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| Document title | Regional status report on exploitation of mineral resources on the sea floor |
| Code | 5-3 |
| Category | CMNT |
| Agenda Item | 5 – Dredging/depositing operations and mining on the sea floor |
| Submission date | 29.9.2016 |
| Submitted by | Secretariat |
| Reference | |

Background

PRESSURE 4-2016 agreed on the need to update HELCOM Status Report on Marine sediment extraction in the Baltic Sea (1999) based on reliable, comprehensive, geo-referenced national data in the frame of HOLAS II. The meeting also agreed to conduct the reporting on marine sediment extraction in the Baltic Sea according to HOLAS II needs and, subsequently, consider the need of regular reporting and revision of HELCOM Recommendation 19/1.

The first online meeting of the nominated experts on dredged material concluded on the need of additional national consultation in order to identify data availability in all the countries. The first expert meeting also discussed the data call (Annex 1) and agreed on the set of data and suggested a reporting timeframe. Secretariat circulated the data request to the Contracting Parties. The expert group also concluded that matters related to exploitation of mineral resources on the sea floor are under responsibility of competent national authorities. The expert group on dredging operations does not have required expertise.

This document contains an extended suggestion on the structure of the status report on exploitation of mineral resources on the sea floor of the Baltic Sea.

Action requested

The Meeting is invited to consider the suggestion on the structure of the status report and agree on its content. The countries are invited to consider an opportunity to lead the work on the Status report. The Meeting is also invited to discuss the use of the information, e.g. for MSFD reporting and HOLAS II assessment.

Regional status report on exploitation of mineral resources on the seafloor in the Baltic Sea

Background

Extraction of mineral resources on the sea floor has been identified as one of the regional human activities that are used to identify the environmental pressures on the Baltic Sea within HOLAS II project (Project for the development of the Second Holistic Assessment of the Ecosystem Health of the Baltic Sea). The last assessment of the extraction of mineral resources on the sea floor in the HELCOM framework was published in the Baltic Sea Environment Proceedings in 1999 (BSEP No. 76) being based on data from year 1997.

PRESSURE 4-2016 agreed on the need to update HELCOM Status Report on Marine sediment extraction in the Baltic Sea (1999) based on reliable, comprehensive, geo-referenced national data and agreed to conduct the reporting on marine sediment extraction in the Baltic Sea according to HOLAS II needs and, subsequently, consider the need of regular reporting and revision of Recommendation 19/1. The document also contains a suggestion for the scope of the assessment. PRESSURE 4-2016 also agreed to establish an expert group to discuss, among the others, a structure of the Status report and data availability.

The online expert meeting, held on 23 May 2016, discussed the availability of the data on the activity on exploitation of mineral resources (including existing constraints on their use) and agreed on the written procedure to provide feedback on the content of the status report by 1 July 2016. The meeting also agreed on the set of data on exploitation of mineral resources on the seafloor to be reported and reporting timeframe.

A draft structure of the Regional status

1. Introduction

2. Legal framework

The chapter provides an overview of the major international and national regulations for exploitation of mineral resources at the sea floor including environmental impact assessment.

The chapter will include a description of the requirements of the international regulations in the field of exploitation of mineral resources on the sea floor, e.g. UN Convention on the Law of the Sea in relation with regulation of exploration for deep sea minerals, subordinated legal acts and following guidelines, environmental impact assessment (Espoo convention) as well as the other regulation including HELCOM requirements. The chapter should contain an overview of the regulation of the mining activities on the seafloor by EU Directives and national legal framework. The description of national legislation should include regulatory acts for prospecting of mineral resources on the seafloor and their accounting; licensing and permitting systems including data reporting, fees and supervision of the activities as well as responsibilities of national authorities; monitoring of the impact of extraction of mineral resources on the environment.

3. Estimation of the mineral resources on the Baltic Sea floor

The chapter should include an overview of the mineral resources potentially available at the seafloor of the Baltic Sea including their location and economic potential of exploitation. The chapter has to identify priority mineral resources in the area of the Baltic Sea convention in comparison to the other regional sea conventions - particularly, North Sea. An evaluation of mineral resources development since the last status report (BSEP No. 76) is to be given as well as an assessment of the future perspectives.

The chapter might be complemented with maps illustrating location of the areas with the assessed resources or potential deposits.

4. Exploitation of the mineral resources in the region

- a. Technologies for mineral resources exploitation which are applied in the area;
- b. Impacts of exploitation of different kinds of mineral resources on the marine environment and the use of different techniques;
- c. Licenses issued for exploitation of mineral resources at the seafloor, their boundaries, duration and other conditions;

- d. Volumes of extracted mineral resources and their temporal variations in the last 15 year since the last assessment was published;
- e. The use of the mineral resources mined at the Baltic Sea floor, particularly, construction material.

5. Conclusions

- a. Magnitude and spatial distribution of recent exploitation of mineral resources and perspectives of its development;
- b. Changes in mineral resources exploitation since the last assessment (BSEP No.76);
- c. Environmental pressure caused by exploitation of mineral resources on the sea floor;
- d. Suggestion on regional actions to mitigate environmental pressure;
- e. Suggestions to update HELCOM agreements or other regional documents related to exploitation of mineral resources in the Baltic Sea floor, e.g. the HELCOM Recommendation 19/1 (reporting format and reporting periodicity).

6. Annexes

- a. Spatial distribution of the activity on mineral resource exploitation in the Baltic Sea (a regional map and local maps);
- b. Spatial distribution of mineral resources on the Baltic Sea floor;
- c. Areas affected by mining activities on the sea floor;
- d. Distribution of environmental pressure caused by extraction of mineral resources on the seafloor;
- e. Tables illustrating the volumes of mineral resources of different kind mined since 1997;
- f. Tables of possible impacts on the marine environment.

Annex 1

Draft data call – spatial data on extraction of sand and gravel

HELCOM Secretariat requests from HELCOM countries spatial data on the distribution of human activities, to be submitted by **30 September 2016** to the Secretariat (jonni.kaitaranta@helcom.fi, leena.laamanen@helcom.fi).

RATIONALE FOR DATA REQUEST

HELCOM Secretariat requests spatial data on human activities with the aim of assessing the distribution of main activities, pressures and impacts in the Baltic Sea, for usage in the Second Holistic Assessment of the ecosystem health of Baltic Sea (HOLAS II) and for other HELCOM purposes. The datasets of human activities will be used e.g. as components in assessing cumulative effects of human activities and pressures by the Baltic Sea Pressure and Impact Indices of HOLAS II.

Following decision was made at [PRESSURE 4-2016](#) meeting:

“4.13. The Meeting agreed on the need to update HELCOM Status Report on Marine sediment extraction in the Baltic Sea (1999), based on reliable, comprehensive, geo-referenced national data and agreed to conduct the reporting on marine sediment extraction in the Baltic Sea according to HOLAS II needs, and, subsequently, consider the need of regular reporting and revision of Recommendation 19/1. Denmark informed that they will inform the Secretariat on the data which are available for this assessment”

Following decision was made at [HOLAS II 5-2015](#) meeting:

“4.29 The Meeting noted that spatial information on extraction of sand and gravel is not regularly collected in HELCOM but could possibly be available nationally for licensed mining activities. An ad hoc data call is proposed to provide input to HOLAS II as well as to support an update of the HELCOM report on marine sediment extraction to be carried out under the Pressure Working Group.”

DATA USE POLICY

The requested national data will be compiled to a Baltic-wide HELCOM dataset.

According to [HELCOM data and information strategy](#), all data collected for HELCOM assessment purposes should be openly accessible. The underlying unrestricted spatial datasets submitted by national data providers will be made publicly available as a HELCOM dataset using [HELCOM Map and Data service](#). For transparency and replicability of the assessment, the underlying data should be openly available and documented with proper metadata on lineage and sources. Each compiled dataset will contain a metadata sheet containing lineage information on national data providers. In case reuse and redistribution of national data has to be restricted according to conditions applied by the data provider, the restrictions should be flagged by the national data provider in both metadata and attribute of spatial object which it applies to.

REQUESTED DATASET: SCOPE AND SPECIFICATIONS

HELCOM Secretariat requests spatial data on mining (referred as extraction of sand and gravel). The temporal coverage of the activity should last from 1.1.2011 until 31.12.2015.

In addition to the spatial location and extent of the activity area, the datasets should be accompanied with completed metadata sheet. The datasets should contain the following attribute information:

Dataset 1: Extraction of sand and gravel activity

Area: Area (km²) of the extraction of sand and gravel activity

Amount: Amount of the extracted material (tons)

Year: Year of activity

Dataset 2: Identified resources

Area: Area (km²) of the sand and gravel resources

Type: Type of mineral resource

Amount: Calculated reserves (tons)

Category: Category of the reserves estimate [economic (A), marginally economic (B), sub-economic (C1 & C2)]

Year: Year of registration

Dataset 3: Issued licenses

Area: Area (km²) of the issued licensed for extraction of sand and gravel

Type: Type of mineral resource.

Amount: Amount of the allowed extraction (tons)

Year_Iss: Year of issuing

Year_Exp: Year of expiring

REQUESTED DATASET: EXTRACTION OF SAND AND GRAVEL

In addition to the **spatial location and extent of the area**, the dataset should have information on variables listed below included:

- **Area:** Area (km²) of the extraction of sand and gravel activity
- **Amount:** Amount of the extracted material (tons)
- **Year:** Year of activity

The dataset should be accompanied with the fulfilled metadata sheet. Please fill in all the metadata description fields.

| Metadata fields | | Content |
|--|---|--|
| Title | Title of the dataset | Extraction of sand and gravel |
| Abstract | Short description of dataset (including e.g. modelling approach, if applicable) | |
| Data provider information | Organisation name | |
| | Contact person name | |
| | Contact person email | |
| Lineage | Lineage (history and/or overall quality of the spatial data set. Where appropriate it may include a statement whether the data set has been validated or quality assured) | |
| Spatial data information | Spatial data format (ESRI shapefile, MapInfo TAB, GML) | |
| | Data type (polygon) | Polygon |
| | Coordinate reference system (EPSG: code) | ETRS89LAEA (EPSG: 3035) |
| | Minimum scale range | 1:5,000 |
| | Maximum scale range | 1:150,000,000 |
| Temporal extent | Start date (DD.MM.YYYY) | 01.01.2011 |
| | End date (DD.MM.YYYY) | 31.12.2015 |
| Access and use | Conditions applying to access and use | Data can be used freely given that the source is cited (following creative commons license CC-BY). The source should be cited as: "Organisation: Name of dataset (Year)". |
| | Limitations on public access (Yes/No/Partly) | No |
| Attribute specification and units | Description of attributes of each spatial object (Attribute name (data type): Description) | Area: Area (km ²) of the extraction of sand and gravel activity Amount: Amount of the extracted material (tons) Year: Year of activity |

REQUESTED DATASET: **IDENTIFIED RESOURCES**

In addition to the **spatial location and extent of the area**, the dataset should have information on variables listed below included:

- **Area:** Area (km²) of the sand and gravel resources
- **Type:** Type of mineral resource
- **Amount:** Calculated reserves (tons)
- **Category:** Category of the reserves estimate (economic, marginally economic, sub-economic)
- **Year:** Year of registration

The dataset should be accompanied with the fulfilled metadata sheet. Please fill in all the metadata description fields.

| Metadata fields | | Content |
|--|---|--|
| Title | Title of the dataset | Identified resources |
| Abstract | Short description of dataset (including e.g. modelling approach, if applicable) | |
| Data provider information | Organisation name | |
| | Contact person name | |
| | Contact person email | |
| Lineage | Lineage (history and/or overall quality of the spatial data set. Where appropriate it may include a statement whether the data set has been validated or quality assured) | |
| Spatial data information | Spatial data format (ESRI shapefile, MapInfo TAB, GML) | |
| | Data type (polygon) | Polygon |
| | Coordinate reference system (EPSG: code) | ETRS89LAEA (EPSG: 3035) |
| | Minimum scale range | 1:5,000 |
| | Maximum scale range | 1:150,000,000 |
| Temporal extent | Start date (DD.MM.YYYY) | 01.01.2011 |
| | End date (DD.MM.YYYY) | 31.12.2015 |
| Access and use | Conditions applying to access and use | Data can be used freely given that the source is cited (following creative commons license CC-BY). The source should be cited as: "Organisation: Name of dataset (Year)". |
| | Limitations on public access (Yes/No/Partly) | No |
| Attribute specification and units | Description of attributes of each spatial object (Attribute name (data type): Description) | Area: Area (km ²) of the sand and gravel resources Type: Type of mineral resource Amount: Calculated reserves (tons) Category: Category of the reserves estimate Year: Year of registration |

REQUESTED DATASET: **ISSUED LICENCES**

In addition to the **spatial location and extent of the area**, the dataset should have information on variables listed below included:

- **Area:** Area (km²) of the issued licensed for extraction of sand and gravel
- **Type:** Type of mineral resource.
- **Amount:** Amount of the allowed extraction (tons)
- **Year_Iss:** Year of issuing
- **Year_Exp:** Year of expiring

The dataset should be accompanied with the fulfilled metadata sheet. Please fill in all the metadata description fields.

| Metadata fields | | Content |
|--|---|---|
| Title | Title of the dataset | Issued licences |
| Abstract | Short description of dataset (including e.g. modelling approach, if applicable) | |
| Data provider information | Organisation name | |
| | Contact person name | |
| | Contact person email | |
| Lineage | Lineage (history and/or overall quality of the spatial data set. Where appropriate it may include a statement whether the data set has been validated or quality assured) | |
| Spatial data information | Spatial data format (ESRI shapefile, MapInfo TAB, GML) | |
| | Data type (polygon) | Polygon |
| | Coordinate reference system (EPSG: code) | ETRS89LAEA (EPSG: 3035) |
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| | End date (DD.MM.YYYY) | 31.12.2015 |
| Access and use | Conditions applying to access and use | Data can be used freely given that the source is cited (following creative commons license CC-BY). The source should be cited as: "Organisation: Name of dataset (Year)". |
| | Limitations on public access (Yes/No/Partly) | No |
| Attribute specification and units | Description of attributes of each spatial object (Attribute name (data type): Description) | Area: Area (km ²) of the issued licensed for extraction of sand and gravel Type: Type of mineral resource Amount: Amount of the allowed extraction (tons) Year_Iss: Year of issuing Year_Exp: Year of expiring |