



Focal Area: Persistent Organic Pollutants (POPs)

Scope of the Challenge

Of all the pollutants released into the environment every year by human activity, persistent organic pollutants — POPs — are among the most dangerous. These pesticides, industrial chemicals, or unwanted byproducts of industrial and other processes are highly toxic and long-lasting, and cause an array of adverse effects, including disease and birth defects in humans and animals. Some of the severe health impacts from POPs include cancer, damage to the central and peripheral nervous systems, reproductive disorders, and disruption of the immune system.

These impacts do not respect international borders, and are often intergenerational, affecting both adults and their children. POPs can affect people and wildlife even at very low doses.

The serious environmental and human health hazards created by these chemicals particularly affect developing countries, where systems and technology for monitoring, tracking, and disposing of them can be weak or nonexistent. Across Africa, for example, at least 50,000 tons of obsolete pesticides are contaminating soil, water, air, and food sources.

KEY FACTS

- POPs pose a serious threat to human health and the environment.
- The GEF has invested US\$341 million for measures to reduce human and environmental exposure to POPs, with an additional US\$474 million leveraged through private sector and other sources.
- The GEF is helping 135 countries meet their obligations under the Stockholm Convention to develop a National Implementation Plan.

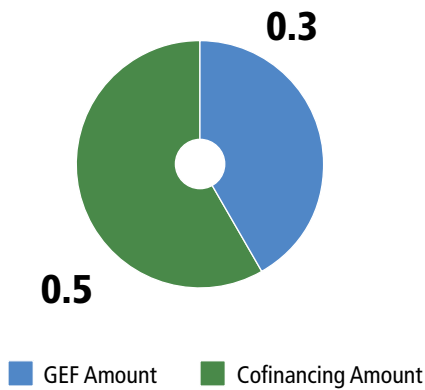
GEF Response

The GEF is the lead institution providing technical and financial assistance to support the efforts of developing countries and countries with economies in transition to implement the Stockholm Convention on Persistent Organic Pollutants, a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, and accumulate in the fatty tissue of humans and wildlife.



SUMMARY BY FOCAL AREA:
PERSISTENT ORGANIC POLLUTANTS

Amounts in billion USD



The GEF is helping countries create national inventories of POPs and reduce or eliminate the chemicals' use and release into the environment, as well as assisting with safe disposal and the development of environmentally sound alternative products, practices, and techniques.

The GEF's main goal in the POPs focal area is to protect human health and the environment by helping countries to reduce and eliminate production, use, and releases of POPs, and thereby contribute generally to capacity development for the sound management of chemicals.

Since adoption of the Stockholm Convention in May 2001, the GEF has committed US\$341 million to projects in the POPs focal area and leveraged some US\$474 million in cofinancing, bringing the total value of the GEF POPs portfolio to over US\$800 million. In 2008, the GEF invested more than \$140 million in 38 new projects, leveraging \$280 million in cofinancing.

The current emphasis is to support projects of partner countries to help them carry out their national implementation plans, working through three strategic programs:

- *Strengthen capacity of countries to implement the Stockholm Convention.*
About 40 percent of funding is directed to this program, which includes strengthening regulatory frameworks and assistance to

countries that lag farthest behind to establish basic institutional and regulatory capacities to manage chemicals safely.

- *Invest in partnerships needed to carry out national implementation plans to reduce and eliminate POPs.*

Approximately 45 percent of funding is directed to this program to phase out and dispose of PCBs, support non-POP alternative products and practices, and destroy pesticide wastes.

- *Create partnerships to demonstrate innovative technologies and best practices to reduce POPs or create safe substitutes for their use.*

About 15 percent of resources are directed at the identification of alternative products or practices for DDT or POP termiticides, demonstration of destruction technologies, and demonstration of best available techniques and best environmental practices.

Priorities and Projects

NATIONAL IMPLEMENTATION PLANS

The GEF has funded or is funding the preparation of the initial national implementation plan in 135 countries. More than 100 countries are now at the stage where their plan has been endorsed and submitted, or is at the stage of final review and endorsement. Many of these countries have already submitted their plan to the Stockholm Convention's Secretariat.

OBSOLETE PESTICIDES AND THE AFRICA STOCKPILES PROGRAM

The Africa Stockpiles Program (ASP) was launched in September 2005 with the goal to clear all obsolete pesticide stocks from Africa, and establish measures to help prevent their recurrence. Projects under the program are also designed to train and strengthen institutions on important chemicals-related issues, create opportunities to address broader hazardous waste management issues, and evaluate new, cleaner disposal technologies. The total cost of the program is estimated at \$250 million, of which the GEF will contribute up to \$80 million.

In Tunisia, one of the first ASP projects, 1,200 tons of obsolete stocks were identified at a large number of containment sites. In addition



WHAT ARE POPs?

POPs are pesticides, industrial chemicals, or unwanted byproducts of industrial or other processes that have been used for decades but have recently been found to share a number of disturbing characteristics, including:

- **Persistence** — they resist degradation in air, water, and sediments.
- **Bio-accumulation** — they accumulate in living tissues at concentrations higher than those in the surrounding environment.
- **Long-range transport** — they can travel great distances from the source of release through air, water, and migratory animals, often contaminating areas thousands of kilometers away from any known source.

The Stockholm Convention currently focuses on 12 POPs of immediate concern — often referred to as “the dirty dozen” — pesticides, industrial chemicals, and unintentional byproducts. The pesticides are aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene (HCB), mirex, and toxaphene; the industrial chemicals are polychlorinated biphenyls (PCBs) and HCB (also mentioned under “pesticides”); and the unintentional byproducts are dioxin and furans (as well as PCBs and HCB). Unintentional chemical byproducts result from combustion and industrial processes and are among the most potent cancer-causing chemicals known.

These synthetic chemicals move everywhere, even through the placental barrier and into the womb, exposing the unborn during the most vulnerable stages of development.

Most recently, the parties in May 2009 took the historic decisions to add 10 new chemicals to the list of controlled substances under the Convention: alpha- and beta-hexachlorocyclohexane (byproducts); lindane and chlordecone (pesticides); tetra- and hexabromodiphenyl ether, hexabromobiphenyl, pentachlorobenzene, perfluorooctane sulfonic acid, and perfluorooctane sulfonyl fluoride (industrial chemicals).

to removing and disposing of these stocks and cleaning up the related sites, the program aims to strengthen existing regulatory systems for pesticide control; promote ongoing integrated pest management (IPM) efforts, particularly with small-scale farmers; promote certified organic agricultural production; develop a communications campaign to raise awareness about pesticide impact and opportunities created by IPM; and upgrade storage facilities.

In Morocco, the ASP is helping to prevent future stockpiling by strengthening the regulatory, legal, and management framework for managing pesti-

cides; undertaking public communications campaigns disseminating information on pesticide risks; and refurbishing pesticide storage facilities. The capacity of the Centre for Poison Control of Morocco will also be strengthened, a direct contribution to the objectives of the Strategic Approach to International Chemicals Management (SAICM).

Similar efforts are planned or underway in other countries and regions, including Syria, Belarus and Moldova, the Caucasus and Central Asia, China and Vietnam, and Nicaragua, and an expansion of the ASP to Egypt, Eritrea, Mozambique, and other states.

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POLYCHLORINATED BIPHENYLS (PCBS)

The GEF has been working to help countries locate and safely destroy PCBs while promoting effective management through training, public awareness, and institutional development. The aim of these activities is to introduce environmentally sound management to all stages of the lifecycle of electrical, hydraulic, and other equipment that contains, or is contaminated by, PCBs, and to promote noncombustion technologies for destroying PCBs.

Many countries around the world are engaging with the GEF to develop and implement PCB management, phase-out, and disposal programs, including Argentina, Brazil, Honduras, Mexico, Uruguay, Armenia, Azerbaijan, Belarus, Kazakhstan, Latvia, Macedonia, Mongolia, Romania, Ghana, Tunisia, China, India, Philippines, and Vietnam.

DDT ALTERNATIVES

The GEF funds projects to identify sustainable alternatives to DDT and to demonstrate significant progress at reducing the incidence of malaria without the use of DDT. Past efforts have shown an average of between 26 percent and 80 percent reduction in the incidence of malaria in participating countries. This success is forming the framework for new DDT reduction projects under way in Africa, the Middle East, Southeast Asia, and elsewhere in the world.

MEDICAL WASTE

Working in a number of countries across all regions, GEF projects show how health care waste management can avoid the need for waste incineration. For example, a project to demonstrate and promote best practices for reducing health care waste to avoid environmental releases of dioxins and mercury in Argentina, India, Latvia, Lebanon, Senegal, Tanzania, and Vietnam includes reuse, recycling, waste separation, and use of products that generate smaller volumes of less toxic wastes at model facilities. Projects sharing similar objectives are underway or under preparation, including in China and Tunisia.

TERMITES

Termites are essential to soil health, but problems arise when they come in contact with agricultural, forest, or urban areas. The annual economic cost of structural damage to buildings from termites in urban areas is about \$15–20 billion worldwide.

Combined with the cost of damage to agricultural and forestry resources, the overall cost to society is over \$30 billion per year.

Managing termites without using harmful POPs chemicals is one of the challenges under the Stockholm Convention. Recognizing the importance of effective termite control without using POPs, the GEF promotes alternative methods — complemented by building public awareness, providing training, and developing institutional capacity.

