Identifying and quantifying plastic contaminant sources and leakages into the aquatic environment

Project objective

The objective of this project is to establish a practical methodology to identify and quantify sources of plastic pollution in the aquatic environment.

Executive Summary

There are several physical models and methodologies to address land-based sources of marine pollution, but there is no standardised tool to develop an appropriate inventory of sources of plastics entering the aquatic environments.

To address this, the project will develop a practical and useful toolkit to identify and quantify the sources of plastic pollutants entering into the aquatic environment; to support countries, river basin organisations and coastal management authorities to develop science-based action programmes to reduce plastic pollution. The application of the toolkit will allow the development of source-inventories and list of hotspots, so that control bodies can develop strategies to address water plastic pollution and identify priority action.

All sources of water plastic pollution (both land-based and water-based) will be considered, and scientists, waste management experts/practitioners, and data management experts will all participate in the toolkit development. Once the toolkit development is complete, it will be applied in a selected pilot country -Kenya-, and the results and experiences will be fed back to the modification and reinforcement of the toolkit.

This project is based on the expertise developed by the UNEP International Environment Technology Centre (IETC) and the work of UNEP Marine Litter Programme in Ecosystems Division and the Global Environment Monitoring System (GEMS) in Science Division. Furthermore, the project is based on the expertise and experiences of the water and marine programmes of the European Commission Directorate-General for the Environment.

The project will be closely tied with the UNEP's Medium-term strategy (MTS) 2022-2025, particularly under Outcomes 3B and 3C, and will also be part of UNEP's One Plastic Initiative.

Outcome, outputs and activities

Expected outcome

Information on sources/leakages of plastics entering aquatic environment is available and used to establish baselines/targets/objectives within aquatic plastic pollution management programmes.

The underlying assumption to produce the Outcome is that: (i) there is a sufficient scientific basis to develop a practical toolkit; and that (ii) interests of Member States and communities to use the toolkit are well expressed and

linked. The drivers that are external factors influencing achieving the outcome are two-fold: Increasing plastic waste; and Increased use of plastics for human lives.

Outputs and activities

Output 1. A toolkit to identify and quantify sources/leakages of plastic waste entering aquatic environment.

Activity 1.1 Organisation of working group meetings
Activity 1.2 Compilation of existing methodologies and models
Activity 1.3 Development and finalisation of a target toolkit

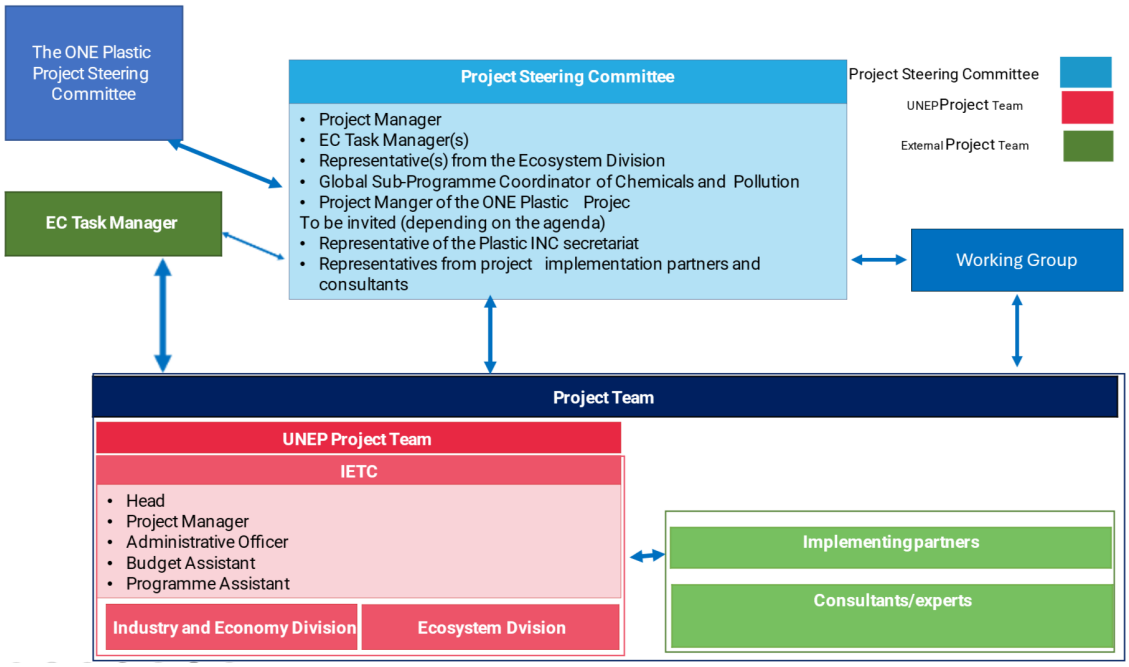
Output 2. Source/leakage inventory of plastics entering the aquatic environment in Kenya applying the toolkit.

Activity 2.1 Identification of a pilot country
Activity 2.2 Participatory data collection
Activity 2.3 Application of the toolkit

Output 3. Communication and visibility of the project results through the existing water agreements and a future legally binding agreement on plastic pollution.

Activity 3.1 Development of information materials
Activity 3.2 Organisation of events on key occasions
Activity 3.3 Dissemination of outreach/advocacy materials

Project management and governance



Workplan and timeline

Output	Main actors involved	2023	2024				2025				2026	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1. Toolkit development	PM, PC, RC, WG											
2. Toolkit application	PM, PC, WG, SC											
3. Communication and outreach	PM, PC, CT											
Other activities												
Steering Committee meetings	PM, SC											
Working Group meetings	PM, PC, WG											

PM: Project Manager, PC: Project coordinator, RC: Researcher consultant, WG: Working Group, SC: Steering Committee, CT: UNEP Comms teams.

Donor and Implementing partners

Major donor: European Commission
Implementing partners: European Commission Directorate-General for the Environment and UNEP

Contact

Project manager: Felipe Dall felipe.dallorsoletta@un.org

Overall supervisor: Takehiro Nakamura takehiro.nakamura@un.org

unep.org/ietc/

twitter.com/unep_ietc

linkedin.com/company/unep-international-environment-technology-centre/