

Request for Expression of Interest

A review of marine plastic litter in the WIO region: Status, implications on the environment and human populations, effectiveness of measures taken and opportunities

Several studies indicate that marine litter is a growing, critical issue in the Western Indian Ocean (WIO). Densely populated coastal cities are the primary cause of the problem, which is being exacerbated by increasing coastal development and additions from upstream, urbanized areas which are located further inland. There are at least five major cities along the coast of Eastern and Southern Africa including Mombasa, Dar es Salaam, Beira, Maputo and Durban, while all of the island states have large urbanized ports.

Marine litter contributes to environmental, economic, health and aesthetic challenges stemming from poor solid waste management practices, lack of infrastructure, and indiscriminate human activities. These impacts vary across countries, populations and ecosystems. Many national initiatives that deal with marine litter-related aspects are being implemented in the region. Still, there has been little coordination, communication and mutual learning among WIO countries, experts and partners working in this field. Therefore, there is a need for mechanisms that can facilitate communication between practitioners and experts, as well as between different programmes and funding agencies. This can help reduce duplication of work, establish partnerships, improve coordination, and provide a forum for sharing information and knowledge among experts, managers, and funding agencies, as well as joint regional planning and implementation. These regional efforts are of particular significance, as marine litter is transported widely by ocean currents and impacts distant localities both in the region and globally.

Recognizing the need to have a coordinated approach in addressing these challenges, the Ninth Conference of Parties to the Convention for the Protection, Management and Development of the Marine and Coastal Environment for the WIO region (Nairobi Convention) held in Mombasa, Kenya in August 2018, *requested* the Nairobi Convention Secretariat, in collaboration and cooperation with partners, to establish a marine litter regional technical working group in the Western Indian Ocean region.’ Several other related decisions were adopted under ‘Decision CP.9/3. Management of marine litter and municipal wastewater in the Western Indian Ocean’ including on the development of a regional strategy or action plan or both on the management of marine litter and microplastic and capacity-building programmes on marine litter and microplastics, including microbeads: for a harmonized approach to data generation, monitoring and reporting; conducting outreach and public awareness activities on the impact of municipal waste and marine litter on marine species and their habitats; and encouraging countries to discourage plastic microbeads, take measures within their national capacities to consider phasing out their use in the region and promote the exchange of expertise, best practice and lessons learned.

In response to ‘Decision CP.9/3. Management of marine litter and municipal wastewater in the Western Indian Ocean’, especially in respect to the setting up of a regional marine litter technical working group, WIOMSA and the Nairobi Convention Secretariat in collaboration with other partners have established a Group of Experts on Marine Litter and Microplastics. One of the major priority actions for the WG is to undertake a regional assessment on the status of marine litter and microplastics; the resultant ecological, human health and economic impacts; and measures undertaken by different institutions to address the challenges and highlight opportunities which can be harnessed for greater impact.

The first regional assessment of marine litter was published in 2008 in the UNEP and WIOMSA report, 'Marine Litter in the Eastern Africa Region: An Overview Assessment'. This was followed with the development of a Regional Marine Litter Action Plan, which was expected to inform development of National Marine Litter Action Plans in countries across the region. This process was facilitated by the UNEP GPA Unit in collaboration with the Nairobi Convention and the Institute of Marine Sciences (IMS), Zanzibar.

In recent years, the knowledge of marine litter has improved significantly. A number of studies/reviews have been undertaken to assess the status of marine litter and their impacts on environment, marine life and on human health. For instance, in 2019, the UN Environment Programme supported the collection of baseline data on the state of marine litter on the coasts of Kenya and Seychelles, in order to inform the National Source Inventory for marine litter in these countries. Studies on different aspects of marine litter have also been commissioned by the World Bank in Kenya and Mozambique. The Kenya study focused on determining the magnitude of marine litter and plastics issues: (i) document (through rapid assessment) the distribution of plastic in the ocean, on the coast, and in the nearshore environment, and identify priority areas where marine litter and plastics have the largest impact on Kenya's coastal and marine environment; (ii) identify the ten plastics that are most prevalent; and (iii) identify their sources and pathways, both land- and ocean-based.

Further, South Africa undertook an extensive science review to assess the current threat of marine plastic pollution to ecosystems, human health and economy in the country. The results of this review has been published in a Special Issue of the South African Journal of Science (May 2020) in five thematic areas including: land-based sources and pathways of marine litter; the transport and fate of marine plastics; impacts of plastic debris on biota and implications for human health; impacts of marine plastic on ecosystem services and economy; and monitoring marine plastics. The aim of the review was to identify gaps in knowledge to inform future investment in marine plastic debris research.

Since, 2019, WIOMSA in collaboration with the Sustainable Seas Trust (SST) through the African Marine Waste Network and Country partners started implementing a three-year marine litter monitoring programme in six countries; namely Kenya, Madagascar, Mauritius, Mozambique, Seychelles and Tanzania. The data collected will be used to set baselines in these countries. WIOMSA is also supporting marine litter projects in Kenya and Tanzania through the Marine and Coastal Science for Management (MASMA) Programme. These three-year projects which began in 2019, aim to quantify microplastic occurrence and distribution in the marine system and examine the adsorption of chemicals on microplastics, their ingestion, trophic transfer and chemical release, and a wide array of ecotoxicological effects on invertebrates and vertebrates.

The studies reviewed here highlight the ongoing work on the issue of marine litter in the WIO. However, the current level of knowledge about marine litter in the WIO is still insufficient to make region-wide recommendations to solve the problems related to marine litter, including understanding the cost of inaction. Thus, one of the priority actions for the WIO Group of Experts on Marine Litter and Microplastics is to undertake a regional assessment on the status of marine litter and microplastics and their ecological, human health and economic impacts;

assess measures undertaken by different institutions to address the challenges; and highlight opportunities which can be harnessed for more significant impact.

The main objective of this initiative is to commission three inter-related studies that will assess (i) the status of marine litter and microplastics knowledge in the WIO region; (ii) their ecological, human health and economic impacts, and (iii) effectiveness of measures undertaken to address the challenge and, opportunities that could be harnessed for enhanced interventions. These reports will also identify evidence gaps and make recommendations on management and policy actions to be taken at national and regional levels.

Scope

The Group of Experts on Marine Litters and Microplastics is looking to recruit three senior experts each to prepare a report on different aspects of marine litter in the WIO region as follows:

- i) assess the current status of marine litter and microplastics knowledge in the WIO region by reviewing the existing literature on the amounts, sources, fate and resultant ecological and human health impacts of litter on the coastal and marine environment. This should include identifying evidence gaps and making recommendations on actions to be taken at national and regional levels.
- ii) review and evaluate the economic consequences of unmanaged plastics and the economic opportunities for each country to reduce the leakage of plastics into the environment through increased reuse and recycling (establish a local recycling economy). This study will focus on highlighting the cost of plastic pollution, the cost of inaction, and the economic opportunities that can benefit communities, and identify economic incentives that will not only address poverty, but will encourage a local secondary resources economy. This should include identifying evidence gaps and making recommendations on actions to be taken at national and regional levels to reduce the consumption of single-use plastics; improve product design for recycling; and grow local recycling economies.
- iii) review of policy and institutional frameworks on marine litter in the WIO region. This study will not only be limited to policies/strategies and other actions taken by governments, but will also include interventions undertaken by non-state actors to address the challenges. These include NGOs, communities and the private sector. The role of the private sector in the recycling of waste plastic, adoption of innovative technologies and use of environmentally friendly materials as alternatives will be key. Any existing and planned public-private partnerships related to the management of waste plastics should be captured and the opportunities to strengthen these partnerships explored.

Geographical Focus

The study will focus on the ten WIO countries (Comoro, Madagascar, Mauritius, France (Reunion), Seychelles, Kenya, Tanzania, Mozambique, Somalia and South Africa). The experts are expected to conduct desk research, online interviews and online questionnaires to collect information for the assignment.

Assignment deliverables

This assignment has the following distinct deliverables:

- Three inception reports outlining the work plan for delivery of the outputs of the consultancy and detailed outlines of the reports
- Three reports (based on scientific data, assessments, with case studies/examples addressing the different themes around the opportunities and challenges) of 20-30 pages per report, but with a short 1-2 page executive summary that can stand alone as a separate briefing note (summary) (single spacing);
- Complete electronic copies of all source documents.

For harmonized assessments, consistency and delivery, these studies will be conducted simultaneously. In preparing these reports, the experts will work closely with the Group, the Nairobi Convention Secretariat, WIOMSA and other partners as deemed appropriate and necessary.

Eligibility criteria

The assignment requires a multi-disciplinary team of experts with the following qualifications and experience:

- Academic qualifications: Advanced university degree (Masters or PhD) in subjects related to study priorities. The evaluation of the policy and institutional framework will have to be carried out by a legal expert or experts who have recently conducted similar studies in the region
- Professional experience: At least 7 years of work experience related to the study priorities; researchers who have published in peer-reviewed journals will be given preference.
- Experience in working with governments and other partners in the WIO is essential
- Language skills: Working knowledge of English. Working knowledge of French is an asset.

Financial Support

WIOMSA in collaboration with the GEF-funded WIO SAP programme and UN Environment GPA will provide a modest honorarium of US\$ 8,000 for each report.

The operational costs, including communication costs and participation in review meetings, will be covered by sponsors.

Submission of Applications

The interested experts should prepare and submit an expression of interest submitted as a WORD document not exceeding 3 pages (Times New Roman 11 pts, spacing 1.15). A two-page CV should also be submitted. The expression of interest should highlight expertise and experience in areas relevant to the focus on the study for which they are applying for and demonstrating of the understanding of the topic through a brief background and research questions that will guide the study.

One expert or a team of experts may be appointed per study, but experts may apply for more than one assessment. If applicants are submitting proposals for multiple topics, each "Expression of Interest" should be submitted as a separate document.