



# Preventing a Toxic Legacy—Transforming the Use of Chemicals in Supply Chains

**ISSUE** The production, use, and disposal of chemicals are rapidly increasing in developing countries and countries in economic transition. These rapid changes increase economic opportunities but pose significant risks to human health and the environment if they are not matched by enhanced programs and initiatives for sound chemicals and waste management. The cost to national economies of human and environmental exposure to harmful chemicals is often unrecognized but can be substantial.

Complicating matters further, in the pursuit of new materials and chemicals many manufacturers do not always conduct sufficient analysis of the potential harmful impacts of their products before they are used commercially, which results in significant harm to humans, terrestrial, freshwater, and marine ecosystems, and wild species. A current example is the use of the group of Neonicotinoid pesticides, the most widely used insecticides in agriculture, which are linked to the current decline in bee populations.

Contamination by chemicals is a pervasive global problem: toxic chemicals are now found in practically all ecosystems on Earth, affecting biodiversity, agricultural production, and water quality. Over 100 million man-made chemicals and chemical formulations are used in every sector in today's economy. Some of the most harmful chemicals that include persistent organic pollutants (POPs) and mercury travel over large distances through air and water. These have been now found in high concentrations in areas where chemicals are not used, such as the Arctic. Some POPs can remain in

the human body for more than 50 years. Mercury, an element, is infinitely persistent.

Also, there are also barriers in the private sector that hinders the possibility of change. In some industries it is difficult to make the case to get chemical policy to the level of company policy. Particularly, small companies find it difficult to afford 'greener' practices. Furthermore, there is lack of robust data and information on toxic chemicals, partly due to weak capacity in developing countries, which in turn affects the possibilities of bringing science-based reports to policy makers.

The most harmful chemicals include persistent organic pollutants, ozone depleting substances, mercury, and highly hazardous pesticides. Due to the global impact on human health and the environment these highly dangerous chemicals are controlled by international law.

## SOLUTION

Many of the products we use today involve complex and long global supply chains which span from

material extraction to disposal at the end of life. With such a global scale of materials and product production and consumption, dealing with products and materials at the end of life is not sustainable and there is an urgent need to transform the use of chemicals along the supply chain. To do this, safer and more sustainable materials and chemicals need to be used in the design and manufacturing side. For example most major electronics brands already have stopped using brominated flame retardants, PCBs, and mercury in their products.

On the consumption side, demand for safer products as well as systems for safely handling those products that will still contain harmful chemicals will need to be strengthened. Some electronics companies have developed take-back systems for their products, both to properly handle the products but also to extract recyclable materials and minerals.

Coordinated actions at international, national, regional, corporate, and civil society levels are urgently needed so that the sound management of chemicals is perceived as essential throughout their life cycle.

## LOOKING AHEAD

The question, however, has been: can the existing global architecture for chemicals management help us transform the way in which we produce and use chemicals? We are at a moment in time where there are more and more chemicals being produced and put into everything we consume, from our cell phones to our food and drinking water. We are also at a point where the industry itself is beginning to shift to more sustainable 'green' supply chains and manufacturing. How can the chemicals industry accelerate this switch? What are the challenges ahead, and what innovations and global coalitions do we need?

The GEF is a catalyst for both governments and the private sector to help eliminate or reduce harmful

chemicals and waste. GEF's programming strategy for chemicals and waste builds on its past work in policy and priority setting, piloting technologies and techniques to build best practices, and progressively working with the private sector to help foster sound management of chemicals and waste.

The GEF has developed two key strategic objectives around chemicals and waste:

- Develop the enabling conditions, tools, and environment for the sound management of harmful chemicals and wastes;
- Reduce the prevalence of harmful chemicals and waste and support the implementation of clean alternative technologies/substances.

To achieve transformational change, GEF projects seek closer integration with global supply chains. These efforts help ensure that products crossing national borders are free of global priority substances that otherwise enter into markets and recycling chains. Increasingly, this process engages the private sector. The GEF can help to convene the relevant stakeholders and function as an honest broker in facilitating the work needed to help transform the chemicals industry and related products and materials streams.

For the years ahead, parties to Minamata Convention are obliged to take actions to reduce emission of mercury but there is a need for international assistance to developing countries. One entry point is to assist in the design of the legal and regulatory framework to ban toxic chemicals.

Moreover, better communication has been identified as a key priority to achieve full engagement of stakeholders across sectors. People need to be educated on the risks toxic chemicals pose to humanity and the Earth system. The ability to humanize the messages on chemicals is critical to better action.

