

1. Name of your organization

Ministry of Entrepreneurship and Technology

2. Your view on major barriers to combatting marine litter and microplastics.

As ca 80% of marine litter has its origin in land we can state that main reason for plastic presence as debris in the marine environment is poor or insufficient waste management, insufficient recycling and recovery of plastic waste. From UNEP's Global Waste Management Outlook it is estimated that at least 2 bln people do not have any access to regular collection of solid household waste and who to rely on dumpsites – most usually uncontrolled land disposal sites, quite often close to waterways and seas.

Therefore, in our opinion combatting marine litter as a global problem has to concentrate on improving waste management in those areas and countries where environmental awareness is at higher levels (as in European Union or in the USA) should promote their good practices and transfer their knowledge to less developed areas. Another reason is littering and improper behavior of consumer who often do not care to dispose of waste according existing rules or good practices. We think that education at all age levels is needed here to create and promote the awareness about the necessity to separately collect waste and about the harm to marine environment caused by littering. This educational effort should be undertaken by various stakeholders: the governments and their agencies but also by business, NGOs, academia and other partners.

Combatting microplastics must start with primary microplastics, i.e. those intentionally added to products (like microspheres in cosmetic products or in abrasive media). Understanding this challenging task to be done relevant industries and many leading companies have voluntarily declared replacement of microplastics by other materials in the formulation of their products.

Another source of primary microplastics may be leakage of polymer pellets to the environment. Here we fully support Operation Clean Sweep®, the initiative of plastics industry to fully contain all the pellets within production facilities and along the full value chain (during storage, transportation and processing of pellets) and not let them to leak into the environment

Secondary microplastics are formed in the environment, usually by selfdegradation and degradation of plastic products in the environment. In our opinion, such processes are unavoidable therefore reducing plastic litter in the marine environment automatically reduces the impact of microplastics. It has been proven by scientists that plastic and microplastics litter may harm marine life but little is known whether it may be a threat to seafood and to humans – we suggest here that aspect requires further studies.

3. Your view on potential national, regional and international response options and associated environmental, social and economic costs.

As shown earlier, marine litter is a global phenomenon and in order to reduce it, actions have to be taken globally using the competences and knowledge of leading regions (European Union, USA). It is impossible for us to estimate any costs related to such actions, it seems however appropriate that European and American experts and scientists would need to join forces with local networks of relevant stakeholders and adapt means and measures to local conditions, standards and culture.

4. Your view on the feasibility and effectiveness of different response options.

In our opinion, the most important step is to stop or reasonably reduce existing leakage of plastics waste into the marine environment. A visible quantitative effect would be achieved if efforts are concentrated in the regions that contribute most to marine pollution (South East Asia in the first place (estimated origin of more 80% marine plastic litter) and Africa (origin of 16% marine litter).

Of course, other regions including Europe Union and Poland should do their tasks as well: to improve waste management systems, to fight against littering, to secure existing landfills and to close any irregular dumpsites which may be uncontrolled sources of plastics waste leakage. We suggest that governments integrate the issue of marine litter in their national waste management strategies: waste management infrastructure should be improved so that all plastic waste is collected and then either recycled or used for energy production.

5. Any other inputs

We recommend that awareness campaigns about antilittering and proper consumers behavior and appropriate waste management systems are the right solutions to prevent marine litter. Attempts to ban any specific products (as introduced in some countries) will not resolve the issue.