consistent between sheets.

   Based on the outlined tests the submitted national datasets either

   a. National dataset passes the quality assurance and are included in the Baltic dredged material data product
   b. National dataset does not pass the quality assurance, and further clarification/resubmission is requested by the data provider. This typically required email exchange between the Secretariat and data provider.
3. **Acceptance of processed dataset** could be done by the experts providing the national data to check that the data collation have been made correctly. This process can include various quality assurance procedures to the national datasets such as:
   - **Spatial accuracy.** Manual check of errors in spatial data using the dataview.
   - **Completeness.** Is all reported data included in the dataset.
   - **Correctness.** Are all attributes transferred correctly to processed dataset.
   - **Action levels.** Are action levels reported in sheet 2 and in sheet 6 consistent?
   - **(Loads.** Recalculation of concentrations based on reported loaded data to identify outliers.).

   The acceptance would be carried out in HELCOM Meeting Portal using the dataview in the [workspace](#), where the processed dataset is made available for review (Figure 3). Data submitters can accept and carry out the review using the workspace functionalities (a list to be developed by the Secretariat which experts can edit in the workspace).

Based on the outlined tests, the processed dataset either

a. Processed dataset passes the quality assurance and are accepted by the experts as verified public data product to be made available via HELCOM map service and used for analysis/assessment

b. Processed dataset does not pass the quality assurance and further clarification is conducted with the Secretariat and data provider.

4. **Verified data product** to be made publicly available via HELCOM map service and used for analysis and assessments.
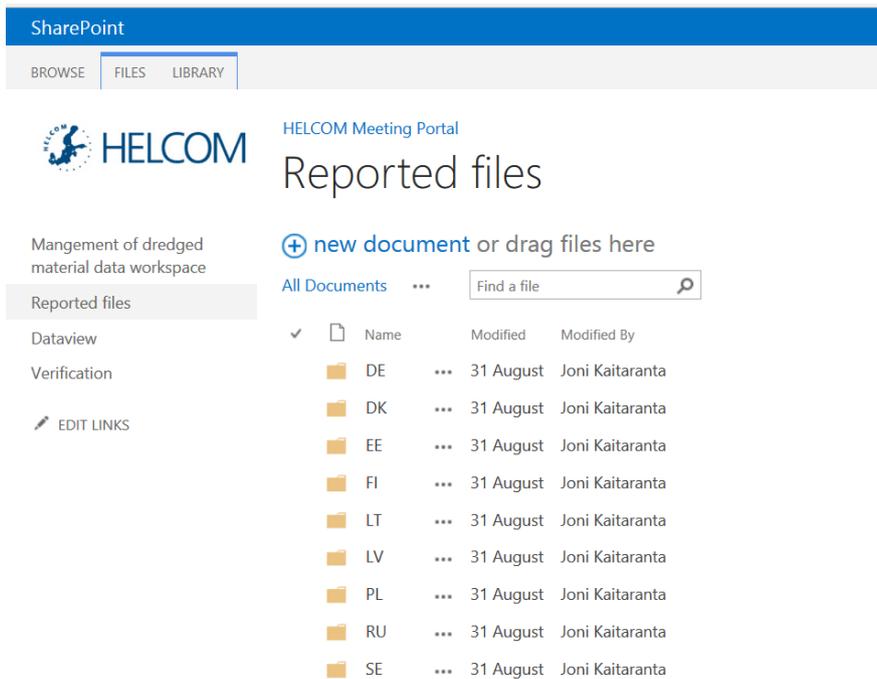

Figure 2. Data submission folders grouped by Contracting Party in the workspace.
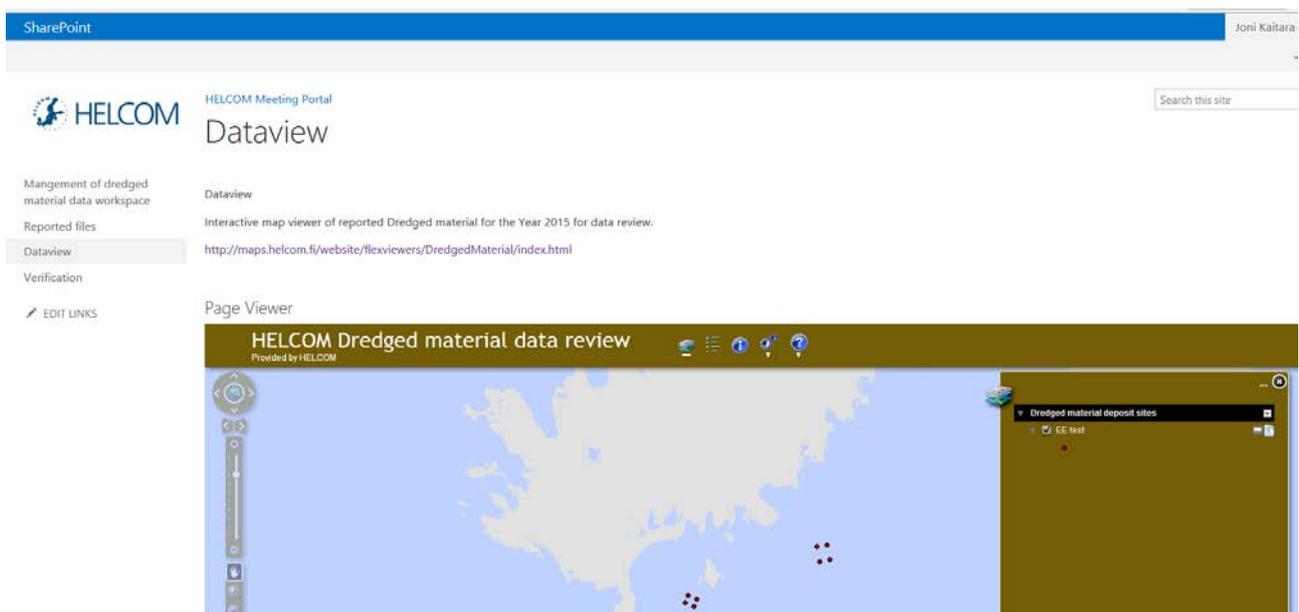

Figure 3. Draft example of data view containing reported data in map viewer to be used for verification.