



<b>Document title</b>	Annual data reporting and publishing the updated data set to MADS
<b>Code</b>	4-1
<b>Category</b>	DEC
<b>Agenda Item</b>	4 - Annual data reporting and verification, Publishing data in HELCOM MADS
<b>Submission date</b>	13.02.2019
<b>Submitted by</b>	The Secretariat
<b>Reference</b>	

---

## Background

HELCOM Recommendation 36/2 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. This document describes the reporting and data verification status of 2017 reporting on dredged material.

HELCOM publishes spatial datasets of the reported data on depositing of dredged material and dredging activities in the HELCOM Maps And Data Service (HELCOM MADS). The newest update will be published during February consisting of data up to 2017. Data will be published in a slightly different spatial form and with some additional attributes than previously. Due to this update, some modifications are needed to be made for the database. This document describes the plan how to publish the data and the required modifications in the database.

## Action requested

The Meeting is invited to take note of the status 2017 data reporting and verification.

The Meeting is invited to agree on the plan to publish the data in HELCOM MADS.

## The status of 2017 reporting

HELCOM Recommendation 36/2 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. The deadline for reporting is 1 October on the following year the activities have taken place. The Secretariat uploaded the national datasets to EN DREDS workspace by 1 December 2018, and Contracting Parties had time until 1 February to verify the annual datasets.

All Contracting Parties have reported data for 2017 (Table 1). Only three CP's have so far verified their data set according to the annual data verification process.

	Depositing sites	Contaminant load	dredging*	verification
Denmark	79	66	no	yes
Estonia	3	0	no	
Finland	30	30	yes	
Germany	22	12	yes	yes
Latvia	4	4	yes	
Lithuania	27	27	yes	
Poland	11	11	no	yes
Russia	4	4	no	
Sweden	16	16	yes	

Table 1 Reported data on depositing, contaminant load and dredging and verification of annual data. \*Reporting of dredging sites is optional in HELCOM guidelines and therefore not all dredging sites are reported.

## Publishing depositing and dredging data set in HELCOM MADS

This section explains the current dataset, the plan to publish the new data set and the required modifications to the database.

Current datasets for depositing and dredging in MADS

The current datasets for depositing and dredging in MADS can be accessed [here](#). Data includes three geometry types (points, lines and areas) for both depositing and dredging operations. Currently in the database and in the data published in MADS, an individual feature (spatial object) is created for an individual depositing activity, regardless that they are deposited at the same location and at the same year. Therefore, several identical spatial features are piled up on top of each other, resulting in an overlap which makes it difficult to visualize information of individual events. For example, if one uses the identify tool in MADS to view attributes a spatial object, only information of the topmost feature is displayed. However, the attribute table view shows each spatial object as a separate row (Fig. 1).

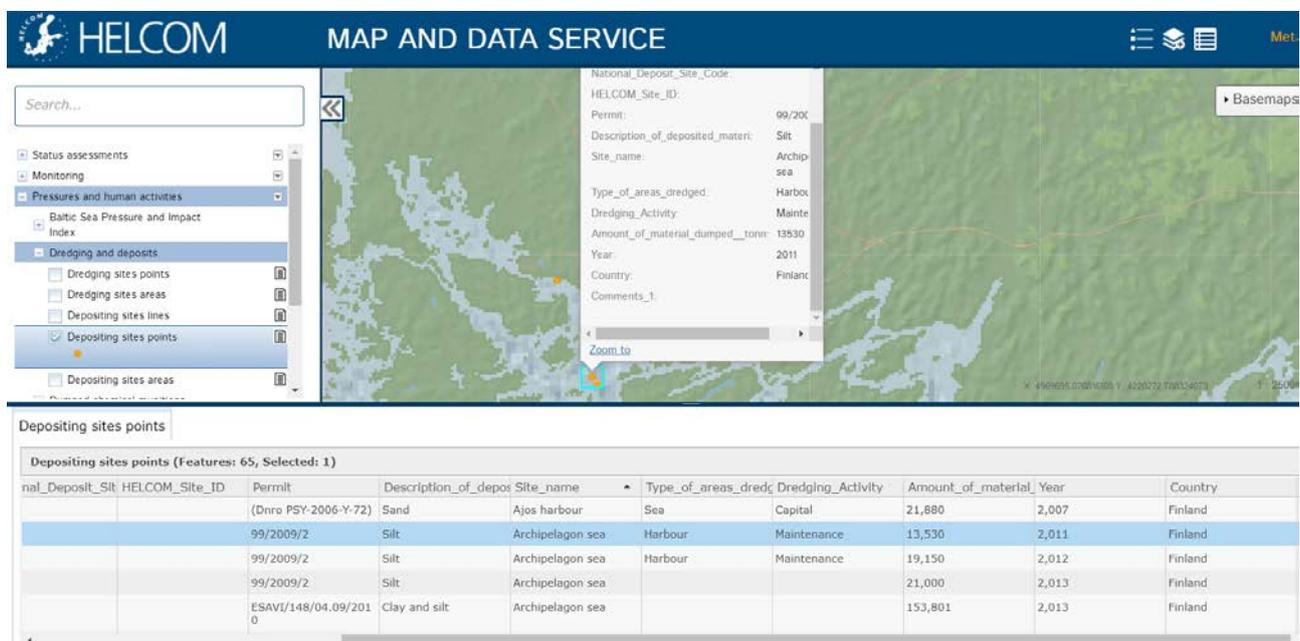


Fig. 1. Overlapping deposit site point visualized in MADS with identify tool and attribute table.

The attributes in the current data includes the basic information of the depositing/dredging activity, but no contaminant load.

Publishing the new data set

The new dataset will be published in MADS as related tables and with all attributes included in the reporting format, including also contaminant load. Publishing the dataset as related tables means that a single deposit site, that has the same id from year to year, will only have one feature (spatial object) and the individual depositing events will be included as related information from a separate table. A new functionality will be developed for MADS to visualize related data. It would be then possible to display a list of all individual deposit events for a deposit site, making it possible to easily browse all events connected to one site. To make this type of publishing possible, deposit sites located at the same place should be dissolved to have only one spatial feature and site id for the whole data period.

However, in the historical data the site id and the spatial dimensions have been slightly changing during the history of reporting depositing data perhaps due to reason of rounding coordinates or creation of polygons from rounded coordinate points. To be able to carry out the data processing required by the related table view (dissolve), some data harmonization measures are required to be done for the database. Following section provides suggestions how to harmonize the data set.

Deposited sites in the data prior to 2011 have sometimes been reported without deposit site id. Same deposit id is needed to dissolve the deposit sites to one feature.

- Suggestion: Harmonize the site id's, by giving the older deposit sites the same id than in the newer data for the same site, also between different geometries. For those sites that the id is completely missing, an id would be formed by country code, year and running number, e.g. FI\_2008\_001.

Deposit sites that have slightly different spatial objects for different years (Fig. 2a). Similar object is needed to dissolve the deposit sites to one feature.

On some more rare occasion there are two completely different overlapping spatial objects at the same area and with the same id (Fig. 2b).

- Suggestion: If the offset is less than 500m, the same spatial object will be used for that deposit site, the newest reported object will be chosen for this
- Suggestion: If the offset is more than 500 m or the deposit sites have clearly different spatial objects, the Contracting Party in question will be consulted on which geometry should be used.

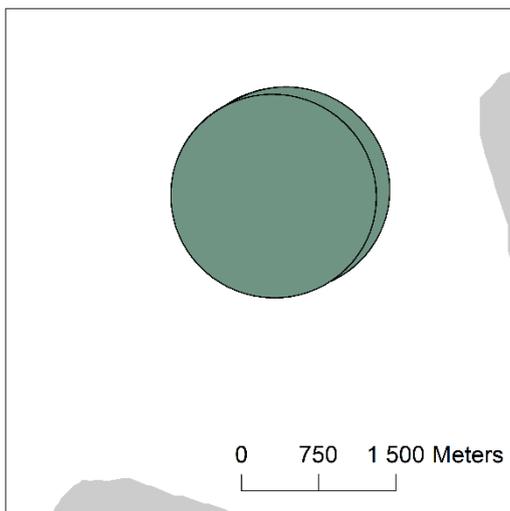


Fig. 2a

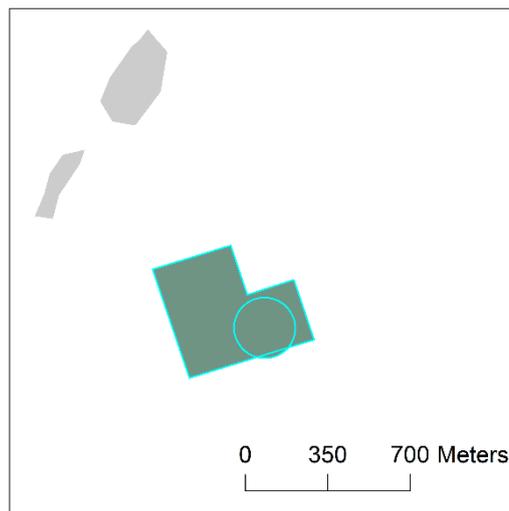


Fig. 2b

### Quality flagging of the data

A quality flag attribute will be added to the data set, for each individual object. The quality flag attribute will be text field which is populated by a fixed list of values which are following:

1. **“Quality assured”**, Data is quality assured either in the annual verification or in a separate quality assurance process by EN DREDS
2. **“No quality assurance”**, Data is not quality assured due to the reason that process has not been carried out
3. **“No Quality assurance possible”**, Data quality assurance process has been made, but it was not possible to find the reference data to verify the parameters

EN DREDS 6-2018 decided to request Contracting parties to provide a brief sentence why the quality assurance was not possible, and this sentence will be added to the metadata to indicate the reason for the absence of the quality check.

#### Attributes

All attributes included in reporting format will be included in the database and will be published, including contaminant load, which has not been published in the past. For the contaminant load, all value units are transferred to tonnes and kilograms according to the unit defined in the reporting format. Attribute type will be changed from string to numeric. Therefore, all non-numeric values and blanks will be transformed to "null", including "EX", "ND" etc. Values reported as zero will be kept as zero.

#### Data on dredging

Data on dredging will be published as a separate data set, as done currently is HELCOM MADS. The attributes in the dredging data will only have the basic info on the activity such type, origin and material. No info on amounts or contaminants will be included. However, as far as possible, each individual dredging activity (feature) will have a reference to the deposit object where the material has been deposited. URL link can be added from dredging feature to the related depositing feature which makes it possible for user to click the link and be directed from dredging feature to the depositing feature extent and attributes in MADS.