

Indicator Fact Sheet

(WHS11) Accidental oil spills from marine shipping

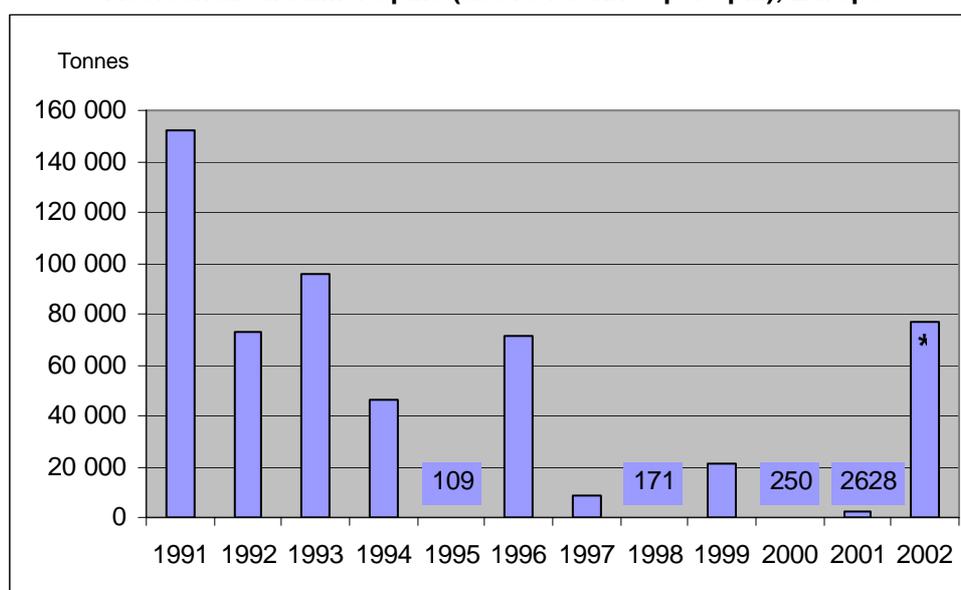
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Key message

- ☺ Pollution from oil spills on a world-wide scale has been reduced by 60 % since the 1970s.
- 🚫 But, major accidental oil tanker spills (i.e. those greater than 20 000 tonnes) still occur at irregular intervals in European waters.

Accidental oil tanker spills (above 7 tonnes per spill), Europe



Note: The mass of oil spill is approximate, as some records do not contain the exact amount of oil spill

*: Prestige wreckage only

Source: 1990-1998, Eurostat, based on data from ITOPF; 1999-2001, ITOPF

Results and assessment

Policy relevance:

The main sources of oil pollution in the marine environment include maritime transport, refineries and offshore installations (see WHS10), land based activities (either discharging directly or through riverine inputs) and atmospheric deposition. At present, no reliable data sources exist for marine oil pollution from land based activities even though it is the largest source in comparison to accidental and illegal spills.

Policy context:

In the field of water protection and management, the Dangerous Substances Directive 76/464/EEC includes targets on oil pollution with reference to persistent and non-persistent mineral oils and hydrocarbons of

petroleum origin. Targets are total elimination for persistent compounds and specific quality objectives set by Member States for non-persistent compounds. In the field of maritime safety, the Directives 93/75/EEC and 95/21/EC were issued to support the MARPOL 73/78 convention established by the International Maritime Organisation for the prevention of pollution from ships.

On 13 December 2001, the EU adopted the Erika I package. The package, announced by the European Commission shortly after the "ERIKA" sinking on 12 December 1999, contains three measures:

- Directive 2001/106/EC concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions (port State control). The Directive, amending Directive 95/21 on port state control, will increase both the intensity and the frequency of compulsory ship inspections for substandard vessels.
- Directive 2001/105/EC on common rules and standards for ship inspection and survey organisations and for the relevant activities of maritime administrations. The Directive, amending Directive 94/57/EC is designed to tighten up on procedures for authorising and monitoring the performance of classification societies.
- Regulation (EC) No 417/2002 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) N° 2978/94 (gradual phase-out of single-hull oil tankers from EU waters by 2015).

In 2002 the EU adopted additional tools:

- Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system, replacing the Directive 93/75/EEC. [27 June 2002]
- Regulation (EC) No 1406/2002 establishing a European Maritime Safety Agency. [27 June 2002]
- Regulation (EC) No 2099/2002 establishing a Committee on Safe Seas and the Prevention of pollution from Ships (COSS) and amending the Regulations on maritime safety and the prevention of pollution from ships [5 November 2002]
- Directive 2002/84/EC of the European Parliament and of the Council amending the Directives on marine safety and the prevention of pollution from ships [5 November 2002]

Finally, in 2003 the EU issued the following texts:

- Report from the Commission to the European Council on action to deal with the effects of the Prestige disaster (COM(2003) 105 final). [5 March 2003]
- Proposal for a Directive on ship-source pollution and on the introduction of sanctions, including criminal sanctions, for pollution offences (COM(2003) 92 final). [5 March 2003]
- Decision to strengthen the criminal-law framework for the enforcement of the law against ship-source pollution (COM(2003) 227 final). [2 May 2003]

Environmental context:

The indicator shows reported oil spills (greater than seven tonnes per spill) from tankers, combined carriers and barges in the North East Atlantic, Baltic and Mediterranean Sea. It provides a partial indication of the total amount of oil released to the marine environment from the transport of oil. Oil spills and discharges below 7 tonnes from tankers and other shipping, and spills that are not reported or detected have not been included due to data availability and reliability issues. ITOPI estimates that 83 % of the nearly 10 000 ship related oil spill incidents are of a size less than 7 tonnes. The data of this category are however not very reliable, and represent a relatively small contribution to the total quantity of oil spilt into the marine environment.

Oil spills to marine areas have a significant impact on environmental quality affecting all aspects of marine ecosystems. The consistency of oil can cause surface contamination and smothering of marine biota. In addition, its chemical components can cause acute toxic effects and long-term accumulative impacts. Marine life may also be affected in clean-up operations, either directly or through physical damage to marine and coastal habitats. Natural recovery is possible, but the time required depends on the size of spill or discharge. In the case of large accidental spills, expensive clean up operation and programmes to save marine sea birds and sea life are required. The impacts of accidental spills can be catastrophic on coastal zones that are often sites designated for their high ecological quality. Spills can also have severe repercussions for tourism, mariculture and fisheries in affected areas.

Assessment:

Despite an increase in the marine transport of oil, the world-wide average number of accidental oil spills above 7 tonnes has been estimated at 24.1 per year for the decade 1970-79, 8.8 per year for the decade 1980-89 and 7.3 per year for the decade 1990-99. In 2000 there was one spill of 250 tonnes (Germany) and 3 spills in 2001 totalling 2628 tonnes including 1 spill (Denmark) of 2400 tonnes.

Sub-indicator

Key message

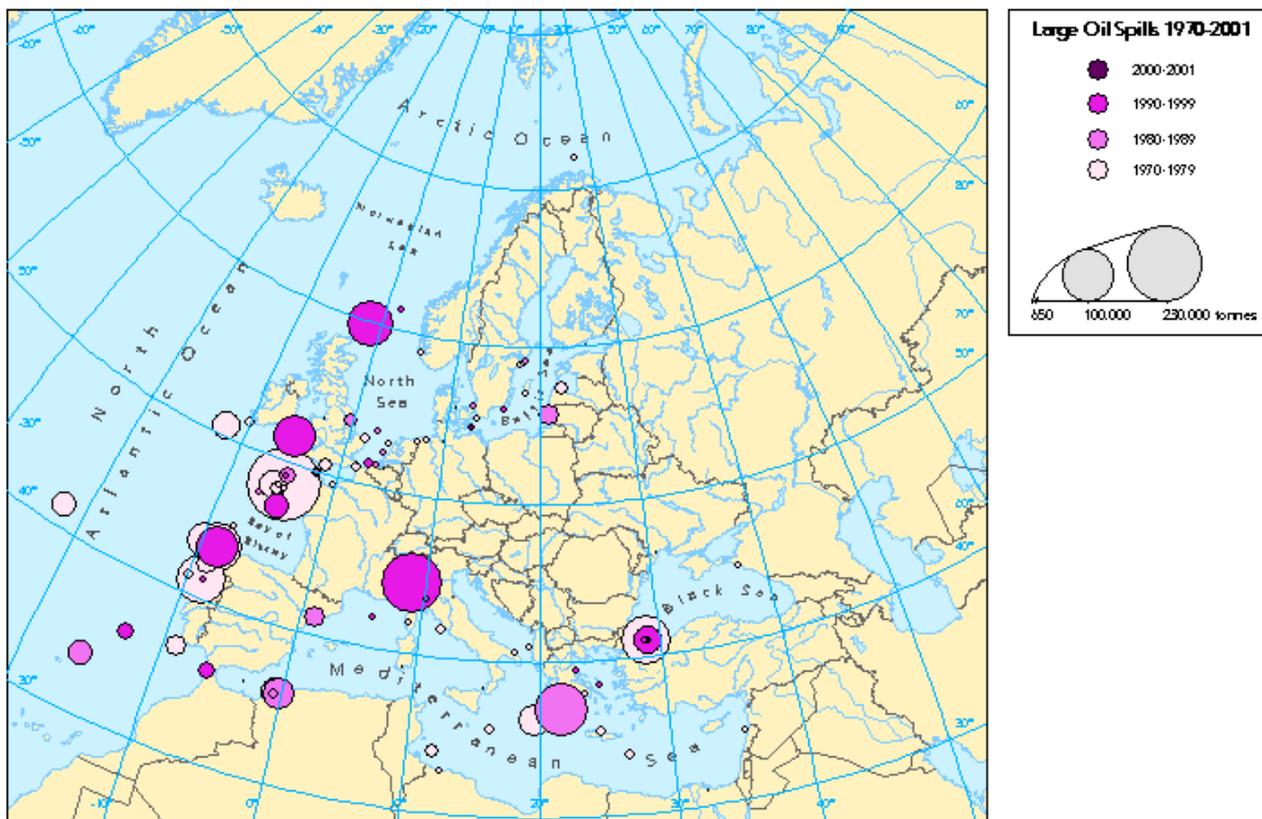
⊗ Oil production and consumption is increasing, as are net imports of oil to the EU, which increases the risk of oil spills. More rapid introduction of double hulls for tankers will help to reduce this risk.

Table 1: Selected major accidental oil tanker spills (> 20 000 tonnes), EU

Ship name	Year	Location	Oil lost (tonnes)
Amoco Cadiz	1978	Off Brittany, France	223,000
Haven	1991	Genoa, Italy	144,000
Torrey Canyon	1967	Scilly Isles, UK	119,000
Urquiola	1976	La Coruña, Spain	100,000
Jakob Maersk	1975	Oporto, Portugal	88,000
Braer	1993	Shetland Islands, UK	85,000
Aegean Sea	1992	La Coruña, Spain	74,000
Nassia	1994	Black sea Turkey	33,000
Sea Empress	1996	Milford Haven, UK	72,000
Erika	1999	Off Brittany, France	20,000
Prestige	2002	Off Cap Finistere, Spain	77,000

Source: ITOPF 2003

Map 1: Large tanker spills, 1970 - 2001



Source: EEA 2002

Assessment of the sub-indicator

A few very large accidents are responsible for a high percentage of the oil spilt from maritime transport. For example, during the period 1990-99, from all the 346 accidental spills over 7 tonnes from tankers, combined carriers and barges, totalling 830 thousand tonnes, just over 1% of the accidents produced 75 % of the spilt oil volume. The figures for a particular year may be distorted by a single accident, as for the Haven in 1991 (see table 1).

References

- Council of the European Union, Council minutes, 2439th meeting of the Council (Environment), held in Luxembourg on 25 June 2002. <http://register.consilium.eu.int/pdf/en/02/st10/10375-a1en2.pdf>
- European Environment Agency - Europe's environment, the Second Assessment
- EC communication of 21 March 2000 and 6 December 2000: <http://europa.eu.int/comm/transport/themes/maritime/english/safety/erika.htm>
- International Tanker Owners Pollution Federation Ltd (ITOPF), 2000, 2001. <http://www.itopf.com/index2.html>
- OSPAR convention. <http://www.ospar.org/>

Data

WHS11_OilSpillsAccidental_V7.xls

Meta data

Web presentation information

1. Abstract / description / teaser:

Shows reported oil spills (greater than seven tonnes per spill) from tankers, combined carriers and barges in the North East Atlantic, Baltic and Mediterranean Sea.

2. Policy issue / question:

Are we reducing oil discharges from marine shipping?

3. EEA dissemination themes:

Coasts and seas

4. DPSIR:

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Technical information

5. Data source:

International Tanker Owners Pollution Federation (ITOPF) retrieved by Eurostat for the period 1990-1998, directly from ITOPF 1999-2001

Description of data:

Accidental oil spills in excess of 7 tonnes from tankers, barges and combined carriers.

7. Geographical coverage:

EU 15

8. Temporal coverage:

1990-2001. The global data are available at ITOPF, but an agreement to use the individual data in order to present them by country has been established with ITOPF. Annual update should be available in April each year.

9. Methodology and frequency of data collection:

Continuous collection of factual data and annual update.

10. Methodology of data manipulation:

grouping of accident reports by country

Quality information

11. Strength and weakness (at data level):

Convenient indicator based on long-term collection of data by professionals of oil activities.

12. Reliability, accuracy, robustness, uncertainty (at data level):

The individual data are estimates which accuracy and uncertainty is not specified.

13. Overall scoring (give 1 to 3 points: 1=no major problems, 3=major reservations):

Relevancy: 1

Accuracy: 2

Comparability over time: 1

Comparability over space: 1

Further work required

As expected, the extension of the indicator to Candidate countries started in 2002, with agreement by ITOPF and the delivery of corresponding data. The process has to be more officially established.