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The International POPs Elimination Project

*Fostering Active and Effective Civil Society Participation in
Preparations for Implementation of the Stockholm Convention*

Global Day of Action on POPs in Sri Lanka Impact of open burning and elimination of persistent organic pollutants (POPs)

Centre for Environmental Justice
Dilena Pathragoda, Director (Projects),
Email: dilenapk@yahoo.com
59/14, Kuruppu Road, Colombo 08, Sri Lanka
Tel/Fax: 0094-11-2683282
Email: info@ejustice.lk; centrefore@yahoo.com
Website: www.ejustice.lk

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About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org>) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

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Global Day of Action on POPs in Sri Lanka

Impact of open burning and elimination of persistent organic pollutants (POPs)

The Centre for Environmental Justice (CEJ) and the POPs Unit of the Ministry of Environment and Natural Resources, together with the Green Movement of Sri Lanka and the Sri Lanka Environmental Exploration Society (SLEES), organized a workshop for environmental activists, farmers, media and



industries to create awareness on the harmful impact of POPs. The workshop, entitled “Impact of open burning and elimination of Persistent Organic Pollutants (POPs),” was held on 29th April 2005 at the Auditorium of the Sri Lanka Association for the Advancement of Science (SLAAS). It was held around Earth Day 2005 as part of a global day of action organized by the International POPs Elimination Network (IPEN).

In addition, a live radio programme was held on 22nd April 2005 at the Sri Lanka Broadcasting Corporation (SLBC). The participants of this programme included Ms. Pathmini Batuwitage, Director, Ministry of Environment, Mr. Gunarathne, Green Movement, Mr. Ravindranath Dabare, Environmental Lawyer and Mr. Dilena Pathragoda, Centre for Environmental Justice. The radio programme called “Suba Rathi” was broadcasted at 7.00 am to 8.00 am. This is a very popular programme which goes to more than a million listeners.



The main message of the workshop and radio programme was that the open burning of garbage and toxic waste creates POPs, which destroy the environment. This message is supported by a great deal of scientific evidence. Recently, European scientists have found Dioxins in birds' eggs, which they

believe has caused a thinning of the egg shells. Many freshwater lakes in Europe contain dioxins and PCBs, which cause cancer and harm aquatic life. Scientists have also found that POPs chemicals such as DDT and Dioxins change the chromosomes of sperm, causing more Y chromosomes.

PCBs, Dioxins, Furans and POPs pesticides such as Aldrin and Dieldrin have also been found in the human body, particularly in mothers' breast milk. As a result of the involvement of many scientists, the Stockholm Convention came into effect in 2001, of which 151 countries, including Sri Lanka, are signatories.

The workshop programme on 29th April 2005 consisted of four lectures by individuals from the most relevant institutions on POPs, followed by a panel discussion involving the environmental activists, farmers, media and industry members in attendance at the workshop.



First, Ms. Chandani Panditharathne, Assistant Director of the POPs Unit of the Ministry of Environment, spoke on the impact of open burning. Ms. Panditharathne discussed the fact that open burning is a cheap, easy and convenient way for people without access to organized waste

disposal to get rid of combustible materials. Unfortunately, open burning is an environmentally detrimental process that generates POPs and numerous other harmful pollutants as unintended by-products of incomplete combustion. Despite the affordability and convenience of open burning, Ms. Panditharathne explained that the unintended creation of POPs must be controlled, because POPs are persistent, bio-accumulative, can travel long distances, and have severe adverse effects on human health and the environment. She recommended replacing open burning with the use of BAT/BEP in industrial operations, and discontinuing the use of toxic pesticides and industrial chemicals, such as PCBs and Hexachlorobenzene. As a means of controlling and reducing waste, Ms. Panditharathne proposed alternatives such as source reduction, composting of biodegradable waste, repair and reuse of certain devices or parts (rather than the purchase of new devices), and the cost-effective recycling of unwanted materials such as metals, glass, clean dry paper, corrugated board, cloth, plastics, and wood.

Second, Mr. D.R. Gunarathne, of the Green Movement of Sri Lanka, spoke about industrial POPs chemicals, discussing both their beneficial uses in industry and their negative side-effects and unintended impact on society and the environment.



Third, Mr. Sumith Jayakody, from the Office of the Registrar of Pesticides, spoke regarding the various actions a government agency may take in an effort to minimize the impact of POPs, including some of the steps his office has already taken in this regard. He emphasized the importance of the Stockholm Convention and Sri Lanka's duty (as a signatory) to uphold their promise to control the nation's POPs output.

Fourth, Mr. Mangala Wijesinghe, Attorney-at-Law, gave an elaborate account of the need for a convention, touching again on Ms. Panditharathne's points about the dangerous characteristics of POPs. He then discussed the actions mandated by the Stockholm Convention,

including inventory of POPs emission sources, action plans for the reduction of unintended POPs by-products and the use of DDT as a means of disease control, five-year progress reports on phasing out PCBs, assessment of POPs stockpiles (including their management and disposal options), identification of POPs contaminated sites, and much more. Mr. Wijesinghe also explained the statutory provisions regarding POPs, as covered in the National Environmental Act, No. 47 of 1980 (amended by Act No. 56 of 1988) and the Control of Pesticides Act, No. 33 of 1980 (amended by Act No. 06 of 1994).

Finally, Mr. Hemantha Withanage, Executive Director of CEJ, chaired a panel discussion on POPs, allowing members of the audience to ask questions and collaborate with the expert presenters of the programme.



More than 60 participants from civil society organisations, government departments and media attended this workshop. CEJ was pleased with the attendance of (and positive response to) these successful POPs events, and happy for the opportunity to educate the public on the dangers of POPs.

MEDIA COVERAGE

FEATURE: SUNDAY OBSERVER

15 May 2005

Beware of POPs

by Shanika Sriyananda

The recent detection of dioxin in eggs sold in European markets have led local eco-groups to ring the alarm and caution local authorities which import eggs, to be 'more vigilant' about their imports.

Dioxin, classified as a 'dirty dozen' among a gamut of chemical pollutants is an unintended by-product of combustions and industrial processes and is identified as one of the highly carcinogenic 'Persistent Organic Pollutants' (POPs).

According to findings, the dioxin in eggs can easily get into the human body. Lack of proper garbage disposal system has resulted in a rapid accumulation of dioxin and furan in the environment. Waste, especially hospital waste needs burners with a temperature of over 1200 celsius to burn dioxin and furan. But, all the hospital burners in the country have much less than the required temperature and consequently a high amount of dioxin and furan enter the atmosphere daily.

Dioxin may also be released into the environment through the production of pesticides and other chlorinated substances, while furan is a major contaminant of Polychlorinated biphenyl (PCBs), a by-product often found with dioxin.

Apart from the burning of garbage in open spaces, these two chemical compounds can also be released into the environment from vehicle emission, coal and wood combustion, metal smelters, refineries and cement kilns. Other toxic chemical in the dirty dozen are the pesticides aldrin, hexachlorobenzene, chlordane, dieldrin, endrin and heptachlor.

PCBs, which are a synthetic organic chemicals now sold under various trade names and popular due to their chemical stability and heat resistance can be found in dielectric fluids in electrical equipment such as transformers, capacitors, heat transfers, hydraulic systems, pesticide extenders, sealants, in carbonless paper, industrial oils, paints, adhesives, plastics and flame retardants.

Meanwhile, according to Hemantha Witanage, Executive Director of the Centre for Environmental Justice, PCBs in old transformers of the Ceylon Electricity Board are a threat to the environment and the people living in the areas where these transformers are installed.

He said that though the country signed the Stockholm Convention on Persistent Organic Pollutants in 2002, the POP Implementation Plan which gives guidelines to eliminate POPs in the country has not been finalised yet.

"A proper garbage disposal system to eliminate POPs is another vital aspect that the Ministry of Environment and Natural Resources, which is the focal point to prepare the Plan, needs to look into", he pointed out.

Witanage said that importation of nine toxic pesticides had been banned by the Registrar of Pesticide (RoP) in 1996. "But we suspect that old stocks are being still sold", he claimed.

However, he stressed the necessity of commencing a detailed research about POP and also the need of educating the public about the 'dirty dozen'.

"Until such a Plan is finalised no one can take action. We do not know the POP hot spots. Scientists have found that the POPs or the 12 toxic pollutants commonly known as the 'dirty dozen' accumulated in the air, water and soil pose a serious threat to human health and the eco systems.

They easily bio-accumulate in the fatty tissues of exposed animals and humans. According to health experts, the 'dirty dozen' toxic pollutants can cause cancers, birth defects and fertility problems.

The most vulnerable are the foetus and infants. People will become susceptible to diseases and loss of intelligence due to long term exposure to POPs.

A high level of exposure to PCBs can also cause skin rashes, itching and burning, eye irritation, skin and nail pigmentation changes, disturbances in liver function and the immune system, irritation of the respiratory tract, headaches, dizziness, depression, memory loss, nervousness, fatigue and impotence.

The population of marine mammals, common seal, humpback porpoise, bottlenose dolphin and blue whale have already dropped due to exposure to POPs.

Another groundbreaking scientific discovery carried out by Prof. Alexander Giwercman of the University of Sweden had found that exposure to POPs could change the sex chromosomes in sperm.

They found that Swedish fishermen exposed to high levels of Organochlorine - dioxin, DDT and other pollutants have a higher proportion of the male Y chromosomes in their sperm.

The alarming risk of POPs resulted in the implementation of the Stockholm Convention on POPs by the United Nations Environment Programme on February 18, 2001. Meanwhile, the United States, which did not ratify the Kyoto Protocol to phase out greenhouse gases, is also considering signing the Convention to phase out the world's most hazardous pesticides and chemicals, next year.

The US and Russia, which are the biggest industrialised countries, are yet to ratify the Stockholm Convention. Assistant Director POP Unit of the Ministry of Environment, Chandani Panditharatne said Sri Lanka was legally bound to control POPs and is in the process of preparing a National Implementation Plan (NIP) with the assistance of the experts in the pesticide and other chemicals.

"We have formed individual groups and they have to submit their final reports. The major task of them is to find the amount of toxic chemicals that come under 'dirty dozen' that are available in the country", she said.

According to Panditharatne, a proper waste disposal system is vital to control POPs, especially, hospital waste which should be properly incinerated. "At the moment, the country lacks proper incineration facilities. The present system of burning clinical waste will generate more dioxin and furan", she said.

"But there is no alternative and burning of clinical waste is better than land filling as the risk of contaminating ground water resources and spreading diseases are high", she pointed out.

The CEB and the Lanka Transformers Ltd (LTL) are the main institutions that deal with PCBs but they do not have the facilities to detect PCBs in transformer oil. Testing transformer oil for PCBs is done at the Industrial Technology Institute. The LTL has taken steps to import transformer oil free of PCBs. Under the Stockholm Convention, Sri Lanka needs to eliminate PCBs before 2028.

According to Panditharatne, several benefits were given to developing countries which signed the Convention. "Financial assistance to adopt best environmental technologies to control POPs will be given by the developed countries to least developed countries like Sri Lanka", she added.

Awareness campaigns to educate the CEB engineers, the public and school children have been launched by the Ministry together with the CEJ, Green Movement of Sri Lanka and the Sri Lanka Environment Experts Society.

Panditharatne said alternatives to POPs can be encouraged through public awareness campaigns and pollution can be minimised through cleaner technologies.