



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNIDO Green Industry Newsletter

Issue Four, April 2009



FEATURE Persistent Organic Pollutants (POPs)

[Message from the Director](#)

[Persistent Organic Pollutants \(POPs\)](#)

[NIP Assistance](#)

[The Stockholm Convention Unit](#)

[Selected POPs Projects](#)

[Global Forum Activities](#)

[UNIDO Tools: New UNIDO POPs Portal](#)

[Upcoming Events](#)



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



Message from the Director

Persistent Organic Pollutants (POPs) are chemicals that are toxic to humans and wildlife. They remain intact in the environment for long periods and, through transboundary movement, circulate globally. Upon deposition, they highly endanger ecosystems.

As such, a call for international action was issued at the 1992 Earth Summit. This was subsequently reinforced by the Stockholm Convention. To date, over 150 countries have ratified the Convention, and thus agreed to eliminate or reduce the release of the 12 most widely produced and used POPs (the so-called "Dirty Dozen"). In response, governments develop National Implementation Plans (NIPs) that detail measures to eliminate or reduce the release of POPs.

The fourth meeting of the POPs Review Committee (POPRC-4) recommended expanding the scope of the Convention to nine additional POPs chemicals - this will be further discussed at the forthcoming fourth Meeting of the Conference of the Parties of the Convention (COP-4) in May 2009 in Geneva. It is expected that the decisions taken at COP-4 will mark a shift of focus towards the environmentally sound management of POPs that are currently used and produced.

From the very beginning, UNIDO has played a proactive role in POPs and supported more than 50 countries in preparing their respective NIPs. As a Global Environment Facility (GEF) Implementing Agency, UNIDO provides ongoing support to countries entering the post-NIP phase and seeks to expand its activities to meet the challenges ahead. These include the promotion of innovative destruction technologies and alternatives to POPs chemicals taking into account the socio-economic impact of phasing-out these hazardous substances.

Heinz Leuenberger
Director, Environmental Management
Branch, UNIDO

UNIDO FOCUS

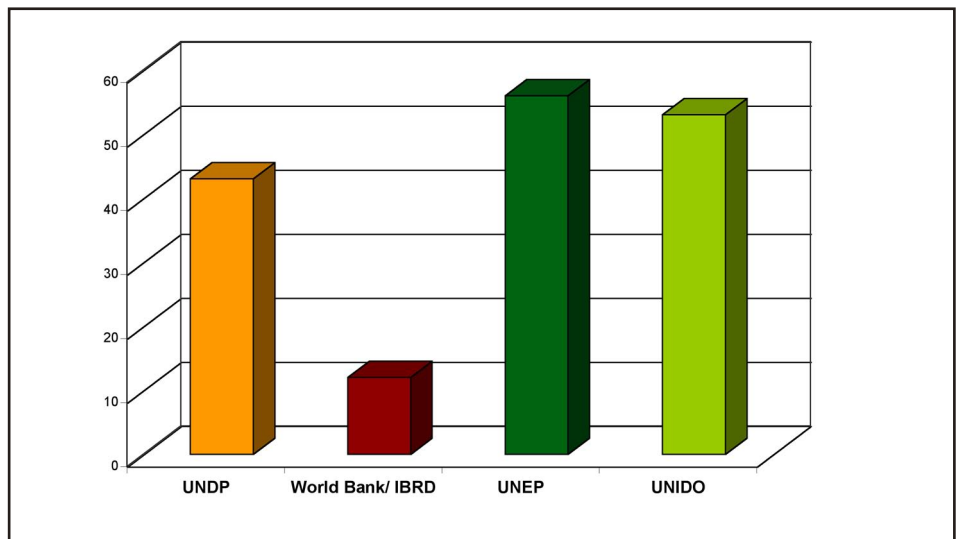
The Stockholm Convention Unit

Services for the global fight against harmful chemicals

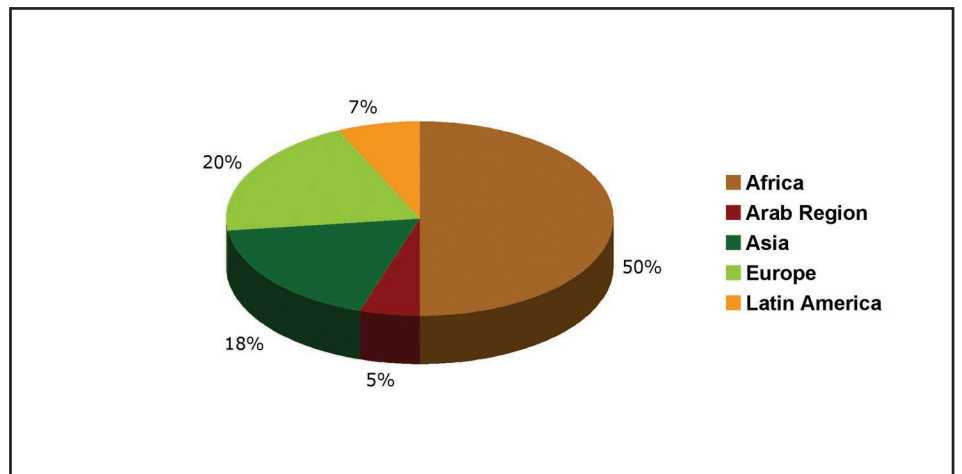
In recognition of its comparative advantage in the area of industry-related POPs issues, UNIDO became a GEF Executing Agency with Expanded Opportunities in May 2000. UNIDO also contributes to the overall debate on POPs, through its membership of the GEF Inter-Agency Task Force on POPs and the Expert Group of the Stockholm Convention Secretariat. In May 2001, the GEF Council approved UNIDO's direct access to GEF resources for expedited "Enabling Activities" on POPs. Since 2006, UNIDO as a whole was granted direct access to GEF resources for POPs projects. UNIDO is currently developing a number of large-scale thematic programmes in the fields of water management, energy/ climate change and POPs.

"Major problems have emanated from unsustainable management of chemicals and toxic substances which include loss of human health, loss of biodiversity and wildlife, low water and sediment quality as well as high soil and air pollution."

*Kandeh K. Yumkella,
Director-General, UNIDO
International Conference on Chemical
Management (ICCM), Dubai
United Arab Emirates
4-6 February 2006*



Number of national POPs projects funded by GEF



UNIDO's NIP projects by region



SELECTED POPs PROJECTS

Best Available Techniques and Best Environmental Practices

Red Sea and the Gulf of Aden coastal zone

The sustainable management of the resources of the Red Sea and the Gulf of Aden calls for a collective regional approach. The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) was established with a view to collectively introduce best available techniques (BAT) and best environmental practices (BEP) for the coastal zone industries. PERSGA has requested UNIDO to develop and implement a project to introduce BAT/BEP strategies with the objective of reducing and eliminating the

unintentional production of POPs (UP-POPs) in key sectors of industry (cement, incineration, metallurgy, pulp and paper). The project will permit PERSGA members to comply with their obligations under the Stockholm Convention, particularly those obligations related to the industrial releases of UP-POPs. Being linked to the national sustainable development plans of the participating countries, the project further contributes to the improvement of human health and environmental conditions in the coastal zone.

Environmentally Sustainable Management (ESM) of Medical Waste

China

The project will demonstrate and replicate BAT and BEP in the environmentally sound management of medical waste by upgrading incineration equipment and air pollution control systems. It will replace outdated or over-capacity incineration facilities with alternative, non-incineration techniques that avoid the release of dioxins and furans. To achieve this goal, regulatory, administrative, planning, technical, economic, market, information and training instruments will be designed and comprehensively applied to

promote the locally affordable or commercially available supply of technologies and equipment needed, as well as promote the commercialisation of domestic-ally constructed medical waste treatment and disposal facilities. This extensive capacity building programme aims at strengthening the regulatory framework and the institutional capacity at the national level, as well as at promoting local manufacturing industry and services that will be carried out nationwide.



UNIDO helps upgrade medical waste disposal equipment in China

Phasing-out of PCBs

In the Former Yugoslav Republic of Macedonia (FYROM)

The project's main objective is to assist the Former Yugoslav Republic of Macedonia to comply with its polychlorinated biphenyl (PCBs)-related obligations under the Stockholm Convention and thus reduce the releases of PCBs into the environment. This will be achieved through the enhancement of national capacity in the management of PCBs-containing equipment and wastes. The threats to human health and the environment will be removed by an ESM system for disposal of PCBs and PCB-containing equipment. This will include legislation, institutional and technical capacity building, awareness raising and assistance in the phase-out process of PCBs-containing equipment from the selected demonstration areas. Overall, the main outcome of the project will be a strengthened countrywide capacity for PCB management.

DID YOU KNOW?



In 1968 in Japan, 280 kg of PCBs contaminated rice bran oil, used as chicken feed, left 400,000 chickens dead. Known as Yusho Disease, it also resulted in the mass poisoning of up to 14,000 people.



Several studies have identified a correlation between high levels of dioxins and furans in humans and a variety of adverse health effects such as elevated rates of endometriosis, and precocious puberty.



Incineration is not the only way to dispose POPs waste. UNIDO promotes the use of several commercially available non-combustion technologies that offer a viable alternative to incineration.

PCBs Disposal

India

After ratifying the Stockholm Convention in 2006, the Government of India identified the environmentally sound management and disposal of PCBs as one of the key priorities for the implementation of India's obligations under the Convention. The planned GEF-funded full-size project "Environmentally Sound Management and Final Disposal of PCBs in India" seeks to address national priorities in the PCB field. These priorities include the strengthening of the legal and regulatory framework for chemicals management, institutional capacity building for the environmentally sound management and final disposal of PCBs, the reduction of PCBs releases from industrial and other sources, and the improvement of environmental performance in industry.

The project aims at establishing a PCB inventory and seeks to build capacity for the final disposal of PCBs and PCB-contaminated waste in selected pilot states in India. A unique feature of this post-NIP project is that it will be implemented at the same time as the development and formulation of the NIP project, which is also a GEF-funded FSP. With its vast experience in the PCB management and disposal field, the Bangalore-based Central Power Research Institute (CPRI) is the designated national executing agency for both NIP and post-NIP PCB activities. This will lead to significant synergies in the implementation of the two projects.

DID YOU KNOW?



Some polychlorinated biphenyls (PCBs) exhibit dioxin-like toxicity.



PCBs can cause learning problems in children.



Dioxins accumulated at a certain time will persist in a human body for years and years.



The atmosphere serves as the primary route for global transport of PCBs.

Disposal of PCBs Waste

Romania

The NIP for Romania identified PCBs as one of its top priorities. The project's objective is to overcome current barriers which impede the implementation of Romania's PCB-related obligations under the Stockholm Convention. A GEF grant will consolidate ongoing and baseline activities of the government towards the implementation of its obligations for PCB elimination. The project will demonstrate locally viable and environmentally sound control measures, as well as their incorporation into a national policy framework. In this context, all activities are undertaken in a controlled and coordinated manner to protect human health and the environment from the harmful effects of PCBs. The main outcome of the project will be an increased national capacity to manage PCBs in an efficient and environmentally sound manner, an increased human

capacity, improved regulations, financing options and physical facilities management of PCBs. The lessons learned in the project will be replicated in other countries experiencing similar barriers to meeting their obligations under the Stockholm Convention.



Safe storage of PCBs stockpiles is a top priority in Romania

Non-combustion Technologies

Philippines

Under the umbrella of the "Global programme to demonstrate viability and removal of barriers that impede adoption and successful implementation of available non-combustion technologies for destroying POPs", UNIDO is implementing a non-combustion project in the Philippines. The four-year project aims at deploying a commercially available, proven

non-combustion technology to initially manage 1,500 tons of equipment and wastes containing PCBs. The programme will introduce and apply a non-combustion technology to destroy a significant amount of obsolete POPs stockpiles and wastes. It will also help remove barriers to the adoption and effective implementation of available non-combustion technology.



Non-combustion technologies will help manage equipment and waste containing PCBs



GLOBAL FORUM ACTIVITIES

Workshop on Bio-pesticides

Nantong, China,
14-16 October 2008

The workshop was held by UNIDO under the umbrella of the Regional Network on Safe Pesticide Production and Information for Asia and the Pacific (RENAPAP). Its main objective was to assist the network's member countries in strengthening their capabilities in the production and application of newer generations of bio-pesticide formulations with a view to reduce the risks in the use of toxic crop protection chemicals and their old formulations, ensuring safety to the environment, farmers, workers, and to minimize the residues of pesticides on food crops. The workshop also aimed at promoting South-South cooperation by inviting expert nominees from the African region. In particular, the workshop covered the following topics:

- Progress made by the member countries in the field of development and production of biodegradable eco-friendly bio-pesticides,
- Discussion on the latest advances made in research and development in the field of bio-pesticides production and application for the protection of the environment and safety to workers,
- "Hands on" training in various aspects of development of bio/botanical pesticides in laboratories, pilot plants and commercial plants,
- Discussion on the role of bio-pesticides as alternatives to some POPs pesticides,
- Application of bio-pesticide technologies, and
- Evaluation of the benefits derived from the application of bio-pesticides.

Participants discussed the use of bio-pesticides as mosquito larvicides in malaria vector control programmes. The workshop recommended that RENAPAP/UNIDO should strengthen its activities on bio-pesticides production and application as alternatives to DDT in public health programmes at the inter-regional and global levels.

Second GCC Consultation Meeting on BAT/BEP

Manama, Bahrain, 1-2 February 2009

The Gulf Cooperation Council (GCC) Meeting on BAT/BEP was the first event organized in the region. It aimed to promote, apply and diffuse BAT/BEP in GCC countries, in line with the Stockholm Convention guidelines. The meeting agreed to establish the GCC Forum,

and to develop terms of references for the Forum's structure. A framework for a regional action plan on BAT/BEP and a Trust Fund to finance the implementation of the Forum's activities were finalized as well.



Participants of the Second GCC Consultation Meeting on BAT/BEP

Meeting of POPs Focal Points from LDCs

Nairobi, Kenya, 14-16 February 2009

The meeting focused on a joint UNEP-UNIDO capacity building programme, which aims at enhancing and sustaining the implementation of the Stockholm Convention in Least

Developed Countries (LDCs) and Small Island Developing States (SIDs) in Africa, with particular emphasis on human health and the informal sector.



Participants of the POPs focal points meeting in Nairobi



Joint POPs Policy Meeting

Bangkok, Thailand,
June 15-19 2009

The participants will discuss the cooperation between two UNIDO chemical related networks: the Regional Network on Safe Pesticide Production and Information for Asia and the Pacific (RENPAAP) and the East-South East Asia Regional Forum on Best Available Techniques/ Best Environmental Practices (BAT/BEP ESEA). Concrete measures towards the development of a joint and harmonized POPs policy will also be on the agenda.

PEMSEA-UNIDO Cooperation Meeting

Manila, Philippines, 29 January 2009

The Partnership in Environmental Management for Seas of East Asia (PEMSEA) is a Regional Programme on Marine Pollution Prevention and Management for the East Asian Seas Region. The PEMSEA-UNIDO Cooperation Meeting identification of possible collaborative

projects between the two organizations and the participation of UNIDO in PEMSEA initiatives, such as the East Asian Seas Congress 2009, Public-Private Partnerships on Environmental Investments and the Manila Bay Rehabilitation.

UPCOMING EVENTS

Fourth Meeting of the Conference of the Parties of the Stockholm Convention

Geneva, Switzerland, 4-8 May 2009

COP-4 will include a high-level segment on 7 and 8 May 2009. The theme of the segment is "Meeting the challenges of a POPs-free future". For the first time in the history of the COP, new chemicals will be considered for listing in the annexes of the Convention. Nine new substances are designated for scrutiny and will be discussed at the meeting. On 6 May 2009, UNIDO will co-host a side event on the implementation of Article 5 of the Convention. In addition, the Ministry of Environment and

Sustainable Development of Romania and UNIDO will jointly organize the 3rd Consultation Meeting of the Regional BAT and BEP Forum for Central and Eastern Europe, Caucasus, and Central Asia (CEECCA) to promote strategies to reduce or eliminate unintentionally produced POPs from industry. The meeting aims at finalizing planning documents for the Ministerial meeting to launch the Forum, planned to be held in Bucharest, on 29 October 2009.

DID YOU KNOW?



Polychlorinated -dibenzodioxins and -dibenzofurans (PCDD/Fs), or simply dioxins and furans, are also found in cigarette smoke.



Dioxins and furans are present in minuscule amounts in a wide range of materials used by humans - including practically all substances manufactured using plastics, resins, or bleaches.



Recent animal studies have shown that exposure to dioxins changes the ratio of male to female births among a population such that more females are born than males.



POPs are also found in remote regions such as the middle of oceans and Antarctica.



Indigenous people of the arctic regions are found to have high levels of POPs due to the high consumption of animal fats, contaminated by POPs.



Studies have shown a possible link between the exposure to PCBs and the occurrence of type-II diabetes.

Ministerial Launching meeting of the CEECCA Regional Forum on BAT/BEP

Bucharest, Romania,
29 October 2009

UNIDO and countries of the Central and Eastern Europe, Caucasus and Central Asia (CEECCA) region will meet in Bucharest, for the Ministerial Launch meeting of the CEECCA Regional Forum on Best Available Techniques and Best Environmental Practices (BAT/BEP). The objective of the Forum is to set out a framework to implement the BAT/BEP related obligations of the Stockholm Convention on POPs with the goal of reducing or eliminating releases of unintentionally produced POPs at a global scale.

Toolkit Development Workshop for Contaminated Sites

Beijing, China,
21-23 August 2009

The growing demand of countries to manage POPs chemicals sites requires a systematic approach for identification and classification, based on risk assessment and management. The Toolkit aims to support the identification and prioritization of contaminated sites and the development of suitable technologies for land remediation in accordance with BAT/BEP. It will enable countries and POPs programmes to systemize the management of contaminated sites.



Workshop on Environmentally-Friendly Pesticide Formulations

Gurgaon, India, 2-9 March 2009

RENAP has provided assistance and advisory services to its member countries in achieving self-sufficiency in the production of user and environmentally-friendly pesticide formulations. To follow-up on previous workshops and to account for the rapid progress in the field of formulation development, the Institute of Pesticide Formulation Technology (IPFT), which served as RENAP'S technical coordinator on this subject, organized this workshop. Its main objective was to assist member countries in strengthening their capabilities in the field of pesticide formulation development and quality assurance.



Strengthening environmentally-friendly pesticide development capabilities

The workshop covered the following issues:

- Advances made in the field of pesticide formulation development and application including bio-pesticides and botanical pesticides for the environmental protection and safety of workers,
- “Hands on” training in the production of pesticide formulation with special emphasis on new generation formulation,
- Quality assurance of pesticides formulation,
- “Hands on” training on preparation of water-based pesticide formulation and instrumental methods of analysis,
- Progress made by member countries, especially in the promotion of environmentally-friendly formulation development and production, and
- Steps taken by member countries to comply with the requirements of the Stockholm Convention.

Fourth International Symposium on Contaminated Sediments

Glasgow, Scotland, 30 June-3 July 2009

Since UNIDO possesses significant expertise on these issues, the organization will share it with other actors to strengthen the international fight against toxic chemicals. At this high-profile symposium at the University of Strathclyde, Glasgow, UNIDO will also present its POPs-related activities and case studies. The event aims at attracting a wide variety of participants from multi-disciplinary backgrounds. The topics for the symposium include:

- Eco-toxicology and sediment quality assessment tools,
- Engineered remediation technologies, Natural recovery and attenuation processes,
- Risk assessment and decision-making,
- Monitoring and performance evaluation,
- Habitat restoration and biodiversity,
- Stakeholder needs and expectations.

UNIDO TOOLS

New UNIDO POPs Portal

The UNIDO Stockholm Convention Unit has re-launched its web presence and now provides facts and figures on all sorts of POPs related issues, such as:

Information on chemical conventions and POPs in general; detailed information on the respective chemicals that fall under the Stockholm Convention; information related to

UNIDO efforts for NIPs and Post-NIP projects; updated information on news and events; and evolving online and e-learning resources.

Since its re-launch in October 2008, the UNIDO POPs Portal more than doubled its web traffic. To access the portal, please go to: www.unido.org/pops

Screenshot of the UNIDO POPs online portal

Readers are invited to send their
comments and opinions to:



Vienna International Centre
P.O. Box 300, 1400 Vienna,
Austria
Telephone: (+43-1) 26026-0
Fax: (+43-1) 26926-69
E-mail: unido@unido.org
Internet: www.unido.org

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this newsletter do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” or “developing” are intended for statistical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.