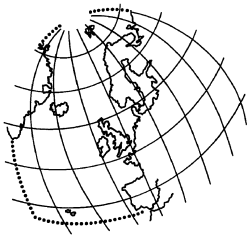
Biodiversity Series

Dumping of Wastes at Sea in 2005

(with corrected UK data at Table 3b)

and Assessment of the Annual Reports 2003-2005



OSPAR Commission

2007

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention") was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. It has been ratified by Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland and the United Kingdom and approved by the European Community and Spain.

La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998. La Convention a été ratifiée par l'Allemagne, la Belgique, le Danemark, la Finlande, la France, l'Irlande, l'Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d'Irlande du Nord, la Suède et la Suisse et approuvée par la Communauté européenne et l'Espagne.

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Annual OSPAR Report on Dumping of Wastes at Sea in 2005

Contents

Assessment of the Annual OSPAR Reports on Dumping of Wastes at Sea in 2003-2005

Executive Summary

The assessments of the OSPAR Reports on Dumping of Wastes at Sea aim to identify issues of concern and trends related to reported amounts of dredged material dumped and the associated contaminant loads.

All Contracting Parties provided data on amounts of wastes dumped at sea for 2003, 2004 and 2005.

Examination of trends in the amounts dumped and in the associated contaminant loads has been difficult mainly due to the incompleteness of the data, especially with regard to data on contaminant loads. The methods of analysis of trace metals differ, resulting in lack of comparability of the data and in uncertainties about the total load of trace metals. As regards organic contaminants, the methods of analysis should have given comparable results, had the data been more complete.

Since 1998, when dumping of sewage was prohibited, more than 99% of the overall amount licensed for disposal at sea refers to dredged material. Dumping of vessels or aircrafts was phased out in 2004. Disposal of fish waste and inert material is allowed, but no fish waste was dumped at sea in 2003-2005. Disposal of inert material, such as rock and mining wastes, decreased significantly from several million tonnes per year in the early nineties to about 700 000 tonnes nowadays.

A slight increase in the total amount of dredged material disposed of at sea can be observed from 1990 (approximately 80-100 million tonnes dry weight) to 2005 (approximately 120 million tonnes dry weight).

As the amounts of material to be dredged are strongly influenced by natural conditions, dumping strategies, sediment disposal criteria and episodic capital dredging activities, future trends in the amounts dumped are difficult to predict. For most Contracting Parties the bulk of dredged material originated from maintenance dredging. Since 1995 the total quantities of dredged material from estuaries and sea channels exceed those from harbours, but the distribution is quite different for Contracting Parties.

An increase in trace metal loads from 1995-2002 was observed for total dredged material load. Although quantities of dredged material disposed of were higher in 2003-2005, total loads of most metals decreased compared to 1995-2002.

For organic contaminants no proper assessment could be carried out as, both in 2003-2005 and previous years, only little information on these contaminants was available from the Contracting Parties.

It should be kept in mind that total contaminant loads reported to OSPAR are considered to be much higher than the actual inputs to the OSPAR maritime area. At present there is no approach available for deriving actual contaminant inputs from dredged material disposal operations to the sea.

Récapitulatif

Les évaluations des rapports OSPAR sur l'immersion des déchets en mer ont pour objectif de déterminer les questions préoccupantes et les tendances relatives aux quantités de matériaux de dragage immergés notifiées et aux charges de contaminants correspondantes.

Toutes les Parties contractantes ont communiqué des données sur les quantités de déchets immergés en mer pour 2003, 2004 et 2005.

Il s'est avéré difficile d'étudier les tendances des quantités immergées et des charges de contaminants correspondantes essentiellement dans la mesure où les données sont incomplètes, en particulier en ce qui concerne les charges de contaminants. Les méthodes d'analyse des métaux traces varient, ce qui rend la comparaison des données impossible et la charge totale des métaux traces incertaine. En ce qui concerne les contaminants organiques, les méthodes d'analyse auraient pu produire des résultats comparables si les données étaient plus complètes.

Depuis 1998, lorsque l'immersion des eaux usées a été interdite, plus de 99% de la quantité totale des immersions permises en mer concernent les matériaux de dragage. L'immersion des navires et des aéronefs a cessé en 2004. L'élimination des déchets de poisson et de la matière inerte est permise mais aucun déchet de poisson n'a été immergé en mer entre 2003 et 2004. L'élimination de la matière inerte, telle que la roche et les déchets de minage, a diminué considérablement. Elle est passée de plusieurs millions de tonnes par an au début des années 90 à 700 000 tonnes par an à l'heure actuelle.

On observe une légère augmentation de la quantité totale des matériaux de dragage immergés en mer entre 1990 (approximativement 80 à 100 millions de tonnes de poids sec) et 2005 (approximativement 120 millions de tonnes de poids sec).

Il est difficile de prévoir les tendances futures des quantités de matériaux à immerger car celles-ci dépendent grandement des conditions naturelles, des stratégies d'immersion, des critères d'élimination des sédiments et des activités de dragage principales épisodiques. Pour la plupart des Parties contractantes, la majorité des matériaux de dragage provient du dragage d'entretien. On relève depuis 1995 des quantités totales de matériaux de dragage provenant des estuaires et des bras de mer supérieures à celles provenant des ports mais la distribution varie d'une Partie contractante à l'autre.

On observe une augmentation des charges de métaux traces de 1995 à 2002 pour la charge totale de matériaux de dragage. Bien que les quantités de matériaux de dragage immergées soient supérieures de 2003 à 2005, les charges totales de la plupart des métaux ont diminué par rapport à 1995-2002.

En ce qui concerne les contaminants organiques, il n'a pas été possible de réaliser une véritable évaluation car les Parties contractantes n'ont communiqué que peu d'informations, aussi bien en 2003-2005 que les années antérieures.

Il convient de tenir compte du fait que l'on considère les charges totales de contaminants notifiées à OSPAR beaucoup plus élevées que les apports actuels dans la zone maritime OSPAR. On ne dispose pas actuellement d'une approche permettant de dériver les apports réels de contaminants provenant des opérations d'immersion des matériaux de dragage en mer.

Introduction

Assessments of the OSPAR Reports on Dumping of Wastes at Sea should aim at identifying issues of concern related to data and information reported by Contracting Parties. They also should examine whether requirements of the OSPAR Guidelines for the Management of Dredged Materials (OSPAR agreement reference number 2004-08) and of the reporting formats (OSPAR agreement reference number 1996-1 (now superseded) and 2002/1) are fulfilled. Furthermore, the assessment should examine, whether trends of the amounts of dredged material dumped and the associated contaminant loads can be established. Initially, the assessments were also intended to provide reliable data on contaminant inputs through dredged material to the OSPAR maritime area, however it was recognised that contaminant loads reported are much larger than the actual inputs.

All Contracting Parties provided data on amounts of wastes dumped at sea for 2003, 2004 and 2005.

Information provided on contaminant loads often was not complete. In 2003, 2004 and 2005, 5 Contracting Parties provided complete data sets for trace metals, however not 1 complete data set was received for organic contaminants in all three years. 7 Contracting Parties, respectively submitted organic contaminant loads only for some of the disposal sites or some of the contaminants in 2003-2005. However, Technical Annex I of the OSPAR Guidelines for the Management of Dredged Material does not require organic substances to be analysed in all circumstances. Thus, complete data sets for these substances should not be expected.

In 2003, 2004 and 2005 several Contracting Parties provided additional (updated) information requested in the reporting format. However, additional information on analytical methods was already available from the replies to the Questionnaire on Methods of Analysis of Sediments (SEABED 02/2/6). For trace metals analyses, on the one hand, different methods are used, which may result in systematic differences of measured concentrations in case total (coarse-grained) samples are analysed, and on the other hand, total samples or fine fractions are analysed. This may result in a lack of comparability for trace metal data provided by different Contracting Parties, and consequently in a large uncertainty of total trace metal loads. In principle, methods applied for organic contaminants and organotin compounds should give comparable results, [However, different sediment size fractions analysed will affect the data for these substances as well.] however the reported differences in detection limits may influence the estimation of loads, as often concentrations of organic contaminants below detection limits are reported. It is assumed that other factors, such as the amounts of dredged material disposed of, had a greater impact on the contaminant loads than the methods of analysis. However, care should be taken in drawing conclusions from small changes in the data.

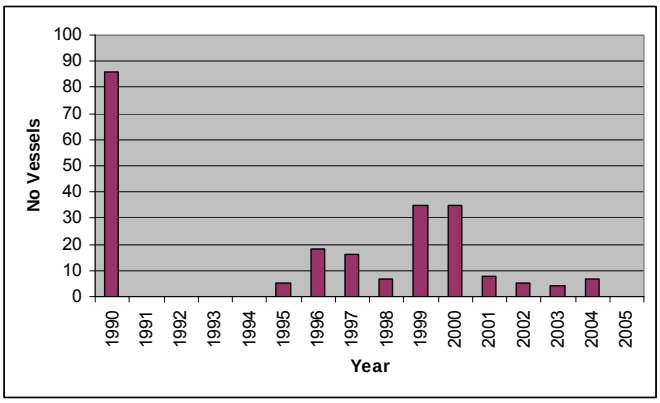
In order to assess the effectiveness of measures to reduce the quantities of dredged material as well as the associated contamination, it might be worth examining trends in the amounts dumped and contaminant loads over a period of several years. At present, only the amounts dumped from 1995 - 2005 are comparable and can be examined, as the reporting requirements changed from wet weight of dredged material to dry weight only in 1995. As mentioned above, it may be even more difficult to establish trends in contaminant loads of dredged material mainly due to incomplete data sets and to a smaller extent due to a lack of comparability of data provided by different Contracting Parties.

Permits

Table I of this report summarises the numbers of permits issued and the tonnes licensed for the different types of wastes dumped. The amounts actually disposed of are summarised in Table II and Table III. Although still several types of wastes are dumped, most of the permits were issued for dredged material, as in previous years: about 95% of the permits and more than 99 % of the overall amount licensed for disposal at sea refer to dredged material. Disposal of 39 000 t of inert material consisting of fine sand and clay, was permitted by Portugal in 2003 and disposal of 539 500 t of inert material was permitted by Portugal 2004. Norway permitted disposal of 723 503 t of inert material in 2003, 120 000 t of inert material in 2004 and 875 237 t of inert material in 2005.

The number of vessels licensed for disposal by Norway was lower than in previous years: 1 and 3 licenses were issued in 2003 and 2004, whereas in previous years 33 vessels (1999/2000) and 4 vessels (2001/2002) were dumped. Portugal permitted 3 vessels to be disposed of at sea in 2003 and permitted 3 vessels to be disposed of in 2004. In 2004, Sweden permitted 1 vessel to be disposed of at sea and 71 000 m3 of inert material.

Although several types of wastes are still dumped, since 1998 more than 99% of the overall amount licensed for disposal at sea refer to dredged material. Disposal of vessels which was phased out in 2004, decreased as indicated in Figure 1.



One might expect that the phasing out in 2004 did not pose problems to Contracting Parties. The sea disposal of industrial wastes and sewage sludge stopped on schedule by the end of 1995 and 1998, respectively. Disposal of sewage sludge by the UK and Ireland already decreased from 628 000 t in 1995 to about 210 000 t in 1998 in total within the OSPAR area. From 1999 onwards no sewage sludge was disposed of anymore.

Figure 1: Total No. of Vessels disposed of from 1995 to 2005

Disposal of fish waste and inert material still continue. Disposal of fish waste amounted to less than 1000 tonnes/year except in 1992 and 1993. In 1997 and 1998, a total of about 441 t and 404 t of fish waste were permitted for sea disposal by Norway and UK. In 1999 and in 2000, a total of about 110 t fish waste each year was permitted for sea disposal by UK, and a total of about 242 t fish waste was disposed of by the UK, Ireland, and Norway in 2000. In 2001, the United Kingdom permitted 350 t of fish waste and in 2002, the United Kingdom and Ireland permitted 360 t of fish waste to be disposed of at sea. In 2003, 2004 and 2005 no fish waste was dumped at sea.

Disposal of inert material, including e.g. rock, colliery, mining wastes, decreased significantly from several million tonnes per annum in the early nineties to a few 100 000 tonnes in the mid/late nineties. In 1999 however 576 000 tonnes were dumped, going down to 261 000 tonnes in 2000, increasing again in 2001 to +/-700 000 tonnes, going down again to +/- 350 000 tonnes in 2002, increasing again in 2003 to +/- 750 000 tonnes, 660 000 tonnes in 2004 and 860 000 tonnes in 2005. The amounts of bulky wastes (for example steel wire and concrete) and fish waste disposed of at sea are comparatively small. Quantities of bulky wastes disposed of varied from less than 100 tonnes in most years to more than 1000 tonnes in 1991 and 1997 to zero from 2001 onwards.

As in previous years, a comparison of the permits and the amounts of dredged material licensed in 2003-2005 reflect the different licensing procedures of the Contracting Parties (Table 1 of this assessment). Some Contracting Parties issue few permits for large amounts of dredged material, e.g. Belgium and the Netherlands with 5 permits for more than 10 Million t of dredged material, and on the other extreme, Norway issued more than 50 permits for about 700 000 t. In other Contracting Parties, a general permit (Iceland) or 2-yearly permits in Belgium or no formal permits are issued (Germany) or reported (Spain).

Specific reporting on dumping permits

Norway and Portugal specifically reported on permits for the disposal of vessels in 2003 and Norway, Sweden and Portugal reported on permits for the disposal of vessels in 2004.

In 2003, only Germany and France specifically reported on permits for dumping dredged material. In 2003, France allowed disposal of dredged material with Cu, Pb, PCB52-101-118-138-153-180 contaminant concentrations exceeding level 2 of 90 mg/kg, 200 mg/kg, 50 µg/kg, 100 µg/kg, 50 µg/kg, 100 µg/kg, 100 µg/kg and 50 µg/kg. There was no reason given for this exceptional allowance.

In 2004, France, Spain and Sweden specifically reported on permits for dumping dredged material. In 2004, France allowed disposal of dredged material with Hg, Cu, Cd contaminant concentrations exceeding level 2 of 0,8 mg/kg, 90 mg/kg and 2 mg/kg. In 2004, Spain allowed disposal of dredged material with Hg, Cd, Pb, As contaminant concentrations exceeding level 2. In 2004, Sweden allowed disposal of dredged material with higher TBT and Zn contaminant concentrations, but none of these permits issued in 2004 did result in dumping during the same year.

In 2003 and 2005, Germany allowed disposal of dredged material with HCB contaminant concentrations exceeding level 2 of 6 µg/kg, with p,p‘-DDE concentrations exceeding level 2 of 3 µg/kg, and in 2005 additionally p,p-DDD contaminant concentrations exceeding level 2 of 10 µg/kg, α-HCH concentrations exceeding level 2 of 1 µg/kg, and γ-HCH concentrations exceeding level 2 of 0,6 µg/kg, and p,p-DDT concentrations exceeding level 2 of 3 µg/kg in order to maintain navigation and safety. Disposal was allowed as no contaminants were added to the system, and sediments were dredged and relocated within the same water body. Due to hydrological conditions, mixing of particulate matter between dredging and disposal areas is intensive, and therefore the same material has to be dredged and disposed of repeatedly. The concentrations of HCB, pp-DDD and pp-DDE in the dredged material and in suspended particulate matter of the Elbe are very similar. There is no local source for these contaminants in the dredging area, however they originate from the upper reaches of the Elbe. The average concentrations in the fine fraction <20 µm of dredged material of the Elbe estuary are: HCB: 6,3 µg/kg; p,p’-DDE: 3,8 µg/kg; p,p’-DDD: 11,6 µg/kg. In addition, in 2005 other parameters exceeded level 2 concentrations because of the maintenance of the Hamburg Seaport, which requires continuous dredging of the access channels to harbour basins. According to the open water disposal concept for dredged material of the state authorities of the City of Hamburg, relocation within the city limits (not OSPAR area) is only possible during the winter season in order to reduce effects on the water quality (e.g. oxygen depletion) and the ecosystem. About 1 Mio m3/a of contaminated dredged material is disposed of on land after treatment of the material. Due to an increase of sediment amounts to be dredged, in summer 2005 open water disposal was necessary in order to maintain access to harbour basins. It is assumed that larger amounts of dredged material disposed of downstream of Hamburg will be transported back to the harbour area especially in the summer season due to low river discharge. Therefore the intention is to remove material from the so called sediment cycle. An expansion of the capacity of the sediment treatment on land is not possible. Thus, in summer 2005, the Federal State Schleswig-Holstein granted a permit including conditions for the disposal of 0,8 Mio m3 of dredged material in 2005 and of further 3,7 Mio m3 from 2006 to 2008 at a sediment disposal site in the Southern German Bight. Subsequently, a long–term sediment management concept has to be established. The selection of the disposal site took into consideration the demands of the OSPAR Dredged Material Guidelines and an impact hypothesis was carried out. Additionally, disposal of dredged material is accompanied by an extensive monitoring program including measurements of sediments, biota, water phase, benthic communities, transport of the sediment plume, and numerical modelling of sediment dispersion. The average concentrations in the fine fraction <20 µm of the dredged material are: α-HCH: 2,4 µg/kg, γ-HCH: 2,9 µg/kg; HCB: 19,5 µg/kg; p,p'-DDT: 4,6 µg/kg; p,p'-DDD: 22 µg/kg; p,p'-DDE: 4,7 µg/kg.

In 2005, the UK permitted 43,935 tonnes dredged material with higher concentrations than Action Level 2 for TBT at disposal site TY081. The material was placed at this site and capped with clean material. This operation was reported to the OSPAR EIHA 2006 meeting in Galway in paper EIH 06/2/8 where additional information may be found.

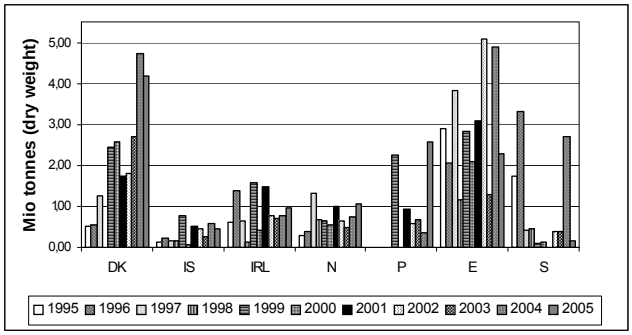
However, it should be kept in mind that at present not all Contracting Parties report on or issue permits. With the adoption of the new reporting format, also operations regulated by other means than licenses should be reported, and possibly, more information will be provided in future. Specific reporting may also be incomplete, since not all Contracting Parties have established national action levels yet.

Amounts of dredged material dumped

As disposal of dredged material may have physical impacts on the marine environment, total amounts of material disposed of are included in the assessment (Tables II, III and IV). As in previous years, about 90 % of the dredged material reported to OSPAR in 2003-2005 was dumped by only 5 Contracting Parties (Belgium, France, Germany, The Netherlands, UK).

The overall amounts of material disposed of at sea vary significantly from approx 80 - 100 Million tonnes (dry weight) in 1990 to 104 Million tonnes (dry weight) in 1998, and 131 Million tonnes (dry weight) in 1999, and about 120 Million tonnes (dry weight) nowadays. A slight increase in the overall amounts can be observed from 1990 till 2005. As the amounts of material to be dredged are strongly influenced by natural conditions, dumping strategies, sediment disposal criteria and episodic capital dredging activities which occasionally contribute huge amounts to the total amount of dredged material disposed of at sea, trends in the amounts dumped are difficult to predict for the future.

Variations in national amounts dumped often are more distinct (Fig. 2 a and b). In the UK, quantities disposed of increased from about 20 million t dredged material from 1995 – 1998 to 32 million t in 1999, and decreased to about 17 million t in 2001-2004, again. This peak in 1999 mainly is caused by one large capital dredging operation with about 17 million t dredged material. Also in Germany, capital dredging in the Elbe estuary caused quantities disposed of to decrease from about 25 million t dredged material in 1999/2000 to about 21 million t in 2001-2005, again. For Belgium, data indicate a slight decrease from about 31 million t in mid nineties to 25 million t in 2003-2005. In France, quantities disposed of decreased from about 29 million t dredged material from 1995/1996 to 20 million t in 1997-2001, and increased to about 38 million t in 2003-2004, and decreased to 27 million t in 2005, again. In the Netherlands, variations of the amount of material dredged possibly are due to various amounts of dredged material from Rotterdam Harbour and fluctuate between 8-14 million t dredged material. Quantities disposed of in Sweden decreased significantly from 1995/1996 to 2003 by about a factor 20, increased again in 2004 till about 3 million t dredged material and decreased again to 200 000 t dredged material in 2005. In Denmark an increase by a factor 9 from 500 000 t dredged material in 1995/1996 to 4,5 million t dredged material in 2004-2005 can be found.



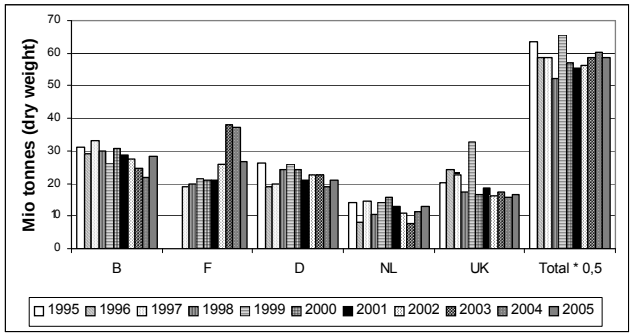
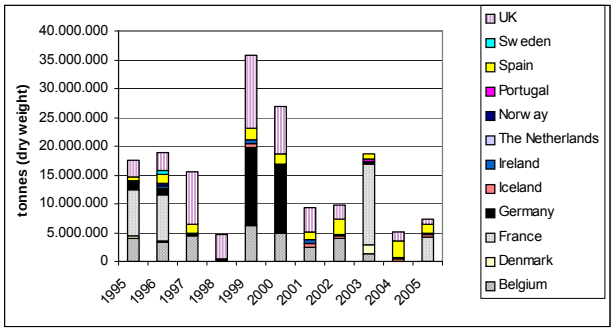


Fig. 2a and 2b: National and total amounts of dredged material disposed of from 1995 to 2005

In order to have one y-axis for all loads, the total amount of dredged material for all Contracting Parties was multiplied by a factor of 0,5.

For most Contracting Parties, the bulk of dredged material originates from maintenance dredging, and amounted to 85% in 1995/1996 till 95% 2001-2005. In 2003-2005, appreciable amounts of material from capital dredging, i.e. more than 10 % of the reported total amounts per CP, were reported by Denmark, France, Iceland, Portugal, Spain and the UK in 2003, in 2004 by Spain, Ireland, United Kingdom and Iceland, and in addition, in 2005 France, Iceland, Ireland, Spain, Sweden and the UK. In Iceland, more than 80% of the material came from capital dredging, whereas in Belgium, Germany, the Netherlands and Norway no or only very small amounts originate from capital dredging. For the UK, the proportion of capital dredging is on average 20% over the period 1995-2005. In 1999, appreciable amounts of material from capital dredging, i.e. more than 40 % of the reported total amounts per CP, were reported by the UK. The amounts of

capital dredged material show a peak in the years 1999/2000 caused by high amounts of capital dredged material from Belgium, Germany, Spain and the UK (see Figure 3a and 3b). In 1999/2000 the proportion of capital dredged material is about 25%, whereas in the other years it amounts to about 10-15%.



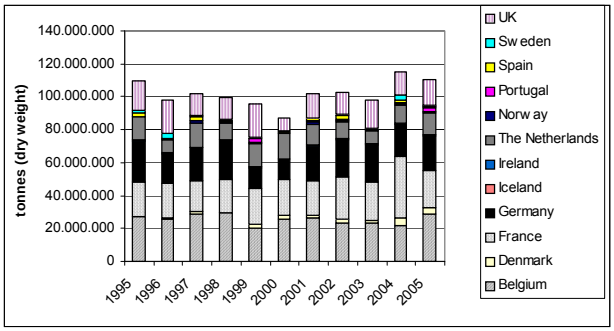


Fig. 3a and 3b: Capital and maintenance amounts of dredged material disposed of from 1995 to 2005

In addition, a separate evaluation of the amounts dredged in harbours on the one hand and in estuaries/sea channels on the other hand is carried out (cf. Tables V, VI and VII). Contracting Parties often indicated more than one type of area dredged per dumping operation, but usually the reports did not include information on the percentages of dredged material associated with the respective types. When both, harbours and estuaries/sea channels, are indicated as origin of the dredged material without the respective percentages, usually 50 % were attributed to harbours and 50% to estuaries/sea channels. These amounts assigned to harbours and to estuaries/sea channels have large uncertainties.

Similarly as from 1995 to 2002 the quantities of dredged material from estuaries or sea exceeded those from harbours in 2003-2005, and the ratio of material from harbours to that from estuaries/channels ranged from 37-51% of the total dredged material (cf. Table VIII). However, in the period 2002-2004, the quantities of dredged material from harbours temporarily increased to about 46-51% of the total dredged material and more comparable to years before 1994, the relative amount of dredged material from estuaries/sea channels decreased.

Although the total quantities of dredgings summed for all Contracting Parties from estuaries/sea channels exceeded those of harbours, the distribution is quite different for Contracting Parties. The bulk of dredged material in Belgium, Denmark and Germany originates from estuaries and sea channels, whereas Iceland, The Netherlands and Norway generally, only reported on dredged material from harbours. This distribution was quite constant over the last 10 years. For most of the other Contracting Parties, larger or comparable amounts of material came from harbours than from estuaries/sea channels. In 2003-2005 for most Contracting Parties the ratios of dredged material from harbours to that of estuaries/sea channels were similar as in previous years. However, in Germany this ratio decreased significantly from about 16 in 1995-2000 to 1,5 in 2001-2005. This may be due to differences in classifying harbour and estuarine dredgings.

As already observed in previous years, the number of dumping sites compared to the amounts dumped varies significantly between Contracting Parties (cf. Table I). Belgium, Germany and the Netherlands disposed of large quantities of dredged material per disposal site e.g. in 2004: 16, 19 and 8 dumping sites for about 22 Mt, 19 Mt and 11 Mt of dredged material, respectively. In comparison, in 2005, Iceland and Norway disposed of about 0,5 Mt and 1,0 Mt dredged material at 9 and 69 dumping sites, respectively. This indicates that some of the dumping sites receive much higher amounts of dredged material than others. However, the dumping reports do not include information on the sizes of disposal sites that may differ significantly. Consideration should be given to evaluating how the impacts on the seabed vary depending on the intensity of dredged material disposal at dumping sites (i.e. amount per unit area). This information might be available from reports on monitoring dumping sites.

Total contaminant loads

In 2003, 7 Contracting Parties provided complete data sets on trace metal loads for all dumping sites, and 2 further Contracting Parties submitted data only for some of the dumping sites. Only a few or no data were available from Norway and Denmark. In 2004, 6 Contracting Parties provided complete data sets on trace metal loads, and 4 further Contracting Parties submitted data only for some of the dumping sites. In 2005, 7 Contracting Parties provided complete data sets on trace metal loads, and 3 further Contracting Parties submitted data only for some of the dumping sites. In 2003, Portugal and Sweden and in 2004 and 2005 Portugal did not report data on trace metal loads. Norway generally submitted data only for some of the dumping sites as well as only for a few trace metals. In Iceland, contaminant concentrations in dredged material are within the range observed in unpolluted sediments in the relevant region and exempted from analysis for the complete period 2003-2005. For most dumping sites without data for contaminant loads, there was no information whether the dredged material was exempted from analyses according to the OSPAR Dredged Material Guidelines or whether required data were not reported. This information would support data assessment, as contaminant loads of material exempted from analyses are negligible in contrast to contaminant loads of material that might be contaminated to varying degrees.

Nevertheless, trace metal data are considered to be sufficient for an assessment. However, it should be kept in mind that due to incomplete reporting and to differences in the analytical approaches, as mentioned in the Introduction, comparison of national total trace metal loads between Contracting Parties might be associated with large uncertainty. Therefore, the overall total trace metal load for all Contracting Parties can be only regarded as rough estimate, to have an indication of the order of magnitude of loads.

For organic contaminants and TBT, no proper assessment can be carried out, as both, in 2003-2005 and previous years, only little information on these contaminants is available from the Contracting Parties. Contracting Parties often only reported on few organic contaminants and/or on selected dumping sites. The Dredged Material Guidelines, which introduced the requirement of analyses of organic contaminants, came into force only in June 1998. However, Technical Annex I of the OSPAR Guidelines for the Management of Dredged Material does not require organic substances to be analysed in all circumstances. Thus, complete data sets for these substances should not be expected.

National total contaminant loads associated with dredged material are summarised in Tables II, III and IV. Loads, which could not be estimated reliably due to a lack of data are identified with brackets and italic letters.

Trace metal loads

For most Contracting Parties, national trace metal loads reported for 2003 - 2005 are quite similar.

Comparison between the current data from 2003-2005 with national loads reported for previous assessments showed a few considerable differences:

- In Belgium, reported trace metal loads are comparable to those reported in previous assessments, except for the reported Cd and Hg loads in 2003, which show a sharp increase at one particular deposit site. From 1995-2005, total trace metal loads from Belgium showed a slight decrease over the period 1995-2005, except for As, Cr and Cu.
- In France, reported trace metal loads are comparable to those reported in previous assessments. From 1995-2005, total trace metal loads from France showed a slight increase over the period 1995-2005.
- In Germany, trace metal loads reported for 2003-2005 are comparable to those reported in previous assessments. From 1995-2005, total trace metal loads from Germany showed a slight decrease over the period 1995-2005.

- In The Netherlands, the trace metal loads reported for 2003-2005 are comparable to those reported in previous assessments. The total trace metal loads from the Netherlands over the period 1995-2005 do not show a distinctive decreasing or **increasing trends; which was also** confirmed by the analysis of the contaminant concentrations from Rotterdam Harbour over the period 1980-2006.
- In the UK, reported trace metal loads are comparable to those reported in previous assessments. From 1995 to 2005, a small or no further decrease in trace metal loads (Cd, Cr, Hg and Zn) from the UK was discernible, and a slight increase in As and Pb loads can be observed from data.

A comparison of the sums of the national total loads from 1995 to 2005 shows some variability, both for the total loads, and for specific total loads, i.e. total loads per e.g. 1 million tonnes, too (Fig. 3a). An increase in trace metal loads from 1995-2002 is observed for total dredged material load. From 2002-2005, a decrease in trace metal loads is observed for total dredged material loads. Although quantities of dredged material disposed of are higher in 2003-2005, total loads of most metals decreased compared to 1995-2002, except for Cd loads in 2003, which show a steep increase. This is caused by the high Cd load at one particular deposit site in Belgium in 2003. The high Cu and Zn loads in 2002 are caused by increased loads from France and Portugal. This also applies to the specific loads, where the individual trace metals behave differently. The specific loads do not show distinctive decreasing or increasing trends, from 1995-2005, except for As and Pb, a slight increase in specific loads can be observed from the data.

Data from other Contracting Parties are not considered to be sufficient for deriving a discernible trend in trace metal loads, especially having in mind that contaminant loads reported often were incomplete and are associated with large uncertainties.

Contaminant loads from harbour dredgings

As total contaminant loads may be influenced strongly by varying amounts of dredged material from areas with a different degree of contamination, trends probably can be established only if long time series are available. In addition, trends in total contaminant loads of dredged material are not regarded as appropriate means to assess the effectiveness of measures for the reduction of contaminant inputs, as these loads include natural background contamination and may count in and even more than once those quantities that have been merely relocated and do not constitute new input. In estuaries and sea channels, sediments often return from disposal sites to dredging sites continually due to natural currents. A trend assessment should focus on the new contaminant input, however, there is no agreed approach for its estimation available yet.

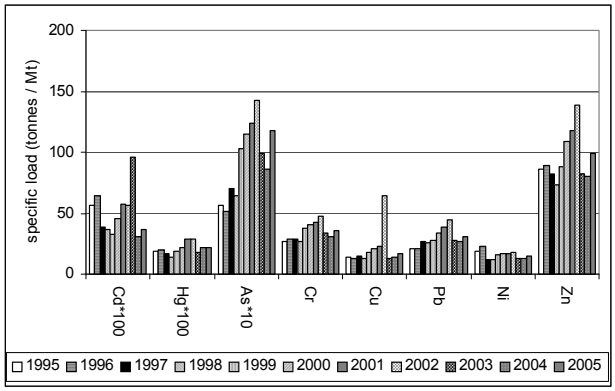
In order to reduce variability due to the repeated relocation of large amounts of dredged material and the associated contaminants within estuaries and sea channels, and to make the identification of a potential trend more likely, contaminant loads from harbours and from estuaries and sea channels are assessed separately. However, as mentioned earlier, often both, dredged material from harbours as well as from estuaries and sea channels are disposed of at same disposal sites, and as the respective percentages usually are not indicated, 50 % each, are attributed to harbours and to estuaries/sea channels, as an estimate. This rough estimate may add to the uncertainty of the assessment of contaminant loads from harbours significantly.

Furthermore, it is assumed, that usually dredged material relocated in estuaries and sea channels repeatedly, only contribute to a minor extent to the new contaminant input compared to dredged material from harbours. However, it is recognised, that this approach is associated with large uncertainties. For example, some industrialised estuaries may need to be considered in the same category as harbour dredgings as they may contribute to new contaminant inputs.

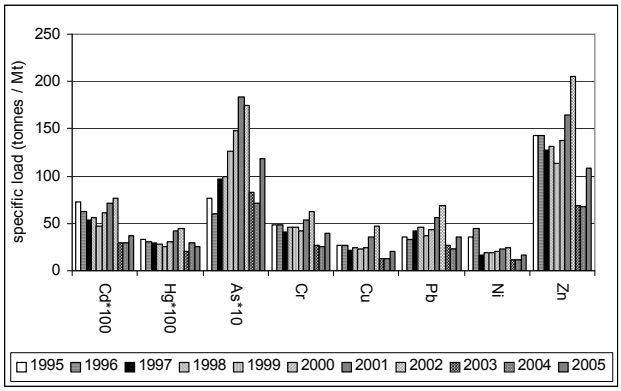
Tables V, VI and VII give the contaminant loads separately for harbours (Tables Va, VI a and VII a) and for estuaries and sea channels (Tables V b, VI b and VII b).

In Fig. 4, specific loads (i.e. tonnes of a trace metal / million tonnes of dredged material) from harbour dredgings (Fig. 4b) since 1995 are compared with specific total loads (Fig. 4a). Patterns of loads from harbour dredgings and total loads are similar. A slight increase in trace metal loads from 1995-2002 is observed for all dredged material sources and for harbour dredgings. From 2003-2005, a slight decrease in trace metal loads, except for As, is observed for all dredged material sources and for harbour dredgings.

In 2003-2005, the mean percentage of trace metal loads in dredged material from harbours amounts to about 43 % of the reported total trace metal loads. The percentage is very similar for all trace metals in 2003-2005, and except for Cd in 2003. The Hg loads in dredged material from harbours amount to about 60% of reported total trace metal loads. However, trace metal loads from estuaries/sea channels are contained in approximately double the volume of dredged material from harbours. The mean percentage of trace metal Cr, Cu, Ni, Zn loads in dredged material from harbours decreased from 70% in mid-nineties to about 40-50% nowadays of the reported total trace metal loads.



(a) All dredged material sources



(b) harbour only

Fig. 4a and 4b: Specific total trace metal loads and specific loads of trace metals from harbour dredgings in 1995 to 2005

In order to have one y-axis for all trace metals, loads of Cd and Hg were multiplied by a factor of 100, and the As load was multiplied by a factor of ten for presentation in Fig. 4.

It should be kept in mind that total contaminant loads reported to OSPAR are much higher than the actual inputs to the OSPAR maritime area, as

- loads of naturally-occuring contaminants include a substantial proportion derived from the background content of the contaminants in the mineral matrices,
- sediments to a significant extent recirculate between dredging and disposal site, and
- the bulk of dredged material disposed of will not add new contaminants from anthropogenic sources to the sea, provided all input paths, such as direct discharge, riverine and atmospheric inputs or diffuse sources are taken into account.

At present, there is no approach available for deriving actual contaminant inputs from dredged material disposal operations to the sea.

Conclusions

There are still small amounts of several wastes other than dredged material disposed of at sea. Although several types of wastes are still dumped, since 1998 more than 99% of the overall amount licensed for disposal at sea refers to dredged material. The sea disposal of industrial wastes and sewage sludge stopped on schedule by the end of 1995 and 1998, respectively. Disposal of vessels, which was phased out in 2004, decreased from 86 in 1990 to 0 in 2005. Disposal of inert material, including e.g. rock, colliery, mining wastes, decreased significantly from several million tonnes per annum in the early nineties to about 700 000 tonnes nowadays. Quantities of bulky wastes disposed of varied from less than 100 tonnes in most years to more than 1000 tonnes in 1991 and 1997 to zero from 2001 onwards.

Disposal sites receive significantly different amounts of dredged material across the OSPAR area. Belgium, Germany and the Netherlands disposed of much large quantities of dredged material per disposal site e.g. in 2004: 16, 19 and 8 dumping sites for about 22 Mt, 19 Mt and 11 Mt of dredged material. In comparison, in 2005, Iceland and Norway disposed of about 0,5 Mt and 1,0 Mt dredged material at 9 and 69 dumping sites, respectively. This indicates that some of the dumping sites receive much higher amounts of dredged material than others. Consideration should be given to evaluating how the impacts on the seabed vary depending on the intensity of dredged material disposal at dumping sites (i.e. amount per unit area) on the basis of monitoring reports.

The overall amounts of material disposed of at sea vary significantly from approx 80 - 100 Million tonnes (dry weight) in 1990 to 104 Million tonnes (dry weight) in 1998, and 131 Million tonnes (dry weight) in 1999, and about 120 Million tonnes (dry weight) nowadays. A slight increase in total amounts of dredged material summed for all Contracting Parties could be established from 1990 till 2005. Separate evaluation of amounts for individual Contracting Parties indicated and confirmed some changes. As in previous years, about 90 % of the dredged material reported to OSPAR in 2003-2005 was dumped by only 5 Contracting Parties (Belgium, France, Germany, the Netherlands, the UK). As the amounts of material to be dredged are strongly influenced by natural conditions, dumping strategies, sediment disposal criteria and episodic capital dredging activities, which occasionally contribute huge amounts to the total amount of dredged material disposed of at sea, trends in the amounts dumped are difficult to predict for the future. For most Contracting Parties, the bulk of dredged material originates from maintenance dredging, and amounted to 85% in 1995/1996 till 95% 2001-2005. Similarly as from 1995 to 2002 the quantities of dredged material from estuaries or sea exceeded those from harbours in 2003-2005, and the ratio of material from harbours to that from estuaries/channels ranged from 37-51% of the total dredged material.

A comparison of the sums of the national total loads from 1995 to 2005 shows some variability, both for the total loads, and for specific total loads. An increase in trace metal loads from 1995-2002 is observed for total dredged material load. From 2002-2005, a decrease in trace metal loads is observed for total dredged material loads. Although quantities of dredged material disposed of are higher in 2003-2005, total loads of most metals decreased compared to 1995-2002. From 1995-2005, total trace metal loads from Belgium showed a slight decrease over the period 1995-2005, except for As, Cr and Cu. From 1995-2005, total trace metal loads from France showed a slight increase over the period 1995-2005. From 1995-2004, total trace metal loads from Germany showed a slight decrease over the period 1995-2005. The total trace metal loads from the Netherlands over the period 1995-2005 do not show a distinctive decreasing or increasing trends; which was also confirmed by the analysis of the contaminant concentrations from Rotterdam Harbour over the period 1980-2006. From 1995 to 2005, a small or no further decrease in trace metal loads from the UK was discernible, and even a slight increase in As and Pb loads can be observed from data.

For a reliable trend assessment it would be preferable to perform a separate assessment on the one hand for the amounts of dredged material from harbours and of dredged material from estuaries / sea channels, and on the other hand for maintenance and capital dredgings.

Patterns of loads from harbour dredgings and total loads are similar. A slight increase in trace metal loads from 1995-2002 is observed for all dredged material sources and for harbour dredgings. From 2003-2005, a slight decrease in trace metal loads, except for As, is observed for all dredged material sources and for harbour dredgings. The mean percentage of trace metal Cr, Cu, Ni, Zn loads in dredged material from harbours decreased from 70% in mid-nineties to about 40-50% nowadays of the reported total trace metal loads. Trends in other contaminants than trace metals could not be established for total loads or for loads from harbour dredgings. At present, not all data are considered to be sufficient for deriving a trend of total contaminant loads, especially having in mind that contaminant loads often are reported incompletely, and that they are associated with large uncertainties. Particularly for organic contaminants and TBT, there is a lack of information.

Furthermore, trend assessment of total contaminant loads are not regarded as appropriate means to evaluate the effectiveness of measures for the reduction of contaminant inputs due to the disposal of dredged material at sea. Instead, trend assessment of contaminant concentrations in

dredged material from selected areas proved to be a more effective tool for this purpose, as demonstrated in the overall assessment from the mid-1980's to 2001 in the OSPAR area (BDC 03/7/2). In this overall assessment, data from Belgium, the UK, the Elbe Estuary and Rotterdam Harbour demonstrated that there was a rapid decline for Mercury (Hg) and Cadmium (Cd) concentrations with a reduction of approx 60 - 80 % from 1986/1987 to 1991. In addition, data from Belgium, the Netherlands, and the UK showed a steady decline in concentrations of Copper (Cu), Nickel (Ni), Lead (Pb) and Zinc (Zn) with a reduction of approx. 40 - 60 % in the same period while concentrations of these trace metals in the Elbe Estuary showed only little or no decrease. A similar decrease of about 50 % was reported for PCB in Rotterdam Harbour. In addition, in dredged material from Belgium and Rotterdam Harbour, Chromium (Cr) concentrations decreased by about 50 - 60 %, however in Germany and the United Kingdom little or no decline could be observed, as concentrations were probably already close to background concentrations. From 1991 to 2000, a considerably smaller or even no further decrease in contaminant concentrations was discernible. In future, a further steady downward trend in some trace metal and PCB inputs may be expected as a result of reduction measures such as better control on contaminant sources and on land-based disposal. Although no definitive conclusions can be drawn with regard to the contaminant input to the sea via dredged material disposal, the figures on trends in contaminant concentrations in dredged material indicate that most of those contaminants are much closer to background levels than they were 10 – 15 years ago.

Contaminant loads as reported in the annual OSPAR dumping reports should not be considered as (new) contaminant input to the maritime area.

Table I: Overview on the number of permits. Dumping sites and amounts of dredged material licensed (in tonnes dry weight) and dumped in 2003, 2004 and 2005

	2003				2004				2005			
	Number of permits	Number of Dumping Sites	Amounts licensed	Amounts dumped	Number of permits	Number of Dumping Sites	Amounts licensed	Amounts dumped	Number of permits	Number of Dumping Sites	Amounts licensed	Amounts dumped
Belgium	0	19	0	24,805,920	0	16	0	22,029,402	0	17	0	28,502,245
Denmark	15	24	3,200,000	2,687,568	15	36	3 505 000	4,718,970	14	43	6,680,000	4,186,960
France	44	34	37,910,361	37,910,361	98	36	0	37,383,837	53	51	35,283,000	26,871,481
Germany	17	22	23,000,000	22,697,000	15	19	19,374,000	19,176,000	26	28	29,386,706	20,966,237
Iceland	11	11	251,346	251,346	12	12	566,617	566,617	9	9	457,842	457,842
Ireland	7	9	1,098,654	694,292	8	9	2,217,587	763,282	6	11	1,683,887	966,381
The Netherlands	5	8	16 605 000 m3	7,719,286	5	8	16 605 000 m3	11,336,603	6	8	16.605.000 m3	12,943,947
Norway	38	48	302,246	476,648	42	55	724,085	728,475	55	69	1,051,667	1,051,577
Portugal	9	12	629,850	668,850	5	8	367,732	367,732	11	10	2,576,800	2,576,800
Spain	4	7	1,290,608	1,290,608	6	8	0	4,902,990	6	6	2,270,756	2,270,757
Sweden	2	3	19,000,000	375,605	5	4	155,610	2,704,400	4	8	74,800	170,400
UK	128	125	23,113,925	17,522,159	107	124	24,113,943	15,770,462	110	129	25,867,319	16,459,247

NI: not indicated

Table II: Summary of Amounts of Wastes Dumped at Sea in 2003

Waste material Country	Total quantity (in metric tonnes) dry weight	in tonnes										in kilograms				
		Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	Total CB*	HCB	g-HCH	DDT	TBT
Dredged material																
Belgium	24 805 920	87,3	4,3	322	1045	301	627	299	2 102		*(10,3)*	*(189,3)*				*(0,4)*
Denmark	2 687 568	*(0,01)*	*(0,01)*	*(0,36)*	*(1,42)*	*(0,47)*	*(0,87)*	*(0,56)*	*(3,17)*							*(0,36)*
France	37 910 361	8,6	3,1	254	1068	285	680	389	2180	*(76,9)*	*(2,9)*	*(172,7)*				*(574,3)*
Germany	22 697 000	3,7	4,2	138	478	164	329	179	1409	1224	*(4,4)*	*(55,3)*	*(22,1)*	*(1,9)*	*(9,8)*	375,5
Iceland	251 346	*exempted from analyses*											*exempted from analyses*			
Ireland	694 292	*(0,1)*	0,1	3,9	17,8	16,0	15,9	10,3	58,2		*(0,7)*					*(11,7)*
The Netherlands	7 719 286	4,0	2,1	96	265	143	258	119	892	1085	*(9,9)*	*(165,0)*	15,0	16,0	*(9,0)*	*(64,0)*
Norway	476 648	*(0,0)*	*(0,4)*				*(51,2)*					*(1,4)*				
Portugal	668 850	*Not reported*														
Spain	1 290 608	1,5	0,6	6	37	41	59	18	251		*(0,4)*	*(28,6)*				
Sweden	375 605	*Not reported*														
UK	17 522 159	7,5	6,3	342	1027	559	1286	487	2881	*(497,8)*		*(34,7)*				*(1.174)*
Total	117 099 643	112,6	21,0	1 163	3 940	1 510	3 306	1 502	9 777	*(2.884)*	*(29)*	*(647)*	*(37,1)*	*(17,9)*	*(18,8)*	*(2.200)*
Inert Material																
Norway	723 503															
Portugal	39.000															
Sweden	0,4 million m3															
Fish Waste																
Vessels/Aircraft																
Norway	1															
Portugal	3															

Total CB*: France, Germany, the Netherlands, Spain and the U.K. reported ΣPCB7.

Table III: Summary of Amounts of Wastes Dumped at Sea in 2004

Waste material / **Country**	**Total quantity (in metric tonnes) dry weight**	**in tonnes**										**in kilograms**				
		Cd	**Hg**	**As**	**Cr**	**Cu**	**Pb**	**Ni**	**Zn**	**Oil**	**Total PAH**	**Total CB***	**HCB**	**g-HCH**	**DDT**	**TBT**
Dredged material																
Belgium	22 029 402	8,5	2,0	203	651	175	368	187	1 303		*(5,8)*	*(59,7)*			*(3,6)*	*(0,2)*
Denmark	4 718 970	*(0,09)*	*(0,04)*	*(0,90)*	*(7,98)*	*(4,88)*	*(8,64)*	*(1,85)*	*(27,29)*							*(0,00)*
France	37 383 837	6,0	6,1	174	964	381	651	420	2446	*(16,1)*	*(2,2)*	*(269,2)*				*(478,1)*
Germany	19 176 000	3,6	3,5	180	411	180	375	226	1470	827	*(4,5)*	*(62,3)*	*(13,9)*	*(1,1)*	*(5,7)*	833,7
Iceland	566 617	*exempted from analyses*										*exempted from analyses*				
Ireland	763 282	0,2	0,0	3,7	12,4	8,4	15,9	8,2	56,5		*(0,7)*	*(0,8)*				20,9
The Netherlands	11 336 603	9,7	7,2	107	316	147	268	128	896	988	*(13,1)*	*(165,7)*	*(21,4)*	*(5,5)*	*(17,2)*	*(77,9)*
Norway	728 475	*(0,0)*	*(0,1)*	*(0,2)*	*(1,6)*	*(4,1)*	*(54,1)*	*(1,0)*	*(10,0)*		*(0,2)*					
Portugal	367 732	*Not reported*														
Spain	4 902 990	*(2,8)*	*(1,9)*	*(50,3)*	*(366,5)*	*(200,1)*	*(209,4)*	*(171,0)*	*(760,2)*		*(0,0)*	*(2,6)*				
Sweden	2 704 400	*(0,3)*	*(0,2)*	*(4,0)*	*(9,0)*	*(4,0)*	*(6,0)*	*(5,0)*	*(36,0)*			*(16,1)*				
UK	15 770 462	5,5	5,6	315	916	533	1225	428	2705	*(1.947)*	*(146)*	*(144,7)*				*(286)*
Total	120 448 770	36,6	26,7	1 038	3 656	1 638	3 181	1 576	9 710	*(3.778)*	*(172)*	*(721)*	*(35)*	*(7)*	*(26)*	*(1.894)*
Inert Material																
Norway	120 000															
Portugal	539.500															
Fish Waste																
Vessels/Aircraft																
Norway	3															
Portugal	3															
Sweden	1															

Total CB*: Belgium, France, Germany, Ireland, the Netherlands, Sweden and the U.K. reported ΣPCB7. UK also reported the sum of 25 CBs.

Table IV: Summary of Amounts of Wastes Dumped at Sea in 2005

Waste material / Country	Total quantity (in metric tonnes) dry weight	in tonnes										in kilograms				
		Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	Total CB*	HCB	g-HCH	DDT	TBT
Dredged material																
Belgium	28 502 245	11,0	3,4	358	868	222	558	263	2010		*(6,8)*	*(123)*				*(0,3)*
Denmark	4 186 960	*(0,06)*	*(0,03)*	*(3)*	*(6)*	*(3)*	*(6)*	*(4)*	*(21)*							*(0,0)*
France	26 871 481	9,9	4,5	296	1307	442	842	465	2710		*(18,6)*	*(470)*				*(679)*
Germany	20 966 237	3,9	3,7	164	398	186	379	223	1496	1657	*(4,9)*	*(73,3)*	*(20,3)*	*(1,5)*	*(8,0)*	*(453)*
Iceland	457 842	*exempted from analyses*										*exempted from analyses*				
Ireland	966 381	0,2	0,1	6,2	28,4	21,7	25,0	16,4	87,6		*(1,3)*					*(11,5)*
The Netherlands	12 943 947	7,3	4,3	195	563	301	488	256	1699	2099	*(15,7)*	*(331)*	*(62,2)*	*(85,0)*	*(19,5)*	*(324)*
Norway	1 051 577	*(0,18)*	*(0,02)*	*(0,02)*	*(0,05)*	*(0,06)*	*(8,08)*	*(0,04)*	*(0,19)*		*(0,0)*	*(1,0)*				
Portugal	2 576 800	*Not reported*														
Spain	2 270 757	3,9	3,2	10	78	59	93	29	608		*(0,0)*	*(0,4)*				
Sweden	170 400	*(0,1)*	*(0,0)*	*(0,1)*	*(2,3)*	*(4,0)*	*(1,6)*	*(1,3)*	*(12,5)*			*(1,8)*				*(0,0)*
UK	16 459 247	6,3	5,9	349	963	692	1219	501	3000	4320	*(145,1)*	*(127)*	*(0,0)*	*(0,0)*	*(0,2)*	18108
Total	117 423 873	42,7	25,2	1382	4216	1931	3621	1760	11645	*(8.075)*	*(192)*	*(1.127)*	*(82)*	*(87)*	*(28)*	*(19.577)*
Inert Material																
Norway	857.237															
Fish Waste																
Vessels/Aircraft																

Total CB*: France, Germany, the Netherlands, Sweden and the U.K. reported ΣPCB7. UK also reported the sum of 25 CBs.

Table V a: Amounts of Dredged Material and Associated Contaminants Dumped in 2003 from Harbours

Countries	total quantity (in metric tonnes) dry weight	in tonnes										in kilograms				
		Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	Total CB	HCB	g-HCH	DDT	TBT
Belgium	2 994 063	1,8	0,7	57,8	225,1	66,9	129,6	68,1	137,5		*(4,9)*	*(0,0)*				*(0,2)*
Denmark	1 816 775	*(0,0)*	*(0,0)*	*(0,4)*	*(1,3)*	*(0,4)*	*(0,7)*	*(0,6)*	*(2,7)*							*(0,4)*
France	20 207 909	*(2,2)*	1,1	50,1	194,8	64,9	133,8	71,0	401,6	*(76,9)*	*(2,9)*	*(28,4)*				96,6
Germany	7 480 000	1,6	1,9	60,4	200,7	73,6	143,2	76,2	639,2	994,5	2,0	*(25,5)*	*(10,1)*	*(0,9)*	*(4,6)*	*(176,6)*
Iceland	251 346	*exempted from analyses*											*exempted from analyses*			
Ireland	300 095	*(0,0)*	*(0,0)*	*(1,6)*	*(9,3)*	*(8,5)*	*(8,4)*	*(5,4)*	*(30,4)*		*(0,3)*					*(5,7)*
The Netherlands	7 719 286	4,0	2,1	95,5	265,0	143,2	257,9	119,5	892,3	1085,4	*(9,9)*	*(165,0)*	15,0	16,0	(9,0)	(64,0)
Norway	476 648	*(0,0)*	*(0,4)*				*(51,2)*					*(1,4)*				
Portugal	494 260	*Not reported*														
Spain	1 118 612	1,0	0,4	4,3	31,8	35,0	46,6	16,9	178,9		*(0,2)*	*(15,1)*				
Sweden	195 000	*Not reported*														
UK	9 219 999	1,9	3,9	164,7	505,0	285,1	624,8	248,9	1411,3	*(186,0)*		*(23,5)*				*(585,0)*
Total=	**52 273 991**	15,2	10,6	435	1433	678	1396	607	3694	*(2.343)*	*(20)*	*(259)*	*(25)*	*(17)*	*(14)*	*(928)*

Table V b: Amounts of Dredged Material and Associated Contaminants Dumped in 2003 from Estuaries and Sea Channels

Countries	total quantity (in metric tonnes) dry weight	in tonnes										in kilograms				
		Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	Total CB	HCB	g-HCH	DDT	TBT
Belgium	21 811 857	85,4	3,6	264	820	235	498	231	1964		*(5,4)*	189				*(0,2)*
Denmark	870 793	0,0	0,0	0,4	1,4	0,5	0,9	0,6	3,2							*(0,4)*
France	17 702 452	6,4	2,0	204	874	220	546	318	1778	*(0,0)*	*(0,0)*	*(144,3)*				*(477,7)*
Germany	15 217 000	2,1	2,3	78	277	91	185	103	770	*(229,6)*	*(2,4)*	*(29,8)*	*(12,0)*	*(1,0)*	*(5,2)*	*(198,9)*
Iceland	0	*exempted from analyses*											*exempted from analyses*			
Ireland	394 198	0,1	0,0	2,3	8,5	7,5	7,5	4,9	27,8		*(0,3)*					*(6,0)*
The Netherlands	0															
Norway	0															
Portugal	174 590	*Not reported*														
Spain	171 997	0,5	0,2	1,8	5,0	6,3	12,0	1,5			*(0,2)*	*(13,5)*				
Sweden	180 605	*Not reported*														
UK	8 302 161	2,9	2,4	178	522	273	661	238	1470	*(311,8)*		*(11,2)*				589
Total=	**64 825 652**	97,4	10,5	728	2507	833	1910	896	6083	*(541)*	*(8)*	*(388)*	*(12)*	*(1)*	*(5)*	*(1.271)*

(....) data sets are incomplete

Table VI a: Amounts of Dredged Material and Associated Contaminants Dumped in 2004 from Harbours

Countries	total quantity (in metric tonnes) dry weight	in tonnes										in kilograms				
		Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	Total CB	HCB	g-HCH	DDT	TBT
Belgium	1 593 518	0,9	0,3	6,7	110,0	31,8	62,8	33,2	52,0		*(2,3)*	*(0,0)*			*(0,0)*	*(0,1)*
Denmark	1 988 085	*(0,1)*	*(0,0)*	*(0,8)*	*(7,8)*	*(4,8)*	*(8,5)*	*(1,4)*	*(26,3)*							*(0,0)*
France	19 660 750	1,2	3,8	34,7	163,2	60,6	121,1	66,2	432,2	*(16)*	*(2,1)*	*(38,8)*				*(0,0)*
Germany	9 742 000	1,9	1,8	92,4	212,7	93,9	193,7	117,0	758,2	686,7	*(2,3)*	*(31,5)*	*(7,0)*	*(0,5)*	*(2,8)*	*(421,0)*
Iceland	566 617	*exempted from analyses*										*exempted from analyses*				
Ireland	462 808	0,1	0,0	1,9	6,8	6,0	11,4	4,7	37,8		*(0,5)*	*(0,8)*				*(19,8)*
The Netherlands	11 336 603	9,7	7,2	106,5	316,1	146,7	267,7	127,6	896,0	987,5	*(13,1)*	*(165,7)*	*(21,4)*	*(5,5)*	*(17,2)*	*(77,9)*
Norway	728 475	*(0,0)*	*(0,1)*	*(0,2)*	*(1,6)*	*(4,1)*	*(54,1)*	*(1,0)*	*(10,0)*		*(0,2)*					*(130,0)*
Portugal	367 732	*Not reported*														
Spain	4 688 894	*(1,7)*	*(1,5)*	*(49,6)*	*(359,3)*	*(194,6)*	*(180,3)*	*(170,5)*	*(667,7)*		*(0,0)*	*(1,3)*				
Sweden	2 704 400	*(0,3)*	*(0,2)*	*(4,0)*	*(9,0)*	*(4,0)*	*(6,0)*	*(5,0)*	*(36,0)*			*(16,1)*				*(67,0)*
UK	7 770 733	2,5	2,8	141,8	420,9	244,7	544,6	203,0	1228	1026	*(60,0)*	*(66,8)*				*(118,9)*
Total=	**61 610 615**	*(18,4)*	*(17,8)*	*(438,7)*	*(1.607,3)*	*(791,2)*	*(1.450,2)*	*(729,7)*	*(4.143,9)*	*(2.715,9)*	*(80,6)*	*(321,0)*	*(28,4)*	*(6,0)*	*(20,0)*	*(916,0)*

Table VI b: Amounts of Dredged Material and Associated Contaminants Dumped in 2004 from Estuaries and Sea Channels

Countries	total quantity (in metric tonnes) dry weight	in tonnes										in kilograms				
		Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	Total CB	HCB	g-HCH	DDT	TBT
Belgium	20 435 884	7,6	1,7	196,0	541,1	142,8	305,6	153,5	1251,0		*(3,5)*	*(59,7)*			*(3,6)*	*(0,2)*
Denmark	2 730 885	*(0,0)*	*(0,0)*	*(0,1)*	*(0,2)*	*(0,1)*	*(0,2)*	*(0,4)*	*(1,0)*							*(0,0)*
France	17 723 087	4,8	2,3	139,6	801,0	320,7	529,5	353,6	2013,5	*(0,0)*	*(0,1)*	*(230,4)*				*(0,0)*
Germany	9 434 000	1,7	1,7	87,8	198,7	86,6	181,5	109,3	711,6	140,8	*(2,2)*	*(30,8)*	*(7,0)*	*(0,5)*	*(2,8)*	*(412,6)*
Iceland	0	*exempted from analyses*										*exempted from analyses*				
Ireland	300 474	0,1	0,0	1,8	5,6	2,4	4,6	3,4	18,7		*(0,1)*	*(0,0)*				*(1,1)*
The Netherlands	0															
Norway	0															
Portugal	0	*Not reported*														
Spain	214 095	*(1,1)*	*(0,4)*	*(0,7)*	*(7,2)*	*(5,4)*	*(29,2)*	*(0,5)*	*(92,5)*		*(0,0)*	*(1,3)*				
Sweden	0															
UK	7 999 730	3,0	2,8	173,1	495,0	288,5	680,8	225,4	1478	921	*(85,6)*	*(77,9)*				*(167,1)*
Total=	**58 838 155**	18,2	8,9	599	2049	847	1731	846	5566	*(1.062,1)*	*(91,4)*	*(400,1)*	*(7,0)*	*(0,5)*	*(6,4)*	*(977,5)*

(….) data sets are incomplete

Table VII a: Amounts of Dredged Material and Associated Contaminants Dumped in 2005 from Harbours

Countries	**total quantity** (in metric tonnes) dry weight	**in tonnes** Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	**in kilograms** Total CB	HCB	g-HCH	DDT	TBT
Belgium	1 964 531	1,10	0,40	34,8	136,6	39,2	77,4	41,2	269,1		*(2,8)*	*(0,0)*				*(0,1)*
Denmark	1 590 960	0,06	0,03	3,2	6,1	3,0	6,4	3,8	19,8							*(0,0)*
France	9 706 891	3,8	2,4	95	476	173	309	147	944		*(13,3)*	*(324,6)*				*(386,1)*
Germany	8 120 693	1,8	1,8	74	180	89	173	99	704	1206	*(2,0)*	*(33,0)*	*(10,4)*	*(0,8)*	*(3,7)*	*(242,1)*
Iceland	457 842	*exempted from analyses*										*exempted from analyses*				
Ireland	97 205	0,01	0,00	0,96	2,69	1,37	1,42	2,06	5,41		*(0,02)*					*(1,7)*
The Netherlands	9 165 101	5,44	2,88	136	382	205	334	173	1196	1541	10,6	*(234,6)*	*(37,9)*	*(48,6)*	*(19,0)*	*(228,1)*
Norway	1 051 577	*(0,18)*	*(0,02)*	*(0,02)*	*(0,05)*	*(0,06)*	*(8,08)*	*(0,04)*	*(0,19)*		*(0,0)*	*(1,0)*				*(0,6)*
Portugal	2 283 900	*Not reported*														
Spain	0															
Sweden	168 600	*(0,1)*	*(0,0)*	*(0,1)*	*(2,3)*	*(4,0)*	*(1,6)*	*(1,3)*	*(12,5)*			*(1,8)*				*(1,0)*
UK	8 759 021	3,6	3,7	169	544	378	646	271	1575	2286	*(67,2)*	*(60,8)*			*(0,2)*	17228
Total=	**43 366 320**	16,1	11,3	513	1730	893	1557	739	4725	*(5.032,6)*	*(96,0)*	*(655,8)*	*(48,3)*	*(49,4)*	*(22,9)*	*(18.088)*

Table VII b: Amounts of Dredged Material and Associated Contaminants Dumped in 2005 from Estuaries and Sea Channels

Countries	**total quantity** (in metric tonnes) dry weight	**in tonnes** Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	Total PAH	**in kilograms** Total CB	HCB	g-HCH	DDT	TBT
Belgium	26 537 714	9,9	3,0	324	731	183	481	221	1741		*(3,9)*	*(122,5)*				*(0,2)*
Denmark	2 596 000	0,00	0,00	0,03	0,35	0,06	0,09	0,20	1,27							*(0,0)*
France	17 164 590	6,1	2,1	201	831	269	533	318	1766		*(5,2)*	*(145,6)*				*(292,8)*
Germany	12 845 545	2,0	1,9	91	218	97	206	125	792	451	*(2,9)*	*(40,3)*	*(9,9)*	*(0,8)*	*(4,3)*	*(210,5)*
Iceland	0	*exempted from analyses*										*exempted from analyses*				
Ireland	869 176	0,17	0,08	5	26	20	24	14	82		*(1,31)*					*(9,8)*
The Netherlands	3 778 846	1,81	1,42	59	181	96	155	84	503	558	5,1	*(96,4)*	*(24,2)*	*(36,4)*	*(0,6)*	*(96,0)*
Norway	0															
Portugal	292 900	*Not reported*														
Spain	2 270 757	3,9	3,2	10,1	78,2	59,4	92,9	29,1	608,3		*(0)*	*(0,4)*				
Sweden	1 800	*(0,0)*	*(0,0)*	*(0,0)*	*(0,0)*	*(0,0)*	*(0,0)*	*(0,0)*	*(0,0)*			*(0,0)*				*(0,0)*
UK	7 700 226	2,6	2,2	180	420	314	573	230	1426	2034	*(77,8)*	*(66,2)*			*(0,0)*	880
Total=	**74 057 553**	26,6	13,9	869	2486	1039	2065	1021	6920	*(3.042,7)*	*(96,4)*	*(471,4)*	*(34,1)*	*(37,2)*	*(4,8)*	*(1.489,6)*

(….) data sets are incomplete

Tab. VIII: Relative quantities of dredged material from different areas disposed of at sea since 1987

Origin of dredged material	total dredged material	harbour dredgings		estuaries/sea channel dredgings	
	(Mt dry weight)	(Mt dry weight)	(%)	(Mt dry weight)	(%)
2005	117	43	37	74	63
2004	120	62	51	59	49
2003	117	53	45	65	55
2002	113	52	46	61	54
2001	111	41	37	70	63
2000	100	39	39	61	61
1999	131	47	36	84	64
1998	104	30	29	74	71
1997	117	43	37	74	63
1996	117	47	40	70	60
1995	127	49	39	78	61
1994	(1)	(1)	52	(1)	48
1993			42		58
1992			40		60
1991			46		54
1990			52		48
1989			47		51
1988			64		36
1987			44		56

(1): reported as wet weight

* : Data reported not complete

Report on Dumping Permits Issued in 2005

Table 1 Overview of number of permits issued, tonnes licensed and tonnes dumped in 2005

Contracting Party	Number of permits issued for waste category					Number of operations regulated by other means	Tonnes licensed (dry weight)	Tonnes dumped (dry weight)	Notes
	Dredged material	Inert material	Fish waste	Vessels or aircraft	Others				
Belgium	0	0	0	0	0			28 502 245	(1)
Denmark	14	0	0	0	0	0	6 680 000	4 186 960	
France	105	0	0	0	0	0	35 283 000	26 871 481	(1) (2)
Germany	26						19 366 732		(1)
							10 019 974	20 966 237	(2) (3)
Iceland	9	0	0	0	0		457 842	457 841	(1)
Ireland	6						1 683 887	966 381	(1) (2) (3)
Netherlands	6					numerous	16 605 000	12 943 947	(1) (2)
Norway	55						1 051 667		
		14					857 237	1 908 814	(1) (2)
Portugal	11		NI				2 576 800	2 576 800	
Spain	6		0	0			2 270 757	2 270 757	(1) (2)
Sweden	4	0	0	0			74 800	170 400	(1) (2)
United Kingdom	107	0	0	0	0	0	25 867 319	16 459 247	(1) (2)

NI = No information
GP = general permit

Table 2 Specific reporting on permits issued in 2005*

Contracting Party	Number of permits issued * per waste category				Contaminants/ Material of concern		Tonnes dumped ** (dry weight)	Reasons for classification
	Dredged material	Inert Material	Vessels or aircraft	Others	Type	Level 2 (mg/kg)		
France	1				Cd Hg Pb Zn	2,4 0,8 200 552	600	
Germany (1)	1				HCB p,p-DDD p,p-DDE	0,006 0,010 0,003	4 704 539	(2)
	1				α-HCH γ-HCH HCB pp,-DDT p,p-DDD p,p-DDE	0,001 0,0006 0,006 0,003 0,010 0,003	327 000	(3)
Norway	42	14					857 237	(1)
Portugal	6						299 400	
Sweden	NA	0	0	0				(1)
United Kingdom	1				TBT	5,5	43 935	(1)

* The number of permits in this column includes the operations regulated by other means

** For dredged material the tonnes dumped refer to material exceeding level 2
for inert material - numbers of permits issued in total and tonnes dumped in total

Amounts of Wastes Dumped at Sea in 2005

Part I

Table 3a Details of deposit sites and dumping methods

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
Belgium													
B/1	x				Pas van het Zand			x		x	1 662 563		
B/1	x				CDNB Zeebrugge			x		x	985 234		
B/1	x				Scheur Oost			x		x	121 528		
B/1	x				Scheur West			x		x	247 798		
B/3	x				Pas van het Zand			x		x	627 199		
B/3	x				CDNB Zeebrugge			x		x	121 971		
B/3	x				Scheur Oost			x		x	57 733		
B/3	x				Scheur West			x		x	427 737		
B/6	x				Haven en voorhaven Zeebrugge	x				x	1 689 783		
B/6	x				CDNB Zeebrugge			x		x	1 267 494		
B/6	x				Haven Blankenberge	x				x	16 268		
B/9	x				Toegangsgeul Oostende			x		x	402 445		
B/9	x				Haven Oostende	x				x	197 460		
B/99	x				Haven Nieuwpoort	x				x	61 020		
B/int1	x				Drempel van Borssele		x			x	1 123 966	6 856,19	
B/int1	x				Ankerplaats Everingen		x			x	549 838	3 134,08	
B/int1	x				Pas van Terneuzen		x			x	337 028	1 921,06	
B/int2	x				Drempel van Borssele		x			x	38 326	233,79	
B/int2	x				Pas van Terneuzen		x			x	95 668	545,31	
B/int2	x				Put van Terneuzen		x			x	26 356	55,35	
B/int2	x				Gat Van Ossenisse 26-30		x			x	768 376	998,89	
B/int2	x				Gat Van Ossenisse		x			x	114 088	148,31	
B/int2	x				Drenmpel van Hansweert		x			x	562 052	562,05	
B/int2	x				Overloop Valkenisse 58-62		x			x	38 140	41,95	
B/int2	x				Drempel van Valkenisse		x			x	212 484	456,84	
B/int4a	x				Drenmpel van Valkenisse		x			x	7 176	15,43	
B/int4a	x				Nauw van Bath		x			x	21 344	75,77	
B/int4b	x				Drenmpel van Valkenisse		x			x	14 352	30,86	
B/int4b	x				Nauw van Bath		x			x	28 704	101,90	
B/int7	x				Gat van Ossenisse 30-34		x			x	14 446	18,78	
B/int7	x				Overloop Hansweert opw.		x			x	134 352	107,48	
B/int7	x				Drempel van Hansweert		x			x	56 964	56,96	
B/int7	x				Overloop Valkenisse 50-54		x			x	143 966	187,16	
B/int7	x				Overloop Valkenisse 54-58		x			x	74 184	44,51	

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
B/int7	x				Overloop Vlakenisse (58-62)		x			x	207 636	228,40	
B/int7	x				Drempel van Valkenisse		x			x	35 600	76,54	
B/int7	x				Nauw van Bath		x			x	716 338	2 543,00	
B/int7	x				Drempel van Bath		x			x	350 642	911,67	
B/int7	x				Vaarwater boven Bath		x			x	72 712	43,63	
B/int8	x				Pas Van Terneuzen		x			x	210 788	1 201,49	
B/int8	x				Put van Terneuzen		x			x	428 070	898,95	
B/int8	x				Gat Van Ossenisse 26-30		x			x	262 816	341,66	
B/int8	x				Gat Van Ossenisse 30-34		x			x	30 758	39,99	
B/int8	x				Gat Van Ossenisse		x			x	277 692	361,00	
B/int8	x				Drempel van Hansweert		x			x	1 524 422	1 524,42	
B/int8	x				Drempel van Walsoorden		x			x	129 168	180,84	
B/int8	x				Overloop Valkenisse 50-54		x			x	217 110	282,24	
B/int8	x				Overloop Valkenisse 54-58709.77		x			x	629 870	377,92	
B/int8	x				Overloop Valkenisse 58-62		x			x	645 244	709,77	
B/int8	x				Drempel van Valkenisse		x			x	916 524	1 970,53	
B/int8	x				Nauw van Bath		x			x	242 956	862,49	
B/int8	x				Drempel van Bath		x			x	167 408	435,26	
B/int9	x				Overloop Hansweert afw		x			x	239 820	311,77	
B/int9	x				Overloop Hansweert opw.		x			x	149 716	119,77	
B/int9	x				Drempel van Hansweert		x			x	208 350	208,35	
B/int9	x				Drempel van Walsoorden		x			x	103 060	144,28	
B:int9	x				Overloop Valkenisse 58-62		x			x	226 852	249,54	
B:int9	x				Drempel van Valkenisse		x			x	299 000	642,85	
B/int9	x				Nauw van Bath		x			x	7 176	25,47	
B/int9	x				Drempel van Bath		x			x	174 664	454,13	
B/int9	x				Vaarwater boven Bath		x			x	105 146	63,09	
B/int15	x				Drempel van Valkenisse		x			x	7 176	15,43	
B/int0	x				Containerkaai Noord		x			x	56 138	815,87	
B/int0	x				Drempel van Zandvliet		x			x	316 588	3 894,03	
B/int0	x				Toegangsgeul Zandvliet		x			x	246 756	16 162,52	
B/int0	x				Drempel van Frederik		x			x	722 210	14 949,75	
B/int0	x				Drempel van Lillo		x			x	126 318	1 680,03	
B/int0	x				Vaarwater PL; Lillo		x			x	68 360	1 415,05	
B/int0	x				Ketelplaat		x			x	10 380	127,67	
B/int0	x				Toegang Kallosluis		x			x	81 758	5 919,28	
B/int0	x				Toegang Bau/Cau sluis		x			x	33 548	2 053,14	
B/int0	x				Drempel van de Parel		x			x	56 586	390,44	
B/int0	x				Scheldedijk DD		x			x	72 546	0,00	
B/int0	x				Deurganckdok		x			x	42 152	0,00	

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
B/int1bis	x				Drempel van Zandvliet		x			x	1 311 634	16 133,10	
B/int1bis	x				Drempel van Frederik		x			x	428 088	8 861,42	
B/int1bis	x				Drempel van Lillo		x			x	164 200	2 183,86	
B/int1 bis	x				Vaarw. Pl. Lillo		x			x	874 098	18 093,83	
B/int1bis	x				Drempel van de Parel		x			x	455 168	3 140,66	
B/int1 bis	x				Scheldedijk DD		x			x	328 446	0,00	
B/int1bis	x				Drempel van Krankeloon		x			x	581 858	1 658,30	
B/int12	x				Containerkaai Noord		x			x	47 646	692,46	
B/int12	x				Dr. van Zandvliet		x			x	266 152	3 273,67	
B/int12	x				Toeg. Zandvlietsluis		x			x	258 898	16 957,82	
B/int12	x				Dr. van Frederik		x			x	672 348	13 917,60	
B/int12	x				Dr. van Lillo		x			x	110 300	1 466,99	
B/int12	x				Vaarw. Pl. Lillo		x			x	58 248	1 205,73	
B/int12	x				Ketelplaat		x			x	8 230	101,23	
B/int12	x				Toegang Kallosluis		x			x	76 582	5 327,34	
B/int12	x				Toeg. Boudewijnsluis		x			x	28 700	1 756,44	
B/int12	x				Dr. van de Parel		x			x	42 934	296,24	
B/int12	x				Scheldedijk DD		x			x	69 520	0,00	
B/int12	x				Deurganckdok		x			x	49 946	0,00	
B/int16	x				Toegang Kallosluis		x			x	1 152	83,40	
Total											**28 502 245**	**173 375,02**	

Denmark													
NJL01	x				Aså forhavn	x				x	2 000		
NJL05	x				Egense,m sejlrende		x			x	800		
NJL07	x				Gjøl, sejlrende	x				x	3 400		
NJL10	x				Mou forhavn	x				x	160		
NJL10	x				Hals Barre			x		x	37 300		
NJL10	x				Hou Forhavn	x				x	650		
NJL11	x				Haverslev	x				x	1 400		
NJL13	x				Hirtshals, indsejlingen	x				x	590 600		
NJL17	x				Løgstør Grunde		x			x	132 800		
NJL20	x				Løgstør Havn	x				x	6 700		
NJL21	x				Marbjerg		x			x	72 200		
NJL25	x				Mariager Fjord		x			x	50 700		
NJL26	x				Nibe Havn	x				x	40 000		
NJL31	x				Rønnerhavn	x				x	4 500		
NJL31	x				Søsportshavn	x				x	10 400		
NJL33	x				Skagen, østbassin	x				x	36 500		
NJL37	x				Strandby	x				x	38 000		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
NJL41	x				Sæby Forhavn	x				x	8 100		
NJL45	x				Øster Hurup	x				x	3 200		
NJL50	x				Ålbæk	x				x	17 600		
RIB01	x				Grådyb Barre, sejlrenden			x		x	770 000		
RIB01	x				Esbjerg Havn, Sejlrende		x			x	40 000		
RIB01	x				Esbjerg Harbour	x			x		15 000		
RIB01	x				Fanø Lo		x			x	1 600		
RIB02	x				Grådyb Barre, sejlrenden			x		x	770 000		
RIB02	x				Esbjerg Havn, Sejlrende		x			x	40 000		
RIB02	x				Esbjerg Harbour	x			x		15 000		
RIB02	x				Fanø Lo		x			x	1 600		
RIB03	x				Esbjerg Havn, Sejlrende	x				x	230 000		
RIB03	x				Slunden			x		x	7 300		
RIB04	x				Esbjerg Havn, Sejlrende	x				x	230 000		
RIB04	x				Slunden			x		x	7 300		
RIB08	x				Grådyb Barre, sejlrenden					x	535 000		
RIN05	x				Thyborøn Yderhavn	x				x	8 300		
RIN05	x				Thyorøn	x			x		13 600		
RIN05	x				Sælhundeholmløb		x			x	14 400		
RIN05	x				Thyborøn Færgehavn	x				x	14 000		
RIN25	x				Stauning, sejlløb	x				x	10 350		
VIB02	x				Agger Færgehavn, sejlrenden	x				x	6 800		
AAR01	x				Anholt Havn	x				x	6 400		
AAR06	x				Bønnerup Havn	x				x	6 300		
AAR10	x				Grenå Havn	x				x	272 000		
AAR26	x				Randers Fjord		x			x	115 000		
Total											**4 186 960**		

France													
F/05901	x					x				x	8 970	9	
F/05902	x					x				x	1 050 550	28 304	
F/05903	x					x				x	469 877	10 254	
F/05904	x					x				x	79 383	2 526	
F/06201	x					x				x	411 400	7 208	
F/06202	x					x				x	449 800	11 834	
F/07601	x						x			x	6 836 000	37 502	
F/07602	x					x				x	952 922	19 011	
F/07602	x					x			x		4 205 806	101 465	

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
F/07603	x					x				x	124 627	1 511	
F/07604													
F/07605	x					x				x	30 028	690	
F/07606	x					x				x	25 530	1 243	
F/07607													
F/01401	x					x				x	441 910	3 979	
F/01402													
F/01403													
F/01405													
F/01406	x					x				x	41 311	1 010	
F/01407													
F/01408													
F/05001													
F/05002													
F/05004	x					x				x	13 050	652	
F/05005													
F/03501													
F/02906	x					x			x		6 190	NI	
F/05601	x					x				x	17 730	615	
F/05602													
F/05603													
F/04401	x						x			x	3 402 000	103 094	
F/04402													
F/04404													
F/04406													
F/04407	x					x				x	2 670	83	
F/04408	x					x				x	36 500	621	
F/04409													
F/04411	x					x				x	37 800	1 323	
F/04412	x					x				x	9 900	248	
F/08501													
F/08502													
F/08503	x					x				x	32 877	NI	
F/08504	x					x			x		697	NI	
F/08505													

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
F/08506	x					x				x	24 143	459	
F/08507													
F/08508													
F/08509													
F/08510													
F/08511	x					x				x	3 122	NI	
F/01701	x					x				x	82 400	1 751	
F/01702													
F/01704	x					x				x	800	16	
F/01705													
F/01706	x					x				x	62 000	1 305	
F/01707	x					x				x	205 500	5 657	
F/01709													
F/01710	x					x				x	31 000	543	
F/01711													
F/01712	x					x				x	6 200	143	
F/01714	x					x				x	10 300	216	
F/01715	x					x				x	11 600	302	
F/03301 F/03302 F/03305 F/03306 F/03307	x						x			x	1 981 000	25 375	
F/03303													
F/03307 F/03308 F/03311	x						x			x	2 518 000	29 892	
F/03309													
F/03312													
F/03313 F/03314 F/03315 F/03316 F/03317	x						x			x	1 004 000	11 308	
F/03318	x						x			x	226 000	1 921	
F/03319	x						x			x	496 000	843	
F/03323	x						x			x	701 590	NI	
F/03324													
F/03333													
F/03334													
F/04001	x					x				x	32 190	NI	

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
F/06401	x					X				X	774 153	30 430	
F/06402													
F/06403													
F/06404	x					X				X	13 954	8 114	
F/06405													
Total											**26 871 481**	**451 457**	

Germany													
D10	x				Dagebüll harbour	x				x	2 000		
D11	x				Approach channel of Dagebüll harbour			x		x	17 000	0,21	
D12	x				Husum harbour	x				x	34 000	0,15	
D13	x				Harbour and outer harbour of Büsum	x				x	18 000	0,08	
D14	x				Elbe estuary / navigation channel;outer port of the lock to the "Nord-Ostsee-Kanal" (Kiel-Canal); inner part of "Nord-Ostsee-Kanal"	x	x			x	4 705 000	150,55	(1)
											6 445 556		(2)
D15	x				Weser Estuary/navigation channel		x			x	558 000	8,92	(1)
											893 097		(2)
D17	x				Jade Bay/navigation channel	x	x			x	2 096 000	37,73	(1)
											574 829		(2)
D19	x				Niedersachsenbrücke Wilhelmshaven (seaward mooring berth)	x	x			x	14 000	0,10	
D20	x				Outer harbour of Hooksiel	x				x	32 000	0,26	
D21	x				Wangerooge harbour	x				x	4 000	0,05	
D22	x				Spiekeroog harbour	x				x	14 000	0,23	
D30	x				Norderney harbourg	x				x	26 000	0,62	
D32	x				Norddeich harbour	x				x	18 000	0,44	
D34	x				Ems estuary / navigation channel		x			x	1 797 000	59,29	(1)
											2 093 755		(2)
D36	x				Borkum, Minitrain harbour and approach channel of Borkum island	x				x	3 000		
D40	x				Harbour basin of river Eider flood gate system	x				x	8 000	0,16	
D41	x				Niedersachsenbrücke Wilhelmshaven (approach channel and seaward mooring berth)	x	x			x	19 000	0,17	
D43	x				Bensersiel harbour	x				x	28 000	0,42	
D45					Approach channel of Juist harbour	x				x	12 000	0,11	
D47					River quay berth Elbe; harbours of Cuxhaven	x	x			x	1 036 000		
D49					Wittdün/Amrum ferry jetty, Steenodde Amrum mole, Amrum harbour navigation channel	x		x		x	18 000	0,09	

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
D50					Baltrum harbour	x				x	1 000	0,02	
D51					Langeoog harbour, Bensersiel harbour and approach channel to Bensersiel harbour	x				x	17 000	0,27	
D52					Wyk habour (Föhr)	x				x	5 000	0,10	
D53					List habour (Sylt)	x				x	2 000		
D54					Friedrichskoog harbour	x				x	83 000	0,46	
D56					Niedersachsenbrücke Wilhelmshaven (seaward mooring berth)	x	x			x	65 000	0,13	
D57					Hamburg Harbour	x				x	327 000	6,21	
Total											**20 966 237**	**266,770**	
Iceland													
IS 2	x					x			x		9 516		
IS 24	x					x			x		35 831		
IS 33	x					x			x		2 196		
IS 41	x					x			x		7 198		
IS 46	x					x			x		50 020		
IS 51	x					x			x		67 100		(1)
IS 52	x					x			x		73 993		
IS 52	x					x			x		7 759		
IS 54	x					x				x	41 114		
IS 59	x					x			x		163 114		
Total											**457 841**		
Ireland													
IRL 8	x				Suir/Barrow Estuary		x			x	355 969		
IRL 17	x				Cork Harbour		x			x	180 871		
IRL 17	x				Cork Harbour		x		x		93 669		
IRL 20	x				Boyne Estuary		x			x	35 575		
IRL 33	x				Shannon Estuary	x				x	43 182		
IRL 45	x				Shannon Estuary	x	x			x	21 465		
IRL 47	x				Boyne Estuary		x			x	133 646		
IRL 48	x				Dundalk Harbour/Bay		x	x		x	18 611		
IRL 49	x				Bandon Estuary		x		x		16 200		
IRL 50	x				Rossaveal Harbour	x			x		51 233		
IRL 51	x	x			Inishbofin			x	x		15 960		
Total											**966 381**		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
Netherlands													
NL-6 Scheveningen	x					x				x	197 358		
NL-7 IJmuiden	x					x				x	1 152 164		
NL-8 Rotterdam	x					x				x	4 036 733		
NL-10 Eastern Sceldt													(1)
NL-11 Western Sceldt													(1)
NL-13 Waddensea West	x					x	x			x	352 996		
NL-14 Waddensea East	x					x	x			x	2 787 502		
NL-15 Ems-Dollard	x					x	x			x	4 417 194		
Total											**12 943 947**		

Norway													
1 Østfold	x				Oslofjord	x				x	180		
2 Østfold	x				Oslofjord	x				x	1 080		
3 Østfold	x				Oslofjord	x				x	1 080		
4 Østfold	x				Oslofjord	x				x	480		
5 Østfold	x				Oslofjord	x				x	3 600		
6 Østfold	x				Oslofjord	x				x	60		
7 Østfold	x				Oslofjord	x				x	600		
8 Østfold	x				Oslofjord	x				x	1 080		
9 Østfold	x				Oslofjord	x				x	360		
10 Østfold	x				Oslofjord	x				x	180		
11 Oslo og A	x				Oslofjord	x				x	80		
12 'Vestfold	x				Oslofjord	x				x	910		
13 'Vestfold	x				Oslofjord	x				x	2 560		
14 'Vestfold	x				Oslofjord	x				x	4 250		
15 'Vestfold	x				Oslofjord	x				x	1 120		
16 'Vestfold	x				Oslofjord	x				x	480		
17 'Vestfold	x				Oslofjord	x				x	960		
18 'Vestfold	x				Oslofjord	x				x	1 040		
19 'Vestfold	x				Oslofjord	x				x	149		
20 Vestfold	x				Oslofjord	x				x	4 000		
21 Vestfold	x				Oslofjord	x				x	160		
22 Vestfold	x				Oslofjord	x				x	480		
23 Buskerud	x				Oslofjord	x				x	433 342		
24 Buskerud	x				Oslofjord	x				x	30 400		
25 Buskerud	x				Oslofjord	x				x	28 800		
26 Vest-Agder	x				Skagerak	x				x	400		
27 Vest-Agder	x				Skagerak	x				x	320		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
28 Vest-Agder	x				Skagerak	x				x	1 700		
29 Vest-Agder		x			Skagerak	x					800		(1)
30 Vest-Agder		x			Skagerak	x					980		(1)
31 Vest-Agder		x			Skagerak	x					90 000		(1)
32 Vest-Agder		x			Skagerak	x					18 000		(1)
33 Vest-Agder		x			Skagerak	x					39 600		(1)
34 Rogaland		x			North Sea	x					270 000		(1)
35 Rogaland		x			North Sea	x					1 080		(1)
36 Rogaland		x			North Sea	x					702		(1)
37 Hordaland	x				North Sea	x				x	300		
38 Hordaland	x				North Sea	x				x	480		
39 Hordaland		x			North Sea	x					295 013		(1)
40 Hordaland		x			North Sea	x					16 200		(1)
41 Hordaland		x			North Sea	x					2 000		(1)
42 Møre & Romsdal		x			Norwegian Sea						118 312		(1)
43 Møre & Romsdal	x				Norwegian Sea	x				x	4 480		
44 Møre & Romsdal	x				Norwegian Sea	x				x	24 396		
45 Møre & Romsdal	x				Norwegian Sea	x				x	149 371		
46 Møre og Romsdal	x				Norewgian Sea	x				x	40 107		
47 Møre og Romsdal	x				Norwegian Sea	x				x	922		
48 Sør-Trøndelag	x				Norwegian Sea	x				x	3 600		
49 Sør-Trøndelag	x				Norwegian Sea	x				x	8 100		
50 sør-Trøndelag	x				Norwegian Sea	x				x	4 400		
51 Sør-Trøndelag	x				Norwegian Sea	x				x	320		
52 Sør-Trøndelag	x				Norwegian Sea	x				x	3 200		
53 Sør-Trøndelag	x				Norwegian Sea	x				x	2 400		
54 sør-Trøndelag	x				Norwegian Sea	x				x	4 800		
55 Sør-Trøndelag	x				Norwegian Sea	x				x	700		
56 Nord-Trøndelag	x				Norwegian Sea	x				x	3 440		
57 Nordland	x				Norwegian Sea	x				x	14 400		
58 Nordland		x			Norwegian Sea	x					800		(1)
59 Nordland	x				Norwegian Sea	x				x	3 450		
60 Nordland	x				Norwegian Sea	x				x	15 200		
61 Nordland	x				Norwegian Sea	x				x	4 300		
62 Troms	x				Barents Sea	x				x	184 000		
63 Troms	x				Barents Sea	x				x	24 000		
64 Troms	x				Barents Seax					x	16 000		
65 Troms	x				Barents Seax					x	2 240		
66 Troms		x			Barents Sea						3 750		(2)
67 Finnmark	x				Barents Seax					x	4 000		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
68 Finnmark	x				Barents Sea					x	1 920		
69 Finnmark	x				Barent Sea					x	11 200		
Total											**1 908 814**		
Portugal													
P/1	x				Douro-Leixões	x				x	91 000		
P/2	x				V.Castelo	x				x	21 700		
P/3	x				Peniche	x				x	523 600		
P/4	x				Lisboa	x				x	1 335 400		
P/5	x				Olhão	x				x	200		
P/6	x				Portimão	x				x	305 500		
P/7	x				V. Castelo	x				x	6 500		(1)
P/8	x				Lisboa		x			x	30 800		
P/9	x				Faro		x			x	700		
P/10	x				Portimão		x			x	261 400		(2)
Total											**2 576 800**		
Spain													
E/1	x				Pasajes		x		x		11 316	537,2	
E/2	x				Bilbao		x			x	6 060	ND	
E/5	x				Avilés		x		x	x	1 141 623	92591,71	
E/8	x				Vilagarcía		x		x		901 271	1087,78	
E/11	x				Huelva		x			x	12 446	402,82	
E/12	x				Cádiz		x			x	198 042	14744,19	
Total											**2 270 757**	**109363,7**	
Sweden													
SWE/3	x				Falkenberg, Kattegat	x				x	40 800	ND	(1)
SWE/11	x				Göteborg, Kattegat	x				x	84 000	ND	(2)
SWE/10	x				at Stora Amundön, Kattegat	x				x	1 200	ND	(3)
Unknown	x				at Stora Amundön, Kattegat			x	x		1 800	NA	(4)
SWE/11	x				Göteborg, Kattegat	x			x		400	ND	(5)
SWE/18	x				Jonstorp, Kattegat	x				x	900	ND	(6)
SWE/19					Öckerö, Kattegat	x			x		41 300	ND	(7)
N 57°59,20'; E 11°31,68'				x							NI		(8)
Total											**170 400**		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
UK													
CR021					Moray Firth	x				x	0		
CR030					Moray Firth	x				x	3 880		
CR031					Grampian Coast	x				x	0		
CR040					Spey Bay/Moray Firth	x				x	7 740		
CR050					Grampian Coast	x				x	2 674		
CR060					Grampian Coast	x				x	31 375		
CR080					Grampian Coast	x				x	2 153		
CR110					Dee River	x				x	168 890		
DM001					Cumbria Coast	x				x	0		(1)
DV010					Kent Coast	x			x	x	302 914		
DV011					Kent Coast	x				x	0		
DV030					Kent Coast		x		x		2 944		
DV040					Rother River and Kent Coast	x			x	x	36 012		
FI015					Shetland Coast	x				x	15 280		
FI055					Shetland Coast			x		x	23 341		
FI080					Shetland Coast	x				x	0		
FO010					South Esk River	x				x	34 354		
FO020					Tayside Coast	x				x	10 269		
FO028					Firth of Tay	x				x	40 249		
FO038					Firth Of Forth	x				x	0		
FO041					Firth Of Forth	x				x	81 216		
FO042					Firth Of Forth	x				x	5 500		
FO043					Firth Of Forth	x				x	5 494		
FO044					Firth Of Forth	x				x	605 042		
FO051					Fife Coast	x				x	0		
FO080					Tweed River		x			x	0		
HE040					Inver River	x				x	0		
HE070					Loch Nevis	x				x	0		
HU015					Humberside Coast	x				x	1 284		
HU020					Humber River	x	x			x	95 896		
HU030					Humber River	x	x	x		x	795 164		
HU040					Humber River	x				x	5 183		
HU041					Humber River	x				x	7 258		
HU060					Humber River	x	x	x	x	x	1 943 594		
HU080					Humber River	x	x		x	x	1 393 833		
HU090					Humber River	x	x			x	294 885		
HU143					Great Ouse River	x	x			x	52 127		
HU150					Yare River	x	x			x	19 831		
HU170					Witham River	x	x	x		x	23 160		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
HU199					Orwell River			x		x	0		
HU201					Humber River		x		x		20 585		
IS040					Anglesey Coast	x				x	0		
IS102					Dee River, Wales		x			x	223 878		
IS110					Mersey River	x	x			x	203 658		
IS120					Mersey River/Liverpool Bay	x		x		x	71 963		
IS128					Mersey River		x			x	217 388		
IS140					Mersey River	x	x	x		x	1 316 201		
IS150					Mersey River/Liverpool Bay	x		x		x	0		
IS170					Wyre River	x				x	749 354		
IS180					Cumbria Coast	x				x	0		
IS192					Lune River	x	x			x	3 832		
IS200					Morecambe Bay	x				x	369 027		
IS205					Cumbria Coast	x				x	578 275		
IS230					Cumbria Coast	x			x		17 430		
IS240					Cumbria Coast	x		x	x	x	1		
IS241					Cumbria Coast	x				x	37 478		
IS245					Cumbria Coast	x				x	0		
IS251					Cumbria Coast	x				x	10 233		
IS400					Douglas Harbour, Isle of Man	x				x	0		
IS595					Belfast Lough	x				x	20 390		
IS636					Down Coast	x				x	1 155		
IS650					Down Coast	x				x	9 637		
IS671					Carlingford Lough	x				x	276 929		
LU010					Camel River	x				x	0		
LU070					Avon River	x	x			x	56 770		
LU080					Avon River	x	x			x	65 697		
LU083					Avon River	x	x			x	16 291		
LU084					Avon River	x	x			x	24 288		
LU085					Avon River	x	x			x	23 579		
LU086					Avon River	x	x			x	0		
LU110					Taff R./Severn Est.	x				x	270 449		
LU115					Severn Estuary	x				x	10 534		
LU130					Tawe & Neath Rivers/Swansea Bay	x	x	x		x	1 428 023		
LU140					Usk River	x	x			x	95 499		
LU168					Milford Haven	x	x			x	0		
LU169					Milford Haven	x				x	0		
LU190					Milford Haven	x				x	1 275		
MA010					Loch Ryan	x				x	14 172		
MA018					Firth Of Clyde	x				x	223 655		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
MA021					Firth Of Clyde	x				x	24 813		
MA025					Firth Of Clyde	x				x	11 715		
MA030					Islay Coast	x				x	0		
MA050					Firth Of Clyde	x				x	52 359		
MA060					Firth Of Clyde	x				x	12 168		
MA501					Foyle River	x				x	0		
MA545					Foyle River	x				x	0		
PL031					Tamar River & Kingsbridge Estuary	x	x		x	x	67 873		
PL060					Fowey River/Cornwall Coast South	x	x			x	16 615		
PL072					Penrhyn River	x				x	1 112		
PL075					Falmouth Harbour/Truro River/Mounts Bay	x	x	x	x	x	12 326		
PO070					Teign River	x	x		x	x	20 095		
PO090					Teign River	x	x		x	x	0		
TH005					Waveney River	x				x	42 809		
TH034					Orwell River	x	x		x	x	35 153		
TH037					Orwell River	x				x	15 485		
TH052					Orwell/Stour Rivers + Thames Estuary	x	x	x		x	1 214 357		
TH053					Orwell River	x				x	14 722		
TH062					Blackwater River		x			x	708		
TH070					Thames Estuary		x	x	x	x	88 661		
TH073					Kent Coast	x				x	0		
TH080					Thames Estuary			x	x		0		
TH140					Kent Coast	x				x	24 818		
TH146					Kent Coast	x				x	0		
TH147					Kent Coast	x				x	0		
TH207					Orwell River	x				x	45 601		
TH208					Orwell River	x				x	49 355		
TH209					Orwell River	x				x	18 152		
TH210					Orwell River	x				x	0		
TH211					Orwell River	x				x	99 514		
TY025					Coquet River		x			x	22 746		
TY042					Northumberland Coast	x				x	60 167		
TY070					Tyne River	x	x			x	42 911		
TY081					Tyne River	x	x		x	x	187 302		
TY090					Wear River	x	x			x	0		
TY130					Durham Coast	x				x	25 083		
TY150					Tees River/Hartlepool Bay	x	x	x	x	x	17 107		
TY160					Tees River/Hartlepool Bay	x	x	x		x	712 368		
TY180					Esk River	x		x	x	x	24 362		
TY181					North Yorkshire Coast			x		x	43 684		

OSPAR-codes	categories of waste				dredged material						total quantity		
Deposit	dredged	inert	fish	vessels/	origin	type of areas dredged			dredging operation type		(in metric tonnes)		
site	material	material	waste	aircraft	name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
TY190					North Yorkshire Coast	x				x	797		
WI010					Ouse River (E.Sussex)	x	x			x	88 555		
WI031					Sussex Coast	x				x	23 361		
WI035					Sussex Coast			x		x	2 889		
WI045					Chichester Harbour	x	x			x	1 086		
WI060					So'ton Water, IoW, Portsmouth...	x	x	x	x	x	382 277		
WI064					Portsmouth Harbour	x				x	5 245		
WI080					So'ton Water, IoW etc.	x				x	15 418		
WI090					So'ton Water, IoW etc.	x		x	x	x	29 374		
WI110					Poole Harbour	x	x	x	x	x	536 926		
Total											**16 459 247**		

Table 3b **Total loads (methods of determination indicated in Part II)**

OSPAR-codes	in tonnes													in kilogrammes													
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/ pesticides
Belgium																												
B/1	0,466	0,166	18,288	57,525	12,685	32,752	17,789	102,081			0,865										0,000					0,041		
B/1	0,394	0,167	17,833	65,715	15,271	35,863	20,296	117,243			0,975										0,000					0,033		
B/1	0,018	0,007	1,074	2,977	0,547	1,531	0,977	4,813			0,032										0,000					0,018		
B/1	0,037	0,015	2,191	6,071	1,115	31,223	1,992	9,813			0,064										0,000					0,038		
B/3	0,176	0,063	6,899	21,576	4,786	12,356	6,711	38,510			0,326										0,000					0,015		
B/3	0,049	0,021	2,208	8,135	1,891	4,440	2,513	14,515			0,121										0,000					0,004		
B/3	0,009	0,003	0,510	1,414	0,260	0,727	0,464	2,286			0,015										0,000					0,001		
B/3	0,064	0,026	37,810	10,480	1,925	53,895	3,439	16,938			0,111										0,000					0,007		
B/6	0,963	0,355	30,416	120,988	33,458	67,253	36,330	234,880			2,399										0,000					0,097		
B/6	0,507	0,215	22,942	84,452	19,646	46,137	26,110	150,832			1,255										0,000					0,043		
B/6	0,006	0,003	0,283	0,991	0,260	0,568	0,309	1,676			0,025										0,000					0,001		
B/9	0,076	0,036	3,892	13,401	2,958	7,083	4,105	22,939			0,165										0,000					0,025		
B/9	0,111	0,038	3,258	11,650	4,542	7,681	3,633	27,052			0,355										0,000					0,012		
B/99	0,024	0,007	0,793	2,935	0,940	1,873	0,915	5,498			0,059										0,000					0,002		
B/int1	<d.l.	<d.l.	8,37	19,67	<d.l.	7,19	6,29	34,84														<d.l.						<d.l.
B/int1	<d.l.	<d.l.	8,25	12,1	<d.l.	5,06	2,8	18,69														<d.l.						<d.l.
B/int1	<d.l.	<d.l.	5,06	7,41	<d.l.	3,1	1,72	11,46														<d.l.						<d.l.
B/int2	<d.l.	<d.l.	0,29	0,67	<d.l.	0,25	0,21	1,19														<d.l.						<d.l.
B/int2	<d.l.	<d.l.	1,44	2,1	<d.l.	0,88	0,49	3,25														<d.l.						<d.l.
B/int2	<d.l.	0	0,34	0,47	<d.l.	0,2	0,11	0,76														<d.l.						<d.l.
B/int2	<d.l.	0,24	9,22	13,06	<d.l.	4,23	3,23	19,98														<d.l.						<d.l.
B/int2	<d.l.	0,04	1,37	1,94	<d.l.	0,63	0,48	2,97														<d.l.						<d.l.
B/int2	<d.l.,	<d.l.	3,2	8,15	<d.l.	<d.l.	1,8	10,12														<d.l.						<d.l.
B/int2	<d.l.	<d.l.	0,21	0,53	<d.l.	<d.l.	0,24	1,07														<d.l.						<d.l.
B/int2	<d.l.	<d.l.	1,1	2,55	<d.l.	0,89	1,18	5,21														<d.l.						<d.l.
B/int4a	<d.l.	<d.l.	0,04	0,09	<d.l.	0,03	0,04	0,18														<d.l.						<d.l.
B/int4a	<d.l.	<d.l.	0,14	0,24	<d.l.	0,15	0,09	0,68														<d.l.						<d.l.
B/int4b	<d.l.	<d.l.	0,07	0,17	<d.l.	0,06	0,08	0,35														<d.l.						<d.l.
B/int4b	<d.l.	<d.l.	0,18	0,32	<d.l.	0,2	0,12	0,92														<d.l.						<d.l.
B/int7	<d.l.	0	0,17	0,25	<d.l.	0,08	0,06	0,38														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	0,98	1,61	<d.l.	<d.l.	0,51	2,42														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	0,32	0,83	<d.l.	<d.l.	0,18	1,03														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	0,76	1,58	0,48	0,55	0,43	2,45														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	0,37	1,11	<d.l.	<d.l.	0,23	1,71														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	1,12	2,91	<d.l.	<d.l.	1,33	5,81														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	0,19	0,43	<d.l.	0,15	0,2	0,87														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	4,58	7,95	<d.l.	5,01	2,9	22,92														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	2,17	4,56	<d.l.	1,95	1,54	11,05														<d.l.						<d.l.
B/int7	<d.l.	<d.l.	0,57	1,02	<d.l.	0,65	0,31	3,05														0,08						<d.l.
B/int8	<d.l.	<d.l.	3,16	4,64	<d.l.	1,94	1,08	7,17														<d.l.						<d.l.
B/int8	<d.l.	0,04	5,56	7,71	<d.l.	3,21	1,71	12,41														<d.l.						<d.l.
B/int8	<d.l.	0,08	3,15	4,47	<d.l.	1,45	1,1	6,83														<d.l.						<d.l.
B/int8	<d.l.	0,01	0,37	0,52	<d.l.	0,17	0,13	0,8														<d.l.						<d.l.
B/int8	<d.l.	0,09	3,33	4,72	<d.l.	1,53	1,17	7,22														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	8,69	22,1	<d.l.	<d.l.	4,88	27,44														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	0,68	1,07	<d.l.	<d.l.	0,3	2,2														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	1,15	2,39	0,72	0,83	0,65	3,69														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	3,15	9,45	<d.l.	<d.l.	1,95	14,49														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	3,48	9,03	<d.l.	<d.l.	4,13	18,07														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	4,77	11	<d.l.	3,85	5,09	22,45														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	1,55	2,7	<d.l.	1,7	0,98	7,77														<d.l.						<d.l.
B/int8	<d.l.	<d.l.	1,04	2,18	<d.l.	0,93	0,74	5,27														<d.l.						<d.l.
B/int9	<d.l.	0,07	2,88	4,08	<d.l.	1,32	1,01	6,24														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	1,09	1,8	<d.l.	<d.l.	0,57	2,69														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	1,19	3,02	<d.l.	<d.l.	0,67	3,75														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	0,55	0,86	<d.l.	<d.l.	0,24	1,75														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	1,23	3,18	<d.l.	<d.l.	1,45	6,35														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	1,55	3,59	<d.l.	1,26	1,66	7,33														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	0,05	0,08	<d.l.	0,05	0,03	0,23														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	1,08	2,27	<d.l.	0,97	0,77	5,5														<d.l.						<d.l.
B/int9	<d.l.	<d.l.	0,83	1,47	0,33	0,94	0,45	4,42														0,12						<d.l.

OSPAR-codes	in tonnes													in kilogrammes													
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
B/int15	<d.l.	<d.l.	0,04	0,09	<d.l.	0,03	0,04	0,18														<d.l.						<d.l.
B/int0	0,05	0,01	0,73	1,7	0,66	1,18	0,51	5,5														0,67						0,07
B/int0	0,23	0,04	3,64	9,02	3,02	5,7	2,85	26,91														3,32						0,32
B/int0	0,88	0,18	8,14	21,34	14,31	21,22	6,91	88,46														14,11						1,36
B/int0	0,97	0,14	11,19	26,72	11,92	20,22	7,94	90,64														9,5						1,08
B/int0	<d.l.	0,02	1,89	3,92	1,23	2,53	1,21	12,13														1,21						<d.l.
B/int0	0,09	0,01	1,06	2,53	1,13	1,91	0,75	8,58														9						0,1
B/int0	0,01	0	0,12	0,3	0,1	0,19	0,09	0,88														0,11						0,01
B/int0	0,41	0,1	2,78	7,66	6,35	8,64	2,53	38,43														6,78						0,6
B/int0	0,15	0,03	1,06	2,92	2,16	3,07	0,94	13,55														2,04						0,18
B/int0	<d.l.	0,03	0,65	1,5	0,36	0,82	0,33	4,75														0,51						0,04
B/int0	0	0	0	0	0	0	0	0														0						0
B/int0	0	0	0	0	0	0	0	0														0						0
B/int1bis	0,94	0,16	15,08	37,38	12,53	23,61	11,8	111,49														13,77						1,31
B/int1bis	0,58	0,08	6,64	15,84	7,06	11,99	4,71	53,73														5,63						0,64
B/int1bis	<d.l.	0,03	2,46	5,09	1,59	3,28	1,57	15,76														1,57						<d.l.
B/int1bis	1,18	0,17	13,55	32,34	14,42	24,47	9,62	109,7														11,49						1,31
B/int1bis	<d.l.	0,21	5,23	12,06	2,89	6,6	2,62	38,23														4,1						0,3
B:int1 bis	0	0	0	0	0	0	0	0														0						0
B/int1 bis	<d.l.	<d.l.	5,44	12,51	1,66	5,93	2,68	31,13														1,25						<d.l.
B/int12	0,04	0,01	0,62	1,45	0,56	1	0,43	4,67														0,57						0,06
B/int12	0,19	0,03	3,06	7,59	2,54	4,79	2,4	22,62														2,79						0,27
B/int12	0,92	0,19	8,54	22,39	15,02	22,27	7,25	92,81														14,81						1,42
B/int12	0,91	0,13	10,42	24,88	11,09	18,83	7,4	84,38														8,84						1,01
B/int12	<d.l.	0,02	1,65	3,42	1,07	2,21	1,05	10,59														1,05						<d.l.
B/int12	0,08	0,01	0,9	2,16	0,96	1,63	0,64	7,31														0,77						0,09
B/int12	0,01	0	0,09	0,23	0,08	0,15	0,07	0,7														0,09						0,01
B/int12	0,37	0,09	2,5	6,89	5,71	7,78	2,28	34,58														6,1						0,54
B/int12	0,12	0,03	0,9	2,5	1,85	2,63	0,8	11,59														1,74						0,15
B/int12	<d.l.	0,02	0,49	1,14	0,27	0,62	0,25	3,61														0,39						0,03
B/int12	0	0	0	0	0	0	0	0														0						0
B/int12	0	0	0	0	0	0	0	0														0						0
B/int16	0,01	0	0,04	0,11	0,09	0,12	0,04	0,54														0,1						0,01
Total	**11,040**	**3,432**	**358,347**	**868,040**	**222,444**	**558,212**	**262,623**	**2 009,956**			**6,767**											**122,510**				**0,337**		**10,910**

Denmark																												
NJL01																												
NJL05																												
NJL07																												
NJL10																												
NJL10																												
NJL10																												
NJL11																												
NJL13																												
NJL17																												
NJL20																												
NJL21																												
NJL25																												
NJL26																												
NJL31																												
NJL31																												
NJL33																												
NJL37																												
NJL41																												
NJL45																												
NJL50																												
RIB01																												
RIB01																												
RIB01																												
RIB01																												
RIB02																												
RIB02																												
RIB02																												

OSPAR-codes	in tonnes													in kilogrammes													
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
RIB02																												
RIB03	0,02	0,02	1,43	2,58	1,18	2,60	1,55	8,15																				
RIB03	0,00	0,00		0,02	0,01	0,02		0,10																				
RIB04	0,02	0,02	1,43	2,58	1,18	2,60	1,55	8,15																				
RIB04	0,00	0,00		0,02	0,01	0,02		0,10																				
RIB08																												
RIN05	0,00	0,00	0,04	0,07	0,05	0,08	0,06	0,28																	0			
RIN05	0,00	0,00	0,09	0,12	0,09	0,08	0,10	0,45																				
RIN05	0,00	0,00	0,03	0,07	0,03	0,04	0,04	0,19																				
RIN05	0,00	0,00	0,06	0,10	0,06	0,06	0,07	0,31													0,07				0			
RIN25	0,00	0,00	0,00	0,00	0,02	0,00	0,03	0,15																				
VIB02																												
AAR01	0,00	0,00	0,01	0,03	0,02	0,04	0,02	0,11																				
AAR06	0,00	0,00	0,01	0,02	0,02	0,03	0,01	0,08																				
AAR10	0,01	0,00	0,14	0,55	0,38	0,86	0,37	2,10																				
AAR26				0,23			0,16	0,88																				
Total	**0,058**	**0,035**	**3,233**	**6,401**	**3,045**	**6,439**	**3,962**	**21,047**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,070**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**

France																												
F/05901	NI	NI	0,296	0,063	0,018	0,045	0,018	0,108	NI	0,000	0,000	NI	1,79	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/05902	0,335	0,103	11,865	45,861	8,121	24,154	14,106	78,729	NI	0,567	0,709	NI	833,44	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	106,788	16,131	
F/05903	0,149	0,049	4,143	17,585	4,611	10,534	6,005	38,442	NI	0,320	0,398	NI	293,08	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	10,548	8,119	
F/05904	0,034	0,011	0,994	4,057	1,709	2,847	1,149	10,734	NI	0,093	0,114	NI	72,67	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	4,648	3,873	
F/06201	0,197	0,030	3,292	12,684	4,137	7,572	3,372	54,196	NI	0,232	0,284	NI	NI	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	7,597	3,803	
F/06202	0,147	0,041	3,173	15,441	5,382	9,764	4,886	31,300	NI	0,301	0,376	NI	NI	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	11,726	8,965	
F/07601	2,474	0,742	35,986	193,361	60,692	139,426	42,713	384,484	NI	2,157	2,836	3822,00	2418,96	<DL	<DL	12,818	13,045	20,247	20,252	33,711	100,073	NI	NI	NI	NI	<DL	<DL	
F/07602	0,433	0,355	10,417	51,594	25,415	40,138	17,699	108,928	NI	1,556	2,132	1827,00	792,39	<DL	<DL	9,607	<DL	12,268	12,201	<DL	34,076	NI	NI	NI	NI	76,697	58,568	
F/07602	2,233	1,639	38,833	253,647	98,000	166,652	68,652	447,550	NI	6,282	8,673	8914,30	3589,83	<DL	<DL	60,791	<DL	110,053	113,722	<DL	284,566	NI	NI	NI	NI	157,926	413,213	
F/07603	<DL	0,009	0,548	4,236	1,193	2,130	1,195	6,363	NI	NI	NI	144,90	6,80	<DL	<DL	0,249	0,237	0,411	0,416	0,343	1,655	NI	NI	NI	NI	NI	NI	
F/07604																												
F/07605	0,012	0,007	0,222	1,783	0,760	1,227	0,468	3,857	NI	0,106	0,141	67,20	2,92	<DL	0,04	0,076	0,088	0,126	0,181	0,029	0,544	NI	NI	NI	NI	0,237	0,225	
F/07606	0,016	0,005	0,103	1,379	1,113	1,322	0,592	4,007	NI	0,101	0,128	10,75	1,39	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	0,067	0,033	
F/01409																												
F/01405																												
F/01406	0,016	0,009	0,372	2,612	1,114	1,659	0,666	4,569	NI	0,029	0,037	110,70	82,85	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	NI	NI	
F/01407																												
F/01401	0,078	0,031	3,374	8,865	5,200	6,573	2,936	19,763	NI	0,224	0,280	470,83	59,80	<DL	<DL	0,549	0,555	0,593	0,678	<DL	2,375	NI	NI	NI	NI	1,252	4,001	
F/01408																												
F/01402																												
F/01403																												
F/05001																												
F/05002																												
F/05004	0,006	<DL	0,116	0,303	0,132	0,183	0,137	0,617	NI	0,000	0,000	1,30	32,35	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	<DL	<DL	
F/05005																												
F/03501																												
F/02906	0,001	0,001	0,025	0,138	0,102	0,130	0,043	0,344	NI	0,003	0,020	9,15	3,12	<DL	<DL	0,077	0,069	0,088	0,073	0,063	0,490	NI	NI	NI	NI	0,500	0,100	
F/05601	0,010	0,004	0,309	1,159	0,779	0,801	0,493	3,567	NI	0,000	NA	1,43	14,54	0,146	0,15	0,061	0,146	0,132	0,146	0,080	0,858	NI	NI	NI	NI	2,773	3,421	
F/05602																												
F/05603																												
F/04401	0,830	0,565	72,021	263,527	88,956	177,628	100,410	497,567	NI	2,190	2,408	10200,40	3398,81	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	292,771	76,420	
F/04402																												
F/04404																												
F/04406																												
F/04407	0,001	0,000	0,040	0,139	0,203	0,120	0,053	0,507	NI	NI	NI	8,80	2,06	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/04408	0,004	0,003	0,438	1,497	0,402	1,059	0,584	3,212	NI	NI	NI	69,40	23,36	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/04409																												
F/04411	0,008	0,005	0,902	3,006	0,977	1,841	1,052	5,260	NI	0,026	0,029	142,80	35,69	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/04412	0,001	0,001	0,208	0,782	0,356	0,505	0,287	1,584	NI	NI	NI	30,70	9,11	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/08501																												
F/08502																												
F/08503	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/08504	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/08505																												

OSPAR-codes	in tonnes													in kilogrammes														
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
F/08506	<DL	<DL	0,313	0,964	0,265	0,627	0,337	1,880	NI	NI	NI	55,43	14,46	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/08507																												
F/08508																												
F/08509																												
F/08510																												
F/08511	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/01701	0,020	0,010	1,310	5,170	1,590	3,180	1,920	10,650	NI	0,049	NI	186,69	58,24	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	1,870	0,550	
F/01702																												
F/01704	0,000	0,000	0,010	0,030	0,010	0,020	0,010	0,070	NI	0,000	NI	1,12	0,38	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	<DL	<DL	
F/01705																												
F/01706	0,010	0,010	1,030	4,180	1,910	2,710	1,650	11,170	NI	0,014	NI	141,14	0,05	<DL	<DL	<DL	<DL	<DL	0,200	<DL	<DL	NI	NI	NI	NI	<DL	<DL	
F/01707	0,080	0,040	4,700	15,380	0,040	12,580	5,990	41,580	NI	0,097	NI	18,00	6,75	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	2,060	1,230	
F/01709																												
F/01710	0,010	0,010	0,780	2,560	0,850	1,640	0,980	5,580	NI	0,006	NI	46,50	22,01	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	0,150	0,150	
F/01711																												
F/01712	0,001	0,001	0,080	0,410	0,280	0,230	0,150	0,870	NI	0,002	NI	26,04	3,66	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	0,200	0,140	
F/01714	0,004	0,001	0,160	0,490	0,320	0,260	0,180	1,340	NI	0,005	NI	23,69	3,71	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	0,680	0,310	
F/01715	0,001	0,001	0,130	0,560	0,310	0,300	0,200	1,140	NI	0,002	NI	32,48	6,61	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	0,420	0,340	
F/03301 F/03302 F/03305 F/03306 F/03307	0,944	0,284	32,797	130,526	43,362	77,699	62,071	308,816	NI	0,848	NI	2483,81	1297,01	1,070	1,97	3,153	2,149	3,929	4,249	3,516	20,041	NI	NI	NI	NI	<DL	<DL	
F/03303																												
F/03307 F/03308 F/03311	1,182	0,348	43,583	181,037	56,993	100,995	82,975	422,839	NI	0,919	NI	2848,10	1567,19	0,888	1,38	2,992	1,953	3,629	4,098	2,607	17,551	NI	NI	NI	NI	<DL	<DL	
F/03309																												
F/03312																												
F/03313 F/03314 F/03315 F/03316 F/03317	0,581	0,153	14,056	56,798	17,211	34,303	26,965	137,405	NI	0,316	NI	1093,73	570,90	0,365	0,40	1,054	0,743	1,546	1,914	1,098	7,122	NI	NI	NI	NI	<DL	<DL	
F/03318	0,060	0,016	2,471	5,991	1,573	3,145	2,995	14,527	NI	<DL	NI	119,36	82,52	0,092	0,07	0,211	0,094	0,139	0,151	0,063	0,815	NI	NI	NI	NI	<DL	<DL	
F/03319	<DL	<DL	3,472	<DL	<DL	<DL	<DL	14,384	NI	<DL	<DL	<DL	125,98	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/03323	<DL	<DL	<DL	<DL	<DL	1,179	0,993	<DL	NI	<DL	0,000	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	<DL	<DL	
F/03324																												
F/03333																												
F/03334																												
F/04001	0,007	<DL	0,155	0,122	0,227	0,087	0,034	0,414	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	<DL	NI	
F/06401	<DL	<DL	3,295	19,093	7,100	6,444	10,151	29,401	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
F/06402																												
F/06403																												
F/06404	<DL	0,002	<DL	0,419	0,433	0,583	0,295	1,940	NI	<DL	0,003	420,71	9,26	<DL	<DL	<DL	<DL	<DL	<DL	<DL	<DL	NI	NI	NI	NI	<DL	<DL	
F/06405																												
Total	**9,884**	**4,486**	**296,021**	**1 307,445**	**441,843**	**842,293**	**465,414**	**2 709,693**		**16,445**	**18,568**	**33328,47**	**15443,69**	**2,561**	**4,01**	**91,638**	**19,080**	**153,160**	**158,282**	**41,509**	**470,165**					**678,910**	**599,592**	

OSPAR-codes	in tonnes													in kilogrammes															
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/		
Germany																												pp DDD	pp DDE	Notes
D10	0,001	0,001	0,12	0,14	0,05	0,13	0,09	0,54	ND		ND	ND	ND	< 0,001	< 0,001	< 0,001	< 0,001	< 0,001	0,005	< 0,001	< 0,012		< 0,001	0,000	< 0,001	ND	ND	< 0,001	< 0,001	
D11	0,009	0,005	0,47	1,14	1,01	0,88	0,73	3,64	92		< 0,002	37,38	5,66	< 0,004	< 0,005	< 0,006	< 0,007	< 0,008	< 0,009	< 0,010	< 0,030		< 0,004	< 0,001	< 0,004	< 0,009	< 0,009	< 0,004	< 0,004	
D12	0,015	0,016	1,23	3,65	1,61	2,00	1,52	8,03	76		< 0,021	92,17	26,48	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	0,731	0,406	ND	ND	
D13	0,007	0,010	0,58	1,65	0,52	1,07	0,81	3,98	72		< 0,002	36,05	7,12	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	0,053	< 0,009	ND	ND	
D14	2,480	2,870	104,00	230,00	122,00	240,00	136,00	1016,00	109		2,823	15243,00	ND	3,528	3,01	7,198	4,657	9,597	13,737	7,386	49,115		16,654	0,847	6,022	345,784	82,800	30,862	10,303	(1)
D15	0,212	0,000	6,13	16,73	7,25	18,96	10,04	66,34	95		0,167	1115,03	ND	0,100	0,08	0,323	0,251	0,452	0,719	0,390	2,319		0,167	0,028	0,151	8,463	2,565	0,268	0,134	(1)
D17	0,293	0,231	18,87	56,60	16,77	44,02	27,25	132,06	45		0,713	4192,46	ND	0,776	0,55	0,797	0,880	1,279	1,384	0,671	6,331		0,755	0,168	0,503	10,439	3,647	0,650	0,629	(1)
D19	0,007	0,004	0,27	1,43	0,36	0,80	0,48	2,23	45		0,003	ND	ND	0,003	0,00	0,002	0,002	0,003	0,004	0,001	0,016		0,001	0,001	0,001	0,081	0,027	0,001	0,001	
D20	0,016	0,008	0,70	3,19	0,83	1,78	1,04	5,03	50		0,0045	ND	ND	0,006	0,00	0,004	0,006	0,006	0,008	0,004	0,038		0,003	0,002	0,004	0,181	0,052	0,003	0,005	
D21	0,002	0,0001	0,07	0,19	0,15	0,21	0,14	0,79	36		0,001	5,93	2,56	0,000	0,00	0,001	0,002	0,006	0,005	0,004	0,018		0,0002	0,0002	0,0002	0,043	0,013	0,000	0,000	
D22	0,007	0,000	0,29	0,70	0,54	0,75	0,48	2,82	37		0,003	28,04	10,62	0,001	0,00	0,007	0,007	0,014	0,014	0,009	0,055		0,001	0,001	0,001	0,124	0,062	0,001	0,001	
D30	0,013	0,0005	0,60	1,30	0,84	1,55	0,85	5,65	59		0,009	74,56	23,48	0,003	0,02	0,025	0,042	0,060	0,048	0,023	0,220		0,013	0,001	0,001	0,977	0,246	0,001	0,001	
D32	0,009	0,0004	0,44	0,91	0,57	1,10	0,61	4,15	60		0,006	49,50	15,02	0,001	0,01	0,021	0,035	0,049	0,039	0,020	0,178		0,010	0,001	0,001	0,894	0,197	0,001	0,001	
D34	0,413	0,216	21,56	52,10	17,97	41,32	30,54	140,13	93		0,988	6287,83	ND	1,204	0,66	1,401	1,276	1,922	2,587	1,078	10,132		1,024	0,252	0,844	23,355	5,929	0,988	0,611	(1)
D36	0,002	0,000	0,06	0,14	0,10	0,18	0,08	0,57	26		0,000	1,84	0,35	< 0,0001	0,00	0,001	< 0,0001	0,001	0,002	0,002	0,006		< 0,0001	< 0,0001	< 0,000	0,008	0,003	< 0,0001	< 0,0001	
D40	0,009	0,009	0,61	1,70	1,28	1,37	0,91	4,83	25		0,006	ND	ND	0,005	0,01	0,007	0,005	0,016	0,023	0,010	0,072		0,015	0,001	0,005	0,326	0,044	0,011	0,005	
D41	0,008	0,005	0,35	1,95	0,48	1,11	0,64	3,00	52		0,003	ND	ND	0,005	0,00	0,003	0,003	0,004	0,005	0,002	0,025		0,002	0,001	0,002	0,129	0,033	0,002	0,002	
D43	0,017	0,001	0,66	1,40	0,91	1,68	0,85	6,83	54		0,005	59,03	26,74	0,003	0,00	0,008	0,010	0,018	0,015	0,008	0,066		0,001	0,001	0,001	0,479	0,135	0,001	0,001	
D45	0,005	0,0005	0,19	0,56	0,42	0,63	0,42	2,24	27		0,002	8,44	6,84	0,004	0,00	0,004	0,004	0,008	0,007	0,003	0,034		0,001	0,001	0,001	0,075	0,041	0,001	0,001	
D47	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	
D49	<0,026	< 0,0039	0,39	0,11	1,36	2,04	0,65	4,35	< 25		0,004	25,51	5,16	< 0,009	< 0,009	< 0,004	< 0,009	0,018	0,018	< 0,004	< 0,070		0,002	0,004	< 0,004	< 0,006	< 0,006	< 0,004	< 0,004	
D50	0,001	0,0000	0,02	0,05	0,03	0,05	0,03	0,19	53		0,0002	2,80	0,90	0,0001	0,00	0,000	0,001	0,001	0,001	0,000	0,004		0,0000	0,0000	0,0000	0,016	0,006	0,000	0,000	
D51	0,011	0,0005	0,39	0,83	0,57	0,99	0,51	3,91	65		0,003	37,15	15,34	0,003	0,00	0,006	0,006	0,012	0,010	0,005	0,044		0,0008	0,001	0,0008	0,252	0,080	0,001	0,001	
D52	0,002	0,0016	0,15	0,20	0,21	0,34	0,13	1,02	86		0,002	9,90	2,53	< 0,003	< 0,003	< 0,007	< 0,003	< 0,007	< 0,009	< 0,004	< 0,035		< 0,003	< 0,005	< 0,004	0,205	0,042	< 0,003	< 0,003	
D53	0,001	0,0018	0,03	0,14	0,05	0,08	0,06	0,33	148		0,001	9,77	1,60	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	0,054	0,007	ND	ND	
D54	0,033	0,043	1,81	5,62	1,83	3,39	2,26	14,03	57		< 0,019	108,20	28,59	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	3,872	1,197	ND	ND	
D56	0,029	0,018	1,33	6,66	1,65	3,91	2,21	10,72	90		0,033	ND	ND	0,018	0,01	0,020	0,025	0,039	0,046	0,017	0,179		0,008	0,003	0,006	0,961	0,252	0,009	0,024	
D57	0,266	0,1900	2,94	9,20	6,45	9,01	4,08	52,63	93		0,144	608,01	255,16	0,611	0,39	0,493	0,252	0,797	1,212	0,657	4,411		1,603	0,231	0,439	55,149	6,371	2,129	0,453	
Total	**3,865**	**3,631**	**164,256**	**398,270**	**185,815**	**379,315**	**223,394**	**1 496,026**	**1 644,040**	**0,000**	**4,919**	**28032,61**	**434,15**	**6,272**	**4,77**	**10,321**	**7,464**	**14,299**	**19,887**	**10,289**	**73,263**		**20,261**	**1,544**	**7,985**	**452,650**	**104,151**	**34,929**	**12,173**	

OSPAR-codes	in tonnes													in kilogrammes														
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
Ireland																												
Irl 8	0,060	0,019	1,900	10,900	2,270	7,250	4,370	28,300	ND	0,55	1,09	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	<1,44	<0,99	
Irl 17	0,060	0,040	1,690	9,870	15,310	12,560	6,120	36,130	ND	0,18	0,22	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	7,05	1,05	
Irl 20	0,026	0,005	0,420	1,510	1,120	1,430	1,240	5,100	ND	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	1,14	<0,21	
Irl 33	0,012	0,002	0,380	1,370	0,360	0,790	0,890	2,470	ND	0,01	0,02	ND	ND	<d.l.	0,62	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	1,30	<d.l.	
Irl 45	0,008	0,002	0,170	0,920	0,390	0,840	0,540	4,200	ND	0,00	0,00	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	<0,59	1,25	
Irl 47	0,012	0,001	0,730	1,380	0,370	0,930	1,040	4,280	ND	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	
Irl 48	<0,001	0,005	0,260	0,210	0,390	0,380	0,310	2,600	ND	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	<1,24	<1,24	
Irl 49	0,002	0,009	0,003	0,180	0,490	0,260	0,300	1,360	ND	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	
Irl 50	<d.l.	<d.l.	0,560	1,200	0,960	0,520	1,100	2,390	ND	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	-	-	<d.l.	<d.l.	<d.l.	0,67	<0,49	
Irl 51	0,001	0,000	0,090	0,890	0,080	0,030	0,490	0,780	ND	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	<d.l.	ND	ND	ND	ND	<d.l.	<d.l.	<d.l.	
Total	**0,182**	**0,083**	**6,203**	**28,430**	**21,740**	**24,990**	**16,400**	**87,610**							**0,62**											**12,170**	**3,490**	
Netherlands																												
NL-6	0,083	0,052	2,879	6,421	5,098	7,414	3,920	29,452	28,458	0,100				0,800	0,800	0,800	0,800	0,800	0,800	0,800	5,600		0,500	0,000		2,000		
NL-7	0,700	0,300	13,460	35,200	15,400	32,800	14,600	100,300	129,200	0,941				7,200	7,200	7,200	7,200	7,200	7,200	7,200	50,600		7,200	7,200	14,400	24,100		
NL-8	2,853	1,111	61,579	159,376	88,382	139,128	70,478	562,296	825,396	4,454				11,000	10,000	12,000	8,000	16,000	16,000	9,000	82,000		6,000	5,000	4,000	106,000		
NL-10																												
NL-11																												
NL-13	0,100	0,100	3,900	11,100	5,540	11,200	5,170	37,100	45,600	0,262				0,500	0,500	0,700	0,600	1,000	1,400	0,600	5,300		0,300	0,400	1,100	7,000		
NL-14	1,427	0,744	48,419	125,395	70,368	107,093	61,833	386,878	407,978	2,186	2,524			11,150	11,150	11,150	5,575	11,150	11,150	11,150	72,500		13,938	13,938		65,316		
NL-15	2,089	1,994	64,705	225,913	116,160	190,812	100,481	582,990	662,564	5,078	7,418			17,668	17,668	17,668	17,668	8,834	17,668	17,668	115,000		34,224	58,502		119,667		
Total	**7,252**	**4,301**	**194,942**	**563,405**	**300,948**	**488,447**	**256,482**	**1 699,016**	**2099,196**	**13,021**	**9,942**			**48,318**	**47,318**	**49,518**	**39,843**	**44,984**	**54,218**	**46,418**	**331,000**		**62,162**	**85,040**	**19,500**	**324,083**		
Norway																												
11	0,000	0,000				0,001																0						
12	0,000	0,000				0,004																						
13						0,019																				< 0,135		
14	0,001	0,000				0,072																				< 0,026		
15	0,000					0,005																						
23	<0,147	0,008				3,999																<< 1,7						
24	0,010	0,001				0,280																<< 0,1						
25	0,010	0,001				0,266																<< 0,1						
43																						<0,005				< 0,448		
57	0,000	0,000				0,000					0											0				0		
59	0,000	0,000				0,000					0											0				0		
60	0,000	0,000				0,000					0											0				0		
61	0,000	0,000				0,000																						
62	<0,018	<0,018				<6,808																						
65	<0,000	<0,000				<0,007																						
68	<0,001	<0,000	<0,019	<0,027	<0,065	<0,027	<0,023	<0,146			<0,003											<0,034				<0,430		
69	<0,001	<0,000	<0,015	<0,064	<0,056	<0,027	<0,061	<0,235			<0,008											<0,153				<0,224		
Total	**0,189**	**0,028**	**0,034**	**0,091**	**0,121**	**11,514**	**0,084**	**0,381**			**0,010**		**0,00**									**0,192**				**0,000**		
Spain																												
E/1	0,005	0,001	0,059	0,073	0,249	0,601	0,086	2,913			0,0064			0,05	0,05	0,05	0,07	0,06	0,07	0,05		0,39						(1)(2)(3)
E/2	NI	NI	NI	NI	NI	NI	NI	NI			NI			NI	NI	NI	NI	NI	NI	NI		NI						
E/5	3,702	2,985	1,799	25,495	25,366	86,691	1,808	523,899			ND			ND	ND	ND	ND	ND	ND	ND		ND						
E/8	0,009	0,103	6,104	42,952	21,853	0,009	20,249	60,395			ND			ND	ND	ND	ND	ND	ND	ND		ND						
E/11	0,020	0,028	0,664	0,330	3,486	1,052	0,194	2,766			ND			ND	ND	ND	ND	ND	ND	ND		ND						
E/12	0,181	0,100	1,490	9,386	8,406	4,596	6,790	18,308			ND			0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,01						
Total	**3,916**	**3,216**	**10,116**	**78,236**	**59,360**	**92,949**	**29,127**	**608,281**			**0,006**			**0,046**	**0,05**	**0,052**	**0,068**	**0,060**	**0,072**	**0,053**	**0,000**	**0,40**						
Sweden																												
SWE/13	0	0	ND	2	3	1	0,7	10	ND	ND	ND	ND	ND	<0,07	0,10	0,11	0,15	0,15	0,17	0,11	0,7	ND	ND	ND	ND	ND	ND	(1)
SWE/11	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND			NI	NI	NI	NI	NI	NI	NI	1	ND	ND	ND	ND	1	ND	
SWE/10	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND			NI	NI	NI	NI	NI	NI	NI	0,1	ND	ND	ND	ND	NI	ND	
SWE/11	0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SWE/19	0	0	0,7	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	(2)
Total	**0,000**	**0,000**	**0,700**	**2,000**	**3,000**	**1,000**	**0,700**	**10,000**				**0,00**	**0,00**	**0,070**	**0,10**	**0,110**	**0,150**	**0,150**	**0,170**	**0,110**	**1,800**							

OSPAR-codes	in tonnes													in kilogrammes														
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
UK																												
CR021	0,00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CR030	0	0	0,01	0,01	0,01	0,01	0,01	0,06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,009	0	
CR031	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CR040	0	0	0,04	0,08	0,13	0,14	0,05	0,36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,022	0	
CR050	0	0	0,04	0,09	0,34	0,10	0,07	0,84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,809	0	
CR060	0,05	0,00	0,28	1,14	0,75	0,50	1,03	3,07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CR080	0,00	0,00	0,07	0,12	0,99	0,17	0,06	1,82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,012	0	
CR110	0,10	0,05	2,12	8,01	8,80	8,11	5,54	26,09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29,044	0	
DM001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DV010	0	0	2	6	1	4	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,281	1,873	
DV011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DV030	0	0	0,02	0,05	0,02	0,03	0,03	0,10	0,338	0,002	0,004	0	0	0	0,003	0,008	0,010	0,010	0,008	0,003	0	0,073	0	0	0	0,135	0,004	
DV040	0	0	0,56	1,34	0,33	0,65	0,60	2,03	0,104	0,001	0,001	0	0	0	0,001	0,003	0,003	0,003	0,003	0,001	0	0,022	0	0	0	0,041	0,001	
FI015	0	0	0,05	0,14	0,08	0,12	0,12	0,31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,175	0	
FI055	0,01	0,00	0,31	0,71	0,66	0,82	1,08	3,34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FI080	0	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FO010	0,01	0,00	0,33	0,50	0,15	0,25	0,43	0,96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FO020	0	0,00	0,19	0,56	0,23	0,37	0,36	1,04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,552	0	
FO028	0,03	0,02	0,84	3,59	2,16	3,81	2,44	9,51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FO038	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FO041	0,17	0,28	2,44	10,72	10,59	21,45	5,32	30,12	0	0	0	0	0	0	0	0	0	0	0	0	0,450	0,969	0	0	0	4,184	0	
FO042	0	0,01	0,21	0,76	0,43	0,89	0,39	1,52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,636	0	
FO043	0	0,01	0,21	0,76	0,43	0,89	0,39	1,52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,636	0	
FO044	0,19	0,84	12,55	50,89	32,21	55,05	24,96	108,74	0	0	0	0	0	0	0	0	0	0	0	0	6,189	18,808	0	0	0	13,208	0	
FO051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FO080	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HE040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HE070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HU015	0	0	0,02	0,05	0,04	0,08	0,04	0,11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,059	0,002	
HU020	0,03	0,02	3,35	8,32	4,08	10,22	3,83	22,76	0	0	0	0	0	0,310	0,152	0,178	0,134	0,174	0,241	0,141	1,262	3,140	0	0	0	5,72	0,572	
HU030	0,27	0,20	27,79	69,04	33,86	84,75	31,75	188,78	0	0	0	0	0	2,561	1,254	1,466	1,105	1,440	1,987	1,163	10,419	25,935	0	0	0	47,364	4,765	
HU040	0	0	0,15	0,79	1,46	0,84	0,95	3,50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,324	1,276	
HU041	0	0	0,21	1,11	2,05	1,18	1,33	4,92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,708	1,792	
HU060	0,67	0,51	64,18	164,47	80,06	197,47	75,90	441,61	0	0	0	0,01	0	5,183	2,539	2,968	2,236	2,915	4,023	2,354	21,090	52,494	0	0	0	101,969	12,949	
HU080	0,49	0,37	47,24	119,69	58,32	143,65	56,42	327,35	0	0,771	2,264	0	0	4,359	2,173	2,486	1,915	2,525	3,383	2,050	17,759	43,801	0	0	0	75,558	8,786	
HU090	0,10	0,08	10,30	25,59	12,56	31,41	11,83	70,08	0	0	0	0	0	0,930	0,456	0,532	0,401	0,523	0,722	0,422	3,784	9,418	0	0	0	18,487	1,755	
HU143	0,01	0,01	0,58	2,05	0,60	1,71	0,98	3,91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,406	0,312	
HU150	0,01	0	0,13	0,16	0,21	0,30	0,11	0,60	2,065	0,013	0,033	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,379	0,057	
HU170	0	0	0,34	1,18	0,37	0,98	0,64	2,31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,265	0,454	
HU199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HU201	0	0	0,32	0,37	0,20	0,38	0,32	0,92	6,266	0,018	0,082	0	0	0,005	0,005	0,005	0,005	0,005	0,005	0,005	0,005	0,010	0	0	0	0,026	0,026	
IS040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS102	0,03	0,02	1,29	3,45	1,82	3,56	1,91	13,13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,885	2,065	
IS110	0,29	0,33	6,96	22,74	17,85	33,51	9,66	100,62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,924	6,104	
IS120	0,01	0,01	0,82	0,50	0,19	0,89	0,29	3,93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,137	0,143	
IS128	0,01	0,01	2,42	1,77	0,36	2,70	1,12	10,37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,265	0,265	
IS140	0,12	0,11	15,14	9,80	3,81	17,11	5,64	73,50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,869	2,631	
IS150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS170	0,04	0,07	4,76	10,74	3,52	8,32	7,15	27,28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,483	0,969	
IS180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS192	0	0	0,03	0,11	0,04	0,11	0,07	0,32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,204	0,144	
IS200	0,03	0,05	3,05	4,97	2,19	7,44	3,53	18,99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,358	0,036	
IS205	0,13	0,22	4,59	14,22	18,14	26,29	8,81	70,29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,54	21,108	
IS230	0,04	0,01	0,45	2,32	0,98	1,76	0,59	3,35	107,340	0,364	1,904	0	0	0,029	0,035	0,046	0,041	0,047	0,043	0,029	0,000	0,067	0	0	0	1,61	0,322	
IS240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS241	0,01	0,01	0,54	1,78	0,85	1,78	0,86	5,61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,535	0,255	
IS245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

OSPAR-codes	in tonnes													in kilogrammes													
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
IS251	0	0	0,14	0,39	0,22	0,61	0,29	1,37	0	0,066	0,220	0	0	1,160	4,625	0,009	0,008	0,010	0,008	2,315	0,043	0,055	0	0	0	0,686	0,046	
IS400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS595	0,02	0,01	0,20	1,57	1,03	1,42	1,02	4,53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS636	0	0	0,01	0,10	0,08	0,06	0,04	0,37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS650	0	0	0,11	0,78	0,64	0,44	0,40	4,86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IS671	0,09	0,02	3,73	20,81	8,07	12,01	11,91	37,22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LU010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LU070	0,01	0,02	0,68	3,39	1,60	3,77	1,84	11,89	0	0	0	0	0	0,419	0,140	0,140	0,140	0,279	0,279	0,279	16,738	3,905	0	0	0	0,279	0,279	
LU080	0,02	0,02	0,79	3,93	1,85	4,36	2,13	13,76	0	0	0	0	0	0,485	0,162	0,162	0,162	0,323	0,323	0,323	19,370	4,520	0	0	0	0,323	0,323	
LU083	0,00	0,01	0,20	0,97	0,46	1,08	0,53	3,41	0	0	0	0	0	0,120	0,040	0,040	0,040	0,080	0,080	0,080	4,803	1,121	0	0	0	0,08	0,08	
LU084	0,01	0,01	0,29	1,45	0,68	1,61	0,79	5,09	0	0	0	0	0	0,179	0,060	0,060	0,060	0,119	0,119	0,119	7,161	1,671	0	0	0	0,119	0,119	
LU085	0,01	0,01	0,28	1,41	0,66	1,56	0,77	4,94	0	0	0	0	0	0,174	0,058	0,058	0,058	0,116	0,116	0,116	6,952	1,622	0	0	0	0,116	0,116	
LU086	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LU110	0,13	0,14	5,01	15,77	12,93	27,57	11,63	82,52	610,33	8,12	15,97			0,52	0,17	0,17	0,17	0,35	0,35	0,35	0	5,22	0,00	0,00	0	54,731	11,309	
LU115	0,02	0,02	0,19	0,91	1,08	1,77	0,48	4,56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,019	1,334	
LU130	1,00	0,39	41,29	76,70	98,83	123,19	71,42	432,49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88,701	9,063	
LU140	0,04	0,04	1,61	5,74	3,90	10,56	4,13	32,14	46,142	0,529	1,130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,563	6,199	
LU168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LU169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LU190	0	0	0,02	0,05	0,03	0,06	0,04	0,16	0	0	0	0	0	0	0,002	0,002	0,003	0,000	0,003	0,002	0,020	0,040	0	0	0	0,05	0,025	
MA010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MA018	0,54	0,29	5,98	83,10	44,93	67,18	19,91	140,46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45,1	0	
MA021	0,10	0,04	0,97	16,13	7,53	11,51	2,35	23,54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,148	0	
MA025	0	0	0,12	1,04	0,35	0,31	1,28	1,43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,758	0	
MA030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MA050	0,02	0,01	0,41	3,11	1,11	2,25	3,29	4,94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,354	0	
MA060	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,122	0	
MA501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MA545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PL031	0,02	0,05	3,76	2,70	10,87	9,99	2,33	18,58	0,004	0,035	0,063	0	0	0,073	0,262	0,499	0,509	0,636	0,510	0,265	0,294	0,547	0,000	0,000	0	2,846	1,183	
PL060	0	0	0,30	0,35	1,10	0,52	0,35	2,09	6,743	0,235	0,317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,063	0,211	
PL072	0	0	0,02	0,12	0,13	0,13	0,05	1,20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,044	0,004	
PL075	0,01	0,01	1,13	0,40	2,90	1,30	0,29	7,13	2,470	0,016	0,029	0	0	0,003	0,003	0,003	0,004	0,006	0,004	0,004	0	0	0	0	0	0,594	0,125	
PO070	0	0	0,33	0,72	0,32	0,93	0,82	3,79	0,109	0	0	0	0	0,004	0,006	0,003	0,004	0,004	0,004	0,004	0	0	0	0	0	0,24	0,024	
PO090	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TH005	0,11	0,09	1,03	2,83	2,51	2,16	1,56	5,85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,784	1,988	
TH034	0,01	0,01	0,51	2,17	2,36	2,16	0,97	5,81	15,175	0,087	0,181	0	0	0,020	0,008	0,025	0,015	0,017	0,011	0,035	0	0	0	0	0	1,811	0,679	
TH037	0,00	0,00	0,29	0,73	0,36	0,59	0,46	1,24	2,471	0,016	0,053	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,341	0,046	
TH052	0,13	0,12	22,05	54,98	27,16	44,61	34,88	93,13	0,596	0,003	0,006	0	0	0,012	0,018	0,011	0,014	0,014	0,013	0,012	0	0	0	0	0	25,574	3,459	
TH053	0	0	0,28	0,69	0,34	0,56	0,44	1,18	2,349	0,015	0,050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,324	0,043	
TH062	0	0	0,01	0,05	0,03	0,03	0,03	0,10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,016	0,012	
TH070	0	0	0,55	0,94	0,16	0,60	0,43	1,61	0,934	0,005	0,010	0	0	0,019	0,028	0,017	0,022	0,022	0,020	0,019	0	0	0	0	0	0,121	0,121	
TH073	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TH080	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TH140	0	0	0,29	0,45	0,56	0,59	0,32	1,78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,314	1,112	
TH146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TH147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TH207	0,01	0,01	0,87	2,14	1,05	1,73	1,37	3,65	7,276	0,047	0,155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,004	0,133	
TH208	0,01	0,01	0,94	2,32	1,14	1,88	1,48	3,95	7,875	0,051	0,167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,086	0,144	
TH209	0	0	0,35	0,85	0,42	0,69	0,54	1,45	2,896	0,019	0,062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,4	0,054	
TH210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TH211	0,01	0,02	1,89	4,68	2,29	3,78	2,99	7,96	15,877	0,103	0,337	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,191	0,29	
TY025	0,00	0,00	0,19	0,34	0,13	0,25	0,25	0,72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,062	0,03	
TY042	0,01	0,01	1,20	2,14	1,87	2,54	1,87	5,89	361,937	0,772	5,464	0	0	0,014	0,013	0,036	0,027	0,040	0,027	0,023	0,174	0,469	0,040	0,013	0,197	3,079	0,268	
TY070	0,05	0,02	0,82	1,93	2,62	7,25	1,42	15,92	137,511	0,503	2,129	0	0	0,071	0,071	0,098	0,098	0,133	0,143	0,125	0,739	1,890	0	0	0	12,833	1,587	
TY081	0,32	0,40	3,42	10,00	62,09	40,25	6,32	141,80	396,336	3,162	9,549	0	0	1,460	3,250	6,125	3,964	4,957	4,279	3,074	4,367	9,072	0	0	0	995,403	42,812	
TY090	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TY130	0	0	0,40	0,50	0,40	1,07	0,37	2,30	0	0	0	0	0	0,017	0,014	0,014	0,015	0,018	0,014	0,011	0	0	0	0	0	1,306	0,138	
TY150	0	0,02	0,30	0,19	0,02	0,34	0,02	0,15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TY160	0,46	0,62	15,45	51,99	54,10	123,76	20,06	191,61	2456,030	21,624	103,826	0	0	2,012	1,385	0,820	0,820	0,795	0,880	1,911	5,312	29,074	0	0	0	52,739	35,815	

OSPAR-codes	**in tonnes**													**in kilogrammes**														
Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/
TY180	0	0	0,44	0,76	0,63	1,46	0,69	2,91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,889	2,911	
TY181	0	0,01	0,23	0,48	3,78	0,45	0,86	1,86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TY190	0	0	0,01	0,03	0,02	0,05	0,02	0,09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,268	0,031	
WI010	0,01	0	0,90	2,56	0,98	1,68	1,27	4,89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,028	0,411	
WI031	0	0	0,16	0,32	0,14	0,21	0,13	0,60	1,457	0,012	0,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,497	0,115	
WI035	0	0	0,13	0,12	0,02	0,05	0,06	0,17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,05	0,012	
WI045	0	0	0,01	0,03	0,01	0,02	0,01	0,05	0	0	0	0	0	0	0	0	0,001	0,001	0,001	0	0,003	0,004	0	0	0	0,019	0,002	
WI060	0,05	0,06	7,89	18,02	16,47	13,50	9,49	41,19	126,183	0,523	0,997	0	0	0,010	0,015	0,028	0,030	0,031	0,024	0,017	0,040	0,068	0	0	0	67,978	12,061	
WI064	0	0	0,11	0,25	0,12	0,19	0,12	0,58	1,845	0,010	0,020	0	0	0,007	0,006	0,007	0,008	0,009	0,008	0	0	0	0	0	0	0,407	0,025	
WI080	0	0	0,44	0,91	0,81	0,77	0,46	2,54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,029	0,213	
WI090	0	0	0,44	1,22	0,47	0,55	0,56	2,36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,499	2,159	
WI110	0,07	0,08	3,13	6,83	4,60	7,53	4,15	19,00	0,933	0,006	0,011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39,4	2,332	
Total	**6,253**	**5,894**	**349,099**	**963,498**	**692,216**	**1 218,878**	**501,028**	**3 000,260**	**4 319,594**	**37,127**	**145,053**	**0,020**	**0,017**	**20,158**	**16,958**	**16,023**	**12,026**	**15,600**	**17,629**	**15,250**	**126,974**	**214,013**	**0,040**	**0,013**	**0,197**	**1 879,206**	**208,109**	

PART II

GENERAL INFORMATION

The continental decimal system is used throughout this report. Empty cells indicate that no information was available. Italic numbers are used when the measured/calculated value was smaller than the actual number given in the cell.

ADDITIONAL INFORMATION

(Referring to Part II of the Format for Annual Reporting on Dumping Operations at Sea adopted at BDC 2001)

1. Deposit site

France

In 2005, France used 3 new deposits sites :

- F/01715 : Saint Denis d'Oléron
  46°02.17' N - 001°21.53' W
- F/03323 : Fosse du Cap Ferret
  44°38.34' N - 001°14.07' W
- F/04001: Cap Breton sud
  43°39.06' N - 001°27.01' W

The next 13 sites do not have valid permits any more and will not be used in the future :

Sites		Coordinates		
Codes	Names	Latitudes	Longitudes	Site Shapes
F/05003	Darse des mielles	49°38.80' N	1°36.25' W	
F/02901	Camaret	48°17.42' N	4°34.66' W	Circle
F/02902	Douarnenez	48°08'25 N	4°21'00 W	Polygon
		48°08'25 N	4°20'60 W	Polygon
		48°07'95 N	4°20'60 W	Polygon
		48°07'95 N	4°21'00 W	Polygon
F/02903	Lesconil	47°46'07 N	4°12'15 W	Polygon
		47°46'07 N	4°11'26 W	Polygon
		47°45'80 N	4°11'26 W	Polygon
		47°45'80 N	4°12'15 W	Polygon
F/02904	Cap-Coz - Fouesnant - Port-La-Forêt	47°50.63' N	3°57.00' W	Circle
F/02905	Crozon-Morgat	48°14.00' N	4°30.00' W	Circle
F/02908	Le Conquet	48°22'50 N	4°48'35 W	Polygon
		48°22'50 N	4°48'10 W	Polygon
		48°22'35 N	4°48'10 W	Polygon
		48°22'35 N	4°48'35 W	Polygon
F/04403	Dépôt nord de Piriac sur Mer	47°24.86' N	2°33.21' W	Polygon
		47°24.61' N	2°32.48' W	Polygon
		47°24.15' N	2°32.78' W	Polygon
		47°24.38' N	2°33.58' W	Polygon
F/04405	La Turballe-pêche	47°20.78' N	2°31.68' W	Polygon
		47°20.78' N	2°31.36' W	Polygon
		47°20.36' N	2°31.36' W	Polygon
		47°20.36' N	2°31.68' W	Polygon
F/01708	Dépôt de Lamouroux	46°80'10 N	1°20'20 W	Circle
F/01713	Bonne anse	45°41.08' N	1°10.57' W	Circle
F/03310	Bouée d'atterrissage Nord-Bassin d'Arcachon	44°35.35' N	1°18.105' W	Circle
F/03320	Sud bouée d'atterrissage Nord-Bassin d'Arcachon	44°33.00' N	1°10.80' W	Circle

Germany

The following dumping sites were notified for the first time by the Federal Republic of Germany:

- "Inner Jade Bay (Verkappstele Südreede 2)", notified by the Federal German State Nidersachsen Schleswig Holstein (new OSPAR-Code D/56);
- "ton E3 near Helgoland", notified by the Federal German State Schleswig Holstein (new OSPAR-Code D/57)

Deposit site	Co-ordinates							
	long	lat	long	lat	long	lat	long	lat
D/56	53°34'50"	8°09'50"	53°34'43"	8°09'52"	53°34'54"	8°09'25"	53°35'07"	8°09'21"

	N	E	N	E	N	E	N	E
D/57	54°03'N	07°58'E						

Iceland

The following sites were used in 2004 but not in 2005:

IS 16, IS 36, IS 38, IS 44, IS 47, IS 53.

The following sites were not used in 2004, but used in 2005:

IS 2, IS 24, IS 59.

Ireland

The locations of the deposit sites in Ireland are indicated in Part II-Figure 4 and their co-ordinates in Table 1 to that figure.

Norway

Number of deposit sites per county in Norway for 2005 in the OSPAR Convention area:

	2005		
Number County	**Dredged material**	**Inert material**	**Other waste**
1 Østfold	10		
2 Akershus/Oslo	1		
3 Vestfold	11		
4 Buskerud	3		
5 Telemark	0		
6 Aust-Agder	0		
7 Vest-Agder	3	5	
8 Rogaland		3	
9 Hordaland	2	3	
10 Sogn og Fjordane	0	0	
11 Møre og Romsdal	5	1	
12 Sør-Trøndelag	8		
13 Nord-Trøndelag	1		
14 Nordland	4	1	
15 Troms	4	1*	
16 Finnmark	3		
Total	**55**	**14**	

* = plant material from a lake (not contaminated)

2. Method of determination

France

Definition of assumptions made in calculating quantities of dry matter in Table 3a

Relationship between the saturated density of the mixture ρ_{sat} *and the concentration of dry matter* ρ_{ms} *:*

These two parameters are connected through the following relationship:

$$\rho_{ms} = \frac{\rho_{ss}}{\left(\rho_{ss} - \rho_{o}\right)} \times \left(\rho_{sat} - \rho_{o}\right)$$ in which:

- ρ_{sat} = density of the mixture (in kg/m^3)
- ρ_{ms} = concentration of dry matter in the mixture (in kg dry matter/m^3)
- ρ_{o} = density of water at 4°C (in kg/m^3)
- ρ_{ss} = density of the dry sediment (in kg/m^3).

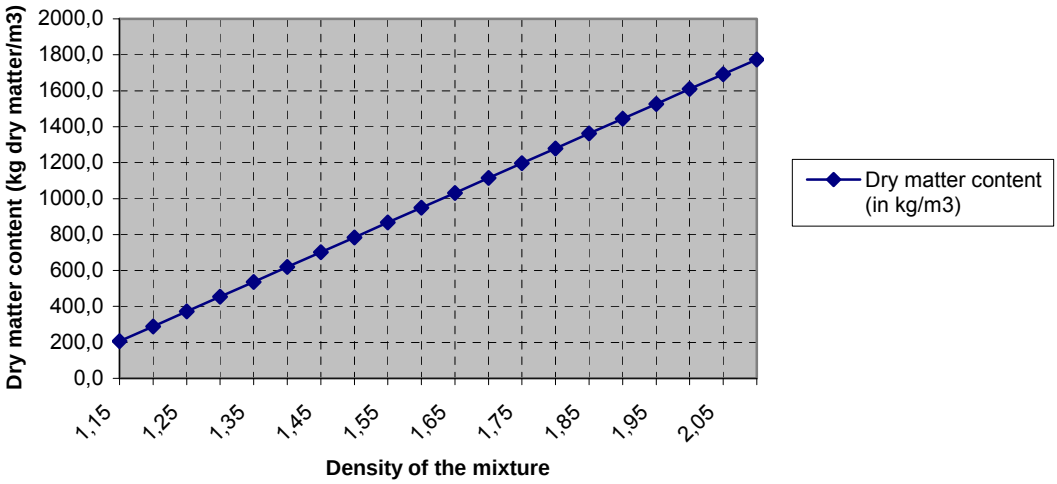
Assuming that ρ_{ss} = 2 600 kg/m^3 and ρ_{o} = 1 025 kg/m^3, the following simplified formula is obtained:

ρ_{ms} = 1 650,8 x (d – 1 025)

where d is the density of the mixture.

This can be represented graphically as follows:

Estimation of dry matter content as a function of the density



Calculation of quantities of dry matter deposited

If the volume in situ to be dredged is known, an approximate calculation of the quantities of dry matter dredged can be carried out using the following assumptions according to the situation encountered:

Type of material	Mean density in situ	Density for calculation	Dry matter content (kg dry matter/m^3)
Fresh sludge	1,1 to 1,3	1,2	288,9
Consolidated sludge	1,3 to 1,6	1,45	701,6
Sand	1,6 to 2	1,8	1 279,4

In practice, data relating to the mean densities in situ of the sediments dredged in the principal French ports are known and listed by the Groupement d'Interêt Economique Dragages-Ports (Port-dredging Economic Interest Grouping).

If the volume in the hoppers is known, an approximate calculation of the quantities of dry matter dredged can be carried out using the following assumptions according to the situation encountered:

Type of dredging	Type of material	Mean density in the Hoppers	Density for calculation	Dry matter content (kg dry matter/m^3)
Trailer Suction dredge	Liquid sludge	1,2	1,2	288,9
	Consolidated sludge	1,25 to 1,35	1,3	454,0
	Sand	1,8	1,8	1 279,4
Mechanical dredge	Fresh sludge	1,15 to 1,25	1,2	288,9
	Consolidated sludge	1,3 to 1,4	1,35	536,5
	Sand	1,8	1,8	1 279,4

Hydrocarbons

Hydrocarbons (Table 3b) are analysed on 2mm fraction of marin sediments, by extraction with CC14 in Infra Red.

Total CB and Oil were not requested to laboratories in 2005.

Germany

For Germany where necessary, the quantities in Table 3a have been converted from cubic metres into tonnes dry weight. The following conversion factors (specific gravity) have been used:

in case of silt: 1,2
in case of sand: 1,8
in case of lacking information or composition of sand and silt: 1,5
in cases where no dry weight (DW) was indicated, the DW was estimated to be 50% (in order to calculate the annual load from the concentration given).

DDT:

From 2002 onwards, the figure given under DDT reflects the "pp-DDT-portion". In the preceding years, the sum of DDT, DDD and DDE components was taken as the basis. Therefore, the quantity given for 2004 is lower compared to the preceding years, except the year 2002.

Total PAH:

Like in the preceding years, the figure under total PAH reflects the sum of PAH_6.

Ireland

PCB and OC determination:

Sample plus surrogate standards are extracted with DCM/Acetone by ASE. The solvent extract is reduced in volume and cleaned up using High Resolution Size Exclusion Chromatography (SEC/GPC). The extract is further cleaned up on Florisil and Silica columns. The cleaned up extract is analysed by GCMS in SIM mode.

PAH determination:

The sediment sample is extracted with an Accelerated Solvent Extraction system using a Dichloromethane/Acetone (50/50) solvent mixture. The extract is cleaned up with Gel Permeation chromatography and Silica gel and analysed via GC/MS in SIM mode.

Extractable hydrocarbons:

Sediment is extracted with pentane, dried and analysed by fluorescence spectroscopy.

In many cases the material dumped at particular sites originates from more than one area. Sediment analysis is carried out by independent laboratories and consequently the limits of detection vary.

The limits of detection requested from laboratories are:

Contaminant	**Concentration**	**Units (dry weight)**	**Contaminant**	**Concentration**	**Units (dry weight)**
Hg	0,05	mg kg^{-1}	CB28	1,0	µg kg^{-1}
As	1,0	mg kg^{-1}	CB52	1,0	µg kg^{-1}
Cd	0,1	mg kg^{-1}	CB101	1,0	µg kg^{-1}
Cu	5,0	mg kg^{-1}	CB118	1,0	µg kg^{-1}
Pb	5,0	mg kg^{-1}	CB138+163	1,0	µg kg^{-1}
Zn	10,0	mg kg^{-1}	CB153	1,0	µg kg^{-1}
Cr	5,0	mg kg^{-1}	CB180	1,0	µg kg^{-1}
Ni	15	mg kg^{-1}	DDE pp	1,0	µg kg^{-1}
TBT & DBT	0,01	mg kg^{-1}	DDT pp	1,0	µg kg^{-1}
PAHs	20	µg kg^{-1}	DDD pp	1,0	µg kg^{-1}
			Dieldrin	1,0	µg kg^{-1}
			Lindane	1,0	µg kg^{-1}
			HCB	1,0	µg kg^{-1}

The limits of detection achieved are:

	Irl 8	**Irl 17**	**Irl 20**	**Irl 33**	**Irl 45**	**Irl 47**	**Irl 48**	**Irl 49**	**Irl 50**	**Irl 51**
Hg (mg kg^{-1})	-	0,01-1	-	0,05	-	-	0,03	-		0,05
As (mg kg^{-1})	-	1	-	-	-		0,05	-		-
Cd (mg kg^{-1})	0,05	0,04-1	-	-	-		0,05	-		0,1
Cu (mg kg^{-1})	-	1	-	-	-		0,05	-		5
Pb (mg kg^{-1})	-	1	-	-	-		0,05	-		5
Zn (mg kg^{-1})	-	1	-	-	-		0,05	-		10
Cr (mg kg^{-1})	-	1	-	-	-		0,05	-		5
Ni (mg kg^{-1})	-	1	-	-	-		0,05	-		15
TBT (mg kg^{-1})	0,001-0,02	0,01	0,001	0,001	0,001	0,001	0,02	0,02		0,02
DBT (mg kg^{-1})	0,001	0,001-0,01	0,001	0,001	0,001	0,001	0,02	0,05		0,02
CB28 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB52 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB101 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB118 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB138 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB153 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB180 (ug kg^{-1})	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
DDE pp (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
DDT pp (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
TDE pp (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
DDT op (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
Dieldrin (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
g-HCH (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
HCB (ug kg^{-1})	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1

Notes:

Units are all dry weight.

Where ranges are given this indicates that different labs testing sediments from various locations dumped at one dumpsite achieved varying detection limits.

Notes:

In some instances the material dumped at a particular site can comprise sediment dredged from various dredging locations. Often a contaminant may be detected in the sediment from one location dumped at a dumpsite whilst the same contaminant from another location (dumped at the same site) is below the detection limits. In such cases the amount of the substance dumped is given as a maximum (e.g. 0,10 tonnes + <0,02 tonnes is quoted as <0,12 tonnes).

United Kingdom

Total PCBs measured consists of the following congeners:

CB 18	CB 49	CB 110	CB 149	CB 170
CB 28	CB 52	CB 118	CB 151	CB 180
CB 31	CB 66	CB 128	CB 153	CB 183
CB 44	CB 101	CB 138	CB 156	CB 187
CB 47	CB 105	CB 141	CB 158	CB 194

Total PAHs measured consists of the following PAH compounds:

2, 3 Benzanthracene	Benzo[ghi]perylene	Fluoranthene
Acenaphene	Benzo [k] fluoranthene	Fluorene
Acenaphthylene	C1-Naphthalenes	Indeno[123-cd]pyrene
Anthracene	C1- Phenanthrenes	Naphthalene
Benzo[a]anthracene	C2-Naphthalenes	Perylene
Benzo[a]pyrene	C3-Naphthalenes	Phenanthrene
Benzo [b] fluoranthene	Chrysene	Pyrene
Benzo[e]pyrene	Dibenzo[a,h]anthracene	

All analyses of dredged material on <2mm fraction. Methods of determination as specified in reports listed below:

- Allchin, C.A., Kelly, C.A. and Portmann, J.P. (1989) Methods of analysis for chlorinated hydrocarbons in marine and other samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (6), 25 pp.
- Jones, B.R. and Laslett, R.E. (1994) Methods for analysis of trace metals in marine and other samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (11), 29 pp.
- Kelly, C.A., Law, R.J., and Emerson, H.S. (2000) Methods of analysing hydrocarbons and polycyclic aromatic hydrocarbons (PAH) in marine samples. Science Series, Aquatic Environmental Protection: Analytical Methods, CEFAS Lowestoft. (12), 18pp.
- Law, R.J., Fileman, T.W. and Portmann, J.P. (1988) Methods of analysis of hydrocarbons in marine and other samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (2), 25 pp.
- Waldock, M.J., Waite, M.E., Miller, D., Smith, D.J. and Law, R.J. (1989) The determination of total tin and organotin compounds in environmental samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (4), 25 pp.

3. Toxicity

Ireland

Toxicity testing carried out on sediments dumped at the following location:
IRL 17**:** Whole sediment bioassay - *Corophium volutator* (10-day exposure) - 3 samples – 5%, 2.5% and 17.5% mortality

4. Quality assurance of analyses of dumped material

a. Do the laboratories carrying out the analyses undertake: *Contracting Parties responding "Yes" to this question are indicated under the respective columns with their country abbreviation.*	All	None	Some
(i) the analysis of blank samples and laboratory reference materials with each batch of samples of waste and other material dumped in the maritime area that is analysed by that laboratory;	*Be, F, Is, IE [1]* *Mosty yes for IE[3], UK*	*IE[2] (PSD, H2O), density)*	*De, Se, IE[2] (all other non subcontracted work)*
(ii) periodic comparative analysis of laboratory reference materials and certified reference materials;	*Be, F, Is, IE [1]* *Mostly yes for IE [3], UK*	*IE[2] - as above*	*De, IE[2] - as above* *IE [3]*
(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 dumped wastes or other materials;	*Be, F, Is, IE [1], Se* *Mosty no for IE[3], UK*	*IE[2] - not for sediment*	*De, IE [3]*
(iv) periodic participation in interlaboratory comparison exercises, including, where possible, international comparison exercises;	*B, F (at least yearly), IS, IE [1]* *Mostly yes for IE [3], UK*	*IE[2] - not for sediment*	*De, IE [3]*
Do the laboratories carrying out the analyses undertake: *Contracting Parties responding "Yes" to this question are indicated under the respective columns with their country abbreviation.*	All	None	Some
(v) periodic participation in national and, where possible, international laboratory proficiency schemes, under which: • participating laboratories are asked to analyse samples of substances which are provided by the organisers of the scheme; • the composition of those samples is not disclosed in advance; • the results of the scheme for each participating laboratory are made available to all participating laboratories.	*Be, NL* *F (only in national comparison exercises),* *Se,* *IE [1]* *IE [1]* *IE [1]* *IE [1]* *Mosty no for IE[3], UK*	*IE[2] - not for sediment*	*De, IE[3] - not for sediment*

b. 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.

In Germany, several laboratories, often commercial laboratories, are involved in analyses of dredged material. Most of these laboratories are accredited and apply the QA procedures (i) to (v).

"Some" has been marked in a(i) for Sweden because of difficulties in obtaining reference samples.

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

Belgium has reported that their laboratories follow the EN ISO/IEC 17025.

d. Are any special difficulties encountered in applying Quality Assurance procedures?

Belgium has encountered no difficulty.

Sweden reported that only occasionally samples are taken by accredited laboratories or by certified or in other ways qualified persons.

Notes to table on Quality Assurance of dumped material

Ireland has reported that dredge sediments are carriout out by a number of laboratories:

IE^1 laboratory responsible for carrying out approximately 60% of all analyses;
IE^2 signifies laboratory responsible for carrying out approximately 20% of all analyses;
IE^2 represents combined answers from laboratories responsible for carrying out the remaining 20% of analyses.
Norway: the Country Administrations have often not filled in information on quality assurance of analyses for dumped material. Reporting in this respect is very inconsistent. Norway has therefore not filled in point a. in the table. In general well established laboratories are used, but formal quality assurance is often missing.

5. Other relevant information

France

51 dumping sites among 88 regulated sites were used in 2005.
53 dumping permits among 105 issued permits were used in 2005.

FOOTNOTES TO ALL TABLES

Table 1

Belgium

(1) No permits were issued in 2005 since permits issued in 2003 are valid for 2 years.

France

(1) 98 permits historically issued, 45 in use in 2004.

Germany

(1) This quantity refers to silt.

(2) Permits for dredging/dumping of dredged material are issued by the competent authorities of the Federal States (Länder). Permits are not issued for dredging/dumping activities of the German Federal Water and Shipping Directorate (the Directorate does not issue permits for its own activities). However the dredging/dumping activities of the Directorate are governed by national regulations which are in accordance with OSPAR and LC requirements.

(3) This quantity refers to sand.

Iceland

(1) According to Icelandic law, dumping of vessels and aircrafts are not permitted.

Ireland

(1) Six permits were issued in 2005. Dumping only took place for five of these. Dumping was carried out in 2005 under four current 5-year permits. Finally, dumping was also carried out in 2005 under two permits issued in 2004 following extensions of their period of validity.

(2) Permits are issued on a wet weight basis. The dry licenced amounts are estimated using the moisture content of the dumped material to “back calculate” the dry licenced tonnages.

(3) The actual amounts dumped can vary considerably from the amount licenced, particularly in cases where five-year permits are granted.

Netherlands

(1) Permits issued for dumping of dredged materials at sea are licensed in cubic metres (not metric tonnes).

(2) Permits issued for dumping of dredged materials in national waters are numerous and are not taken into account in the overview of total amounts licensed in tables 1 and 2 but are specified in table 3.

Norway

(1) Inert materials are mainly rocks. In addition a litte bit of sand.

(2) Inert material in the form of uncontaminated plant material from the bottom of a lake

Spain

(1) In 2005 four new permits were issued (Pasajes, Bilbao, Aviles and Cadiz Harbours).

(2) In the case of Villagarcia Harbour (code E/8) the disposal operations of dredings works started (and licensed) in 2004.

(3) In the case of Huelva Harbour (code E/11) the permit for maintenance dredgings and disposal was issued in 2003, including the period until 2010.

Sweden

(1) All permits are to be reported also to HELCOM.

(2) One know case of illegal dreding and dumping.

United Kingdom

(1) UK licensed tonnages are usually on a wet weight basis. These are the estimated dry weight equivalents.

(2) A significant number of UK dredged material licenses are now issued for 3 years, including some with very large tonnages.

(3) 6 000 tonnes dry weight of fish waste was licensed for deposit in the sea in 2003 under a 3 year licence i.e. 2 000 tonnes per annum. The material was licensed for deposit directly onto the intertidal zone but is not dumping under the terms of the Convention. 1 988 tonnes of fish waste was deposited under this licence during 2005.

Table 2

Germany

(1) Action levels and contaminant concentrations reported in footnotes (2) and (3) refer to the fine-grained fraction < 20 µm.

(2) Although HCB, pp-DDE and pp-DDD concentrations exceed the relevant German action level 2 values (< 20 µm fraction) slightly, disposal in the Elbe estuary was allowed, as no contaminants are added to the estuary. Sediments are dredged and relocated within the same water body. Due to hydrological conditions, mixing of particulate matter between dredging and disposal areas is intensive, and therefore the same material has to be dredged and disposed of repeatedly. The concentrations of HCB, pp-DDE and pp-DDD in the dredged material and in suspended particulate matter of the Elbe are very similar. There is no local source for these contaminants in the dredging area, however they originate from the upper reaches of the Elbe. The average concentrations in the fine fraction <20 µm of dredged material of the Elbe estuary are:
HCB: 6,3 µg/kg; p,p'-DDE: 3,8 µg/kg; p,p'-DDD: 11,6 µg/kg.

(3) The maintenance of the Hamburg Seaport requires continuous dredging of the access channels to harbour basins. According to the open water disposal concept for dredged material of the state authorities of the City of Hamburg, relocation within the city limits (not OSPAR area) is only possible during the winter season in order to reduce effects on the water quality (e.g. oxygen depletion) and the ecosystem. About 1 Mio m^3/a of contaminated dredged material is disposed of on land after treatment of the material.

Due to an increase of sediment amounts to be dredged, in summer 2005 open water disposal was necessary in order to maintain access to harbour basins. It is assumed that larger amounts of dredged material disposed of downstream of Hamburg will be transported back to the harbour area especially in the winter season due to low river discharge. Therefore the intention is to remove material from the so called sediment cycle. An expansion of the capacity of the sediment treatment on land is not possible.

Thus, in summer 2005, the Federal State Schleswig-Holstein granted a permit including conditions for the disposal of 0,8 Mio m^3 of dredged material in 2005 and of further 3,7 Mio m^3 from 2006 to 2008 at a sediment disposal site in the Southern German Bight. Subsequently, a long–term sediment management concept has to be established.

The selection of the disposal site took into consideration the demands of the OSPAR Dredged Material Guidelines and an impact hypothesis was carried out. Additionally, disposal of dredged material is accompanied by an extensive monitoring program including measurements of sediments, biota, water phase, benthic communities, transport of the sediment plume, and numerical modelling of sediment dispersion.

The average concentrations in the fine fraction <20 µm of the dredged material are:
α-HCH: 2,4 µg/kg, γ-HCH: 2,9 µg/kg; HCB: 19,5 µg/kg; p,p'-DDT: 4,6 µg/kg;
p,p'-DDD: 22 µg/kg; p,p'-DDE: 4,7 µg/kg.

Sweden

(1) The pollutant concentrations in the material licensed in 2005 are considered to be low (Sweden does not issue permits according to a "level 2").

United Kingdom

(1) Disposal site TY081: 43 935 tonnes of dredged material with higher concentrations than Action Level 2 for TBT was placed at this sie and capped with clean material. This operation was reported to the OSPAR EIHA 2006 meeting in Galway in paper EIHA 06/2/8 where additional information may be found.

Table 3 a

Germany

(1) Silt.

(2) Sand, exempted from chemical analyses.

Ireland

(1) The inert material dumped at IRL 51 consisted of rock.

Netherlands

(1) The amounts for deposit sites NL-10 and 11 (Eastern and Western Sceldt) were not available at the time of reporting.

Norway

(1) Inert materials are mainly rocks. In addition a litte bit of sand.

(2) Inert material in the form of uncontaminated plant material from the bottom of a lake

Portugal

(1) Metallic (mainly steel platform).

(2) Steel tank.

Sweden

1. Dumping site: SWE/13 N 56° 51', E 12° 20,5'. Dumped volume: 101 970 m^3. Dumping permit issued in 1995
2. Dumping sites SWE/11, Vinga (N 57° 36,64', E 11° 34,88') and SWE/10 Hakefjorden (N 57° 40,03', E 11° 45,21'). Dumped volume 120 000 m^3. Dumping permit issued in 2001
3. Dumping site: SWE/10 Hakefjorden (N 57° 40,03', E 11° 45,21'). Dumped volume 1800-2000 m^3.
4. Illegal dredging and dumping. Dumping site unknown. Dumped volume approx. 3000 m^3.
5. 400 m^3 remaining after dredging operations in 2004. Dumping site (SWE/11, Vinga) N 57° 36,64', E 11° 34,88'. Dumping permit issued in 2004
6. Dumping site SWE/18 N 56° 15', E 12° 42'. Dumped volume 700 m^3. Dumping permit issued in 2004
7. Dumping site SWE/19 N 57° 22,89', E 11° 40,63'. Dumped volume 59 000 m3. Dumping permit issued in 2005.
8. Vessel 20-40 m long, stripped of hazardous materials, to be used for divers' training.

United Kingdom

1. DM001 was a deposit site at Harrington Harbour off the North-West coast of England.

Table 3 b

Germany

(1) The figures for the total load in Table 3b for the sites 14, 15, 17 and 34 have been calculated on the basis of the silt fraction only. The quantity of the associated sand fraction which is exempted from analysis according to § 5.2 of the OSPAR Guidelines for the Management of Dredged Material (Ref. No.: 1998-20) is given as additional information in the footnotes to Table 3a.

Iceland

(1) No samples exceeded level 2 and in general, analysed values are within the range observed in unpolluted sediments in the relevant region. Therefore, calculation of loads are not considered relevant.

Netherlands

(1) The amounts for deposit sites NL-10 and 11 (Eastern and Western Sceldt) were not available at the time of reporting.

(2) Individual PCBs are determined but not reported since a limit is introduced for sum PCB7.

Norway

(1) In most cases loads have not been determined as analyses have not been carried out. Most permits are given in areas where there is no reason to expect contamination of sediments. Instead of making a table full of “ND = not determined”, Norway has only included those sites where loads have been calculated.

Spain

(1) Detection limits for PCBs: 0,001 mg/kg.

(2) Detection limits for PAHs: 0,1 mg/kg.

(3) There is no information for dredged material quality in the case of Bilbao port (E/2).

Sweden

(1) Sn 187 kg. CB28 under the quantification limit 0,003 mg/kg in all cases.

(2) Co 0,2 tonnes, V 1,8 tonnes.

LEGEND TO ALL TABLES

NA Not applicable

ND Not determined

NI No information

DL Detection limit

Figure 1a - Dumping sites of dredged material in Belgium in 2005

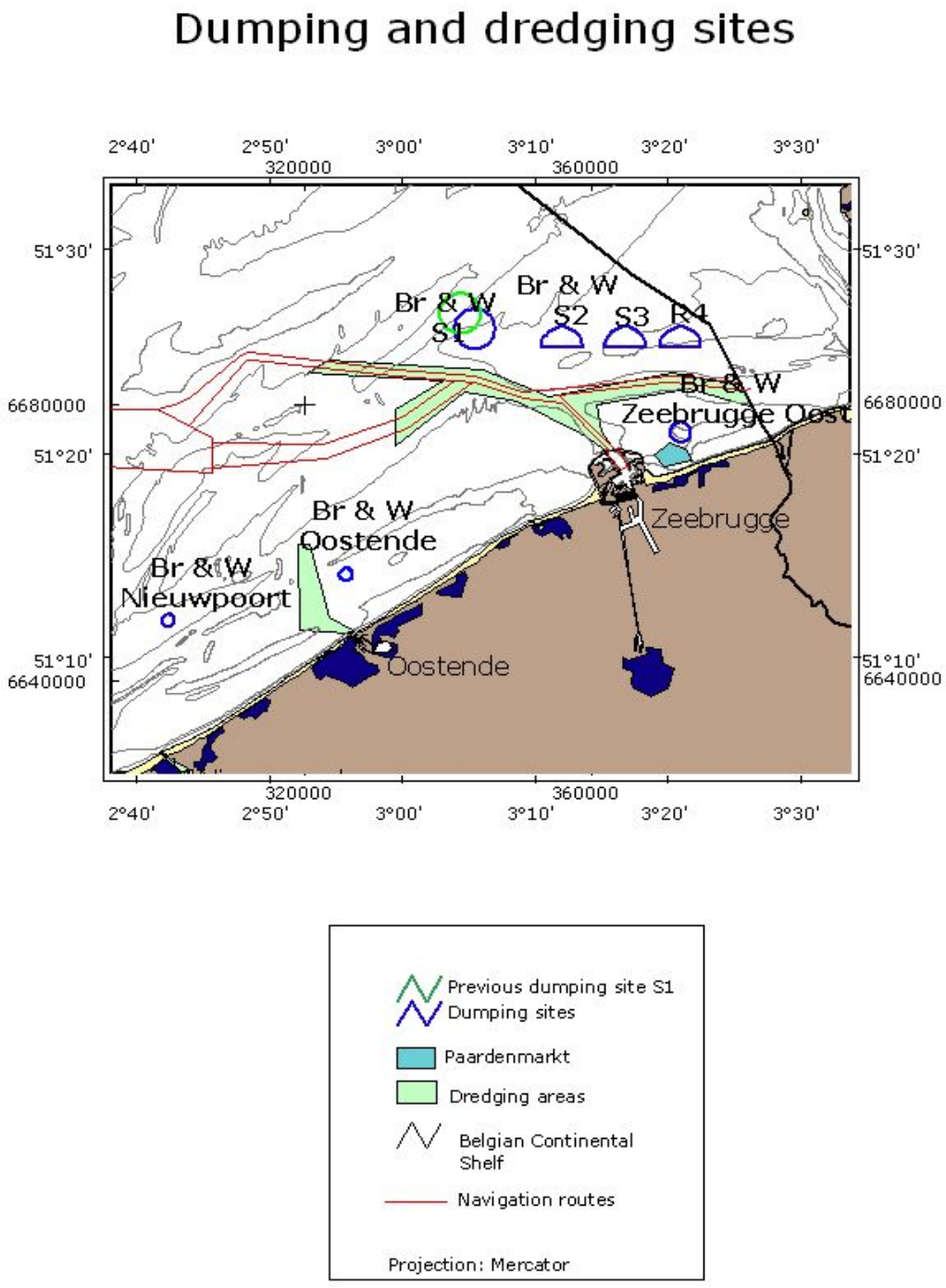


Figure 1b Dumping of dredged material carried out in Belgium in 2005 at B/INT 0-5, 6-9 (Internal waters)

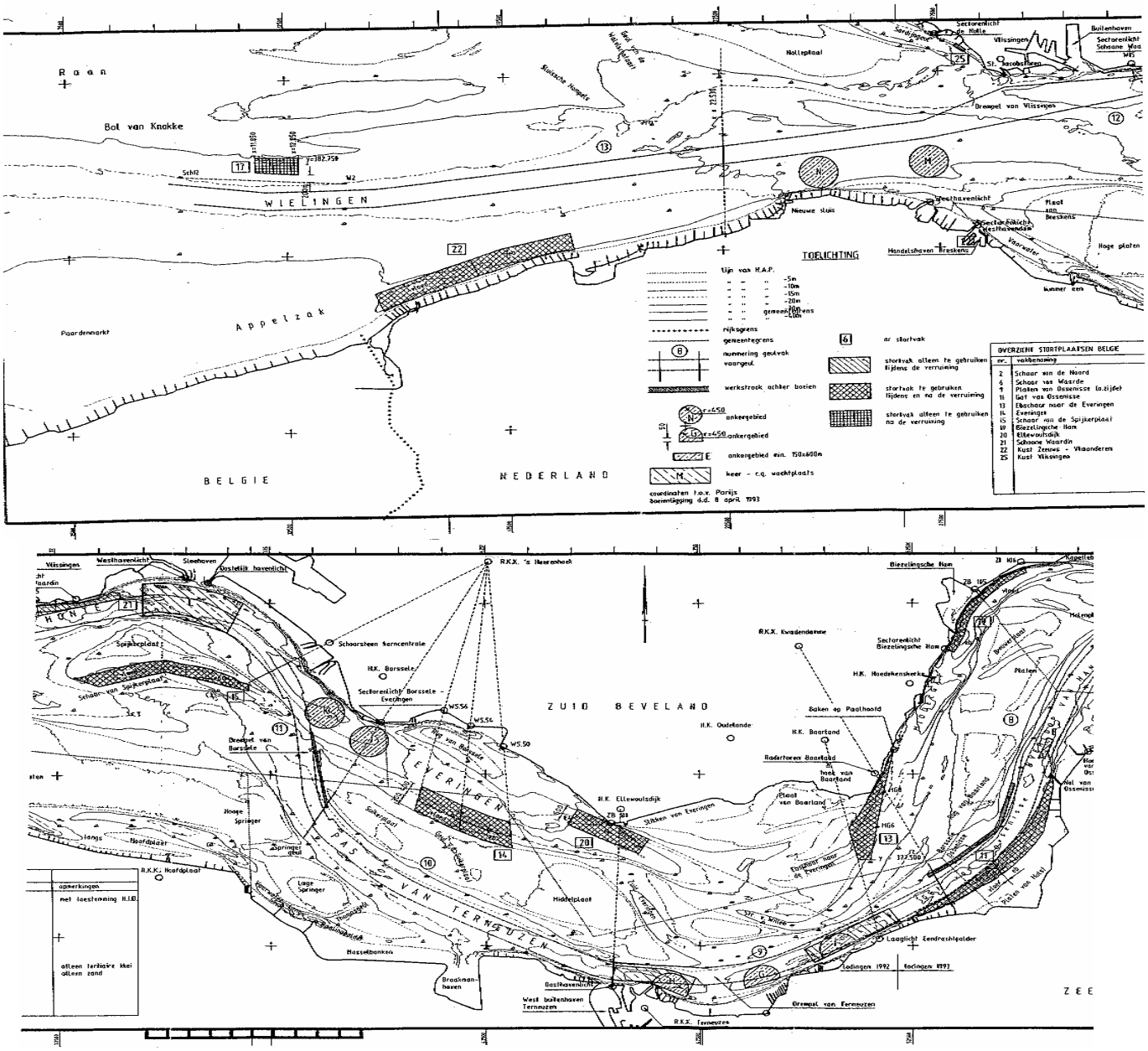


Figure 2a: Dumping sites of dredged material in France in 2005 (Atlantique)

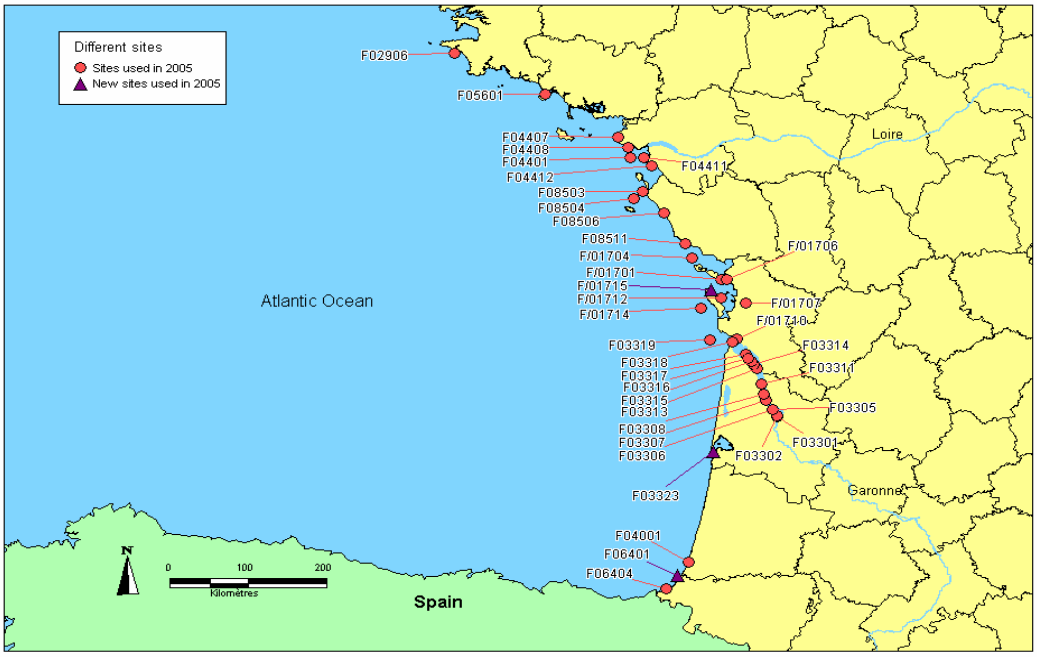


Figure 2b: Dumping sites of dredged material in France in 2005 (Manche)

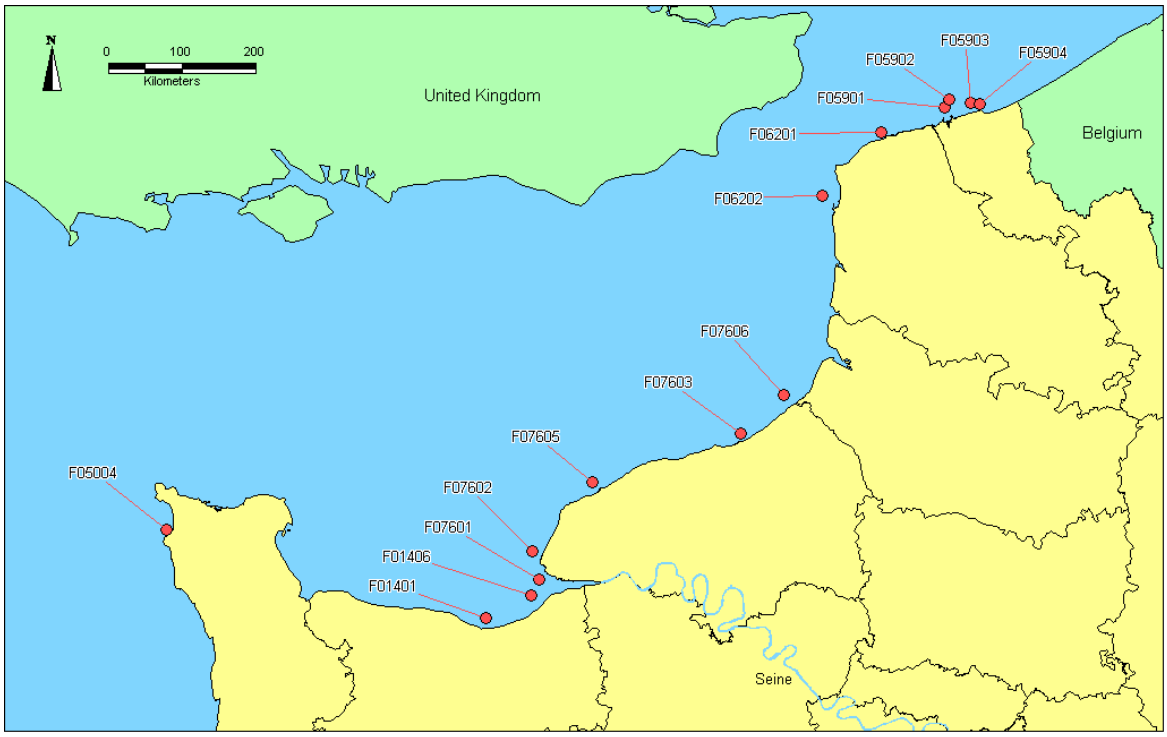


Figure 3 - Dumping sites of dredged material in Germany in 2005

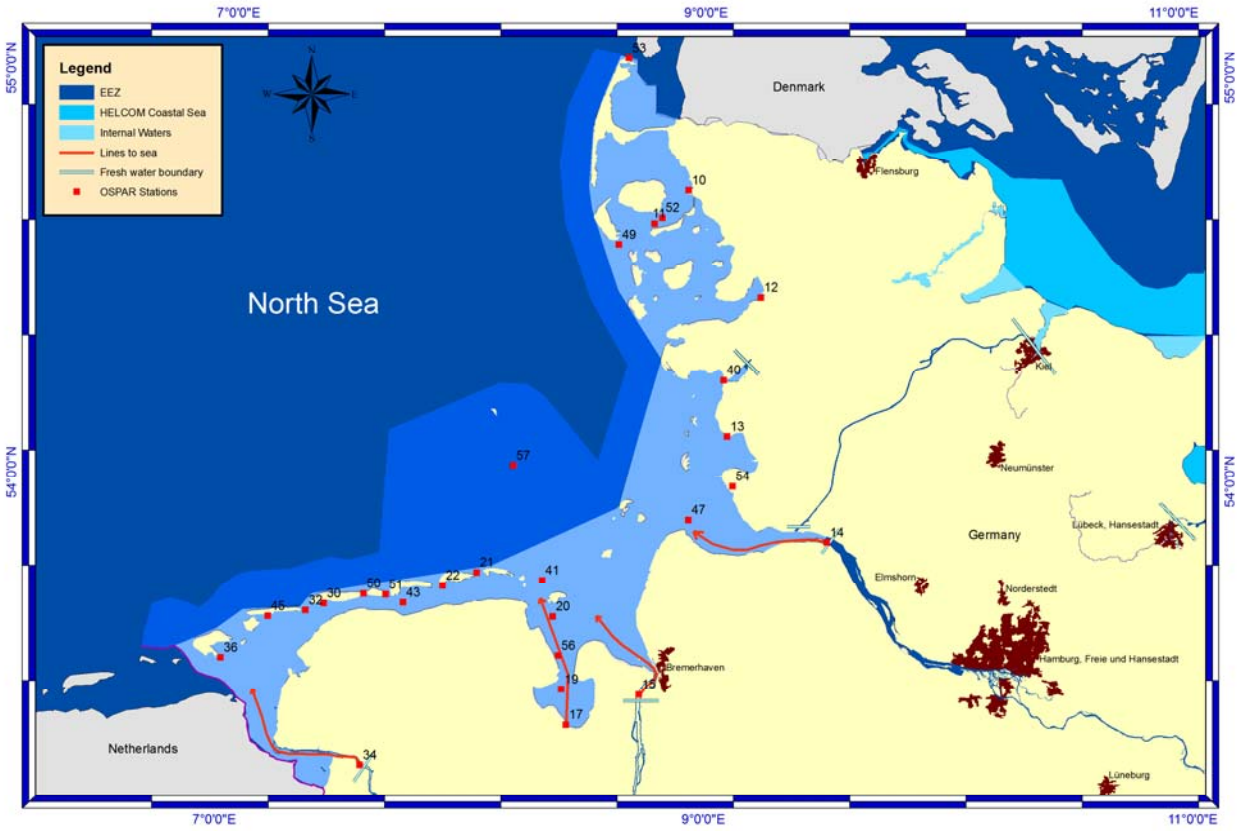
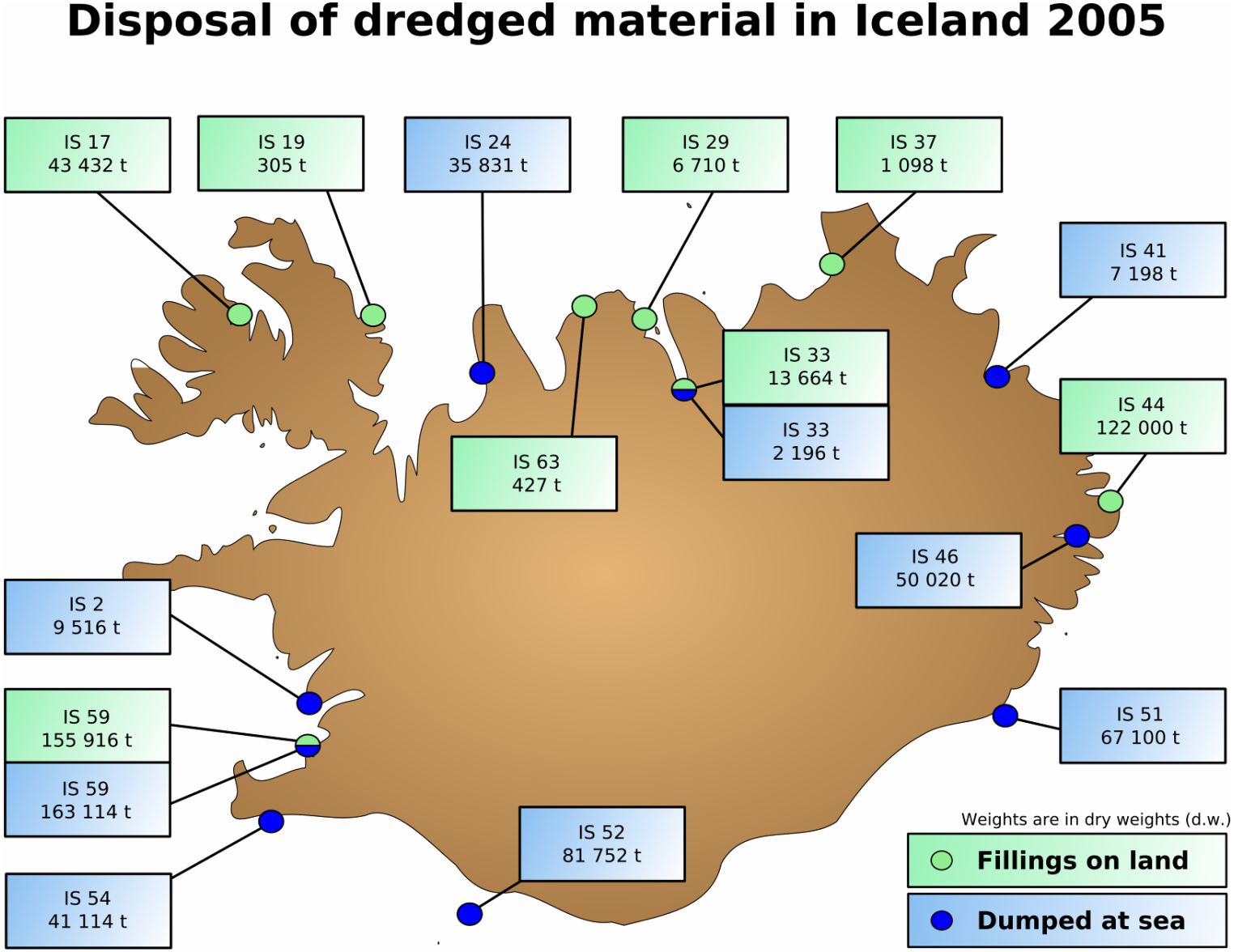


Figure 4 - Dumping sites of dredged material in Iceland in 2005



The figure shows approximate positions of dumping sites for dredged material in Iceland for the given year. Dumping sites are labelled using OSPAR codes, weights are given in dry weights (metric tonnes).

Figure 5 - Dumping site of dredged material in Ireland in 2005

Co-ordinates of the sites are given in Table 1.

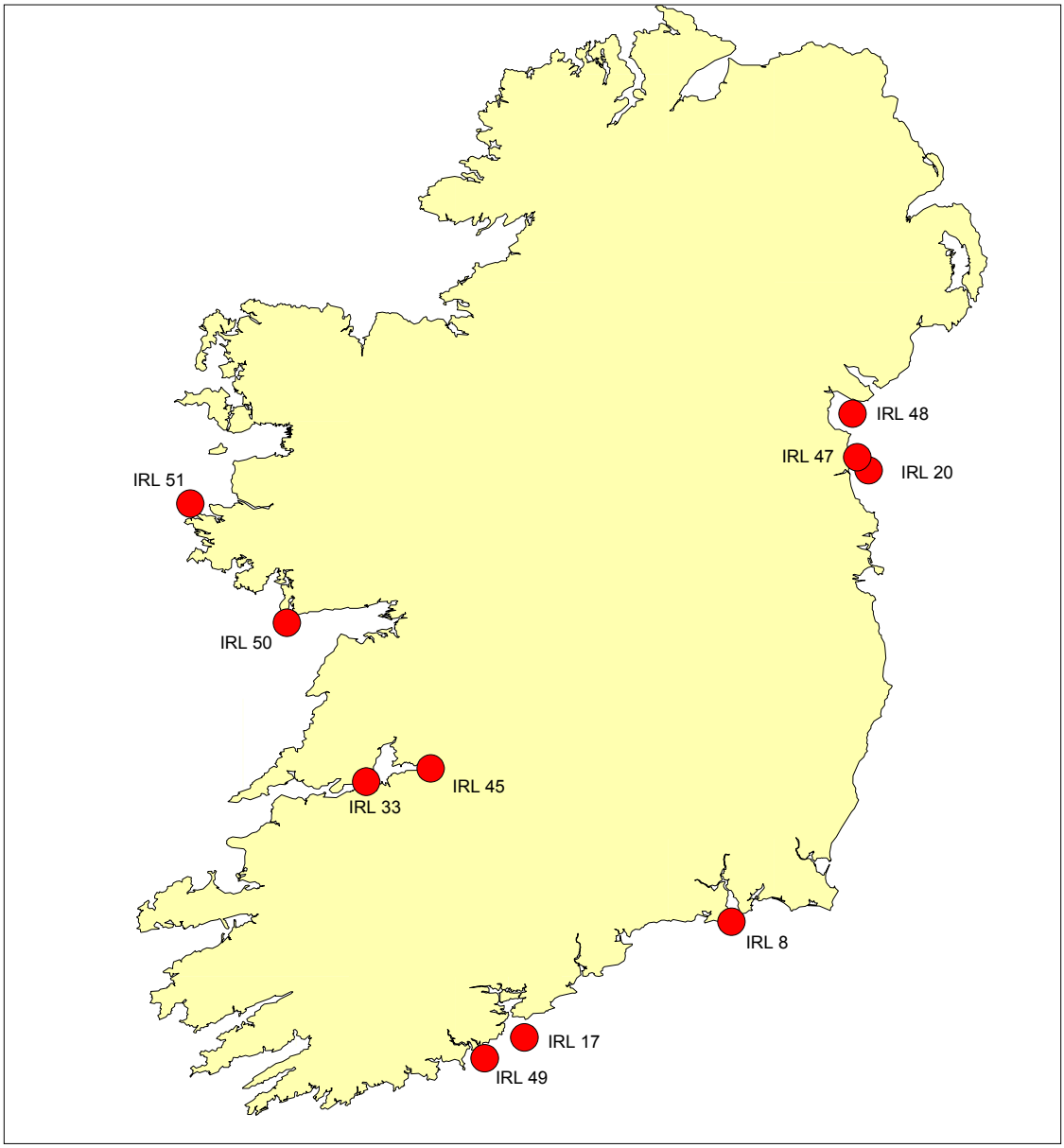
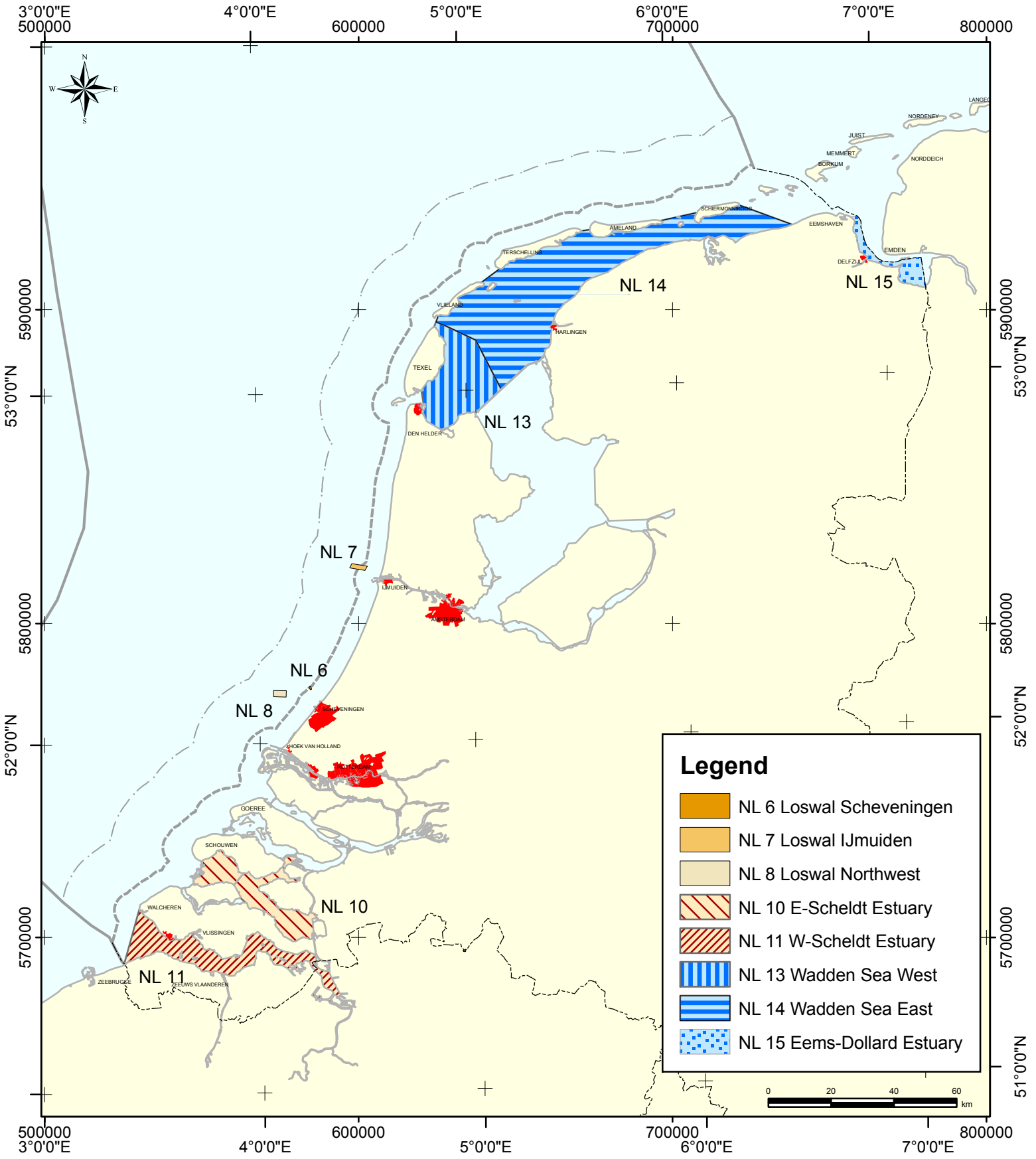


Table 1.

Site No.	Latitude	Longitude
Irl 8	52.13	-6.95
Irl 17	51.72	-8.18
Irl 20	53.75	-6.18
Irl 33	52.622	-9.143
Irl 45	52.674	-8.736
Irl 47	53.764	-6.224
Irl 48	53.934	-6.215
Irl 49	51.673	-8.464
Irl 50	53.209	-9.563
Irl 51	53.608	-10.35



Ministerie van Verkeer en Waterstaat

Rijkswaterstaat

FIGURE 6 - APPROXIMATE POSITION OF THE DUMPING SITES FOR DREDGED MATERIALS IN OSLO CONVENTION WATERS USED IN 2005 BY THE NETHERLANDS

Producent : AMIG	Schaal : 1 : 1.600.000	Datum : 01 - 07 - 2006
Afdeling : AMIG	Formaat : A4 Portret	Data actueel tot : 01 - 07 - 2006
Bronvermelding : RWS Noordzee	Projectie : UTM zone 31, ED50	Tekeningnummer : NZAM 2003 - 0136

Figure 7 - Dumping sites of dredged material in Norway in 2005

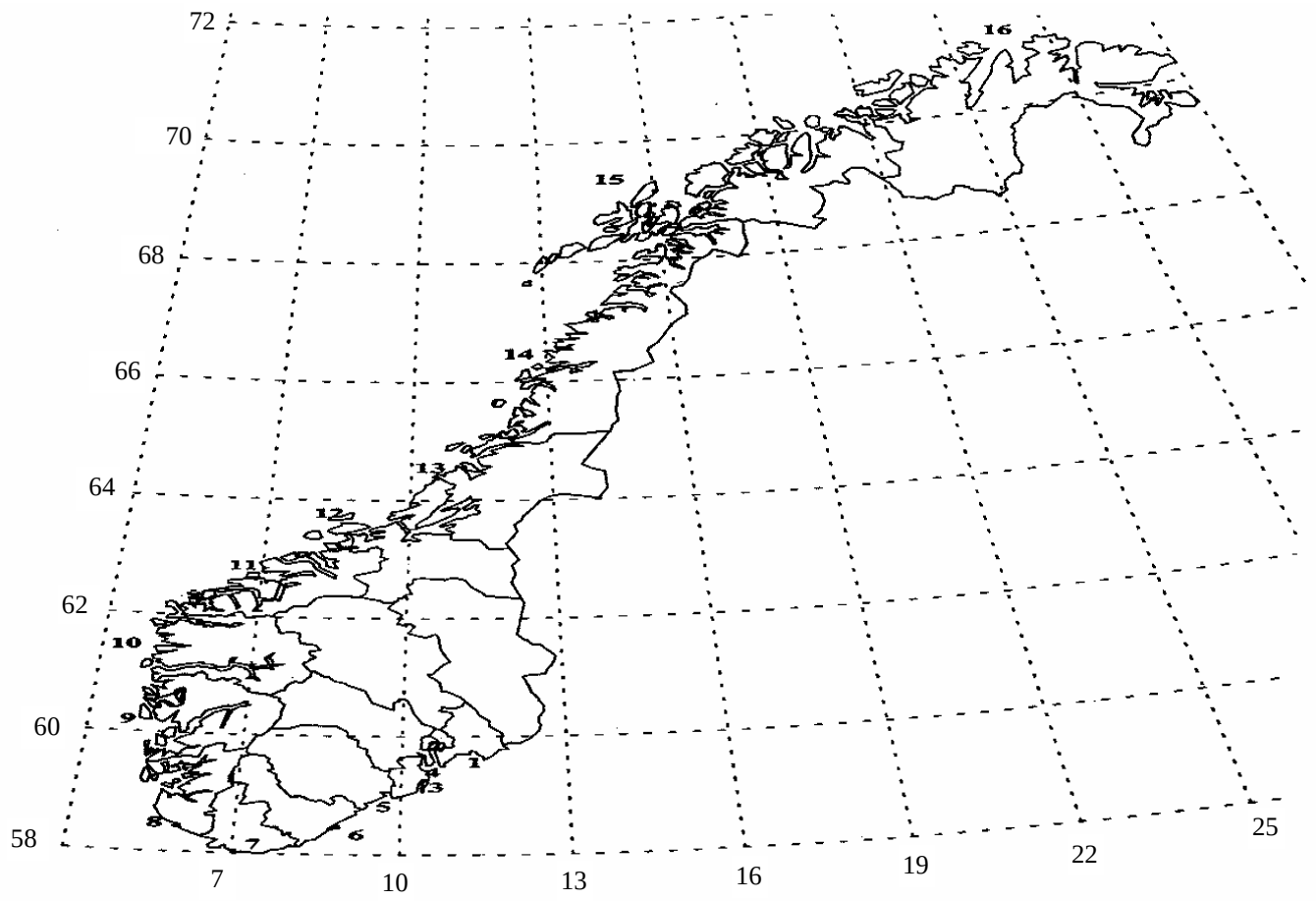


Figure 1. Map of Norway showing latidute (58-72°N, left side) and longitude (7-25°E, bottom). The different counties along the coast are indicated.
1:Østfold, 2:Akershus/Oslo, 3:Vestfold, 4:Buskerud, 5:Telemark, 6:Aust-Agder, 7:Vest-Agder, 8:Rogaland, 9:Hordaland, 10:Sogn og fjordane, 11:Møre og Romsdal, 12:Sør-Trøndelag, 13 Nord-Trøndelag, 14:Nordland, 15 Troms, 16:Finnmark.

Dredged material: in 2005	N/1-N/16 bordering internal waters of Norway in which wastes were dumped	
Dredged material:	N/1-4, 7, 9, 11-16	Total amounts: 1 051 667 tonnes
Inert material:	N/7-9, 11, 15*	Total amounts: 857 237 tonnes (rocks mostly, some sand)

* = plant material from a lake (not contaminated).

Figure 8 - Dumping sites of dredged material in Portugal (Mainland) in 2005

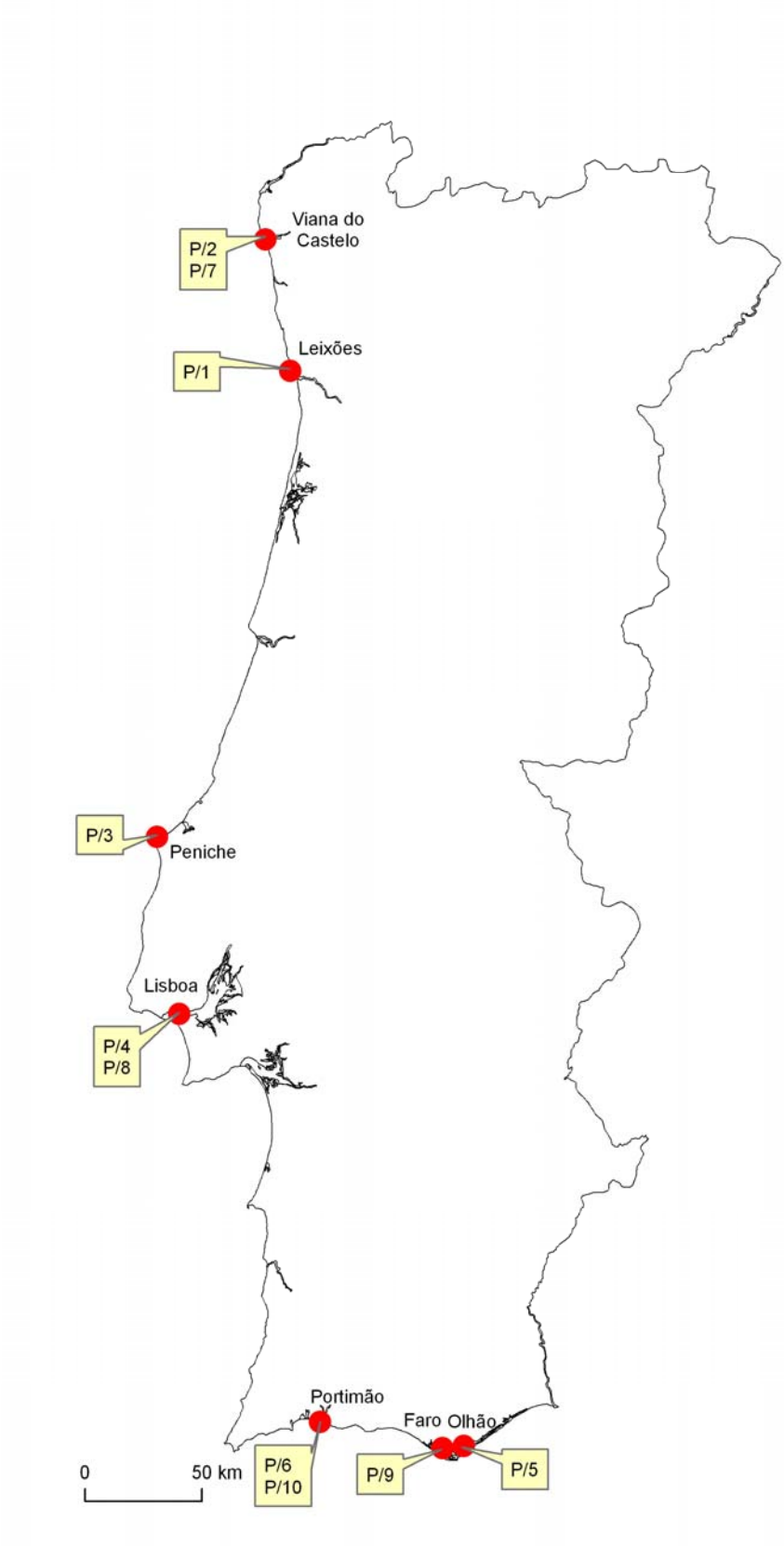


FIGURE 9 – DUMPING SITES OF DREGDED MATERIAL IN SPAIN IN 2005

Spanish dumping sites - 2005

Figure 10a - Dumping sites of dredged material in the UK in 2005 (Northeastern England)

Marine disposal sites in Northeastern England. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.

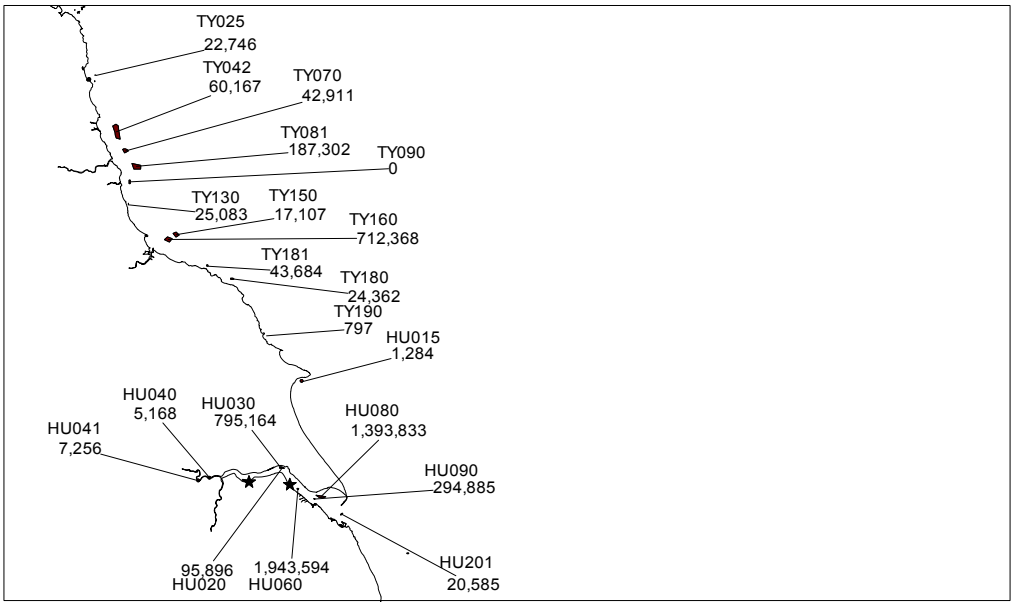


Figure 10b - Dumping sites of dredged material in the UK in 2005 (Southeastern England)

Marine disposal sites in Southeastern England. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.

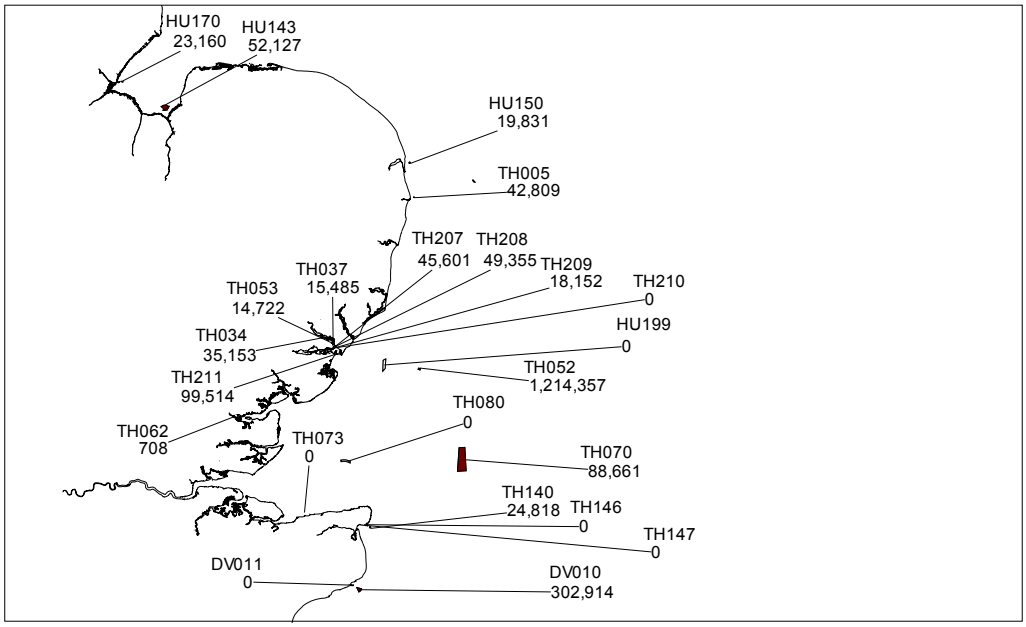


Figure 10c - Dumping sites of dredged material in the UK in 2005 (Southern England)

Marine disposal sites in Southern England. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.

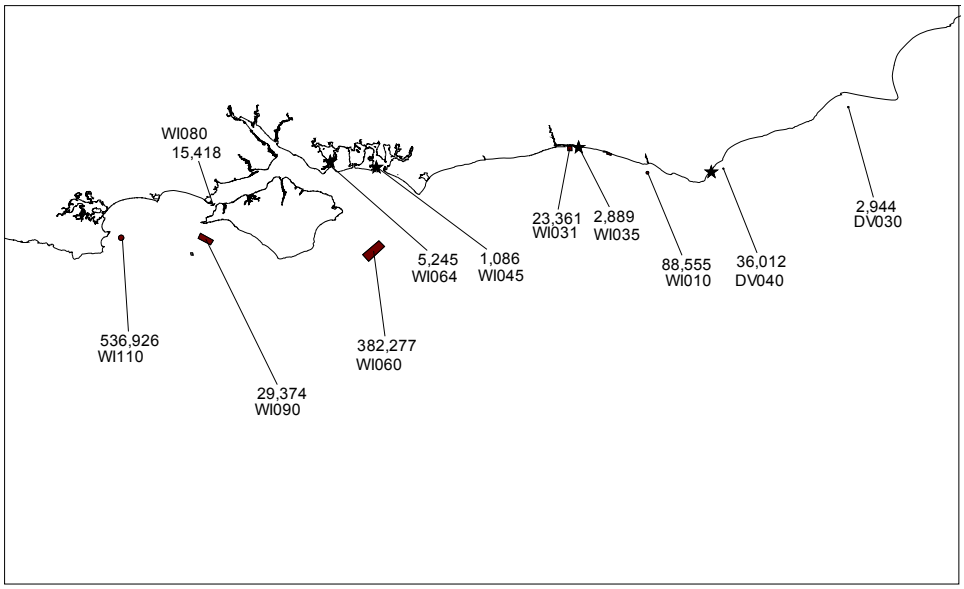


Figure 10d - Dumping sites of dredged material in the UK in 2005 (Southwestern England)

Marine disposal sites in Southwestern England. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.

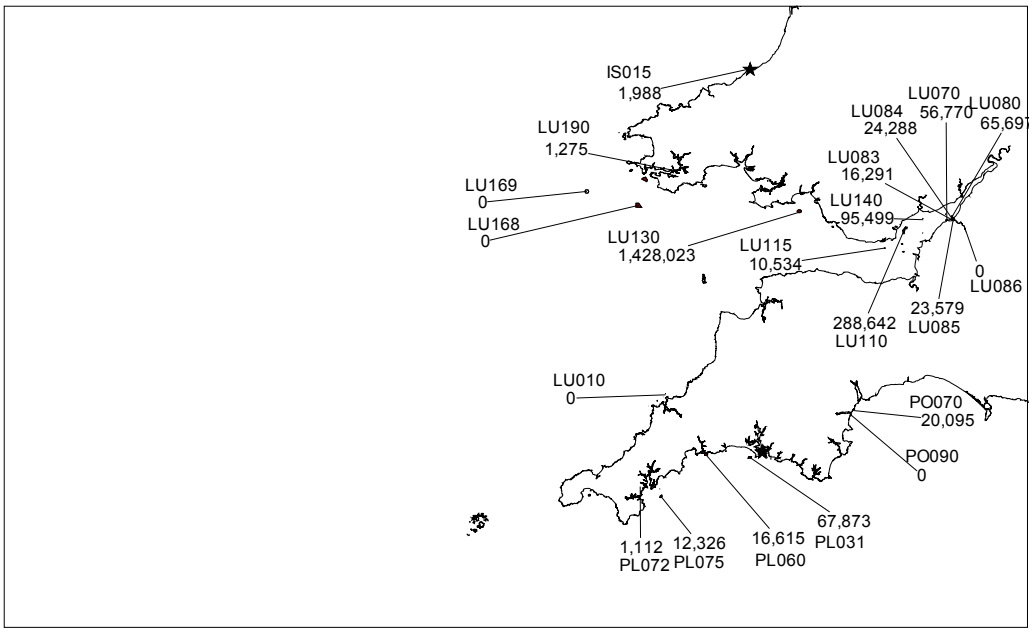


Figure 10e- Dumping sites of dredged material in the UK in 2005 (Irish Sea)

Marine disposal sites in the Irish Sea. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.

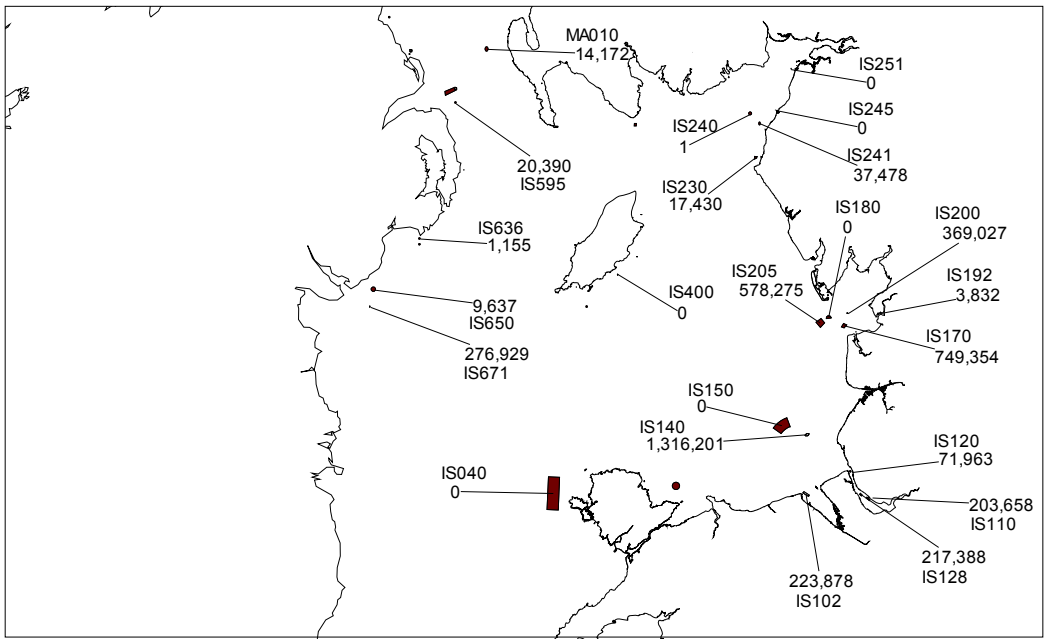


Figure 10f - Dumping sites of dredged material in the UK in 2005 (Western Scotland)

Marine disposal sites in Western Scotland. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.

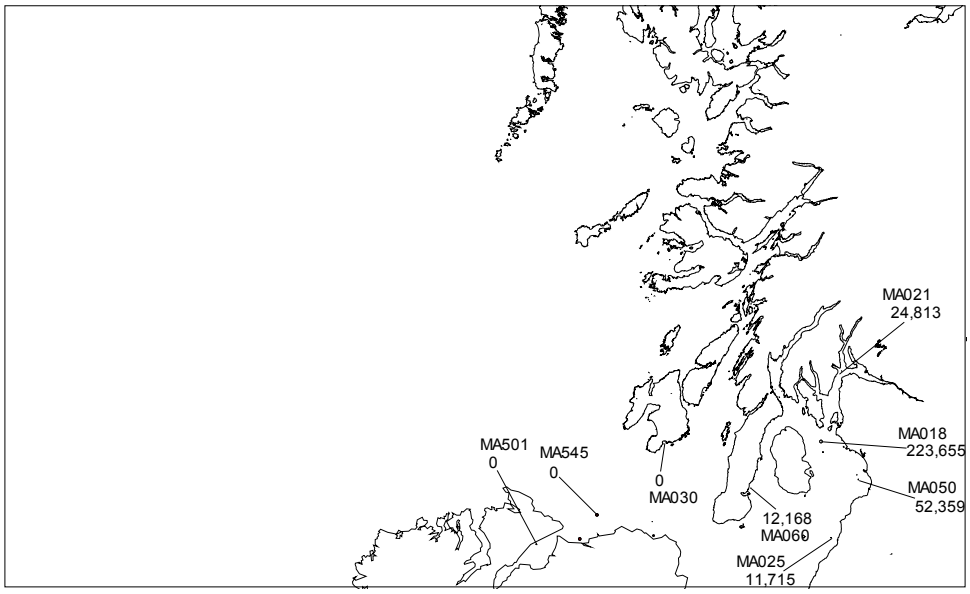


Figure 10g - Dumping sites of dredged material in the UK in 2005 (Northern Scotland)

Marine disposal sites in Northern Scotland. Site codes and quantities deposited in tonnes dry weight, in 2005. All tonnages are for dredged material unless otherwise stated.