

<b>Indicator</b>	
19	Amount of oil pollution.
<b>Measurement</b>	
19.1	Volume of accidental oil spills.
<b>What should the measurement tell us?</b>	
<p>Oil pollution has become an issue of increasing environmental concern, particularly in those countries that have experienced a significant increase of oil transport by tankers.</p> <p>The main sources of oil pollution in the marine environment include maritime transport, refineries and offshore installations, 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 and atmospheric deposition even though it is the largest source by comparison with accidental and illegal spills.</p> <p>The indicator shows the total number of accidental oil spills per year in the coastal waters of the wider reference region and how much oil is spilled (tonnes) each year. This indicator will show us the trend in this kind of contamination and will serve us to examine what is the environmental impact of the maritime oil transport for each reference region.</p>	
<b>Parameters</b>	
(i)	Annual number of accidental oil spills, categorised by size (<7 tonnes, 7-700 tonnes and >700 tonnes).
(ii)	Total annual volume (tonnes/year) of accidental oil spill <sup>(2)</sup> .
<b>Coverage</b>	
<b>Spatial</b>	<b>Temporal</b>
<p>Territorial sea and Exclusive Economic Zone (EEZ) for the national, regional and local calculations.</p> <p>International waters for European calculations.</p>	Annually for at least the last ten years <sup>(1)</sup> .

<b>Data sources</b>		
<p>Since 1974, ITOPF (International Tanker Owners Pollution Federation Ltd. - <a href="http://www.itopf.com/index2.html">http://www.itopf.com/index2.html</a>) has maintained a database of oil spills. This covers all accidental spillages except those resulting from acts of war.</p> <p>Information is gathered from the shipping press and other specialist publications, as well as from vessel owners and their insurers. Information from published sources normally relates to large spills, often resulting from maritime accidents whereas the majority of individual reports are related to small operations. Complete reporting of this latter type of spill is clearly difficult to achieve.</p> <p>The database contains information on both the spill itself (amount and type of oil spill, cause and location) and the vessel involved. For historical reasons, spills are generally categorised by size (&lt;7 tonnes, 7-700 tonnes and &gt;700 tonnes) although the actual amount spilled is also recorded. The volume of oil spill is approximated as some of the records do not show the exact amount. Data are converted from barrels to tonnes by the factor 1 tonne = 7 barrels.</p> <p>The European Environment Agency and the national and regional environment agencies that conduct monitoring programs in littoral waters can also provide data.</p>		
<b>Methodology</b>		
<b>Steps</b>	<b>Products</b>	
1	Delimit the extent of your reference region.	Limits of your reference region.
2	Obtain data sets showing location and co-ordinates of annual oil spills from the European Environment Agency.	List of all current and historic oil spills reported to the EEA.
3	Obtain data sets containing location and co-ordinates of annual oil spills from the national/regional environment agencies.	List of all current and historic oil spills reported at national/regional level.
4	For your reference region, overlay EEA data with the national/regional data and identify the total number of annual accidental oil spills.	<u>Total annual number of accidental oil spills within your reference region (Graph 1).</u>
5	Add up the annual amount of oil spilled in your region.	<u>Volume of oil spill in the reference region (Graph 1).</u>
6	Classify each oil spill data into categories by size (<7 tonnes, 7-700 tonnes and >700 tonnes).	<u>Annual number of oil spill categorised by size within your reference region (Graph 2, Map 1).</u>

<b>Presentation of the data</b>																					
Map 1																					
Graph 1	<p>Bar chart showing the trend of the amount of oil spilled (in tonnes) and the total number of accidents (it should appear on the graph as a line).</p> <table border="1"> <caption>Volume of accidental oil spills (Estimated Data)</caption> <thead> <tr> <th>Year</th> <th>Volume of oil spilled (Tonnes)</th> <th>Total number of accidents</th> </tr> </thead> <tbody> <tr> <td>1990</td> <td>~150,000</td> <td>~15</td> </tr> <tr> <td>1993</td> <td>~90,000</td> <td>~13</td> </tr> <tr> <td>1996</td> <td>~70,000</td> <td>~15</td> </tr> <tr> <td>1999</td> <td>~20,000</td> <td>~8</td> </tr> <tr> <td>2005</td> <td>~10,000</td> <td>~1</td> </tr> </tbody> </table>	Year	Volume of oil spilled (Tonnes)	Total number of accidents	1990	~150,000	~15	1993	~90,000	~13	1996	~70,000	~15	1999	~20,000	~8	2005	~10,000	~1		
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<b>Adding value to the data</b>																					
It is interesting to also classify oil spill data into categories by type of accident (maritime transport, refineries or offshore installations).																					
<b>Aggregation and disaggregation</b>																					
Statistics on the number of accidental oil spills can be aggregated-disaggregated at any geographic scale required, from NUTS 5 to body of surface water to province to country to regional sea or to the whole of Europe.																					

**Notes**

- (1) Long term data will help identify long term trends in accidental oil spills overall as well as the relative significance of larger spills.
- (2) 1 tonne=1000 cubic meters.