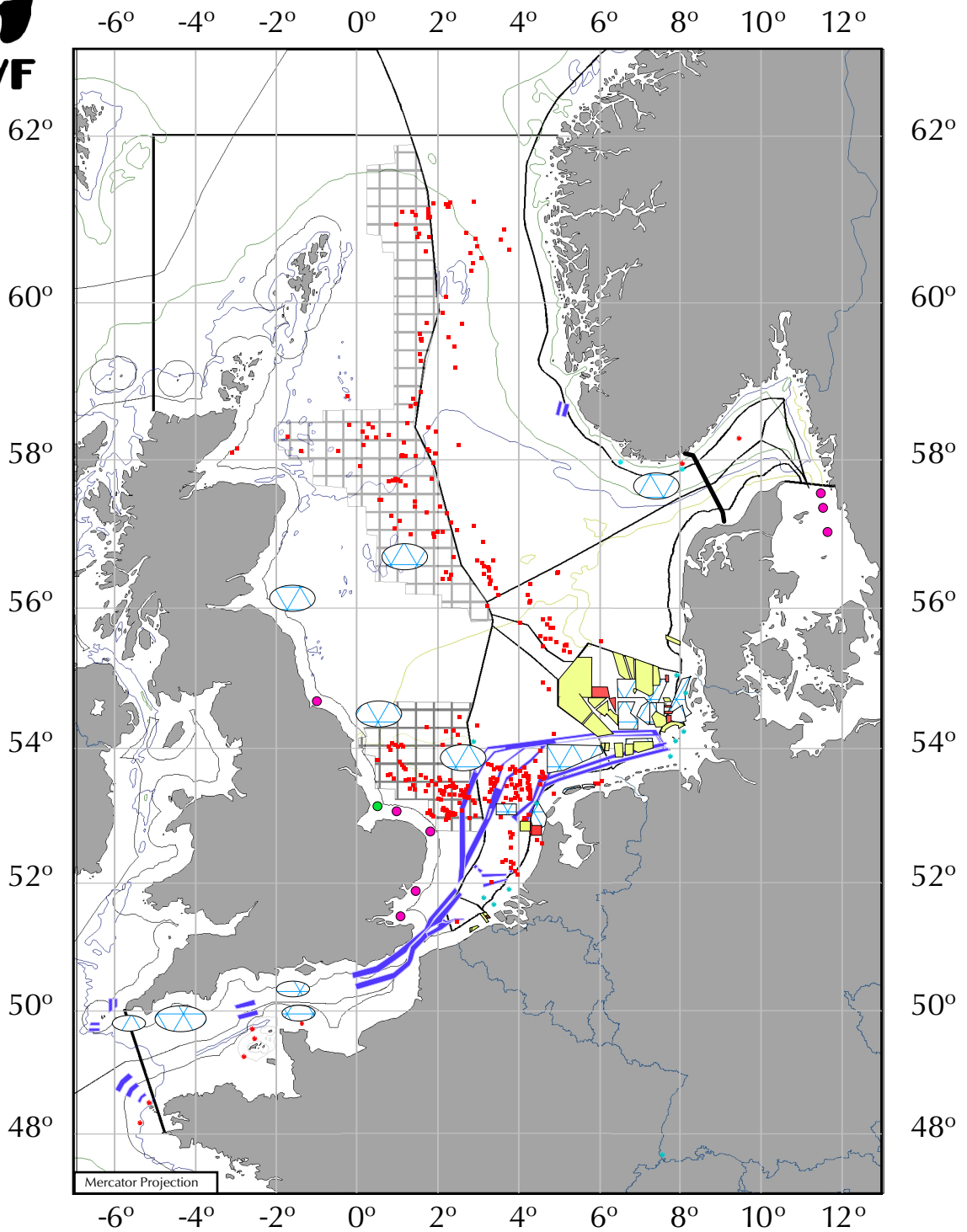




North Sea - Offshore sources of pollution and noise



legend see next page



Legend

North Sea - Examples for disturbance by pollution, noise, vibrations, physical barrier, electric/magnetic field caused by human activities offshore

Areas planned and/or envisaged for **offshore windfarms** - obstacles in bird flyways, sources of disturbance to all fauna, and of alterations of substrate availability for benthos (for review see http://www.coastalguide.org/windpower/von_nordheim.html):

<p>Sites envisaged for developing offshore wind farms in Sweden:</p> <ul style="list-style-type: none"> offshore banks in the Kattegat Fladen, Lilla and Store Middelgrund <p>(Swedish Press 2001)</p>	<p>Offshore wind turbines planned in Denmark:</p> <ul style="list-style-type: none"> Horns Reef, 80 turbines, 27.5 km² <p>(BDC05in8a_DK.pdf, BDC 01/5/Info.10)</p>	<p>Offshore windfarms planned in Germany (3000 MW until 2010):</p> <ul style="list-style-type: none"> application areas, 80-540 turbines pilot sites, approved, or <80 turbines <p>(www.bsh.de/Meeresumweltschutz_Rechtsangelegenheiten/CONTIS/nord_a4_windschutz.jpg - 11/2001)</p>
<p>Offshore wind turbines planned in UK:</p> <ul style="list-style-type: none"> 60 turbines 30 turbines <p>(www.crownstate.ac.uk - 02/2002)</p>	<p>Offshore wind farms planned in Belgium (4 projects, ca. 270 turbines, <30 km²):</p> <ul style="list-style-type: none"> application areas pilot site <p>(www.mum.ac.be - 02/2002)</p>	<p>Offshore windfarms planned in the Netherlands (approx. position):</p> <ul style="list-style-type: none"> Q7-WP, 60 turbines, 2 MW pilot site, 50-70 turbines, 1.5 MW <p>(http://www.noordzee.nl/ruimtelijkeordening/frwindmolens.html)</p>

Military use - sources of pollution, noise and vibrations:

<p>Examples for areas used used for military purposes in UK:</p> <ul style="list-style-type: none"> military exercises, submarines dumping site explosives <p>(seacharts INT 1071 and 1072 (last correction 05/2002): Nordsee, Der Kanal, Westlicher und Östlicher Teil; INT 1041, 1042, 1043 (last corrections 30/2001 - 04/2002): Nordsee, Süd, Mittel und Nordblatt)</p>	<p>Examples for areas used used for military purposes in Norway:</p> <ul style="list-style-type: none"> military exercises, submarines dumping site explosives former dumping site explosives <p>(seacharts INT 1042, 1043 (last corrections 30/2001, 04/2002): Nordsee, Mittel und Nordblatt; 63D (last corrections 02/1991): Nordsee, Skagerrak 1:300 000)</p>	
<p>Area used used for military purposes in Germany:</p> <ul style="list-style-type: none"> military exercises, incl. shooting former dumping site ammunition <p>(www.bsh.de/Meeresumweltschutz_Rechtsangelegenheiten/CONTIS-09/2001)</p>	<p>Examples for areas used used for military purposes in France:</p> <ul style="list-style-type: none"> military exercises, submarines dumping site explosives <p>(seachart INT 1071 and 1072 (last correction 05/2002): Nordsee, Der Kanal, Westlicher und Östlicher Teil)</p>	<p>Area used used for military purposes in the Netherlands (approx. position):</p> <ul style="list-style-type: none"> military exercises, incl. shooting (former?) dumping site ammunition <p>(http://www.noordzee.org/rws/dnz/Levende_zee/economisch_gebruik/militaire_oeff.html)</p>

Offshore oil and gas installations - sources of pollution and traffic. Exploration and exploration as source of disturbance to mammals and fish (see e.g. Hammond et al. 2001; http://www.habitats-directive.org/sea2/dev/html_file/pdf2.cgi/TR_006_W.pdf).

<p>Offshore oil and gas installations (), wells not indicated - sources of pollution and ships traffic.</p> <p>(digitized after seacharts INT 1071, INT 1072, INT 1041, INT 1042, INT 1043 (all last updated 2002) and 63D (2/1991) by Bundesamt für Seeschifffahrt und Hydrographie Germany)</p> <p>SEA2 licensing area 2002, indicating intense seismic exploration (http://www.habitats-directive.org/SEA2)</p>
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Major **traffic** routes - vessels as sources of pollution, noise and vibrations :

<p>Traffic separation schemes as indicators for areas with the highest ships density () in the North Sea.</p> <p>(digitized after seacharts INT 1071, INT 1072, INT 1041, INT 1042, INT 1043 (all last updated 2002) and 63D (2/1991) by Bundesamt für Seeschifffahrt und Hydrographie Germany)</p>
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Direct current cable (—)