

FINANCING THE SOUND MANAGEMENT OF CHEMICALS

Formosa
petrochemical factory
in Louisiana, US.

September 2020

KEY FINDINGS

- The chemical industry generates trillions of dollars in annual sales but does not shoulder the significant health and environmental costs that derive from its activities.
- Substantial management capabilities and infrastructure are required for governments to effectively protect their residents from potential health and environmental harms during chemicals production, use and disposal.
- A coordinated small fee of 0.5% on the production value of basic chemicals has the potential to generate sufficient financing for the global sound management of chemicals and waste.

INTRODUCTION

The world is struggling to address current levels of toxic chemical use, exposure, and harms. As the petrochemical industry grows dramatically over the coming decade, so too will the burdens of chemical management, releases, and accidents. In countries around the world, these burdens fall disproportionately on the most vulnerable and marginalized populations and are felt most severely in low- and middle-income countries that have the fewest protections and least resources to manage threats from chemicals.

“The vast majority of human health costs linked to chemicals production, consumption and disposal are not borne by chemicals producers, or shared down the value-chain. Uncompensated harms to human health and the environment are market failures that need correction.” (UNEP)

Financing the Sound Management of Chemicals Beyond 2020 sets forth a policy mechanism grounded in sound law and sound economics that can address the dire financial obstacles to sound chemicals management. The proposed coordinated fee on basic chemicals is a mechanism to implement the polluter pays principle. The proposal comes at a time when the global community is negotiating how to tackle global chemicals management, including how to pay for it.

THE CHEMICAL INDUSTRY DOES NOT PAY FOR THE TRUE COST OF ITS PRODUCTS

“Of the tens of thousands of chemicals on the market, only a fraction has been thoroughly evaluated to determine their effects on human health and the environment.” UNEP)

A worker dies every 15 seconds from toxic exposures at work. Occupational diseases account for over 86% of total premature work-related deaths.

The public bears an inordinate burden of costs related to chemical production, use, and disposal. Hazardous chemicals are present in our [toys](#), [clothes](#), [electronics](#), consumer products, and packaging, and agricultural soils. They are accumulating in the food we eat, the water we drink, and the air we breathe. Increasingly, they can be found in our [own bodies](#) as well. In 2018, WHO conservatively estimated the global disease burden attributable to preventable chemical mismanagement to be 1.6 million annual [premature deaths](#)



and 45 million lost Disability-adjusted Life Years (DALYs).

Both the drivers and the impacts of chemical hazards are global in nature. Chemicals are disseminated via international trade. Chemical pollutants cross borders in the air and water. And chemical production and use makes substantial, and widely unaddressed, contributions to global warming

Safely managing the production, use, disposal and cleanup of chemicals, and the environmental and human health impacts of chemical hazards, demands significant investments of human, institutional, and financial resources. Most countries lack the financial resources needed to ensure sound chemical management and protect human and environmental health from harms created by the chemical industry. To date, even the wealthiest countries have failed to adequately fund the legal and regulatory infrastructure required for effective chemicals management. In the great majority of the world's nations, the gap between resource needs and resource availability is profound—and dangerous.

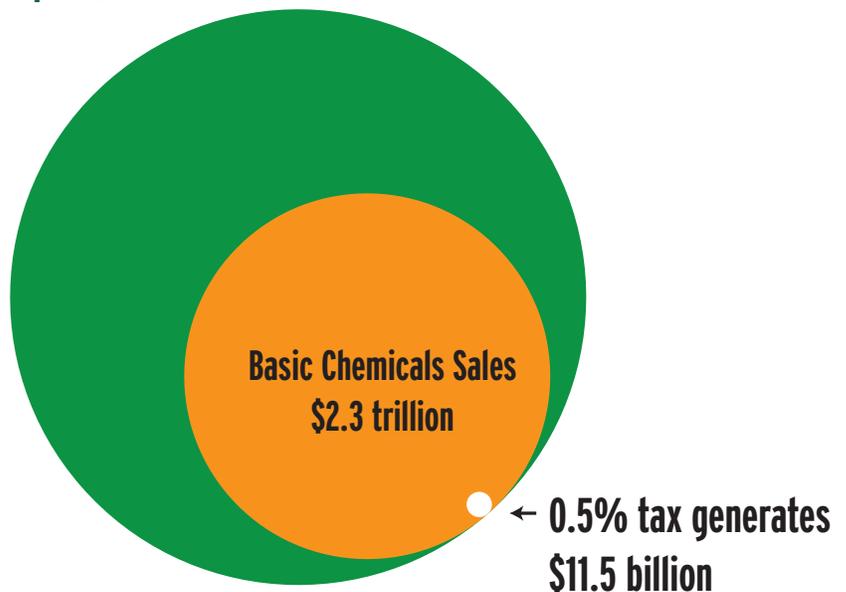
THE CHEMICAL INDUSTRY IS LARGE AND RAPIDLY EXPANDING

The chemical industry is the **second largest** manufacturing industry in the world, the world's **largest** industrial energy consumer, and the third largest emitter of carbon dioxide. The rapidly expanding industry sales (including pharmaceuticals and plastics) totaled **US\$5.7 trillion** in 2017 and this is projected to double to over US\$11 trillion by 2030. The industry has also been historically profitable. For example, the US chemical industry reported a **16.3% operating margin** for 2018. In 2017, the global top 50 chemical companies had a median operating profit margin of **12.7%**.

A COORDINATED TAX OR FEE ON BASIC CHEMICALS

As the primary drivers and beneficiaries of the global chemical trade, chemical producers must take greater responsibility for the safe management of their products. This begins with taking financial responsibility for the production of feedstock chemicals that fuel the global chemicals sector—including the rapidly growing petrochemical industry. If countries with companies that produce these substances levy a small 0.5% fee or tax on their production and then contribute this money to a global fund, sufficient funds to address

Total Chemical Sales in 2017
\$5.7 trillion





INDUSTRY RESPONSIBILITY TO FUND THE GLOBAL CHEMICALS AGENDA

Key international agreements on chemicals and wastes include:

- **Stockholm Convention:** Protects human health and the environment by prohibiting a class of chemicals known as persistent organic pollutants (POPs). These substances are persistent, build up in living organisms and the food chain, travel long distances and cause harm to human health and ecosystems.
- **Rotterdam Convention:** Regulates the trade of hazardous chemicals and formulations and promotes information sharing on bans or severe restrictions. Includes industrial chemicals, pesticides and severely hazardous pesticide formulations.
- **Basel Convention:** Regulates the trade of hazardous wastes and other wastes, including plastic wastes.
- **Minamata Convention:** Addresses human-caused mercury pollution by reducing mercury supply and trade, phasing-out or phasing-down certain products and processes that use mercury and controlling mercury emissions and releases.
- **Strategic Approach to International Chemicals Management (SAICM):** A global policy and strategy adopted by governments and stakeholders to protect human health and ecosystems from the harms caused by exposure to toxic chemical substances.

chemicals management globally could be generated while preventing displacement of harm from one region to another. This global fund could either be a new fund built for this purpose or an established fund such as the [Special Programme](#), administered by the [United Nations Environment Programme](#).

Feedstock or basic chemicals are early stage chemicals produced from petroleum, natural gas, and other raw materials. These chemicals represent the [basic building blocks](#) from which all other chemicals are made. In 2018, sales of basic chemicals totaled **US\$2.3 trillion**. Therefore, a 0.5% tax on the production value of basic chemicals could raise US\$11.5 billion

annually — roughly eighty-five times the [total annual assistance](#) currently flowing to the chemicals cluster from the GEF (US\$131 million) and Special Programme (US\$4.7 million) combined.

Funds generated by this coordinated fee will enable countries to develop, implement, and enforce laws, policies, and regulations for the sound management of chemicals and wastes. This includes support systems for testing chemicals, approving new chemicals, regulating and monitoring chemical production facilities, monitoring chemical policy implementation, ensuring safe disposal of products containing chemicals, and more.

Chemical industry sales annually

\$5 trillion

\$2 trillion

Examples of Health Cost of Chemicals

PFAS in EEA
€52 billion

EDCs in EU
€157 billion

VOCs Pollution
\$236 billion USD

Childhood lead poisoning in low and middle income countries
\$977 billion USD

\$100 billion USD ▶



READ THE FULL REPORT:
ciel.org/ChemicalsTax
ipen.org/ChemicalsTax

Scavengers sort and collect plastics for recycling at the garbage mountain in Bantar Gebang in Indonesia.

WHY IMPLEMENT A COORDINATED APPROACH?

A coordinated approach has the virtue of using existing domestic regulatory infrastructure to collect the taxes or fees while avoiding the challenges of delegating taxation authority to an international body. The large base for the tax enables a very low rate of 0.5%.

The fee would be collected from manufacturers based on the volume of chemicals they produce regardless of the proportion of chemicals recorded as “sold”. Applying the fee to chemicals produced ensures that chemicals transferred within vertically integrated companies without a recorded sale remain subject to the fee, closing a potentially significant loophole. A production tax or fee as opposed to a retail sales tax limits both the number of countries that need to apply it and the number of taxed entities. Moreover, the proposal is compatible with the World Trade Organization.

A coordinated fee could generate the scale of financing required for full and robust implementation of chemicals and waste management in the world’s developing and transition countries. It is also considerably greater than what donor governments might be expected to supply in grant aid on a continuing and sustainable basis.

Existing international mechanisms for sound chemical management are woefully underfunded. Effective management of chemicals and wastes requires regulatory capacity, infrastructure, information and monitoring systems, and waste management and cleanup systems. Funding that exists for these purposes is publicly funded via donor state contributions. As a result, at both the domestic and the international levels, the chemical industry has transferred significant costs of its operations onto the public, rather than properly internalizing those costs within the industry.

Taxpayers in developed countries provide money to their national governments to fund the [Global Environment Fa-](#)

[cility](#) (GEF). The GEF provides the [financial mechanism](#) for the Stockholm Convention and the Minamata Convention, which is available to help developing and transition countries meet their obligations under the two treaties. In this way, the public pays for sound management of chemicals and wastes in these agreements, not the chemical industry. The Basel Convention, Rotterdam Convention, and SAICM do not have financial mechanisms and projects to implement these agreements receive ad-hoc funding from the GEF and special funds.

A coordinated fee on basic chemicals will rightfully put the financial responsibility for chemicals and waste management where it belongs: on the industry actors that produce and profit from those chemicals.

EXISTING EXAMPLES OF COORDINATED FEES

There are functional examples of implementing coordinated fees and a national example of taxing feedstock chemicals.

- The [International Oil Pollution Compensation Funds](#) are funded by a coordinated fee on companies receiving marine shipments of crude and heavy-fuel oil. The money from this fee goes to clean up and compensate for damage from oil spills.
- The [international air travel solidarity tax](#), imposed by 9 countries, which funds purchases of medicine in developing countries.
- The US [imposed a tax](#) very similar to the fee proposed from 1980 to 1995. The tax applied initially to 42 chemical feedstocks whenever manufactured in or imported to the US, and [later added](#) certain imports produced from those chemicals. In the last four years before those taxes expired, they raised an average of US\$331 million per year.