



## **Contribution by the World Meteorological Organization (WMO) to the Report of the Secretary-General on Oceans and Law of the Sea 2016 'Marine Debris, plastics and microplastics'**

(i) Marine meteorological and oceanographic monitoring platforms, including voluntary observing ships, data buoys, both drifting and moored, and other relatively small instruments (e.g. sub-surface profiling floats) are deployed in the global ocean to observe the state of the atmosphere and the ocean in support of operational and research applications of the WMO. Their data are critical for allowing WMO to address its mandate in particular with regard to contributing to the protection of life and property against natural disasters through improved weather forecasting, climate monitoring and services, and marine services. Data retrieved from the observation platforms and their application in the coupled ocean-atmosphere global circulation modelling and prediction make an important contribution to understanding ocean currents and circulation. This is particularly useful for understanding and monitoring the circulation of debris (especially macro and micro-plastics) at both the surface and sub-surface of the ocean, for example the well-known 'Pacific Garbage Patch'. WMO and its Members, through its collaboration with other international organizations such as IOC/UNESCO, have well established its ocean-atmosphere monitoring system including through the WMO Integrated Global Observing System (WIGOS), the Global Climate Observing System (GCOS), the Global Ocean Observing System (GOOS) and the activities of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), and WMO Global Numerical Prediction Centres. These all assist in the sustained monitoring and prediction of the variation and behavior of the global ocean circulation: used to improve the understanding of where marine pollution debris is concentrating (or may concentrate), and the harmful impacts it might have on migrating and/or localised fish stock in the vicinity of these polluted areas.

(ii) Small observational instruments are usually not recovered by the end of their operational lifetime as the exercise would be too challenging and it would severely affect the cost of the corresponding observing programmes. Some of the instruments eventually sink while others continue to drift. However, the instruments cannot be regarded as marine debris, since they are not intentionally deployed at sea for disposal purposes. WMO and UNESCO/IOC are examining this issue with growing interest for future consideration by their JCOMM Data Buoy Cooperation Panel (DBCP). WMO is ready to contribute from that perspective to the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea to facilitate ocean observing activities.

(iii) Other related legal issues that WMO is addressing and that it would recommend the Informal Consultative Process to consider, with a view to facilitate WMO observing activities at sea, including: (a) liability in case of an unmanned instrument deployed at sea and involved in an accident; (b) intentional or unintentional vandalism on data buoys<sup>1</sup>; and (c) piracy in some ocean areas preventing WMO to undertake ship-based instrument deployment and maintenance activities, thus forcing WMO to reluctantly implement some restrictions with regard to the international exchange of ship observations<sup>2</sup>.

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<sup>1</sup> WMO Resolution 25 (Cg-16); UN General Assembly Resolution A/66/L.21, Oceans and the Law of the Sea.

<sup>2</sup> WMO Resolution 27(EC-59).