Chemicals and Waste Management

Chemicals and waste are integral to human existence given that they affect every aspect of our lives. They are critical to the manufacture of a wide range of products and are an important contributor to the global GDP and employment. Recent estimates show that nearly 100 million man-made chemicals are utilized in every sector of the industrial economy. However, without proper management, chemicals and wastes will have serious implications for human health and the environment and may incur substantial costs for national economies. Trace elements such as lead and mercury have caused major human health problems in several parts of the world adversely affecting developing brains and nervous systems. These substances can also lead to autistic disorders if not properly managed. It is therefore essential that chemicals are managed throughout their lifecycle to avoid complex risks to human health and ecosystems.

Why we should be concerned about sound management of chemicals and waste:

- The poor are the most vulnerable to the harmful impact of chemicals. It is estimated that 99 percent of children and 98 percent of adults affected by lead exposure live in low- and middle income countries.
- Toxic pollution affects over 200 million people globally.
- As chemical production continues to increase to match global demand, the potential for chemical exposure is also on the rise.
- Chemicals are essential to food safety and security. With increasing demand for food, a new approach to food security must include green technologies that reduce hazardous chemical inputs including pesticides and fertilizers.
- Water pollution caused by toxic chemicals can be harmful. Safe and adequate water, sanitation, and hygiene could prevent more than 350 000 deaths of children under 5 years annually.
- Records show that nearly one quarter of workplace deaths is as a result of exposure to hazardous substances and the industry employs more than 20 million people.
- Toxic pollutants released into the oceans are later absorbed by some of the fish we consume. In 2008, the total deposits of mercury was 3700 tons and this can pose dire health challenges.
- Safer chemicals and non-chemical alternatives can contribute to the development of circular economies and promote more sustainable patterns of production and consumption.
- Global partnership will be essential to ensuring sound management of chemicals and waste through capacity building and technological innovation.

Digital solutions for managing chemicals and waste:

- A comprehensive cloud software solution for managing and reporting on hazardous chemicals: Learn more
- Automated Chemical Management solution: Learn more
- Treatment and recovery of hazardous waste: Watch now