

## What has been done?

The Oslo Convention on the Prevention of Marine Pollution by Dumping from Ships and Aircraft, was signed on 15 February 1972 and came into force on 6 April 1974.

The Oslo Convention focused efforts on industrial wastes, radioactive wastes, sewage sludge and wastes for incineration at sea. Environmental concerns led to the revision of the Oslo Convention in the early/mid 1990's and a series of Ministerial North Sea Conferences in the late 1980's and early 1990's agreed to phase out the dumping of industrial wastes at sea (except inert materials of natural origin) and sewage sludge and also to halt incineration at sea for chemical wastes in the North Sea area. These decisions were implemented within the Oslo Convention framework bringing to an end:

- dumping of industrial wastes at sea by 31 December 1989 in the North Sea and in other parts of the Convention Area by 31 December 1995
- dumping of sewage sludge at sea by 31 December 1998
- use of incineration at sea for chemical wastes by 31 December 1991.

With the formation of OSPAR in 1992, it was agreed to phase out the dumping of vessels and aircraft at sea by 31 December 2004. France and the United Kingdom also relinquished their options to dump radioactive wastes.

The current OSPAR Guidelines for the Management of Dredged Material (OSPAR 2009) were designed to assist Contracting Parties in the management of dredged material to prevent and eliminate pollution and protect marine habitats in accordance with OSPAR's overarching objectives. OSPAR has also developed guidance for disposal of fish wastes (OSPAR 1998b). So far guidance on inert waste has not been produced.

Dumping has in practice ceased with the entry into force of the OSPAR Convention, with the exception of the dumping of dredged material, inert material and fish waste from industrial fish processing operations. On a worldwide level, the London Convention and its 1996 Protocol that entered into force in March 2006 regulate dumping of waste and other matter and place particular emphasis on the need to identify and control sources of contamination for dredged materials.

In general, dumping of dredged material is well managed by licences from national and local authorities.

Many OSPAR Contracting Parties also have regulatory controls on contaminant levels in dredged material but not on total loads. According to the OSPAR Dredged Material Guidelines (OSPAR 2009), measures to keep the volume of dredged material to a minimum are regarded as Best Environmental Practice for minimising the effects on the environment.

The OSPAR Guidelines are harmonized, as far as possible, with similar guidelines to the London Convention. Some countries have implemented these guidelines in special national guidelines like the HABAK (Directive for the handling of dredged material in coastal waterways for the federal water and shipping administration, 1999) in Germany, or the Technical Rules for Excavation/Dredging and Management of Dredged Material (Ministry Order, n° 141 – June, 1995) in Portugal.

Most OSPAR countries have developed sediment quality criteria (*i.e.* action levels) or equivalent measures for the assessment of dumping of dredged material at sea. The incorporation of action levels in the London and OSPAR Conventions' dredged material guidance has stimulated much thought and discussion on their development, and eleven OSPAR countries have now produced action levels for dredged material assessment (OSPAR, 2004a and 2008c). The approaches used to derive these 'action levels' have varied greatly from a factor times background/mean levels to those derived from ecotoxicological studies. The approach to their derivation is the subject of on-going discussions within the

OSPAR Commission. In most OSPAR countries these action levels are not incorporated in any statutes or regulations but are there to guide the regulatory authorities/agencies in their decision-making.

In recent years, in addition to substances listed in Annexes I and II of the OSPAR Convention, other compounds such as brominated flame-retardants, booster biocides used in anti-fouling preparations (for example irgarol) and endocrine disruptors have become of concern in relation to dredged material disposal. A number of countries developed quality standards or criteria for contaminants in sediments to be used in their assessments of dredged material and several incorporated them into statutes or regulations.

Overviews of national action levels for dredged material are presented in OSPAR (2004c) and OSPAR (2008c). Most Contracting Parties use a “3 category action level” approach which means that 2 concentrations are provided. Concentrations of contaminants in the material falling below the lower limit represent those of little concern. Those falling between the lower limit and the upper limit may trigger further investigation of the material proposed for dumping. Those concentrations above the upper value generally mean that the material should be considered unsuitable for disposal at sea. Where action levels have not been developed, a case by case approach is taken for each application considered individually. Large differences in the action levels of individual elements/compounds per Contracting Party were observed (see Table 3.1 and OSPAR, 2004c). Notwithstanding differences in methodologies that exaggerate the discrepancies, the wide range of action levels suggests that in some cases dredged material may legally be disposed of at sea that might be prohibited in the waters of a different Contracting Party. However, due to the aforementioned variations in analytical methodologies used and particle size fraction analysed, such simplistic comparisons must be treated with caution. The compilation of the national action levels for dredged material of the Contracting Parties also revealed that action levels are only established for a limited number of compounds and that this number can vary significantly between the Contracting Parties. In addition, no action levels exist for ‘contaminants of recent concern’ such as brominated flame-retardants.

**Table 3.1:** Range of Contracting Parties’ national action levels for dredged material  
(Source: OSPAR, 2008c)

Contaminant	TARGET (“action level 1”) VALUES in mg kg <sup>-1</sup>		LIMIT (“action level 2”) VALUES in mg kg <sup>-1</sup>	
	<2 mm fraction	fine fractions (<63 µm and 20 µm)	<2 mm fraction	fine fractions (<63 µm and 20 µm)
<b>As</b>	20 – 80	30 – 80	29 – 1000	150 – 200
<b>Cd</b>	0.4 – 2.5	1 – 2.5	2.4 – 10	5 – 12.5
<b>Cr</b>	40/50 – 300	150 – 200	120 – 5000	750 – 1000
<b>Cu</b>	20 – 150	40 – 100	60 – 1500	200 – 400
<b>Hg</b>	0.3/0.25 – 0.6	0.6 – 1	0.8 – 5	3 – 5
<b>Ni</b>	20/30 – 130	50 – 100	45 – 1500	250 – 400
<b>Pb</b>	50 – 120	100 – 120	110 – 1500	500 – 600
<b>Zn</b>	130 – 700	350 – 500	365 – 10000	1750 – 3000

A comparison of the permits and the quantities of dredged material licensed reflect the different licensing procedures between the Contracting Parties. Some Contracting Parties issue a few permits for large quantities of dredged material, for example Belgium and the Netherlands with 5 permits for more than 10 million tonnes of dredged material. In contrast, Norway has issued more than 50 permits for approximately 700 000 tonnes. In other Contracting Parties, a general permit (Iceland) or 2-yearly permits (Belgium) or no formal permits are issued (Germany, for some operations) or reported (Spain).

### Implementation of international and EU measures

Several of OSPAR's key objectives in terms of pollution prevention and habitat protection are supported through obligations within the framework of other international agreements to which the OSPAR Contracting Parties are signatory. EU directives apply to member states and to Norway and Iceland as members of the European Economic Area.

#### *Water Framework Directive*

EC Water Framework Directive (2000/60/EC) aims to 'establish a Community framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater, in order to prevent and reduce pollution, promote sustainable water use, protect the aquatic environment, improve the status of aquatic ecosystems and mitigate the effects of floods and droughts'. It applies to all water bodies, including estuaries and coastal waters out to at least one nautical mile (for biological parameters) and to 12 nautical miles (chemical parameters) and is therefore relevant to dumping of wastes. The daughter directive (Directive 2008/105/EC) proposes environmental quality standards for Priority Substances. It aims at a 'progressive reduction of emissions, discharges and losses' of Priority Substances. It sets environmental quality standards for surface waters of 41 dangerous chemical substances including the 33 priority substances and eight other pollutants that pose a particular risk to animal and plant life in the aquatic environment and to human health. The development of sediment and biological quality criteria is up to individual EU Member States.

#### *Marine Strategy Framework Directive*

The Marine Strategy Framework Directive (2008/56/EC) aims at the Protection and Conservation of the Marine Environment. This Marine Strategy Framework Directive will influence activities occurring at sea (including disposal of dredged material) through establishing a framework within which EU Member States shall take the required necessary measures to achieve good environmental status. One of the tasks is to draw up an initial assessment for the marine region. The initial assessment will look at the essential characteristics, the current environmental status, the predominant pressures and impacts (including disposal of dredged material at sea), the economic and social analysis of the use of the sea and estimates of the cost of degradation. For OSPAR Contracting Parties, this initial assessment will be based to a large extent on the QSR 2010 or maintain good environmental status in the marine environment by the year 2020 at the latest. For the implementation of the Directive, EU Member States shall make every effort to use existing cooperative mechanisms such as the OSPAR Commission and other Regional Sea Conventions.

#### *Birds and Habitats Directives*

The European Directive 'On the conservation of natural habitats and of wild fauna and flora', commonly referred to as the Habitats Directive (1992/43/EEC) and the Birds Directive (1979/409/EC) have already had a significant influence on port developments, as well as capital dredging and spoil disposal projects. One of the objectives is to establish a European network of conservation areas, the Natura 2000 network. EU Member States must designate strictly protected areas on the basis of certain habitat types and species. Human activities that impact such sites are strictly controlled with decisions based on the conclusions of an Appropriate Assessment by a competent authority (for example fisheries). The Birds Directive recognises that habitat loss and degradation are the most serious threats to the conservation of wild birds. It therefore places great emphasis on the protection of habitats for endangered as well as migratory bird species, especially through the establishment of a coherent network of Special Protection Areas (SPAs) comprising all the most suitable territories for these species. Since 1994 all SPAs form an integral part of the NATURA 2000 ecological network.

*Environmental Impact Assessment (EIA) Directive*

The EC EIA Directive 85/337/EEC, (as amended by 97/11/EC) requires Member States to adopt all measures necessary to ensure that, before consent is given, all likely (significant) effects of projects on the environment are assessed. For the majority of new dumpsites within the OSPAR area, contracting parties will go through the EIA process. The systematic assessment of a project's likely significant environmental effects are reported in an Environmental Statement to a level of detail sufficient to provide the public and competent authorities with a proper understanding of the importance of the predicted effects and the scope for reducing them (mitigation measures). When following the Environmental Statement and, there are no (significant) knowledge gaps, decision-making on the project can go through. Within a monitoring and evaluation programme, during and after the construction/operation phase, predicted effects of the project are compared to the actual observed effects (generally through field studies).

↪ *Go to full QSR assessment report on the environmental impact of dumping of wastes at sea (publication number 433/2009)*