# POPs Newsletter

**No 18, December 2009**
Prepared on behalf of **IHPA**

## In this issue:



## Aim

The aim of this newsletter is to disseminate information in a cost-effective way on the developments taking place in the area of POPs as implicated in the Stockholm Convention and other PTS of concern. It will cover, among others, the news on science and technology for disposal of obsolete stocks and remediation of POPs contamination which might be of interest for commercial exploitation both in developed and developing countries. Special emphasis will be given to bio-remediation, non-combustion related technologies which will benefit developing countries. The newsletter will not go into technical details of selected scientific publications but only highlight salient features for the benefit of the readers. One can **subscribe** and read IHPA Newsletter (2 times/yr free of charge).

## Note from the Editors

**Since the last issue in June, three important events took place, one is the 10th IHPA Forum in Brno, Czech Republic, Conference of Parties IV of Stockholm convention in Geneva and Dioxin 2009 meeting in Beijing. In this issue we are covering these meetings. The Geneva meeting is a watershed in Stockholm Convention in that 9 more chemicals have been added to the POPs list. We are also providing some insight into problems faced by victims of Vietnam war due to use of Agent Orange during the Vietnam war and 25 years after the worst Chemical accident in the world that happened in Bhopal, India. We are also covering a major pollution problem in China that led to lead poisoning in school children.**

### 1. End of Endocrine Disrupting Chemicals (EDCs)?

Assessment of endocrine disrupting chemicals (EDCs)– the USEPA has recently announced the first set of compounds to be screened under the Endocrine Disruptor Screening Programme(EDSP). This is the result of American congress putting pressure on the EPA to carry out assessments of EDCs. Endocrine disruptors are chemicals that can affect hormones produced by endocrine system, which regulate growth, metabolism and reproduction. The EPA has requested that manufacturers screen seven compounds under the first round. These include atrazine, 2,4,D, benzfluralin, chlorathal-dimethyl, fenbutatin oxide, norflurazon and propargite.
The EPA has given a tight schedule ie. within 90 days they have to inform how they plan to generate the data. All the results should be submitted within two years. In October the EPA released test guidelines and has given a schedule covering 67 chemicals. The EPA expects that the resultant data will provide the necessary scientific information to assess the potential EDCs and what act action need to be taken .The testing carried out through EDSP programme will eventually expand to cover all pesticides. The American Chemistry Council (ACC) has endorsed the project and said that this demonstrates "sound science " approach to chemical safety profile.

Meanwhile water companies around the world are investigating best ways to remove endocrine disrupting chemicals from waste water. These chemicals in waste water even at a concentration of 1-10ng/l(parts per trillion) can have drastic effect on sensitive fish

species. So the water companies are trying to remove any trace of EDCs from waste water or dilute it to safe levels before coming into contact with sensitive fish species. Some water companies in the UK are resorting to the use of granulated active carbon (GAC) columns for treating drinking water. Water is pumped through a column from the top down. The companies are also trying other technologies such as ultraviolet and biological treatment, chlorination, ozonization , nano filtration etc. The companies will report their findings to the UK Government in 2010. Many other countries especially, Germany and the USA are trying several technologies. The question is how much the industry, the government and end users are willing to pay trying to catch the very last molecule of EDC from drinking water.

**(Source RSC Advancing the Chemical Sciences-Chemistry world -2009)**

## 2. Events:

Major events since the last issue of our Newsletter, are the IHPA 10th Forum in Brno, The Czech Republic, COP-IV in Geneva and Dioxin 2009 in Beijing. While the COP-IV in Geneva added 9 more compounds to the Stockholm POPs list, the 10th IHPA Forum covered topics close to Stockholm convention by dealing with obsolete stocks of pesticides, soil contamination, non-com technologies for disposal POPs and POPs wastes, Public awareness. However the " Dioxin 2009" in Beijing over 5 days covered more and more on basic research work related to Dioxins and the new POPs added (or indicted) in the COP-IV of the Stockholm Convention .

### 2.1 10th IHPA Forum

The 10th IHPA Forum took place at Brno hosted by the Masaryk University and the Central and Eastern European Regional POPs Centre. The Forum was initiated and enabled by the IHPA in order to follow up on the progress since the 9th Forum in Chisinau, Republic of Moldova. The Brno IHPA Forum started with a question:

**"How many tonnes of obsolete stocks of pesticides have been disposed off 8 years after the Stockholm Convention?"**

**Book edited by Dr. Ivan Holoubek**

The Brno IHPA Forum was attended by 120 experts from more than 40 countries. It was very appropriative that the Forum took place in Czech Republic which has an active environmentally sound approach to remediate POPs contaminated sites the most important example being the successful "Spolana –Dioxins" project where more than 50,000 tonnes of various materials contaminated with PCDDs, PCDFs, HCB, lindane and other chlorinated pesticides were decontaminated using the non.combustion technology, Base Catalyzed Technology (BCD). From their experience, the Republic has enough capacity for the disposal and environmentally sound clean-up and management of sites contaminated with POPs. An unique project in the Republic is the monitoring levels of POPs in ambient air over long period of time. Model passive air monitoring network has been developed consisting of 37 sampling sites including 15 backgrounds (industrial, urban, rural and mountain) and a variety of sites influenced by primary and secondary POPs sources.

IHPA Chair of the Board Bram de Borst assigned 60 new IHPA ambassadors, that have proven their commitment to help to contribute to the elimination of obsolete pesticides. Prof. Emmanuel Heinisch and Dr. Archalus Tcheknavorian have been assigned as Honourable ambassadors for life due to their continuous and longterm efforts.

The Forum based on the discussions lasting three days, made a declaration after:

- **recognizing** various problems facing the Central and East European Countries (CEECs), regarding obsolete stocks of pesticides, barriers to overcome, expertise needed, policies to be enacted and enforced and
- **further** encouraged by the ongoing programmes by GEF/FAO on obsolete stocks of pesticides, UNEP/WHO on sustainable alternatives to DDT in vector management and UNEP/UNIDO programme "demonstrating and scaling up of lindane and HCH waste by ESM" and supporting the SAICM and
- **inclusion** of lindane and HCH isomers in the Stockholm Convention as an important step in the elimination of 1.7 to 6 million tons of HCH residues.

The Forum also welcomed and supported the new initiative for a film entitled "contaminated future".

The Forum participants recognizing above factors, among other things, called upon further support and assistance in reaching the final goal and called upon the European Commission, the European Parliament and the Member States, the United National institutions, World Bank and other bilateral and multilateral donors to:

- **recognise** the growing momentum and desire among governments and civil society to eliminate and prevent POPs, obsolete pesticides and hazardous chemical stockpiles and to financially support national and regional initiatives in this area;
- **improve** the dialogue on the scale and urgency of the problem and possible solutions Specifically, the participants

**Call upon** UN donor agencies and the World Bank to

- **coordinate** programming and project activities in the Central Asian countries (Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) in order to maximize the programme and project outputs.

**Call upon** the Global Environmental Facility (GEF) and the World Bank to

- **accelerate** the processing of project proposals in order to ensure that countries and regions can advance in their work for elimination of obsolete and POPs pesticides and other dangerous chemicals,

**Call upon** the United Nations Commission on Sustainable Development (CSD) to

- **address** obsolete and POPs pesticides and their elimination during its 2010-2011 cycle on the basis of reports provided by FAO and other agencies and institutions mandated on the management of POPs and to take urgent steps to speed up their elimination all over the world and **note** in this context that stakeholders such as national governments, SAICM regional groups, NGOs and others concerned with obsolete and POPs pesticides are invited to put this urgent issue on the agenda during the preparation to the 18th Session of the Commission on Sustainable Development which will be held in New York from 3 to 4 May 2010. One of such preparation meetings will be the Regional Implementation Meeting of the United Nations Economic Commission, which will be held in Geneva on 1 and 2 December 2009. The participants furthermore…

**Call upon** all Governments to

- **ensure** political focus and raise the awareness of obsolete pesticides, make removal of stocks a priority in their national environmental plans, and add destruction to the agenda of negotiations with donors, while making national funds available for co-funding.
- **build** in public participation into the design of policies, programmes and projects in order to reach more effective and sustainable results,
- **establish** public partnerships in order to facilitate and find consensus; and to facilitate to provide alternatives to points of disagreement.
- **consider** applying a multi-disciplinary approach for solving the threat of obsolete pesticide in order to protect the environment and secure the quality of life of people
- **recognise** the urgent problems related to the so-called polygons and uncontrolled dumpsites of POPs and other dangerous chemicals which are particularly prominent in the EECCA region
- **identify** and mobilise existing industrial capacities in the countries to be considered an option for obsolete pesticides and contaminated soil elimination
- **implement** common monitoring programmes (as the example from Czech Republic) and comparable risk assessment systems for POPs in the environment;

**Call upon** the European Commission to

- **lead and develop** an Action Plan in partnership with the EU member states, the European Parliament, non-EU countries such as those falling under the European Neighbourhood Policy and those in Central Asia, international organisations such as the FAO, UNEP, UNDP, UNIDO, World Bank and GEF, agricultural organisations, NGOs, consumer organisations and industry including chemical industry and food retailers.

**Call upon** the European Council, led by the Presidency, to

- **urgently** address the obsolete and POPs pesticides and its adverse impact on the quality of life of people, especially the poor, the old, women and children living in rural areas, in the Council Working Party on International Environmental Issues (WPIEI) to continue the work already commenced during the Slovenian Presidency of the European Council and particularly the WPIEI in first half of 2008.

**Call upon** the European Parliament to

- **request** an amendment of the pesticides strategy within the current debated Framework Directive on sustainable use of pesticides, with binding requirements to report obsolete pesticides stocks, and highlight obsolete pesticides in the coming new Neighbourhood Strategy, which includes Armenia, Azerbaijan, Belarus, Republic of Moldova, Georgia and Ukraine
- **request** to accelerate the finalisation of the proposed Soil Framework Directive

**Call upon** NGOs and the civil society to

- **follow-up** on Government policies and assist in their implementation

**Call upon** plant protection associations and the industry in line with the capabilities to

- **offer** to advise and assist the countries in elimination of dangerous chemicals
- **provide** technologies and facilities for securing a low risk final disposition for empty and properly rinsed containers

**RECOGNITION**

The participants recognised the efforts of the Director of the IHPA for his continuing support in keeping the issue of obsolete pesticides on the international agenda**.** The participants furthermore expressed appreciation of IHPA for the cooperation and assistance to the development of capacities and to elimination of obsolete pesticides and other dangerous chemicals, and urge the continuation of this work.

The participants welcome and appreciate the invitation from the Republic of Azerbaijan to host the11 th International HCH and Pesticides Forum in 2011.

**Selected topics covered in the Forum included among other things:**

- risk assessment modelling, remediation of contaminated sites, pesticide container management, non.combustion technology, public education etc. Obviously obsolete stocks of pesticides dominated the Forum. One interesting PR Newswire press release from Ukraine entitled “Time bomb in Ukraine/Moldavia endangers 7 million people” produced a leaflet which highlighted the IHPA report which said that Ukraine has the biggest chemical time bomb of Europe. The leaflet referred to the former Kalusch factory in the west of Ukraine where no less than 10,000 tons of HCH very close to Dniester river. A single flood would pollute the natural habitat of 7 million people in Ukraine and Moldovia. According to the release in Ukraine alone there are 4,500 storage locations with more than 30,000 tonnes of old pesticides, a legacy of Soviet era. If nothing is done the substances could simply end up in soil and water. According to IHPA the stabilization or destruction of all current stocks of superfluous pesticides amounts to 1 billion Euro. IHPA calls upon the EC to help in developing a solid plan of action. The press release states that IHPA has made its full commitment to use all its strength and knowhow to contribute actively to the solution of problems stemming from production and use of HCH and other obsolete pesticides in Central European and EECCA (Eastern European, Caucasus and Central Asia) countries.

The sessions concentrated on non.combustion technologies which clearly indicated progress made in this area covering radical planet technology, thermal desorption and plasma arc treatment, use of nano catalysts, application of GPCR Technology and natural energy systems. Many of these technologies have been proven to have DRE of 99.9999%. One of the papers presented a proposal from UNEP/UNIDO on a concept for HCH Global Strategy for **GEF consideration.** It explains briefly the need for a global strategy on dealing with HCH waste. The amounts are huge and the solutions are complex and not clear yet. The proposal draws information from voluminous data collected by IHPA on lindane production sites and relatedwaste locations. IHPA document “The Legacy of lindane HCH isomer production“ which played a vital role on the final decision to list HCH as POP. According to estimates for each ton of Lindane between 8-12 tons of over theHCH isomers are produced . Acording to the data provided global usage of lindane between 1950-2000 for agricultural, livestock, forestry, human health and other purposes amounted to 600,000 tons translating to the production of 4.8-6 million tons of HCH byproducts. The paper analyses non.combustion technology and the pros and cons of conversion to HCl by base hydrolysis. In summary the proposal raises following issues that should be looked at:

- It is clear that the problem of HCH is complex and needs a global strategy before large HCH cases will be financed by the GEF
- The information is not sufficient and additional investigations have to be made on global amounts and at each location to assess volumes and its contents in relation to possible treatment
- Various technologies have to be tested on a number of HCH waste sites so the real problems and solutions can be assessed
- Quality criteria for the delivery of HCl from the HCH treatment have to be worked out in order to secure a smooth transfer to the production plants
- Global Capacity for HCl treatment/recycling has to be made
- Financial /Economical analysis of the whole cycle- Removal-Treatment-transport to regional HCl recycling centres

### 2.2. “Dioxin 2009”, Beijing.

Unlike the IHPA Forum, the 5 day long Dioxin 2009 concentrated on basic research on POPs including the newly added to POPs list in Geneva COP-IV. This clearly indicates the increased awareness in academic institutions to look into basic research on POPs which might lead to new knowledge and greater understanding of POP’s socio-economic impact.

## 3. 25 years after Bhopal accident and legacy of the Vietnam war

### 3.1 25 years after the world's worst chemical accident

In the last report we included Malaria which had a big press coverage to commemorate WHO Malaria Rollback project and this month there is a major press coverage on the infamous Bhopal accident that killed more than 3000 people but even after 25 years thousands of people are living with after effects. While the affected plant has been left as a grim reminder of the worst tragedy, there seems to be a controversy between Government and other agencies. According to a local paper (The Hindu) the government put more emphasis on acute toxicity saying that the waste left over is safe while other agencies are putting emphasis on chronic toxicity of water and soil exposure. According to studies the ground water and soil in the area is contaminated with toxic chlorobenzenes, lindane and according a BBC report, the ground water is contaminated with high levels of carbon tetrachloride. All these chemicals are deemed to be toxic on long term exposure in small amounts. While this controversy is going on, the direct victims of the tragedy and the newborns with abnormal effects are paying the price.

### 3.2. Legacy of the Vietnam war:

Similar to Bhopal tragedy another episode lingering on is the after effects of the use of "Agent Orange" herbicide in Vietnam war by the Americans. In this case both the American Veterans who sprayed the poison and the Vietnamese who were the victims of Agent Orange are fighting the after effects of the dioxin exposure.

Vietnam launched a group for Agent Orange victims recently and urged the United States to help people still suffering from the defoliant's effects nearly 30 years after the Vietnam War. According to reports three generations have suffered from the remnants of Agent Orange but the USA says that it is not definitely proven that Agent Orange was the direct cause of it. Former Vice President Nguyen Thi Binh said there were an estimated three million people affected by the Agent Orange used by the US forces during the war. The Vietnam Association for Victims of Agent Orange hopes to attract humanitarian support and donations from within Vietnam and overseas.

In 2000, Prime Minister Phan Van Khai approved a plan to provide monthly stipends ranging from 48,000 dong (US$3) to 100,000 dong (US$6.40) to government workers, soldiers and civilian volunteers who fought for the Communists in heavily sprayed areas during the war. Their disabled children were also included in the plan. Those affected by Agent Orange who fought for the US-backed South Vietnamese government were excluded from the allocation. He said that "we are expecting the US government and the companies which produced the Agent Orange to realise their spiritual, moral and also legal responsibility". While the U.S. Government still not convinced of the after effects of the use of Agent Orange, it has given 6 million dollars to Vietnamese affected by the Agent Orange. Most of it will be spent in Danang area, a hot spot, where the Agent Orange was stored and will be used to clean the soil and put concrete caps to limit the movement of dioxin. The main complaint was that while the USA rightfully spent more than 100 million dollars to bring the remains of soldiers who died in the Vietnam war, it could be also generous to the victims of Vietnam especially those who were born after the war.

On the other side of the Pacific, the American veterans are complaining about the side effects of handling the Agent Orange. Under rules to be proposed recently, the Department of Veterans Affairs, plans to add Parkinson's disease, ischemic heart disease and hairy-cell leukaemia to the growing list of illnesses presumed to have been caused by Agent Orange, the toxic defoliant used widely in Vietnam. (*Excerpts taken from New York Times, BBC, Al Jazeera and The Hindu).*

In all theses tragedies there is a common thread in that mainly the poor people are in the receiving end and when it comes to compensation they get very little with lion's share taken by the middle men and the lawyers.

## 4. World Bank Project *Obsolete Pesticides Technical Study in the Kyrgyz Republic, the Republic of Tajikistan, and the Republic of Uzbekistan*

Tauw, Witteveen and Bos, the International HCH and Pesticides Association, Milieukontakt and Green Cross - Switzerland have just published the interim reports of the *Obsolete Pesticides Technical Study in the Kyrgyz Republic, the Republic of Tajikistan, and the Republic of Uzbekistan.* The project is financed by the Canada Persistent Organic Pollutants Fund, through the World Bank. Local representatives from Milieukontakt in Kyrgyzstan and Tajikistan and from Green Cross in Uzbekistan coordinate the project from Bishkek, Dushanbe and Tashkent. These reports can be found at a new website with the name: Obsolete Pesticides. This website contains all possible information on obsolete pesticides: See **http://obsoletepesticides.net/**

## 5. Words of Wisdom:

Finally we would like to mention a line from the speech of India's Prime minister Dr. Manmohan Singh, during his recent visit to the USA. He said that between the two countries the USA and India he highlighted the importance five Es as very important in the

relationship between the two countries which of course needless to say applies globally.

**"**Prime Minister Singh highlighted the Five Es as –

- **E**conomy,
- **E**nergy,
- **E**nvironment,
- **E**ducation and
- **E**mpowerment

All these form a critical part of the 'next phase of relationship between the two countries" he said.

## 6. Season's Greetings

Once again this year the editors of the Newsletter wish the readers a "Very happy and Prosperous New Year"

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