



AHOEEG on Marine Litter and Micro-plastics 2018

Item 6 Environmental, social and economic costs and benefits of different response options

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May 30th 2018

I represent the NGO International POPs Elimination Network, IPEN, a global network of public interest organizations working for a toxics-free future in more than 100 countries. Today I speak on behalf of Women, NGO, Children & Youth, Farmers, Indigenous Peoples, and Science & Technology major groups.

We would like to specifically highlight the need to include the costs and benefits of marine plastics impact on human health and wildlife, in the cost/benefit analysis of the various options discussed.

I came from the region of the Baltic Sea, which has been subjected to various contaminants for over a hundred years and is often referred as the most polluted sea in the world. The consequences of pollution have not been left unnoticed: for example PCBs and DDTs caused serious declines in seal and sea eagle populations in 1970s and caused significant human health impacts.

Since the Baltic Sea still carries a heavy burden of hazardous substances, the increasing plastic pollution may aggravate the situation by leaching out harmful additives, monomers and other substances as well as by adsorbing some of the existing toxic substances and make them bio available again.

The possible toxicological responses caused by plastic can be a combination of chemicals associated with plastics, including additives, byproducts of manufacturing and chemicals absorbed from the environment. Some of these chemicals are defined as priority pollutants, which are regulated by governmental agencies because of their toxicity or persistence in organisms and food webs. These chemicals include heavy

metals, pesticides, polycyclic aromatic hydrocarbons (PAHs), PCBs, BPA, phthalates and others, which can disrupt important physiological processes of humans and animals causing for example diseases and problems in reproduction.

The concentrations of various monomers and additives, such as BPA, PBDEs and phthalates are reported to be high in marine plastics. Therefore the plastic litter may serve as a pathway for hazardous chemicals to biota and human.

In addition, different chemicals are present in the marine environment, such as in the sediments, water column, plastics and biota, in different concentrations, their interactions and possible synergic effects have to be taken into account when assessing the impacts to marine life.

Most of the studies so far have assessed the fate and impacts of plastics and their leachates or adsorbed contaminants as a whole without being able to separate the effects caused by individual substances, or on the contrary, examined only the influences of one specific substance without taking into account the chemical cocktail present in the material. While this points to the need for additional research on specific aspects of plastic health and environmental impacts, we also believe that existing research provides sufficient evidence of harm to support the need to take immediate actions.

We therefore urge participants to consider immediate and ambitious actions and to consider the full health and social impacts of plastics and associated toxic substances when designing such response.