

4A Coastal eutrophication index

Definition and scope

Indicators 14.1.1 (a) index of coastal eutrophication, and (b) plastic debris density, are created to meet SDG Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. Coastal eutrophication is the loading of nutrients into coastal environments from anthropogenic sources, resulting directly in an excessive growth of plants, algae and phytoplankton, and indirectly in oxygen depletion. The eutrophication phenomenon is a response to anthropogenic discharges in the marine environment, primarily from direct or undertreated domestic wastewater flows from land. Data collection, monitoring and assessment differ from the datasets for plastic debris density.

4B Plastic debris density

Definition and scope

Plastic debris density refers to datasets on plastic litter in the marine environment calculated according to given compartments, namely, beach/shoreline litter, water column litter, seabed/seafloor sediments, etc. At present, due to the surge in awareness of this pollution issue over the last decade since 2010, the datasets and units have not yet been harmonized. The datasets for this indicator measure plastic waste litter according to the amounts reported in a 2015 UNEP/MAP report, providing a regional scale snapshot.

Factsheet rationale

Coastal areas are recognized as the environments most impacted by human activities. Eutrophication is a consequence of urbanization in coastal areas worldwide since the early 20th century, reflecting a socio-economic model that chronically threatens the marine environment and the ecosystem services it provides. Plastic pollution, on the other hand, has been increasing on a global scale since the late 20th century and continues to impact coastal and marine environments on an unprecedented scale. A symptom of tremendous and acute contamination, plastic pollution reflects the unsustainable socio-economic models in operation worldwide, negatively affecting the ocean's health and therefore ecosystem economic returns (ecosystem services). 4a: the SDG datasets are exclusively for eutrophication (a). 4b: this can be considered the second part of the above indicator (b), at present obtained from a 2015 UNEP MAP report.

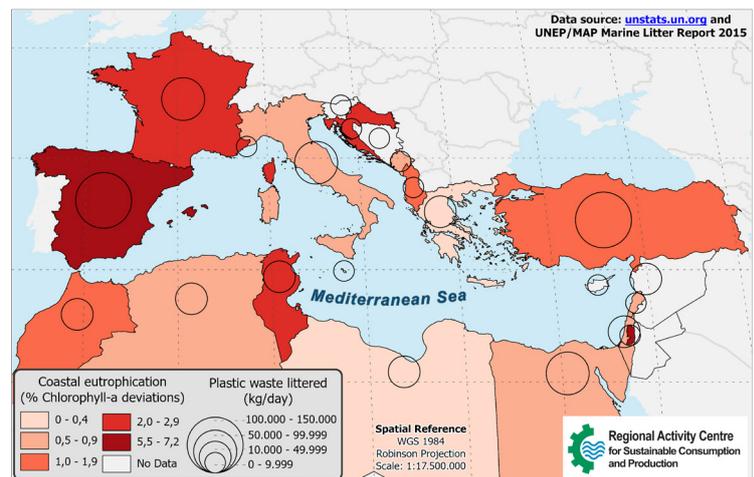
Current situation and progress in the Mediterranean region

Although eutrophication can occur as a natural phenomenon, human-caused eutrophication in the Mediterranean region is a coastal pollution issue localized to certain areas of the Mediterranean. Country datasets derived from satellite imagery could become the norm for assessment of a widely-known process, although there is a need for improved technology to translate large- and medium-scale assessments into local actions. In this regard, the impact of UNEP/MAP-led environmental policy has improved the situation during the last three decades, though concerns remain. On the other hand, with regard to the impact of plastic pollution on science, national authorities and numerous regional stakeholders since 2010, the situation is moving from observational assessment to an action plan (UNEP/MAP Regional Marine Litter Action Plan, 2014) to tackle this complex issue, involving established economic sectors and industry, consumer behaviour and the environment. The amount of plastic litter (or plastic litter density in specific areas or environmental compartments) has not yet been fully investigated with regard to either the countries' continental platforms, the open Mediterranean Sea or the impacts on biodiversity and ecosystem services.

Key message

Eutrophication and plastic litter remain chronic, and acute pollution issues in the Mediterranean region reflect unsustainable socio-economic models requiring urgent remediation.

Coastal eutrophication (2019) and Plastic debris littered (2015)



The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries

Sources

4a: UN SDGs, 4b: UNEP MAP Report, 2015

Links

<https://statistics.fibl.org/world/>