

# FORM FOR REPORTING ON DISPOSAL OF DREDGED MATERIAL AT SEA

APPROVED BY HELCOM MONAS 9/2006 (OCTOBER 2006)

Contracting Parties report on the implementation of the Guidelines for Disposal of Dredged Spoils to the Commission, based on reporting requirements developed by the Land-based Pollution Group. The data for this test of reporting form on disposal of dredged material at sea is to be submitted to the Lead country Lithuania and the HELCOM Secretariat by the Contracting Parties by **30 September 2008**. The reporting form consists of the following parts: Part I – General instructions and Part II – Additional information

## PART I – GENERAL INSTRUCTIONS

Contracting Parties should recalculate m<sup>3</sup> to tonnes using conversion factors in table below.

**Conversion factors<sup>1</sup> between cubic metres (wet volume) and tonnes (dry weight) of dredged material that can be used in the absence of analytically determined values**

| Type of dredged material                  | The wet weight in tonnes of 1 cubic metre water-saturated sediment (wet volume) above water surface | The dry weight in tonnes of 1 cubic metre sediment |
|---|---|--|
| mud (containing organic matter)           | 1.2   | 0.3  |
| postglacial clay, consolidated            | 1.5   | 0.6  |
| glacial clay (boulder clay), consolidated | 1.7   | 1.15   |
| silt, soft and muddy                      | 1.3   | 0.5  |
| silt                                      | 1.6   | 1.1  |
| sand                                      | 1.9   | 1.5  |
| gravel/stone                              | 2   | 1.8  |
| till                                      | 2.2   | 2  |
| general (when sediment type is unknown)   | 1.6   | 0.75   |

Missing information should be indicated as follows:

- NA not applicable
- NI no information
- ND not determined
- EX exempted from analyses according to HELCOM dredging guidelines (chapter 5.3)

<sup>1</sup> Cato, I. 1977: Recent sedimentological and geochemical conditions and pollution problems in two marine areas in south-western Sweden. - *Striae* ; 6. Uppsala : Societas Upsaliensis pro geologia quaternaria, 158 p.  
Avén, S., Stål, T. & Wedel, P.O. 1984: *Handboken Bygg. G, Geoteknik*. - Stockholm : Liber, 603 p.  
Federal Waterways Authority, Germany.  
Schneider, 1996: *Bautabellen für Ingenieure*, Werner Verlag.

**Table 1** refers to general information about disposal of dredged material at sea based on permit information, actually disposed amount of dredged material with enforced permit and disposal of dredged material without formal permits. If you have no information or otherwise you are not able to share the licensed amount for each year of permit period, please report the amount only once at the year when the permit has gained the legal power in order to avoid overestimation.

### **Tables 2a and 2b**

Tables 2a and 2b refer to the total amounts disposed at each disposal site at sea at permit level.

In the case where capital and maintenance material is disposed at the same site, data should be entered on separate lines in table 2a.

The following definitions are provided for guidance:

(a) type of areas dredged

Harbour including enclosed and semi-enclosed docks, docks entrances, marinas, wharves and unloading jetties

Sea areas outside harbours i.e. in open, coastal and offshore sea areas

(b) type of dredging operation

Maintenance dredging includes material dredged from recently deposited by sedimentation processes in harbour or sea areas

Capital dredging includes geological material dredged from previously unexposed layers beneath the seabed and surface material from areas not recently dredged.

A given deposit site may be used for material from several dredging sites. The loads are to be calculated for a layer whose depth is representing the depth of dredging. When concentrations are below the quantification limit, the load could be calculated using the half of the quantification limit value as a concentration. There is a possibility to add compounds under "other" into table 2b.

### **Table 3**

Table 3 requires specific reporting on disposal of dredged material at sea, only when the concentration levels of contaminants in the dredged material exceed the (upper) national criteria values. In this case information should be given, e.g. on

- which contaminants exceed the (upper) criteria, average contaminant concentration (indicate if normalized) and the value of the (upper) criteria themselves
- reason for permitting the disposal (i.e. for the classification as option of least detrimental)
- origin of dredged materials includes name of water system and type of area dredged as in table 2b
- "report presented" refers to monitoring activities and positive answer in this column means that report has been presented to the HELCOM Secretariat in accordance with chapter 13 of HELCOM Guidelines for the Disposal of Dredged Material at Sea.

**Table 1 Number of licenses issued\* in [year] for disposal of dredged material at sea, tonnes licensed, and overview of tonnes actually dumped during the same year**

| Licenses issued* [in 200x] - disposal operations started the same year** |                                     | Licenses issued* [in 200x] – disposal operations start later |                                     | Disposal operations [in 200x] regulated by other means, or done illegally*** |                              | Metric tonnes (dry weight) dumped [in 200x] |  |                        |           | Notes |
|--|-------------------------------------|--|-------------------------------------|--|------------------------------|---|--|------------------------|-----------|-------|
| Number of licenses   | Metric tonnes (dry weight) licensed | Number of licenses   | Metric tonnes (dry weight) licensed | Number of regulated operations   | Number of illegal operations | After the permits have gained legal power‡  | Before the permits have gained legal power | Without formal permits | Illegally |       |

\* To be reported for the year when the permit was issued in its final form (i.e. when the permit gained legal power).

\*\* If there is uncertainty about the starting year, please report here, with a remark in the Notes

\*\*\* This alternative can be used

- where no formal permits for the disposal of dredged material are issued, but the disposals are carried out under national regulations which are in accordance with the HELCOM guidelines, and
- for illegal dumping

‡ The license may have been issued in a previous year.

Contracting Parties are requested to indicate the reason for the disposal of dredged material without formal permits.

**Tables Amounts of Dredged Material Disposed of at Sea in [Year]**

**Table 2a Details of deposit sites at sea, dredging methods and disposal methods**

| Deposit site at sea <sup>2</sup> | Permit number <sup>3</sup> | Dredged material                          |                           | Dredging operation type (b) |             | Dredging method <sup>5</sup> (optional) | Disposal method (optional) | Water depth (m) at deposit site | Metric tonnes (dry weight) | Notes (e.g. sediment type <sup>6</sup> ) |
|----------------------------------|----------------------------|---|---------------------------|-----------------------------|-------------|---|----------------------------|---------------------------------|----------------------------|--|
|                                  |                            | Origin: name of water system <sup>4</sup> | Type of areas dredged (a) | Capital                     | Maintenance |   |                            |                                 |                            |  |
|                                  |                            |   | Harbour                   | Sea                         |             |   |                            |                                 |                            |  |
|                                  |                            |   |                           |                             |             |   |                            |                                 |                            |  |
|                                  |                            |   |                           |                             |             |   |                            |                                 |                            |  |
|                                  |                            |   |                           |                             |             |   |                            |                                 |                            |  |

(a) and (b) see definitions in the beginning of part I – General instructions

<sup>2</sup> Give co-ordinates in long/lat

<sup>3</sup> Use national permit codification

<sup>4</sup> Define both the local area (e.g. Helsinki harbour) and sub-area of Baltic Sea (e.g. Gulf of Finland) concerned

<sup>5</sup> Although HELCOM Recommendation strictly only apply for disposal of dredged material, Contracting parties are also encouraged to exercise control over dredging operation with reference to Annex 2 to the HELCOM Convention on Best Environmental Practices (BEP)

<sup>6</sup> See e.g. the Conversion factor table in the beginning of part I – General instructions

**Table 2b Total contaminant loads at deposit sites at sea**

| Deposit site at sea <sup>7</sup> | Permit number <sup>8</sup> | Load - primary list substances (kg) |    |    |    |    |    |    |    |        |        | Load - secondary list substances (kg) |       |       | Notes |
|----------------------------------|----------------------------|-------------------------------------|----|----|----|----|----|----|----|--------|--------|---------------------------------------|-------|-------|-------|
|                                  |                            | Cd                                  | Hg | As | Cr | Cu | Pb | Ni | Zn | ΣPAH9* | ΣPCB7* | TBT*                                  | TPhT* | Other |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |
|                                  |                            |                                     |    |    |    |    |    |    |    |        |        |                                       |       |       |       |

\* Additional information can be found in Part II

<sup>7</sup> Use the same identification system as in table 2a

<sup>8</sup> Use the same permit numbering as in table 2a

**Tables 3 Disposal of dredged material at sea in [year] of material with pollutant concentrations exceeding national criteria for sea disposal**

| Deposit site <sup>9</sup> | Permit number <sup>10</sup> | Metric tonnes (dry weight) disposed | Origin of the dredged material | Contaminant of concern | Average concentration (mg/kg dry weight) | National criteria / upper level (mg/kg dry weight) | Justification for sea disposal | Monitoring and assessment undertaken | Report presented | Notes |
|---------------------------|-----------------------------|-------------------------------------|--------------------------------|------------------------|--|--|--------------------------------|--------------------------------------|------------------|-------|
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |
|                           |                             |                                     |                                |                        |  |  |                                |                                      |                  |       |

<sup>9</sup> Use the same identification system as in table 2a  
<sup>10</sup> Use the same permit numbering as in table 2a

## PART II – ADDITIONAL INFORMATION

Contracting Parties should provide data and information concerning the items below, where a tabular reporting form is inappropriate, in their reports on amounts of dredged material disposed at sea.

Every following year a note should be submitted stating either:

- a. whether the last update of information is still valid for the respective year;
- b. any new information or changes/amendments necessary with respect to the last update

### 1. Deposit Site

Any changes of existing deposit sites (and information on new deposit sites) should be reported here. The closing of existing deposit sites should be notified.

### 2. Method of determination

Please indicate any subsequent change of the methods for the determination (including the grain size fraction analysed for contaminants) reported to the Secretariat/Lead Country.

ΣPCB7 is the sum of the following congeners: CB 28; CB 52; CB 101; CB 118; CB 138; CB 153; and CB 180.

ΣPAH9 is the sum of the following PAHs: anthracene; benzo[a]anthracene; benzo[ghi]perylene; benzo[a]pyrene; chrysene; fluoranthene; indeno[1,2,3-cd]pyrene; pyrene; phenanthrene.

TBT and TPhT concentrations should be expressed as organotin cations ( $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{)}_3\text{Sn}^+$  and  $(\text{C}_6\text{H}_5)_3\text{Sn}^+$ . The degradation products of TBT (DBT and MBT) and the degradation products of TPhT (DPhT and MPhT) can be reported under "other" by adding more columns into the table 2b.

### 3. Toxicity

Where available, submit information on the toxicity of the dredged material (including type of test, test species used).

### 4. Quality Assurance of Analyses of Disposed Material

It is important that Quality Assurance procedures are instituted for the analysis of samples taken of dredged material disposed in the maritime area. Please provide the information indicated on next page on laboratories which have actually done the analysis presented in this report.

### 5. Other relevant information

Submit additional information on, or related to, any other issue of Part I of this reporting form.

Contracting Party:

Year:

Name/Institute of report compiler:

Date of report:

| a. Do the laboratories carrying out the analyses undertake:   | All | None | Some | Notes |
|---|-----|------|------|-------|
| (i) the analysis of blank samples and laboratory reference materials with each batch of samples of dredged material disposed in the maritime area that is analysed by that laboratory;  |     |      |      |       |
| (ii) periodic comparative analysis of laboratory reference materials and certified reference materials;   |     |      |      |       |
| (iii) the compilation of quality control charts based upon the data resulting from the analyses of the laboratory reference materials and certified reference materials, and the use of those quality control charts to monitor analytical performance in relation to all samples of disposed wastes or other materials;  |     |      |      |       |
| (iv) periodic participation in national and, where possible, international laboratory proficiency schemes, under which: <ul style="list-style-type: none"> <li>• participating laboratories are asked to analyse samples of substances which are provided by the organisers of the scheme;</li> <li>• the composition of those samples is not disclosed in advance;</li> <li>• the results of the scheme for each participating laboratory are made available to all participating laboratories.</li> </ul> |     |      |      |       |
| b. Are laboratories accredited for the analytical methods applied for analyses taken of dredged material?   |     |      |      |       |
| c. Is sampling made according to standardised methods and procedures?   |     |      |      |       |

d. If reporting “Some” in the table above, please indicate which parts of the data set are not subject to the full range of QA procedures.

e. Describe any practical action taken to apply the QA procedures described above (e.g. participation in inter-laboratory comparison exercises and international QA/QC schemes).

f. Are any special difficulties encountered in applying Quality Assurance procedures<sup>11</sup>?

<sup>11</sup> The following publications provide useful guidance which may be taken into account in applying Quality Assurance procedures:

ISO Guide 43: Development and Operation of Laboratory Proficiency Testing, 1984.

ISO 9001: Quality Systems – Model for Quality Assurance in Design/Development, Production, Installation and Servicing, 1987.

EN ISO/IEC 17025: General Requirements for the Competence of Testing and Calibration Laboratories, 2000.

ISO 5725 (Parts 2 and 4): Accuracy (Trueness and Precision) of Measurements Methods, 1994.

EURACHEM: Qualifying Uncertainty in Analytical Measurement (ISBN0-948926-08-2), 1995.