



International Atomic Energy Agency
IAEA Statement

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**Agenda Item 20. The impact of chemicals, waste and pollution on
human health**

Chair,

The impact of chemicals and microplastics on food safety is a growing concern as industrial practices and human activity increasingly affect ecosystems. Persistent Organic Pollutants (POPs), including pesticides, veterinary drugs, heavy metals, and industrial chemicals, often contaminate agricultural products, harming both the environment and human health. Plastics also pose a significant threat, with chemicals like bisphenol A (BPA) and phthalates leaching into food stored in plastic containers, disrupting endocrine systems and causing reproductive and metabolic health problems.

Microplastics, derived from the breakdown of larger plastics, are now found in a wide range of foods, including seafood, honey, salt, and bottled water. These particles can lead to inflammation, oxidative stress, and potential carcinogenic effects in humans. They also act as carriers for harmful chemicals, such as POPs, which accumulate in the body upon consumption. Because of their persistent nature, POPs and microplastics travel long distances through the environment and food chains, even reaching remote regions like the Arctic.

The IAEA is addressing these challenges by supporting member states in developing resilient food safety systems. It employs nuclear techniques, including through its flagship initiatives NUTEC Plastic and ZODIAC, to detect and measure POPs, studies the degradation and transfer of microplastics into

food, and uses irradiation methods to improve food safety, reduce post-harvest losses, and combat pests. These efforts align with the United Nations Plastic Pollution Treaty negotiations, emphasizing global collaboration to tackle microplastics and chemical contamination.

To address the health impacts of food contaminants, the IAEA, through its Division of Human Health and the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture, is collaborating with the WHO to review evidence on using nuclear techniques for nutrition and food safety. A Technical Meeting in July 2025 will explore opportunities for synergies between major players like the FAO, IAEA, and WHO, including through the IAEA-FAO joint initiative Atoms4Food.

Recognizing the link between ocean and human health, the IAEA, through its Marine Environment Laboratories in Monaco, focuses on the effects of marine pollution. Key efforts include developing reference materials for contaminants, researching transport and bioaccumulation of harmful substances, improving analytical techniques for emerging chemicals, and creating early warning systems for seafood contamination. Capacity-building efforts also address the fate of microplastics in seafood, ensuring safer ecosystems and food supplies. Safeguarding food safety requires coordinated action across industries, governments, and global institutions.

We look forward to continuing our engagement with Member States, WHO, FAO and other key partners.

I thank you Chair.