

## POSITION PAPER ON MARINE LITTER AND MICROPLASTICS

SUBMITTED BY: IRENE FRANCISCA OPOKU

REGIONAL DIRECTOR - ENVIRONMENTAL PROTECTION AGENCY-GHANA

### **1.0 Major Barriers to Combating Marine Litter and Microplastics**

Marine litter and micro plastics have not received much attention until the last decade. It is estimated that 10% of plastics produced will enter into the sea (Thompson 2004). Marine litter menace is found along shorelines, in coast waters, estuaries and oceans throughout the world.

Ghana has a long and productive coastline of about 550 km facing the Gulf of Guinea (EPA, 2012). Marine litter travels over long distances with ocean currents and winds and is found everywhere in the marine and coastal environment. The litter found in these environment could be as a result of people dumping deliberately or unintentionally.

Currently, it is estimated that Ghana has an average daily waste generated per capita of 0.45 kg, equating to 3.0 million tons of solid waste annually. It is estimated that only 10% of solid waste generated is properly disposed of mainly through land fill sites but options are rapidly depleting (GhIE, 2011). This trend if not reversed can result in major changes in the environmental conditions or interdependent relationships can cause the marine ecosystem to fail and hence affect the coast's ability to adequately provide for the plants, animals and humans that depend on it and each other to survive.

Most of the global efforts at combating marine litter and the impacts of microplastics include reduction, increased reuse, recycling and well-managed municipal waste schemes. Although these efforts have yielded some successes especially in Regions with effective solid waste management systems, they are inadequate to combat marine litter and microplastics pollution and degradation.

The major barriers are:

- The transboundary nature of the marine environment makes it vulnerable
- Lack of concerted efforts in effective waste management
- Absence of effective solid waste management strategies
- Ineffective or inadequate legislation and its enforcement
- Inadequate or poor waste management infrastructure
- Inadequate funding of solid waste management

- Inadequate public education and awareness creation
- Widespread sources of marine litter and microplastics
- Increased use of plastics in products manufactured and packaging
- Relatively cheap cost of plastic products compared to paper
- Lack of expertise and the equipments to combat marine litter.
- Microplastics is an emerging threat which is not receiving any attention.

## **2.0 View On Potential National, Regional, And International Reponse Options And Associated Environmental Social And Economic Cost.**

Ghana has undertaken many initiatives to improve waste management systems in the country. Some of which are development of policies, strategies, guidelines, legislation and provision of infrastructure for waste management. Some current measures being implemented to minimize or eliminate marine litter are: the use of oxo-biodegradable additives in production of oxo-biodegradable plastic films, monitoring of industries for compliance in oxo-biodegradable use, education on plastic waste management, waste segregation at source of generation and recycling of the segregates, development of Ghana Standards and Conformity Assessment Protocol which became operational in February 2018, and the development of a National Plastic Policy which is underway with a Zero draft developed in December 2017.

Ghana has ratified the International Convention on MARPOL 73/78, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (1972) and other Conventions aimed at prevention of pollution of the marine ecosystem.

The way forward to combat marine litter and micro plastic will require promoting plastic waste recycling by encouraging the private sector to invest in establishing more recycling and waste to energy plants with some support from central Government, development of regulations and by-laws, levy on plastics to make them the last choice of materials as carrier bags, build institutional capacity for plastic waste management and development of Ghana standards for oxo-biodegradable additives and its associated products

### 3.0 Feasibility and Effectiveness of Response Actions

#### National

The feasibility and effectiveness of actions taken to combat marine litter and generation of microplastics can be reviewed in terms of the following strategies:

- Prevention

The strategy so far will not prevent generation of marine litter and microplastics in the sense that it has not been integrated into an overall solid waste management policy. Solid wastes, can still end up in water courses, constructed drains, water bodies, including the marine environment. In 2015 the Government threatened a ban if no clear actions are taken by the industry to prevent the adverse impacts of plastic wastes. It appears that a ban and the use of alternative non-plastic materials is the most effective option. This is because the scope of the problem is very widespread and has been aggravated by generation of microplastics from secondary sources. The use of oxo-biodegradable additives cannot prevent generation of microplastics. Tonnes of plastic wastes already in the environment have not been considered yet.

- Enforcement

Some local manufacturers are not complying with the 1% requirement of oxo-biodegradable additives. Adding <1% will not make the plastic films degrade. Most plastics are imported; it has been observed that imported plastics do not contain oxo-biodegradable additives which limits the goals of the policy. Continuous monitoring of compliance with permissible limits for oxo-biodegradable additives and imported plastics through the borders ports will entail a lot of cost. Such costs will make the policy unsustainable. Development of a National Plastic Policy is still ongoing.

- Education

Stakeholder education has been identified as a major element of success. The focus of education so far has been to appeal to the conscience of people not dispose of plastics in a diffuse manner. This cannot discourage non-compliance. Education should rather focus on adverse impacts of marine plastics and microplastics and existing punitive measures for non-compliance. Education entails a lot of cost and will soon become ineffective if it does not achieve its set goals.

- Regional

Ghana is signatory to the Marine Pollution Convention of 1973/78 (MARPOL 73/78) and is subject to its requirements of preventing pollution of the seas, including dumping of sewage and garbage, oil and exhaust pollution. The Ghana Ports and Harbours Authority have therefore registered Port Reception Facilities in Tema and Takoradi, the two Port cities to receive and treat ship-borne wastes. These efforts help to prevent illegal dumping of marine litter and microplastics into the ocean.

#### **4.0 Other Inputs**

It appears we are a long way from achieving our goals of preventing the adverse impacts of marine litter and microplastics. Whenever such situations are encountered, the best option from the environmental point of view is ‘Prevention’ of further generation of such wastes through a ban.

The establishment of a compliance unit within existing institutions at the national and regional level with the needed capacity and logistics will be needed to effectively monitor, research and collate data and develop an effective system to address existing marine litter and micro plastic menace.