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Rist, Sinja; Almroth, Bethanie Carney ; Hartmann, Nanna B.; Karlsson, Therese M.

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TH030 Microplastics in food and beverages - a distorted perspective on risk

S. Rist, DTU (Technical University of Denmark) / Department of Environmental Engineering; B.C. Almroth, University of Gothenburg / Department of Biological and Environmental Sciences; N.B. Hartmann, Technical University of Denmark (DTU) / DTU Environment; T.M. Karlsson, University of Gothenburg. Microplastics are ubiquitous in aquatic environments and they are ingested by a wide range of animals, including species for human consumption, i.e. bivalves and fish. Additionally, plastic particles have been reported in other food products and beverages, like honey, salt, beer and drinking water. This has triggered a discussion on the human health implications of this contamination – an aspect that has gained increasing attention in the scientific and public debate in recent years. The focus and extent of this debate, however, stands in contrast with scientific findings, which merely show the presence of microplastics in certain products but no actual effects on humans. It is without question that plastics can constitute a human health risk due to toxicity of associated chemicals and to particle toxicity. However, the degree to which microplastic exposure via food products and beverages contributes to this health risk is likely insignificant at present time. When considering the magnitude of plastic usage and consequential exposure to plastic materials in our everyday lives, the relatively few microplastic particles that have been reported in food products and beverages will likely only constitute a minor exposure pathway for both microplastics and associated chemicals. But as this is rarely put into perspective, the current debate creates a distorted picture of plastic exposure and risks to humans, resulting in a misdirected outrage when people find out about plastic particles in fish, while they at the same time not reflect on the plastic container in which the fish is packaged for transport to stores and homes. In this way, the focus is taken away from the root of the problem, namely our use, consumption and disposal of plastic materials. We therefore want to encourage a more balanced and careful discussion on human health implications of plastics that takes these aspects into account.