

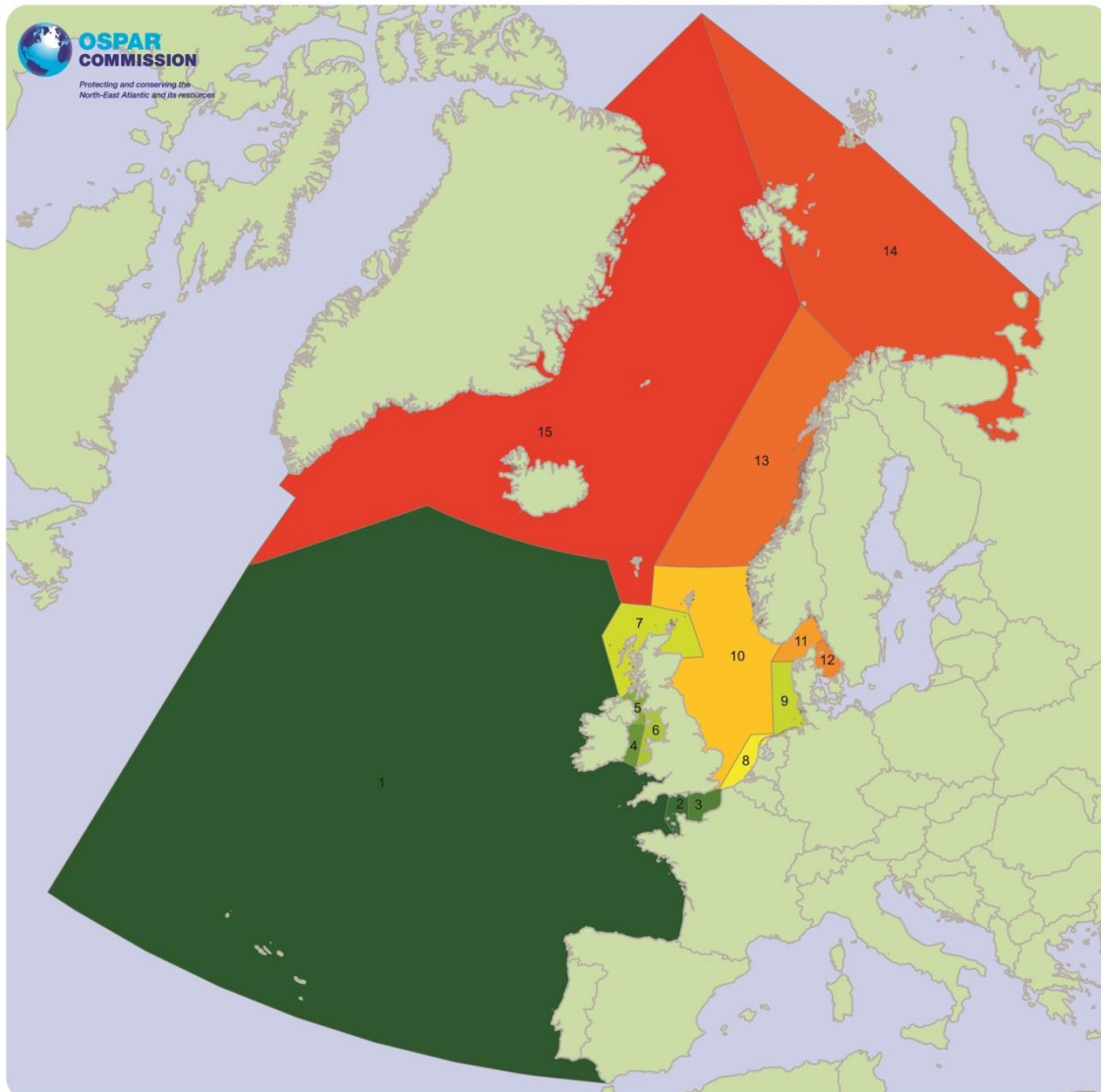
CEMP Appendix R4: Discharges of Radionuclides from the non-nuclear sectors (Revised 2017)

Title: Discharges of Radionuclides from the non-nuclear sectors			
Monitoring Purpose	<i>Pressure</i>	Applicable MSFD GES Criteria	Not applicable (NA); not included in Commission Decision 2010/477/EU. However, the “introduction of radioactive substances” is included as a pressure in Annex III, Table 2 of the MSFD.
Monitoring Guidelines / Monitoring Method in place	<p>OSPAR AGREEMENT ON THE REPORTING OF DISCHARGES OF RADIONUCLIDES FROM THE NON-NUCLEAR SECTOR (2013-11)</p> <p>Discharge data (total-alpha, total-beta, Th-228, Ra-228, Ra-226, Pb-210 and tritium) from the sub-sector oil/gas extraction is reported under the following categories:</p> <ul style="list-style-type: none"> • Produced water • Descaling operations (normal production) • Descaling operations (decommissioning) • Tracer experiments. 	Assessment Guidelines	<p>Assessments of discharges from the non-nuclear sector have not been assessed so far. RSC has agreed the formation of baseline values for the sub-sector oil/gas extraction. Future assessments of this sub-sector will be carried according to principles set out in the 2003 Progress Report on the More Detailed Implementation of the OSPAR Strategy with regard to Radioactive Substances; most recent application in:</p> <p>3rd 4th Periodic Evaluation towards the Radioactive Substances Strategy objectives</p> <p>Baseline values for the sub-sector oil/gas extraction agreed for total-alpha, total-beta, Ra-226, Ra-228 and Pb-210.</p>

	<p>Contracting Parties are also invited to report the estimated discharges from the following non-nuclear sources of radioactive substances:</p> <ul style="list-style-type: none"> • The medical sector (I-131); • Universities and research centres (H-3, C-14, P-32, S-35, Cr-51, I-125); • Phosphate industry (Pb-210, Po-210, Ra-226); • Titanium dioxide pigment manufactures (Pb-210, Po-210, Ra-226, Ra-228); • Primary steel manufacture (Pb-210, Po-210); • Radiochemical production (H-3, C-14, S-35, Cr-51, I-125, Pb-210, Po 210). <p>Sampling and analysis carried out as per national requirements.</p>	Assessment Guidelines	
Quality Assurance Procedures in place	National QA procedures for analysis.	Assessment tools available	<p>For the sub-sector Oil/gas extraction:</p> <p>Simple statistical tests to compare baseline period (2005-2011) with assessment period (2012-).</p> <p>Comparison of the baseline bracket with annual means of the assessment period.</p>
Quality Control	<p>Other QC - National QC through national and international validation exercises.</p> <p>National QC in reporting of data through use of defined reporting format and QC before submission to RSC database by RSC task manager</p>	Data Custodian	OSPAR
Element Monitored	<i>total-alpha, total-beta and a number of individual radionuclides</i>	Data Depository	ODIMS OSPAR non-nuclear sector discharge database
Parameter Measured	Discharge	Indicator Metric	Bq/yr

Temporal scope	Start date: Variable End date: 9999 (9999 if ongoing) Monitoring frequency: Other - Discharge data is reported by Contracting Parties as cumulative discharges per year for each sub-sector as relevant.		Data submission Frequency/ deadline and link to reporting format	30 September Annually Reporting Format [Link to reporting format will be added following OSPAR data strategy]	
Spatial Scope	<i>Variable</i>	<i>(explanation of spatial scope) Variable, discharges occurring in EEZ, coastal waters or rivers</i>			
Nature of Data	<i>Unprocessed data</i>		Aggregation of Data	<i>By Contracting Party for each sub-sector for each OSPAR region.</i>	
OSPAR Region	Arctic Waters	Greater North Sea	Celtic Seas	Bay of Biscay & Iberian Coast	Wider Atlantic
Contracting Parties monitoring	NA	NA	NA	NA	NA
Contracting parties supplying data	NO	BE, CH, DK, LU, NL, NO, SE, UK	IE, UK	ES	IE, ES
Spatial Resolution (proportion)	NA	NA	NA	NA	NA
Spatial Resolution (Density)	NA	NA	NA	NA	NA
Contracting Parties with an “opt out”	NA	NA	NA	NA	NA

Regions identified for the establishment of baselines of concentrations radioactive substances



Region No.	Region Name
1	Wider Atlantic
2	Cap de la Hague Channel
3	Channel East
4	Irish Sea (Rep. of Ireland)
5	Irish Sea (Northern Ireland)
6	Irish Sea (Sellafeld)
7	Scottish Waters (Dounreay)
8	North Sea South (Belgian and Dutch Coast)
9	German Bight
10	North Sea (NW, SE and Central)
11	North Sea (Skagerrak)
12	Kattegat
13	Norwegian Coastal Current
14	Barents Sea
15	Norwegian, Greenland Seas and Icelandic Waters