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Background

EN DREDS 8-2019 (outcome, Agenda item 3) discussed existing practices to monitor depositing sites of dredged material. The Meeting considered how monitoring is reflected in the current Guidelines for Management of Dredged Material at Sea, and related reporting requirements.

The Meeting took note of the different monitoring practices in the countries. Some of the countries include monitoring as a part of depositing permit while others set separate monitoring programmes for depositing site. The Meeting agreed that Contracting Parties will supply information about their national monitoring practices to the Secretariat.

The Meeting also requested the Secretariat to compile the information and propose clarification regarding reporting requirements for monitoring in the HELCOM Guidelines for Management of Dredged Material at Sea.

This document describes how monitoring is reflected in the Guidelines and provides an overview of received information about monitoring practices in Denmark, Germany and Sweden which supplied the information.

Action requested

The Meeting is invited to take note how monitoring is reflected in the Guidelines and conclude whether the environmental monitoring in the Contracting Parties is organized in accordance with the Guidelines and serves for the announced goals.

The Meeting is invited to consider whether further clarifications are needed for the Guidelines.

The Meeting is invited to take note of the available information on monitoring practices in the Contracting Parties and agree on accomplishing of the compilation of information on monitoring practices bearing in mind that this information could be also included in the joint report to the LC/LP.

Monitoring in the Guidelines for Management of Dredged Material at Sea

Monitoring is reflected several times in the Guidelines, as a part of different sections and also as a separate section that covers different aspects of monitoring. The definition of monitoring in the Guidelines is:

"Monitoring in relation to deposit of dredged material is defined as measurements of compliance with permit requirements and of the condition and changes in condition of the receiving area to assess the Impact Hypothesis upon which the issue of a deposit permit was approved."

Monitoring is therefore strongly linked to the permit and further the guidelines describe how the monitoring programme should be designed:

"The Impact Hypothesis forms the basis for defining the monitoring programme. The measurement programme should be designed to ascertain that changes in the receiving environment are within those predicted. In designing a monitoring programme the following questions must be answered:

a) *what testable hypotheses can be derived from the Impact Hypothesis?*
b) *what measurements (e.g. type, location, frequency, performance requirements) are required to test these hypotheses?*
c) *what should be the temporal and spatial scale of measurements?*
d) *how should the data be managed and interpreted?"*

It also states that it is not scientifically or economically reasonable to do monitoring at all sites:

"The effects of dredged material deposit are likely to be similar in many areas, and it would be very difficult to justify (on scientific or economic grounds) monitoring all sites, particularly those receiving small quantities of dredged material. It is therefore more appropriate, and cost effective, to concentrate on detailed investigations at a few carefully chosen sites (e.g. those subject to large inputs of dredged material) to obtain a better understanding of processes and effects."

Regarding reporting it is stated briefly that:

"Contracting Parties should also inform the Secretariat of their monitoring activities and submit reports when they are available."

Monitoring practices in Contracting Parties

EN DREDS 8-2019 agreed that Contracting Parties will supply information about their national monitoring practices to the Secretariat. Answers were received from Denmark, Germany and Sweden. The answers are compiled below. In addition, Sweden submitted a few monitoring reports as examples.

Denmark

Denmark have the following monitoring practices:

- In relation to the application process: When an applicant submits an application for dredging permission, the Danish Environmental Protection Agency (hereinafter referred to as the Agency), can require detailed information concerning the dredging material and dumping site if considered needed. For instance, the agency can require that the depth of the dredging site have to be mapped before the applicant gets its permission. This is to clarify if there is enough capacity on the dredging site for the wished amount of dredged material.
- Permission issued: In dredging permits issued by the Agency, it is required that the permission holder should do the following:
    - The permission holder is required to report the minimum depth on the dredging site after each dredging activity.
    - Comply the minimum depth of the dredging site. This minimum depth is listed in the permission as a term.
    - The permission holder is required to save the vessels logbooks, so the Agency can get a copy of these if required.
- Thereto, the Agency can set a term in the permission, where the permission holder has to do a mapping of the depth at the dredging site after the final dredging activity.
- AIS monitoring: It is required for the permission holder to use a ship with AIS, and report the ship to the Agency latest a week before the wished dredging activity. This makes it possible for the agency to check the ship's ID before the dredging activity, as well as monitor the ship via AIS in GIS, when the dredging activity occurs. In that way, the Agency can check if the permission holder are dredging on the allowed site, and if relevant in the allowed time period, depending on the set of terms in the given permission.

Germany

Information about monitoring practices at deposit sites of dredged material carried out under the responsibility of the German Federal Waterways and Shipping Administration

The German Regulations for the Handling of Dredged Material in Coastal Waterways GÜBAK1 requires investigations into the potential effects of the depositing of dredged material with the view to minimising adverse effects. Based on the assessment of potential effects (Impact Hypothesis) on the environment, the WSA (Wasserstraßen- und Schifffahrtsamt) responsible develops a monitoring programme based on a proposal submitted by the BfG (Federal Institute of Hydrology).

The effects of depositing dredged material are similar in many regards; therefore, it is not necessary to monitor all deposit sites, particularly those, where only small amounts of dredged material were deposited. Detailed investigations should be made only at selected deposit sites.

Some aquatic depositing operations of dredged material are accompanied by comprehensive monitoring programmes. In order to estimate the impacts on marine ecosystems concerned, the monitoring programmes include investigations into chemistry, biology, ecotoxicology and morphology according to the national regulations. Depending on the load of contaminants in the dredged material and the conditions at the selected deposit sites, the monitoring programme as well as the aquatic depositing activities can be adjusted. The extent of the monitoring programme is defined on a case-by-case basis and it takes into consideration the sensitivity of the deposit site and its surroundings, the level of contamination, and finally the findings of monitoring results.

The spatial extent of the area to be examined takes into consideration the size of the planned deposit site and all areas, where dredged material may be unintentionally dumped, as well as possible drift of deposited dredged material. A suitable reference area with similar physical and chemical properties and habitats of the deposit site must be selected to compare possible effects with the unaffected reference area.

In case the dredged material depositing operation has lasted for several years, investigations have to be conducted every 3 to 5 years. Repeated testing is only necessary if change have occurred in the depositing operation (amount and type of the dredged material, placement technique).

The monitoring programmes and the investigations undertaken for the dredging operations help to minimise adverse effects on the marine environment. If for example the results of the biological study at the deposit site show that protected species or benthic communities are subject to considerable impact, this should trigger considerations to shift the deposit site.

It should be kept in mind, that the existing regulations do not take account of the fact, that in most cases the administration/organisation carrying out dredging and depositing for navigational purposes is not responsible for the presence of contaminants in the dredged material.

1 The Dredged Material Guidelines of the London Convention/1996 Protocol, of the OSPAR Convention, and of the Helsinki Convention were implemented in Germany by means of the Joint Transitional Regulations for the Handling of Dredged Material in German Federal Coastal Waterways (“Gemeinsame Übergangsbestimmungen zum Umgang mit Baggergut in den Küstengewässern” GÜBAK) adopted by the Federal Government and the coastal Federal States in 2009. They are applicable to all dredging and aquatic depositing operations conducted by the German Federal Waterways and Shipping Administration (WSV) in the Federal Waterways from the freshwater limit to the outer limit of the territorial sea, in the German Exclusive Economic Zone or on the high seas.

Sweden

Sweden provided some examples of their monitoring reports in Swedish and a summary about their practices:

- In most cases there is no monitoring
- If something is measured, they are usually monitoring suspended substance (mg/ l)/increases in turbidity
- In three cases, they evaluated the effect on the seabed (like topography and secondary impacts to aquatic and benthic organisms' metabolism and mortality) some years after the dumping. It was at larger sites outside Gothenburg (Vinga), Norrköping (Esterön) and Stockholm (Kappelskär).
- One County administrative board (Sweden have 14) also require the actors to measure and take note of wind and current.