

# RADIOACTIVE SUBSTANCES

## OSPAR's QUALITY STATUS REPORT 2023 BRIEFING NOTE SERIES

Society's need for energy, industrial processes, health and wellbeing, and national security have resulted in past and present human activities that have led to the introduction of radionuclides to the marine environment. Activities linked to the production of energy (nuclear sector) have led to discharges of artificial radionuclides, while extraction of oil and gas activities have resulted in the discharge of naturally occurring radionuclides. Industrial uses, research, survey and educational activities and medical uses have also led to discharges of radionuclides. Military activities such as atmospheric nuclear weapons testing and other sources such as the Chernobyl accident have resulted in further inputs of radionuclides to the marine environment.

Under the Radioactive Substances Strategy (RSS) of the North-East Atlantic Environment Strategy (NEAES) 2010-2020, OSPAR's aim was to reduce inputs and levels of radionuclides. From the assessments carried out by OSPAR on data available up to 2018, there is clear evidence for the nuclear sector of progressive and substantial reductions in discharges in the majority of cases. For the oil and gas sub-sector there is evidence of some reductions in discharges. However, in most cases discharges of radioactive substances

from this sub-sector have remained unchanged. As to indicator radionuclides for the nuclear sector, there is clear evidence that current environmental concentrations are close to or lower than historic levels. The environmental concentrations of indicator radionuclides for the nuclear sector and modelled additional concentrations of indicator radionuclides for the oil and gas sub-sector would not result in a significant radiological impact on humans or the marine environment.

It can be concluded that Contracting Parties have successfully fulfilled the objectives of the OSPAR RSS for 2020 under the NEAES 2010-2020 and have made significant progress towards fulfilling the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances. In doing so, Contracting Parties have prevented pollution of the OSPAR Maritime Area by ionising radiation. As delivering the aims of the OSPAR Convention is an ongoing task, new strategic and operational objectives for radioactive substances have been agreed by OSPAR under the new NEAES 2030.



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