

Measure 32: Double-hull oil tankers and penal sanctions for ship source pollution

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<p><i>Policy package:</i> 4D: Safety, quality and the environment</p>
<p><i>Measure 32:</i> Double hull oil tankers and penal sanctions for ship source pollution: phasing in double hull tankers and establishing penal sanctions for those responsible for pollution.</p>
<p><i>What is the problem being addressed ?</i> The measure consists of two type of separate, not directly related, actions addressing the general purpose of reducing ship source pollution through:</p> <ul style="list-style-type: none">• the gradual elimination (phasing out) of the fleet of single-hull tankers (setting age dependent max time limits for the remaining operational life of single-hull tankers) and replacing these by double hull tankers. The action involves an accelerated phasing in of the double hull standards of the MARPOL 73/78 and accompanying measures (a.o. financial incentives/ disincentives)• penal sanctions for those responsible of causing oil spills or other ship-source type pollution. According to the Explanatory Memorandum of this action the main part of world-wide ship-source oil pollution is the result of deliberate discharges (e.g. because of tank cleaning). The action aims at incorporating existing international rules in Community law. The action also addresses the harmonization of enforcement across member states, and the exchange of information on detected discharges. <p>The general objective pursued by these actions is to reduce the negative impacts on the marine and coastal environment either through accidents by unsafe ships, causing massive pollution, or through intent or negligent behaviour resulting in discharges from ships.</p>
<p><i>Measure's costs and/or benefits:</i></p> <ul style="list-style-type: none">• The fact that the fleet of single-hull tankers must be replaced at a faster rate is a considerable cost for the industry. Whether or not this is a net cost for the EU-society depends not only on a reduction of accident cost (and the possible social costs of environmental pollution) but also on where the new tankers are built. Given the current state of the shipbuilding industry it may be expected that this will be in Asia (Korea, China, Japan) so the extra cost for the transport industry will probably not be compensated by additional revenues for the European shipbuilding industry.• Detecting deliberate, illegal discharges is difficult, so enforcement of the ship-source pollution rules may be costly (e.g. require advanced ship-tracking and tracing systems).
<p><i>Legislative implementation at the EU level:</i></p> <ul style="list-style-type: none">• Com (2002) 780: is a Commission proposal for amending regulation no 417/2002 of the European Parliament and the council of 18 february 2002 aiming to ban the transport of heavy fuel-oil in single hull tankers and speeding up at European level the phase out of single-hull tanker for the transport of all types of oil. However the PRESTIGE accident led the European Parliament and the Council to opt for an even faster rate of phasing out single hull tankers. This resulted in Regulation EC No 1726/2003 of the European Parliament and the Council of 22 juli 2003 amending regulation No 417/2002 on the accelerated phasing-in of double-hull or equivalent design for single-hull oil tankers. This was adopted by the EP at the end of 2003.• Com (2003) 92 is a proposal for a Directive of the European Parliament and the Council on ship-source pollution and on the introduction of sanctions, even criminal sanctions, for pollution offences.
<p><i>What are the objectives ?</i></p> <ul style="list-style-type: none">• The objective to reduce accidental oil-spills (by replacing the single-hull fleet by double-hull tankers at an accelerated pace) can be achieved. Double-hull tankers generally are considered to be less likely to cause oil spills.• The deliberate pollution by vessels is more difficult to combat. Stringent enforcement may require the use of advanced ship surveillance and detection systems
<p><i>Interactions with other WP measures:</i> This measure is related to Measure 33 (compensation system for victims of marine pollution) and to Measure 40 (reinforce port state controls).</p>

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Output indicators:

The key output indicators are:

Double/ single hull tankers:

- Size of Fleet of single hull tankers broken down by age class (indicator statistically available)

Ship-source pollution:

- Number of ship-source pollution incidents penalized

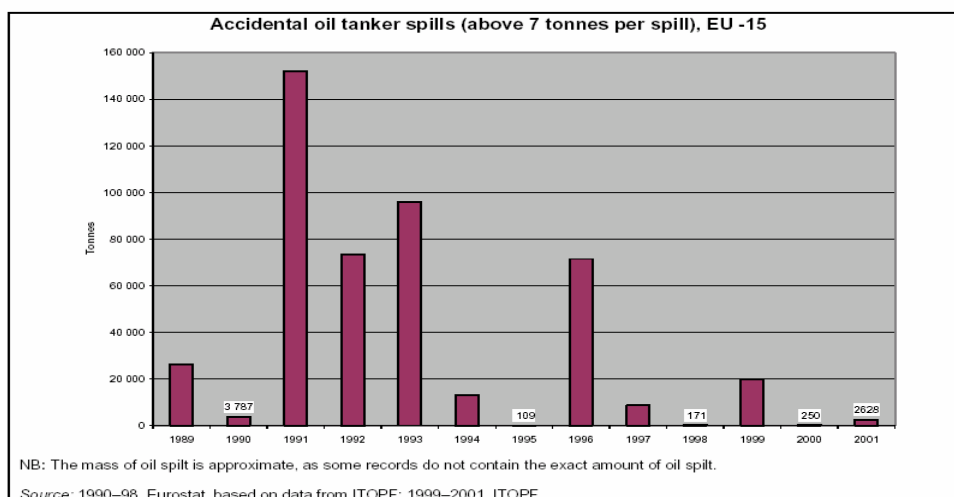
Outcome indicators: intermediate impacts on transport markets

A key market indicator for this measure is the higher cost and prices in tanker transport because of the increased use of double-hull tankers (data must be collected from the market, or estimated by cost models);

Outcome indicators: final impacts on transport users and non users

Key outcome indicators include:

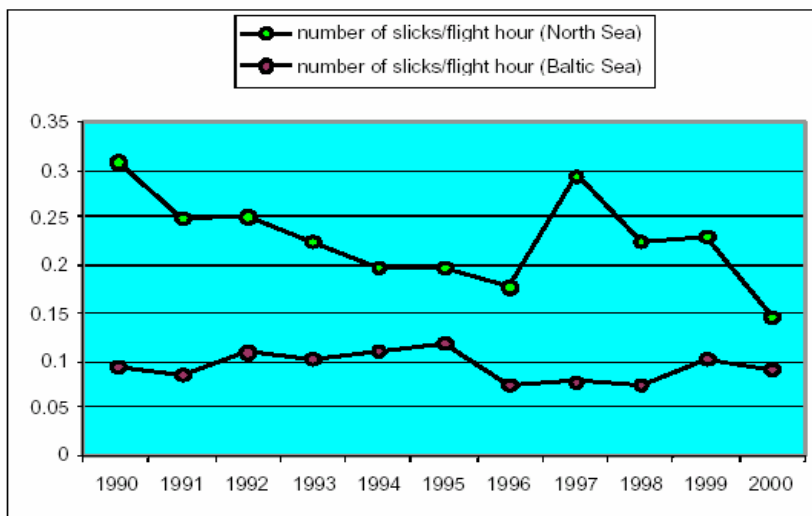
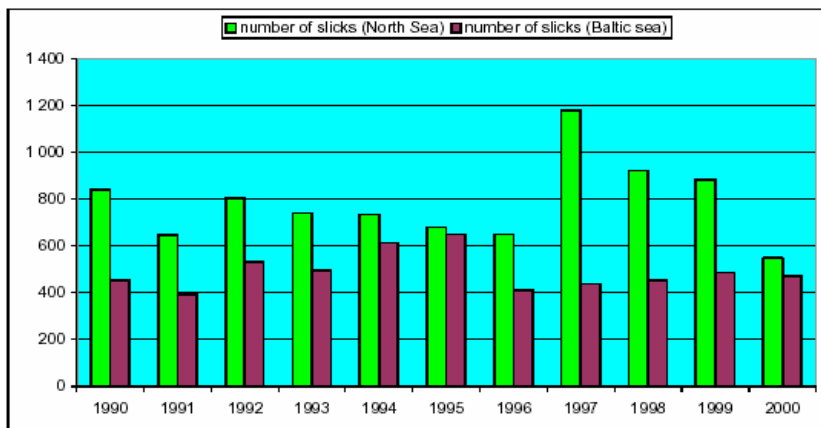
- Accidental oil spills from marine shipping: the indicator shows reported oil spills (greater than 7 tonnes per spill) from tankers, combined carriers and barges in the north-east Atlantic Ocean, Baltic Sea and Mediterranean Sea. It provides a partial indication of the total amount of oil released to 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 poor data availability and reliability. However, the International Tanker Owners Pollution Federation (ITOPF) estimates that 83% of the nearly 10000 ship-related oil spill incidents are of a size of less than 7 tonnes. The data of this category are not very reliable and represent in any case a relatively small contribution to the total quantity of oil spill into the marine environment. Indeed, 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 346 accidental spills over 7 tonnes from tankers, combines carriers and barges, totaling 830000 tonnes, just over 1% of 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 figure below, taken from TERM 2002 – Accidental oil spills from marine shipping):



It is important to note that, despite an increase in the marine transport of oil, the worldwide average number of 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. It is clear that oil spills to marine areas have a significant impact on environmental quality affecting all aspects of marine ecosystems. 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.

- Illegal discharges of oil at sea:** oil tankers are permitted to discharge oil or oily mixtures at the rate of 30 litres per nautical mile, but in “special areas” the oil content in discharges is only allowed to be less than 15 parts per million (ppm). Studies have shown that a visible trace of oil on the sea surface is an indication that the oil content in the effluent exceeds 15 ppm. Therefore, illegal discharges of oil at sea are detected through specific aerial surveillance conducted over the Baltic Sea and North Sea. The results from surveillance show that the number of illegal oil spills slowly decreased in the North Sea, but remained constant in the Baltic Sea. No surveillance is conducted still over the Mediterranean Sea and the Black Sea, but there are indications that these seas are heavily polluted by illegal oil discharges. Annual frequency of observed oil slicks from aerial surveillance in maritime areas in the EU is the chosen indicator (source TERM 2002 – Illegal discharges of oil at sea fact sheet):

Figure 1: Annual number of observed oil slicks from aerial surveillance



Sources: Bonn Agreement and Helcom.

The ratio of the number of slicks per flight hour is given as an indication for the dependence of the indicator on the monitoring intensity. In the North Sea, the highest frequencies observed in 1997 and 1998 correspond to a methodological artefact due to the reporting of very small oil spills (less than 1 m³) by one country. If this is deputed, it can be shown that the number of oil slicks in the North Sea has been declining steadily for the period 1990–2000. Oil spills are mainly confined to navigation corridors and may cause significant local damage on beaches, and to fish, shellfish and bird populations. Monitoring oil spills by aerial surveillance is useful on the condition that offenders caught in action are punished, so this indicator should be strongly related to the introduction of penal sanctions.