



IHPA

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ASSOCIATION

SUPPORT IHPA

POPs NEWSLETTER

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PREPARED ON BEHALF OF IHPA

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The aim of this newsletter is to disseminate information in a cost-effective way on the Development taking place in the area of POPs as implicated in the Stockholm Convention and other pollutants 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 bioremediation, 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) at <http://www.iHPA.info/resources/newsletter/>.

WISH THAT THE COMING NEW YEAR 2013 WILL BRING A SIGNIFICANT POSITIVE CHANGE IN THE PROTECTION OF ENVIRONMENT FROM SEVERE DEGRADATION THAT THE WORLD IS FACING TODAY!

WISH YOU ALL A MERRY CHRISTMAS AND HAPPY NEW YEAR 2013!!

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1. THE INTERNATIONAL HCH & PESTICIDE ASSOCIATION PUBLISHES STUDIES FROM THE 11TH IHPA FORUM AND OTHER KEY CASE STUDIES IN AN INTERNATIONAL JOURNAL

Roland Weber, Gulchohra Aliyeva, John Vijgen

The Journal [Environmental Science Pollution Research](#) (ESPR) from Springer Publisher has the policy to publish special journal issues from selected environmental conferences. IHPA discussed with the editor in chief of ESPR (Professor Philippe Garrigues) if the IHPA Forum and selected contributions from there would be appropriate to be published in such a special ESPR issue. After evaluation of the IHPA Forum topics and abstracts Professor Garrigues invited to submit full papers from the 11th IHPA forum and possibly updated cases from former IHPA Forums to ESPR. As editors for the special issue Gulchohra Aliyeva (from organizing committee of the 11th IHPA Forum), John Vijgen (director of IHPA) and Roland Weber (Ambassador of IHPA and member of Editorial board of ESPR) volunteered as editors for this special ESPR issue. In the next step papers were invited for submission to ESPR and went through the peer reviewing process. Many of the submitted manuscripts have meanwhile been accepted and will be published in the special issue in June 2013.

Some of the articles have already been published online and got open access and can be directly download from the weblinks provided here for free:

In the editorial of the special issue we have given an overview of the overall challenges of organohalogen production and their legacy ([Weber et al 2012](#)). As it was the first time IHPA community published in ESPR one specific article introduces to IHPA and to the IHPA Forum and give also an overview on the 11th HCH Forum in Azerbaijan ([Aliyeva et al. 2012](#)).

Specific articles published online for download are:

- The review by [Torres et al. \(2012\)](#) of lindane/HCH production and formulation sites in Brazil highlights that all these sites are contaminated. The first detailed exposure assessment of a major production site shows that acute health-based thresholds were exceeded. At one site the use of an inappropriate “remediation technology” had actually increased the pollution of the site by formation of unintentionally POPs (including dioxins).
- The demolition of production buildings at a German HCH production site was heavily polluted with HCHs, Dioxins, 2,4,5-T and other pesticides within the city area of Hamburg in Germany ([Weber and Varbelow 2012](#)). A key finding of the comprehensive pollution assessment at this site revealed that the spills from over 50 years of daily operation has resulted in a total soil contamination inventory of approximately 830 tonnes of organohalogenes - including 260 tonnes of HCH.
- A second paper on the same factory details the inventory of the historical deposited POPs wastes and assesses the fate of the wastes deposited in a major landfill ([Götz et al. 2012](#)). The two papers present the most comprehensive inventory and pollution assessment of a pesticide production site which has a dioxin inventory of 333 to

854 kg TEQ¹. They can be used as another example of a best practice approach to inventory the legacy of a pesticide production.

- Another Brazilian case study from [Torres et al. \(2012b\)](#) reports the fate of Dioxin contaminated lime mined from an organochlorine (EDC/PVC) industry landfill site. The lime was then used for neutralisation of citrus pellets, which were subsequently exported for the European cattle feed market. This caused widespread contamination of European milk and dairy products. Landfill mining is likely to increase in the future as natural resources such as metals become more scarce and the case highlights the importance of identifying POPs-containing deposits to ensure that activities such as landfill mining are not allowed.
- The legacy of persistent organic pollutants in Azerbaijan including an assessment of past use and current contamination ([Aliyeva et al 2012](#))
- Also the first comprehensive review of pollution at a 3M PFOS/PFC production plant in Minnesota, USA, was described ([Oliaei et al. 2012](#)). The fate of PFOS waste deposits around production and use sites is a key concern for the Stockholm Convention as they are highly persistent and water soluble so their eventual escape from landfills is almost inevitable.

The following papers on HCH contaminated megasites have been accepted but are not online yet:

- A study of the ground water pollution at a former HCH production site at Bitterfeld/Wolfen in Germany (Wycisk et al. 2012). The study introduces an integrated methodology for assessing the HCH ground water contamination from the contaminated mega-site where approximately 60,000 tonnes of HCH waste isomers were dumped. The modelling covers 45 km² and allows the prediction of future fate of HCH and other groundwater contaminants² to be determined.
- A second case presented in this issue reports on 115,000 tonnes of HCH dumped in Spain with similar groundwater pollution problems. The annual release of HCH to surface waters is estimated to be more than 130 kg (Fernández et al. 2012).

Together with former papers published from IHPA members in ESPR on

- the last operating lindane production facility in India ([Jit et al. 2011](#)); ([Abhilash et al. 2009](#))
- our review on global HCH production ([Vijgen et al. 2011](#)).

we have published a detailed overview on the HCH legacy and related current state of art knowledge.

¹ This amount can be compared with the total dioxin releases of 58.5 kg toxic equivalent (TEQ)/year from 68 countries having established inventories for the Stockholm Convention (UNEP 2011).

² At this site groundwater pollutants have been ranked in order of priority and although groundwater is heavily polluted with HCH the congeners rank 8th (α -HCH), 9th (δ -HCH), 15th (γ -HCH) and 18th (β -HCH) in the priority list emphasising that a comprehensive assessment of all relevant pollutants is necessary (Wycisk et al. 2012)

The case studies IHPA members have published in this special ESPR issue together demonstrate the importance of a thorough assessments of organohalogen production sites as part of the process of updating of the national implementation plans for the Stockholm Convention. The case studies also illustrate the enormous scale of the challenge associated with POPs legacies. Firstly they show that even in industrial countries most 'remediation' undertaken to date involves containment rather than the 'destruction or irreversible transformation' required by the Stockholm Convention for POPs wastes. This approach leaves the pollutants for future generations to manage and is not consistent with sustainable development. Secondly, they show that the cost of securing and monitoring disposal sites is enormous, and an appropriate best available techniques (BAT) destruction of the wastes at the time of their generation would have been a far cheaper solution. This is perhaps the most important message from this Special ESPR Issue. It is of particular relevance for stakeholders currently involved with production of organohalogen (and other persistent and toxic) compounds in developing and transition countries. In cases where production wastes are either disposed of or dumped ([Donath 2012](#)), or treated by inadequate incineration technology leading to dioxin releases and related pollution ([Weber et al. 2008](#)), it is almost inevitable that much more difficult and expensive problems are being stored for the future. To reduce/stop human exposure faced by local residents and to minimise environmental damage, there is an urgent need for best-practice experiences from successful remediation operations to be shared.

Overall it was an excellent opportunity for us and the IHPA community and especially the researchers within IHPA to publish their contributions in a peer reviewed journal for wider visibility of our important topics and work to the global POPs research community and at the same time be rewarded with a publication in scientific journal.

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2. LOW TEMPERATURE SAFE DESTRUCTION OF HCH AND OTHER POPs

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The on-site applications of CTH technology, a new chemical process (reported in [Chemical Engineering](#), Technology Breakthrough Nov 15, 2011) will help solve HCH and other POPs disposal problems across the continents in an acceptable public health, cost-effective and environmentally acceptable manner. The CTH process is a modification of the original BCD process with new chemical reagent that promotes the destruction of POPs and other toxic and hazardous materials in low to 100% concentrations in 30-60 minutes. Most importantly, the destruction is achieved at low temperatures in the range of 130-200° C. Low cost reagents are employed and much of it is recovered and reused. The treated POPs are destroyed to non-detectable levels of less than 1 ppm and products of decomposition are carbon and sodium salts of anions. Decomposition is carried out under non-pressurized conditions or in autoclave low pressurized conditions. The reagent is composed of hydrocarbons, up to 50% water, and catalysts. The presence of water does not interfere with

the destruction of POPs in storage, in soil, other solids, liquids and other matrices. Low operating temperatures, low cost chemicals and fast rates of destruction provides for a practical solution to these long-standing disposal problems.

On-site Destruction by Local Trainees

The preferred method to effectively destroy POPs and other contaminated materials is an autoclave system which retains contents until destruction is complete. Autoclaves are available with capacities to destroy up to 5 tons or more of POPs within 8 hours. A picture of the pilot scale autoclave reactor used in study is shown in Figure 1. A cost-effective solution to the destruction of POPs stockpiles is to have personnel trained to execute the cleanup. The necessary training for implementation of the treatment technology can be provided on-site in Bondtech Corporation's autoclave manufacturing facilities in Salisbury, North Carolina, USA. The trainees would be taught the fundamentals of placing POPs into the vessel, setting computer programmed treatment times, removal of treated contents (POPs, medical waste, other toxic and hazardous materials) and reagent recovery for reuse. Also, trainees will be given, when required, training on the performing GC-MS analysis by BCD Group-//, Inc. As an alternative to training in the USA, equipment can be delivered and training provided in specific countries on how to process POPs and other materials of interest. Countries interested in solving their waste disposal problems are invited to contact us for more information and details.



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3. CARCINOGENIC HCB AT THE BALTIC SEA: A STORY OF PEOPLE OF GOOD WILL

Daniel

This is not just a story of a crime committed on the environment. It's a story of people of good will, who couldn't accept the reality they encountered, and decided to help us change it.

The story begins.

In January 2012, we received an e-mail from a concerned citizen of Gdansk. We called this man "The Watchman" since he was a person who wanted to protect the environment, and local inhabitants, that might have been affected by toxic waste.

"I live in New Port district in Gdansk. There is an incinerator there that takes thousands of tons of waste from Ukraine. Hundreds of trucks come there daily, dropping their loads in every available spot in this facility"- he wrote.

"The Watchman", and other people, who live in the vicinity of this plant kept wondering why waste from Ukraine was transported for over 1000 kilometres to our city. They couldn't find any information about the transports. The piles of waste kept growing every day to an unprecedented size.

"There is so much of this waste, that it is stored all over the place. It is not sheltered in at all, nor protected from rain or wild animals. The odor there is so awful that you cannot describe it.

I tried to inform local authorities, but no one wants to help. They keep ensuring us that everything is in order. For myself and the other inhabitants of our district, I'm asking you for help.

I cannot reveal my identity, because I'm afraid of possible consequences or even losing my employment".

We contacted him, and after confirming the facts, we travelled 550 km to Gdansk where we met "The Watchman" personally. He appeared to be an ordinary man, who just wanted to change the reality that surrounds him. He began his fight long before he contacted us, but was denied any help or attention.

At this point, we had some experience with waste management issues in Poland. Our previous experiences with medical waste treatment proved to us that Polish authorities are not professionally prepared to deal with emergency problems concerning waste management. Assuming that local environmental authorities will say "*Everything is in order; our inspection didn't reveal any breaches*", we decided to gather all the necessary information and evidence on our own. The investigation had begun.

Doubts and Questions

During our first visit we managed to record large bags stored, without any shelter, all around the facility. They were leaking, torn, and covered with snow. This was not a proper "storage". It looked more like a giant garbage dump! These bags covered every available space of the incinerator company. We didn't know what they contained. We kept looking for any marks or signatures to identify what's inside them.

Finally, we found a place just few meters from a fence. Hundreds of bags were piled up there. I walked there with my camera, covering my face with a scarf against the overwhelming odor. We found one of the bags marked with 2 letters and 4 numbers: "UN2729". Below we found a mark, "UA", indicating that it might be from Ukraine.

The first internet search returned with a phrase "**Hexachlorobenzene [UN2729] [Poison]**". Further research revealed: "Toxic! Persistent organic pollutant, carcinogenic, especially dangerous to water organisms, banned according the Stockholm Convention."

We started wondering. How was it possible, to dump thousands of tons of such substances just a few meters from the sea, without any shelter, just in plastic wraps, without any protection?

How was it possible to just dump it there like that? We couldn't find an answer on the Polish internet. Not a single article on HCB, not a word about its origins. We had thousands of tons of one of the world's most dangerous substances lying all around the incinerator in Gdansk, but not a single bit of information available on the matter. Finally, we found a short article about pesticides in leaky bags being returned from the Polish/Ukrainian border. Hexachlorobenzene was one of them.

We confirmed that hundreds of trucks carrying HCB and Pesticides were coming, with permission granted by the Main Inspectorate of Environmental Protection.

At this point, everything looked like a legal transport of dangerous materials to a proper incinerator plant.

Breakpoint

We were stuck. We couldn't prove any irregularities without a strong and reliable expert, who would make us sure that we are right. No one wanted to confirm to us, that what we saw in Port Service might be against the law.

Luckily, we met Mr. Wiesław Stefan Kuc, Former Member of the European Parliament and Member of the Board of IHPA, in Poland, who connected us with Mr. Stanislaw Stobiecki also Member of the Board of IHPA, from the Institute of Plant Protection in Sosnowice.

Just at the point, where we couldn't move forward with our investigation, I received a phone call from Mr. Stobiecki with an invitation to Jaworzno, where I had the pleasure of meeting John Vijgen. After a short conversation with John, I had no doubts anymore. We decided to go to Gdansk and enter Port-Service with our camera.

We were lucky. The president of the Port Service, Krzysztof Pusz, was so confident, that he took us for a walk around the incinerator plant. What we saw there was shocking. At the end of this walk, we asked President Pusz if he knows what kind of waste he stores. He said he didn't know.

However, he kept claiming that he had all the necessary permissions from the proper authorities.

At this point we already knew that with proper supervision from environmental officials this situation wouldn't be possible.

After further investigation we discovered that this facility was not capable of taking that much waste without harm to the environment. Its annual capacity was set for 6000 Mg of highly chlorinated compounds, but it was allowed to bring 12,000 Mg of HCB waste. The facility's storage capacity was set at 450 square meters. When HCB was already dumped there, it was increased to 4,500 square meters, but only on paper. The permission was changed in 11 days. Nobody even checked if this facility could ensure environmentally sound management of this type of waste. All the documents were signed to legalize something that was already highly illegal..

We finished our work and aired 2 reports. However, what disappointed us was the fact that Polish environmental authorities, instead of initiating a solid control, claimed at first that there was no danger, due to the fact that this waste contained just 1.6% of HCB.

Luckily, the prosecutor's office in Gdansk initiated an investigation and decided to check the facts. Their investigation showed that Ukrainian waste consists of much higher percentages of HCB, reaching up to 30%.

After a few weeks, we were contacted by Magdalena Figura, a Greenpeace activist from Gdansk. They didn't trust the official statements, and wanted to check if the facility operated properly, and for pollution from the incinerator. Greenpeace sent their regional toxic expert Gergely Simon from Hungary, to judge the influence of those compounds on environment.

We assisted them taking the samples that were later sent to the Institute of Plant Protection in Sosnowice. Test results of soil taken just outside of the incinerator proved that dangerous waste was already outside of the facility. (Polish standards for HCB, which are very high, were not yet exceeded).

John Vijgen's and Greenpeace's involvement in this case allowed us to receive international support. Journalists from Denmark, Sweden, and Germany contacted us, offering their help disseminating this report in those countries. Thanks to their involvement, the governments of Denmark and Sweden put pressure on Polish authorities. That changed everything. Local environmental authorities were removed, and finally, a serious investigation begun.

Blum Gruppe, German owners of the Port Service incinerator plant in Gdansk, decided to sever ties with former president Mr. Pusz, making Soren Blum the new president of the company. Changes were significant. Waste was covered with tarps, the area secured, and it stopped looking like a dumping site.

Questions arose from the prosecutor's office, the Inspectorate for Environmental Protection, and Greenpeace.

Where are the ashes from incineration?

Was the incinerator capable of decomposing those compounds?

Was it under proper supervision?

Letter from “The Woodsman”

At the time, when officials tried to answer those questions, we received a very worrisome e-mail from a person who called himself **“The Woodsman”**. He claimed that he was a witness to the dumping of partially incinerated waste from the Port Service into a gravel pit.

We couldn’t believe it at first, but after the first meeting, when “The Woodsman” took us to this place, we knew we had to prove it.

After a long conversation with Mr. Tomasz Stobiecki from the Institute of Plant Protection, we received instructions on how to properly acquire soil and water samples.

Equipped with special bottles and containers, we entered the gravel pit. Luckily, we got there unnoticed. At the bottom of the ridge we smelled chemicals and saw partially burnt bags. We then took the samples of ashes and water as instructed.

The results were shocking. Many obsolete pesticides were found in the samples we delivered: HCH (alpha), HCH (gamma), HCB, DDT, and Atrazine. Concentrations of these compounds exceeded the standards for soil and water up to 550 times! We had no doubt where it came from, because those same compounds were found by Greenpeace, right at the Port Service fence.

We aired 2 new reports on this matter. Yet again, all the information we revealed was confirmed. The prosecutor’s office and Inspectorates for Environmental Protection officials confirmed that area in the gravel pit was polluted. The area was secured immediately.

Hereby, I want to thank all the people who were involved, and who are the authors of this change.

Main heroes:

“The Watchman”

“The Woodsman”

You both know who you are.

The people who helped us in our struggle to reveal the truth.

In order of appearance in this story

- Mr. Wiesław Stefan Kuc – Former Member of the European Parliament and Member of the Board of IHPA
- Mr. Stanisław Stobiecki – Institute of Plant Protection – National Research Institute and Member of the Board of IHPA
- Mr. John Vijgen – Director International and HCH & Pesticides Association
- Mr. Tomasz Stobiecki – Institute of Plant Protection – National Research Institute and IHPA ambassador
- Mrs. Magdalena Figura – Greenpeace Poland
- Mr Gergely Simon- regional toxic expert- Greenpeace
- Mr. Maciej Muskat- director of Greenpeace Poland

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4. TOX-CARE PROJECT IN CENTRAL ASIA MANAGEMENT OF HAZARDOUS SUBSTANCES AND GOODS

A SUB-REGIONAL PROJECT FOR CENTRAL ASIAN COUNTRIES: CONSULTING, TRAINING AND DEMONSTRATION-PROJECTS

Boudewijn Fokke, John Vijgen, Maurice Jutz

Project Background

The University of applied Sciences North-western Switzerland together with the Regional Environmental Centre of Central Asia (CAREC) launched in 2004 the implementation of the regional project “**ToxCare**” related to the management of **hazardous substances and goods**. The project is financed by the Swiss Government, Federal Office for Environment, as part of its efforts to foster cooperation and environmental protection within the **GEF Constituency** that **unites Azerbaijan, Kazakhstan, the Kyrgyz Republic, Switzerland, Tajikistan, Turkmenistan, and Uzbekistan**.

The project is aimed at supporting Central Asian countries in their effort to build national as well as local capacities in the area of management of hazardous substances, materials and wastes and is expected to lead to an increase of investments in the waste management sector in Central Asian countries.



Landfill site in Bishkek, Kyrgyz Republic



PCB – containing condenser storage in Tajikistan

Objectives and Methodology

The primary objective of the project is to increase the knowledge and expertise of country representatives from the Central Asian region in the area of management of hazardous substances, materials and wastes. The project includes two major components: (1) the training program in the area of management of hazardous waste and chemical substances, and (2) implementation of pilot projects in cooperation with organizations (industries, municipalities and institutions) interested in the development of hazardous waste management systems and/or in implementation of a technical project on the handling of hazardous substances and goods.

Obsolete pesticides management in Tajikistan: mission 2012

In 2009 the ToxCare project organised a workshop in Dushanbe on Persistent Organic Pollutants (POP's) and obsolete and POP's pesticides and PCB management. In parallel TAUW (NL) and its consortium partners IHPA (DK), Witteveen+Bos (NL) and

Milieukontakt (NL) analysed with the support of the World Bank the situation of the contamination through POP and obsolete pesticides in the southern part of Tajikistan. As there was one major remaining obsolete and POP's pesticides contaminated site in the northern part of Tajikistan, close to Kanibadam, to be analysed, it was decided to organise a common mission to this place in 2012.

The major objectives of the mission were:

1. A five day training for eight local experts in contaminated site assessment, risk assessment and burial site management at the obsolete and POP's pesticides landfill Kanibadam
2. Presenting in a national workshop in Dushanbe the outcomes of the risk assessment in Kanibadam and developing a national implementation strategy in accordance with the National Implementation Plan (NIP) for the Stockholm Convention on POP's in Tajikistan.

The mission was planned and executed in a joint project with the following partners:

- University of Applied Sciences Northwestern Switzerland, Prof. Maurice Jutz, (lead)
- IHPA (DK), Mr John Vijgen, TAUW (NL), Mr. Boudewijn Fokke, Witteveen+Bos (NL), Mr Marten van der Wijk and Ms. Ingrid van der Rijk
- Committee for Environment Protection under the Government of the Republic of Tajikistan, Mr Salimov, Talbak, Chairman
- FSCI, Chair of Public Association "Foundation to support civil initiatives" (TJ), Ms Muazama Burkhanova, PhD (lead local organisation and project support)

Kanibadam POP and obsolete pesticides Polygon: history



During the Soviet Era huge quantities of pesticides were imported to Tajikistan and bordering countries to be used by the community farmers. The main crop was raw cotton. The problem dates back to the 1950s and 1960s, when the import and use of pesticides, in what were then Communist countries, was increased in order to raise agricultural production. Pesticides were distributed to farmers nearly free of charge, leading not only to overuse, but also to unsound management of residuals and packaging materials. The assortment of used pesticides included chemicals which later were included in the POPs-list of the Stockholm Convention such as: Aldrin, Dieldrin, Heptachlor, Endrin, Hexachlorobenzene, Toxaphene and DDT. These plant protection chemicals accumulated in the environmental components of the densely populated, irrigated territories of the Republic of Tajikistan and became serious sources of concern. Therefore also the Soviet banned

the use of obsolete and POP's pesticides and constructed all over their territories polygons with sarcophagi to permanently store the banned pesticides. After the collapse of the Soviet Union these well-guarded and maintained polygons were left orphaned. These polygons were and are opened (waste mined) by mostly young men to sell these pesticides to poor farmers. Poor farmers use these as alternative for the officially approved expensive pesticides. These waste miners are exposed to toxic waste and have ruined these sites resulting in an enhanced dispersion of these toxic chemicals in the surrounding environment. Nowadays the environmental challenges caused by these past actions, may contribute to serious health and environmental pollution risks in Central Asia. Pesticide diffusion to the environment knows no borders and given the transnational nature of this issue, the governments of Kyrgyzstan, Uzbekistan and Tajikistan need to cooperate and coordinate on their environmental security together to find best solutions.

Kanibadam polygon is located in Sugd region in 7 km from Kanibadam city in southeast direction. Territory of this polygon is about two hectares. About 9,000 tons of POP and obsolete pesticides have been buried on the site in the past. The relief of this territory is hilly with a dendritic drainage pattern. The drainage gullies are most of the year dry. The surface of the hillocks and slopes are stony (dessert pavement) due to wind erosion of the finer soil particles. The soil texture is silty / clayish till at least up to 30 meter. The soil has a low permeability. Therefore most of the rainwater is drained by runoff causing the all kind of soil erosion. The groundwater at the polygon is deeper than 30 meters minus surface.

The territory of this polygon is located hypsometrically, 275 meter higher then Kanibadam city with the inclination of relief to the city, where there are two main canals and seven groundwater wells of various purposes. Availability of dry ditches, two of which have their roots in the burial places, stipulates in great extent the flowing of sediments. From geological point of view the site contains mudstone stream sediments with pebbles, boulders and gravel. Such layer is characterized by high penetrability for precipitations with components of various substances, including obsolete and POP's pesticides.

Activities under the mission 2012

The mission of 2012 was carried out to:

- Assess the Kanibadam polygon together with the stakeholders in Kanibadam to:
 - Build awareness of the environmental site conditions and its impact
 - Build capacity on the site assessment and environmental sound site management
- Share the site assessment results with the decision makers in Dushanbe to:
 - Build awareness of the environmental site conditions and its impact
 - Create a sense of urgency to act now to improve the environmental conditions
 - To discuss to short term simple measures eliminating the direct risks

The expected results are to:

- Gain a better understanding of the Kanibadam site conditions
- Identify knowledge gaps to design short term mitigation measures addressing the direct risks
- Raise the awareness that fencing, runoff control etc. are simple and effective environmental risk reducing measures
- Create a steppingstone for the local and national agencies to turn these sinks in sites that are maintained and controlled as long as there is no means available for final disposal of the obsolete and POP's pesticides.

Site assessment training

The training was a theoretical and practical training in site assessment. The four following phases of environmental sound site management were discussed:

- Phase 1 Preliminary site assessment
- Phase 2 Site assessment
- Phase 3 Site management
- Phase 4 Site monitoring and aftercare



Group session on making a Conceptual site model Instruction using Personal Protective Equipment



Site assessment results

Nowadays, the environmental condition of the Kanibadam polygon is extremely bad. Due to lack of fencing and guarding (site management) sarcophagi are waste mined and chemicals migrate off site. Trespassers (mostly children) with cattle, flora and fauna are exposed to toxic waste.

At the Kanibadam site buried pesticides are manually mined and using backhoe. All over the territory empty metallic and plastic containers can be found. The scattering of obsolete and POP's pesticides, leading to the soil contamination of polygon territory, is observed. High temperature during summer periods and intensive solar radiation contribute to decomposition of pesticides. Frequently recurring local winds and windstorms contribute to transmission of harmful substances and objectionable odour from the burial place to great distances. This Kanibadam polygon is seen as an environmental hotspot. It is a leaking sinks.



On-site training with PPE



Soil sampling



Hotspot sampling



Certification ceremony

Erosion control measures such as terraces, a sluice, built in former time in this polygon for reducing run off; collecting rain and controlling gully erosion are destroyed. The soil erosion processes contribute to the contamination of low territories with obsolete and POP's pesticides.

Various soil samples are taken for chemical analyses and the fieldwork results and chemical analytical results are used to update the Conceptual Site Model (CSM). With the CSM the knowledge gaps for designing short term mitigations measures reducing the direct risk are identified. These results are reported in a Kanibadam site assessment report of Witteveen+Bos and Tauw.

Workshop in Dushanbe

The two day workshop was held in Dushanbe to give the representatives of the relevant ministries and the staff of the Vashkh polygon the opportunity to participate. The workshop started on October 29 and was closed the day after.

The results of the Kanibadam training were presented by trainees. The status of the implementation of NIP on the POP pesticides Stockholm Convention was shared by Ms. Bobritskaya Ludmila Sergeevna. Gaps and hurdles for site rehabilitation were inventoried in group sessions and plenary discussed. The overall conclusion was that implementation of the necessary measures elaborated in the NIP and mentioned in the World Bank report came to a standstill because the whole package of mitigation measures reported in the World Bank report is as a whole finally not feasible for Tajikistan to implement under the current financial regime of the World Bank.

The outcome of the discussion was used to write a road map with the focus on simple and effective short term measures from the above mentioned package addressing the direct risks.

The final result of the workshop is a resolution conveying the message that immediate appropriated short term measures reducing the direct environmental risks due to the obsolete and POP's pesticides should be taken for the:

- Polygon in Vashkh and Kanibadam
- Former community farms with buried stocks obsolete and POP's pesticides
- Sites with remnants of stocks of obsolete and POP's pesticides

Immediate actions to be taken

The outcomes of the risk-assessment during the ToxCare mission in 2012 are summarised in an action list attached to the above mentioned resolution. These actions should be implemented as soon as possible in order to protect the local population and environment from further negative impacts of emissions of the polygons and other obsolete and POP's pesticides contaminated sites. The proposed short term actions are simple and can be implemented with local available material and are not costly. Examples of these measures are:

- Reinstall site management
- Install proper fencing and warning signs
- Inform local population about the danger of
- Using obsolete and POP's pesticides
- Entering the POP and obsolete pesticides contaminated sites
- Create local commitment and engagement in order to create sustainability by establishing local ownership by:
 - Implementing construction measures with local craftsmen and workers
 - Establishing a local defence organisation that will take care of construction works implemented and take access control and guards
- Prohibit cattle breeding in the surroundings

Because of the low precipitation and the deep groundwater level the workshop participants are confident, that these simple actions can be effective. But express that the other necessary mitigation measures are still to be prepared and planned while the short term measures are containing the site.

The remaining mid-term mitigation measures are:

1. Monitor migration of the pollution to be aware of the effects of the short term measures
2. Capping the polygon preventing infiltration of rainwater and migration of contaminants to deeper soil layers and finally to the groundwater
3. Implement soil erosion control measures preventing off site migration of contaminants

The remaining long term mitigation measures are:

1. Repack and dispose all the POP and obsolete pesticides
2. Remediate the contaminated soil

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5. SILENT SNOW AROUND THE WORLD

Natascha Korvinus

This fall, it was exactly fifty years ago since marine biologist and conservationist Rachel Carson published the book 'Silent Spring', an unsettling insight in how our environment becomes increasingly polluted by the use of pesticides like DDT.

That was 1962. Today, little has changed unfortunately and the results of years and years of pesticides in our environment have started to show. Dutch filmmaker Jan van den Berg and Pipaluk Knudsen-Ostermann, a young Inuit woman from Greenland, documented the devastating effects in their documentary 'Silent Snow', which premiered early 2011. In Greenland, where they filmed most of the footage, persistent organic pollutants accumulate and cause serious health problems for the local inhabitants. The pollutants are carried North by ocean currents and the wind. Research has proved that children with high levels of pesticide in their blood have a lower IQ and for adults they cause fertility problems and cancer. The documentary shows Pipaluk as she travels around the world, looking for the sources and solutions for the chemical pollution.

Inspired by all the people interviewed in the film, who were fighting for their environment, Van den Berg started the Silent Snow project: a platform to create awareness of this problem, consisting of 2 documentaries, a website and educational material for schools. The Silent Snow project believes that knowledge is the start of improvement. Its goal is to inform as many people as possible on the dangers of pesticide use and start a discussion on how to improve for our future generations.

In September 2011, Silent Snow was successfully received at the 11th International HCH and Pesticide Forum in Gabala, Azerbaijan. Since then, the film was shown in over 35 countries and won several international awards at film festivals like the International Mountain Film Festival in Domzale, Slovenia, Envirofilm in Slovakia, Festival de Cine y Derechos Humanos and the International Environmental Film Festival (FICMA) in Barcelona, Cine'eco in Portugal, and the Cinema Verde Environmental Film Festival, Gainesville FL. USA. Van den Berg also brought the film to Dutch, German and Belgian cinemas, where the film was often followed by a debate with professionals. Educational projects started in, among others, Costa Rica, one of the countries in the world that uses the most pesticides. High school and secondary school students were given workshops on the dangers of pesticides and informed about safer alternatives. After being screened this winter in Argentina, France and San Francisco, Van den Berg is now on his way for an exciting range of screenings at the Karama Human Rights Festival in Jordan, which will be in fact the Middle Eastern premiere.

A sequel to the successful film project is on its way; No Fight No Victory, a documentary about the practice of land grabbing, food security and the value of small family farming. Once again, Van den Berg teams up with a powerful woman (this time its Brazilian journalist and Capoeirista Sara Abreu) and travels around the world to capture the effects of practices of large multinational companies on the environment of average local people. The first short pilot of the film project got loads of support on Lisbon Film Festival and the Rio +20 UN Conference on Sustainable Development.

For more information, please visit: www.silentsnow.org and www.nofightnovictory.org

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6. TRASHED: A DOCUMENTARY FEATURE FILM

John Vijgen

Trashed: A documentary Feature Film by Blenheim Film with Jeremy Irons. Academy winning actor Jeremy Irons is no longer a stranger to taking centre stage. But his next role in a documentary highlighting solutions to the pressing environmental problems faced by us all, could well be his most important yet.

This movie has been made because there are so many people who feel strongly the urgent need for the problem of 'waste' and 'sustainability' to be addressed. There is an equally urgent need for the most imaginative and productive solutions to this troublesome subject to be understood and shared by as many communities as possible throughout the world.

This is where movies can play such an important role, educating society, bringing 'difficult' subjects to the broadest possible audience.

Please go to the link below to see the trailer of the movie:

<http://www.trashedfilm.com/>

<http://www.gracelinks.org/blog/1199/trashed-the-film-a-review>

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7. NEWS AND EVENTS

Bala Sugavanam

1. Malaria Vaccine loses its potency.

The results of the Phase III trial of the malaria vaccine RTS,S/AS01 are greatly disappointing. The efficacy of the vaccine in preventing clinical and severe malaria in infants aged 6 to 12 weeks is much less than what was expected. In fact, the level of protection offered is nearly half of what was reported last year in older children (5 to 17 months).

What is more disappointing is the drastic reduction in efficacy during the 12-month follow-up period. The efficacy was “higher at the beginning than at the end of the follow-up period” found the study, published a few days ago in *The New England Journal of Medicine*. If the protection efficacy does wane with time, several factors may make younger infants more vulnerable than older children, the paper suggests.

The vaccine has been developed primarily for infants and children in sub-Saharan Africa. The reasons are obvious: of the 216 million cases of malaria and 6,55,000 malaria-related deaths in 2010, a majority of deaths took place in African countries.

Target 2014

In that sense, the latest results do dampen the high spirits seen last year. The last word is yet to be pronounced. One has to wait till 2014 when the complete data is analysed and the outcome is known. Only then can it be said with any certainty if the vaccine will indeed be included for use in the African countries as per WHO recommendations. WHO had taken the unusual decision last year when it had “recommended” its use in the African countries as early as 2015.

(Source “The Hindu, November 14,2012)

2. Indian paint majors have toxic double standards: NGO

Indian paint majors are including dangerously high levels of lead in their products, according to a study conducted by some non-governmental organisations in India, Nepal and Bangladesh.

For example, Asian Paints' Golden Yellow shade of paint contains only 90 ppm (parts per million) of lead in India, meeting international standards. In Nepal, it contained 190 ppm of lead, exceeding global safety norms, but meeting Indian standards. However, in Bangladesh, the same shade of paint contained a whopping 43,600 ppm of lead.

Similarly, Berger Paints' Golden Yellow paint has 17,200 ppm of lead in India – well above any safety limits – but almost 2.12 lakh ppm in Nepal. In Bangladesh, the same shade contains 122,000 ppm of lead.

The claim that top paint manufacturers are marketing toxic products in countries with laxer standards - even while phasing them out in India - is found in the report titled “Double Standard - Investigating Lead Content In Leading Enamel Paint Brands In South Asia”.

Collaborative effort

The report was a collaborative effort by Toxics Link, India, the Center for Public Health and Environment Development, Nepal, and the Environment and Social Development Organization, Bangladesh.

The study examined 27 paint samples of common brands from Nepal, India and Bangladesh for their lead content. Apart from Asian Paints and Berger, which have manufacturing facilities in Bangladesh and Nepal, the study also examined samples from ICI and Nerolac, which largely export their products from India to neighbouring countries, and did not show such a wide differential.

In a statement, Berger Paints India insisted that it has switched to lead-free formulations, and suggested that the study's results may have come from older samples. The study shows that the samples had manufacturing dates between February 2009 and July 2010.

However, Berger admitted that products in neighbouring countries still contained lead. “It is expected that Berger will be able to totally change to lead free formulations in Nepal in a short span of two to three months,” said the statement, adding that Berger Bangladesh expects to be lead-free within six months.

In recent years, lead has been phased out or restricted in many consumer products due to serious health impacts, especially in children and fetuses. The United States has enforced a lead limit of 90 ppm in paint. While India does not have any mandatory norms, the voluntary limit has been set at 1,000 ppm. Neither Nepal nor Bangladesh have any safety standard, mandatory or otherwise.

The study found that 63 per cent of the samples exceeded the American safety limit, while 44 per cent exceeded the Indian limit.

Urging the region's multinational paint majors to end their toxic double standards, the NGOs behind the study also called on governments to swiftly bring enforceable standards to safeguard the health of their children.

Source The Hindu, March 21, 2012.

8. TOXIC SCARE: YELLOW SMOG BLANKETS BUENOS AIRES AFTER CHEMICAL CONTAINER EXPLOSION

Mikhail Malkov

PC, PPRD-East EU-funded project

Original published: 06 December, 2012, 18:36

<http://rt.com/news/chemical-buenos-argentina-exlosion-440/>

A chemical container has exploded in Buenos Aires, Argentina, blanketing the capital in a huge toxic cloud. Residents are being told to stay inside while a mass evacuation from the area surrounding the blast has been ordered, local media report.

The container filled with pesticide caught on fire after a chemical reaction between its contents and exploded. As the flames were put out, yellow smoke billowed out of it. City officials believe the container may have been transporting garbage.

"The pesticide presents a low level of danger and affects the respiratory tract," said Sergio Berni, the national Security Secretary, as quoted by C5N television channel.

The incident hit the city's Port Terminal 4 early in the morning. Several buildings in the port and the surrounding area were evacuated, according to Buenos Aires's Civil Defense. Residents in near-by areas were told to stay indoors, close their windows and turn off air conditioning.

By 9:00am local time a strange heavy odor, described as similar to burnt oil or a gas leak, hit the city causing some metro lines and the city's domestic airport to suspend operations.

A public health and security emergency has been declared by the country's Security Ministry in the wake of the incident, reports Buenos Aires Herald. The ministry urged the public to call 107 in the event of any intoxication symptoms.

Some residents complain of eye irritation and breathing problems and have to move along the streets covering their faces with masks and handkerchiefs, but officials say *"the situation is under control"* now.

For details please go to the link below:

<http://rt.com/news/chemical-buenos-argentina-exlosion-440/>

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9. CHEMICALS IN FURNITURE HARD TO AVOID

Md. Mahbubar Rahman

Original by Stephanie M. Lee. 2012. Chemicals in furniture hard to avoid. SFGate. San Francisco Chronicle. Published on Wednesday Dec 12, 2012 7:59 AM PT

<http://www.sfgate.com/default/article/Chemicals-in-furniture-hard-to-avoid-4072857.php>

Toxic flame retardants pervade the nation's households, especially California's, and little can be done to keep them out of our bodies, two new scientific studies find.

The studies, published Wednesday, arrive as state and federal lawmakers are pushing for stricter regulations on potentially hazardous chemicals that go into furniture, electronics and other products.

California has been a prominent force behind fire retardants because of a 1975 state law, the only one of its kind in the nation, which requires foam in furniture to withstand a 12-second open flame without catching on fire.

Gov. Jerry Brown now wants regulations to reduce the number of chemicals permitted in furniture, but experts say the law has already done damage nationwide. In a bow to California's powerhouse economy, they say, manufacturers saturated furniture with flame retardants.

Consumers rarely know what chemicals are in the furniture products they buy because they are considered trade secrets. As a likely result, levels of flame-retardant chemicals in California children are among the world's highest, according to 2010 studies.

Some fire-retardant chemicals were banned and phased out in 2005. But the new studies, which were conducted separately and appear together in the journal *Environmental Science and Technology*, add to a growing body of research that shows that homes have not become significantly safer.

One of the new studies, led by UC Berkeley and Duke University scientists, found toxic or untested flame retardants in most of the couches they examined from across the nation. The other study also found that hazardous and potentially hazardous chemicals in dust from couches and other products pervaded 13 of 16 homes tested in Northern California. Both studies turned up substances that, when inhaled or ingested, are linked to cancer, changes in DNA, hormone disruption, lowered IQ, decreased fertility, hyperactivity and other serious health issues.

Chemicals in all couches

Anyone who wants a sofa will find it virtually impossible to avoid these chemicals, experts said.

"You really do not have a choice to buy furniture without flame retardants anywhere in the country," said Arlene Blum, co-lead author of the couch study. Blum is a visiting scholar at UC Berkeley and executive director of the Green Science Policy Institute, a health watchdog group in Berkeley.

The studies "point out these two essentially glaring, frustrating situations in which we cannot make our own choices as consumers, and where we cannot fully understand very

broad, large-scale decisions in marketing and manufacturing that might affect our future before they happen," said Barbara Cohn, who directs the Public Health Institute's Child Health and Development Studies in Berkeley and was not part of the studies.

For the couch study, Blum and her team studied chunks of foam from 102 sofas that were bought between 1985 and 2010, sent to them by people from various regions of the nation.

Toxic or untested flame retardants were in 85 percent of the couches overall and in every couch bought in California since 2005. There was no easy way for consumers to know, because California law does not require that furniture be labeled for flame retardants. Researchers also compared couches purchased before 2005, the year a main flame retardant, PBDEs, was banned, with those purchased afterward.

Even that ban did not significantly reduce hazardous exposure in households, the researchers found, because PBDEs remain in humans for up to 12 years after exposure and many couches bought more than seven years ago are still in use.

In addition, when the ban took effect, PBDEs were seemingly replaced by another chemical, chlorinated Tris, the researchers found. It was detected in half of the couches purchased after 2005 that they studied.



Sue Chiang sits in her family's Oakland home with children Elena Pazy Miño, 2, and Gabe Pazy Miño, 4. Photo: Lance Iversen, The Chronicle / SF



Elena Pazy Miño age 2 sits on the family coach with her cat Jadzia, Elena's mother Sue Chang, is the pollution prevention co-director at the Center for Environmental Health in Oakland Monday Nov. 26, 2012. Chang and CEH are leading the fight against flame-retardants that are everywhere in the households including the family sofa and bodies of Americans, according to a pair of prominent scientific studies to be published Wednesday. Photo: Lance Iversen, The Chronicle / SF

Changes to DNA

The dangers of chlorinated Tris are well-known. The chemical was removed from baby pajamas in 1977 when it was found to change the DNA of people exposed to it, and California now lists it as a carcinogen.

Researchers also found evidence of a fire retardant known as Firemaster 550, which showed up in larger amounts in the newer couches than the older ones. Firemaster 550 has been shown to be an endocrine disruptor in animals, but its health effects in humans are largely unknown.

The findings underscore the likely dangers of replacing one chemical with another, the scientists said.

"Any new chemicals that we're introducing, we're dealing with another chemical, or class of chemicals, with long half-lives that we haven't studied in terms of health consequences," said Brenda Eskenazi, director of UC Berkeley's Center for Environmental Research and Children's Health, who was not part of Blum's study.

Until recently, Sue Chiang, 42, had never heard of Firemaster 550.

Five years ago, she grew worried that her old, dusty couch would cause allergies, so she sold it. She and her husband bought a burgundy microfiber sofa at J.C. Penney and plunked it in the living room of the Oakland house they moved into in 2008.

The couple's two kids, a 4-year-old boy and a 2-year-old girl, watch TV on it and build forts with the cushions. When they go to bed, Chiang and her husband sit on it and work on their laptops.

But the couch became cause for alarm when Chiang, a pollution prevention co-director at the Center for Environmental Health in Oakland, learned of Blum's study. She sent in a chunk of the foam, and the scientists found elements of Firemaster 550.

"I was worried about this old couch and allergens," Chiang said. "I didn't even think about chemicals."

A homeowner's experience

Sylvia Hopkins, 68, of Richmond thought she knew about chemicals.

In 2006, scientists from the Silent Spring Institute, an environmental group in Massachusetts, visited Hopkins' home and those of 15 others in Richmond and Bolinas to study flame retardants in house dust.

Their study came about because U.S. adults are primarily exposed to PBDEs through house dust, and those chemicals are disproportionately high in California's homes and its residents.

The investigators returned in 2011 to see what had changed. Hopkins had given away an old couch, so she figured her dust would be safer.

To her shock, the scientists found higher levels of some flame retardants but couldn't explain why. "I don't have things in my house that I consider to be polluting," Hopkins said.

Researchers found higher-than-expected levels of two state-listed carcinogens, including chlorinated Tris, and increased levels of Firemaster 550 components. Thirteen of 16 homes had at least one flame retardant that exceeded a federal health guideline.

Those findings mirror the patterns Blum saw in sofas.

"Our study says those chemicals don't stay in the couches, they come out into house dust, and we're finding them at levels of health concern," said Julia Brody, one of the study's authors and executive director of the Silent Spring Institute.

The American Chemistry Council responded to the studies by defending flame retardants, saying they can buy valuable escape time if a fire breaks out.

"There is no data in (Blum's) study that indicate that the levels of flame retardants found would cause any human health problems," the organization said, and the dust study "should not be interpreted to indicate that the levels detected would have any effects on human health."

That reassurance, however, isn't sufficient for people like Hopkins.

"We have no way of knowing what they're doing to us," she said.

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**10. DANGEROUS FOR KIDS' PYJAMAS, SAFE FOR SOFAS?
FLAME RETARDANT REMOVED FROM SLEEPWEAR AMID HEALTH CONCERNS IS
INCREASINGLY USED IN FURNITURE**

Md. Mahbubar Rahman

Original by Michael Hawthorne, Chicago Tribune reporter 11:00 p.m. CST, November 27, 2012

<http://www.chicagotribune.com/news/watchdog/flames/ct-met-flames-couches-20121128,0,2804431,full.story>

More than three decades after manufacturers stopped making children's pyjamas with a flame retardant suspected of causing cancer, new research suggests the same chemical has become the most widely used fire-resistant compound in upholstered furniture sold throughout the United States.

The study, led by Duke University chemist Heather Stapleton, found that foam samples from more than 40 percent of 102 couches bought from 1985 to 2010 contained the chemical, known as chlorinated tris or TDCPP. More than half of the couches bought since 2005 were treated with it.

Overall, 85 percent of the couches contained flame retardants, which escape over time and settle in household dust that people ingest, especially young children who play on the floor and frequently put their hands into their mouths. Several of the flame retardants detected in the new study have been linked to hormone disruption, developmental problems, lower IQ and impaired fertility.

The Tribune's Playing With Fire series, published in May, revealed how flame retardants are commonly found in American homes as a result of a decades-long campaign of deception by the tobacco and chemical industries. Among other things, the leading manufacturers of flame retardants created a phony consumer group that stoked the public's fear of fire to protect and expand the use of their chemicals in furniture, electronics and other products.

The new study, to be released Wednesday in the peer-reviewed journal *Environmental Science & Technology*, is the first to outline how widespread flame retardants have become in furniture and suggests their use has increased in recent years. Researchers also tracked how the chemical industry has shifted over time from one troublesome flame retardant to another and has introduced new, chemically similar compounds with little or no study about potential health effects.

Another new study in the scientific journal found that chlorinated tris was the most commonly detected flame retardant in dust from the homes tested.

"People just don't have a choice now," said Arlene Blum, a University of California at Berkeley chemist and co-author of the couch study. "These chemicals are in everybody's furniture and pose serious health problems."

Earlier research by Blum led to the voluntary removal of chlorinated tris from children's pyjamas in the late 1970s. Because the chemical wasn't formally banned, companies can legally add it to other products without informing government regulators or the public.

Responding to questions about the couch study, the American Chemistry Council, the chief trade group for the chemical industry, said flame retardants in furniture help save lives.

"There is no data in this study that indicate that the levels of flame retardants found would cause any human health problems," the group said in a statement.

The trade group also cited an analysis of a government-funded study that it said shows "flame retardants in upholstered furniture can provide valuable escape time" from house fires.

However, studies by the U.S. Consumer Product Safety Commission and Underwriters Laboratories found that flame retardants in household furniture cushions provide no meaningful protection from fires.

Two of the world's leading manufacturers of the chemicals, Louisiana-based Albemarle Corp. and Israel-based ICL Industrial Products, have pledged to stop making chlorinated tris after fiercely defending its use for years.

Albemarle said it no longer markets chlorinated tris and is in the process of shutting down its production of the flame retardant and related chemicals. ICL said it will stop selling chlorinated tris for use in furniture and children's products Jan. 1 and stop making it altogether by the end of 2015. Other overseas companies still make the flame retardant.

The announcements by Albemarle and ICL come after chemical manufacturers in October 2011 failed to block California from officially listing the flame retardant as a carcinogen and moving to require warnings on products that could expose people to unsafe levels. Other major health organizations already had concluded that the chemical is a cancer risk, including the World Health Organization, the National Cancer Institute and the National Research Council.

In a statement, ICL said its decision reflected the company's "commitment to market leadership, innovation and responsiveness to market conditions and customer needs." Albemarle called its move part of an effort to restructure "underperforming assets."

More changes could be on the way. In the wake of the Tribune series, California Gov. Jerry Brown is pushing to overhaul his state's 37-year-old flammability standard for residential furniture, which if adopted could lead to a dramatic reduction in the use of chemical flame retardants.

For now, furniture manufacturers say, the cheapest way to comply with the California standard is to add flame retardants to the foam cushions of couches and upholstered chairs sold in every state. California officials and the CPSC have concluded that a more effective solution is using upholstery that resists smoldering cigarettes — the leading cause of furniture fires — without requiring the use of chemical flame retardants.

In the new couch study, researchers collected foam samples from volunteers who had been solicited for help at public meetings or had signed up for mailing lists about toxic chemicals. The authors said that while the sample size was large, it might not be representative of the U.S. as a whole.

Furniture made with flame retardants sometimes features a label stating that it complies with Technical Bulletin 117, the California flammability standard. However, the study found that nearly two-thirds of the couches without a label still contained the chemicals.

The new research provides evidence that the chemical industry started relying more heavily on chlorinated tris in 2005, when the sole manufacturer of another flame retardant known

as penta agreed to stop making it in response to studies that revealed it builds up in people and triggers neurological problems in children.

Of the couches bought before 2005, 39 percent contained penta and 24 percent contained chlorinated tris. More than half of the couches bought since 2005 contained chlorinated tris.

Officials at the federal agency that regulates industrial chemicals, the Environmental Protection Agency, say they are largely powerless to do anything about chlorinated tris and other flame retardants. The EPA has cited industry's continued use of chlorinated tris as a stark example of why it backs a sweeping overhaul of the nation's chemical safety law, the 1976 Toxic Substances Control Act.

Existing law allows chemical companies to put their products on the market without proving they are safe and makes it practically impossible to ban chemicals after health effects are documented.

The couch study suggests it is increasingly difficult to avoid flame retardants in furniture. More than a quarter of the older couches tested either did not contain the chemicals or had only trace amounts. After 2005, all but about 7 percent of the couches contained flame retardants.

If a newer couch didn't contain chlorinated tris, the study found, it likely was treated with another flame retardant known as Firemaster 550, which the EPA initially described as a safe, environmentally friendly alternative to penta. It was found in 18 percent of the newer couches tested.

The EPA now considers Firemaster 550 a potential health threat, citing widespread exposure from household products.

Philadelphia-based Chemtura, the manufacturer of Firemaster 550, says it is safe. But the EPA became more concerned after a recent study by Stapleton and Heather Patisaul, a toxicologist at North Carolina State University, showed that small doses triggered obesity, anxiety and developmental problems in baby rats.

In the new peer-reviewed study of flame retardants in household dust, researchers from the nonprofit Silent Spring Institute found chlorinated tris in all 16 California homes tested. Other flame retardants found in house dust included chemicals in Firemaster 550 and nearly 40 other compounds.

The researchers also found penta, the flame retardant that was phased out in 2005. The discovery suggests that Americans can continue to be exposed to chemicals even after manufacturers stop making them, in part because people typically own furniture for years and many flame retardants are designed to be long-lasting.

"These chemicals just shouldn't be in household products," said Ruthann Rudel, the non-profit group's research director. "By now it doesn't take a rocket scientist to realize they are bad for us."

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11. 32ND INTERNATIONAL SYMPOSIUM ON HALOGENATED PERSISTENT ORGANIC POLLUTANTS–DIOXIN 2012

Roland Weber and Mahbubar Rahman

The 32nd International Symposium on Halogenated Persistent Organic Pollutants–Dioxin 2012 Cairns, Australia. For the first time in the Symposium's history, it was held on the fifth Continent. The Symposium provides for science professionals and students from around the world an interdisciplinary forum for communicating scientific advances and emerging issues of concern to the environment and human health. About 600 scientists and governmental stakeholder met and presented approx. 500 abstracts in five parallel sessions.

All papers are available online in a searchable database (for free).

http://www.dioxin20xx.org/ohc_database_search.htm

In this database all papers from the last POPs 20 Symposium years can be searched and download.

The exciting program covering a broad range of core topics on analytical and environmental chemistry, environmental and human toxicology, epidemiology, exposure assessment, as well as regulation, risk assessment and management. Important global and current regional issues were also a focus of Dioxin 2012, and included areas such as emerging contaminants, marine and eco-toxicology and chemical regulation and policy.

Some exciting contributions worth reading came also from IHPA members including:

- A paper highlighting that modern pesticides substituting POPs such as Imidacloprid have highly negative effects on bees: Rahman M, Weber R, Tennekes H, Sanchez-Bayo F (2012) Substitutes of persistent organic pollutant (POP) pesticides in Bangladesh and the need for a sustainable substitution process. *Organohalogen Compounds* 74, 1178-1181 <http://www.dioxin20xx.org/pdfs/2012/1302.pdf>.
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The tropical city of Cairns, the award winning Cairns Convention Centre as the main venue, 600 environmentally concerned and dedicated people and two excellent chairs made the Conference to a great success and fun.

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12. THE “TICKING TIME BOMB BOOK”, IN GEORGIAN

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The book named “A Ticking Time Bomb & Why We Have to Act Now” published by JOHN VIJGEN and CHRISTIAN EGENHOFER in 2009 is now available for Georgian readers. The Georgian affiliate of IHPA with the support of the EECCA project has published the Georgian version of the book for local dissemination. The book is a professional translation of the original version and depicts the figures of OP inventories in the EECCA countries. The book is aimed at raising the public awareness in order to minimize the risk and get millions involved in fighting against POPs and OPs. Local info dissemination and a special presentation accompanied the book presentation. As a post-publishing activity, the authors of the interpretation and other Georgian affiliates started the collection of the feedback, which will be compiled and analyzed by the time when next newsletter of IHPA is published.

Publishing of the Georgian version of the book has been implemented in the framework of the Micro grant project launched in Georgia since Aug 2012. This project is part of the GEF-Green Cross-US AID Funded Project for “Capacity Building on Obsolete and POPs Pesticides in Eastern European, Caucasus and Central Asian Countries (EECCA). The project aims at rising the public awareness to the OPs and POPs removal and supporting the interests of governments, self-governments, NGOs, media, and society in fighting the problem occurring in eight regions out of fourteen in Georgia. TV stories, newspaper articles, social media activities and working with local population via self-governments are the tactical steps project has been implementing since the very launch of the micro-grant project.

In addition to the above, the IHPA Georgia Website will be available by the end of 2012 for Georgian and international viewers. www.ihpa.ge will cover: the latest news globally regarding OPs and POPs; about the IHPA and its activities worldwide; strategies and guidelines for diminishing the risks; facts & figures section of the web will give researchers and media the primary and secondary data coming from either field works, or from official structures; the website will give short hints and links to all relevant sources. The facebook page of IHPA Georgia supports the promotion of the web and the activities regarding OP and POPs.

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International HCH & Pesticides Association



FAO EC Pesticides project kicks-off with a first Steering Committee meeting in Moldova

Deputy Minister of Agriculture of Georgia Mr. Malkhaz Akishbaia: "This steering committee meeting is different from many other international meetings that I attended. Here is a real drive and commitment to tackle the issue of obsolete pesticides in the region."

On 27 and 28 September 2012 the main stakeholders of a new EC / FAO project Improving capacities to eliminate and prevent recurrence of obsolete pesticides as a model for tackling unused hazardous chemicals in the former Soviet Union met for the first programme steering committee meeting to review project implementation in 2012. Of the twelve former Soviet republics included in the project ten national delegations travelled to Chisinau, Moldova for the two-day meeting. National representatives from Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Ukraine and Uzbekistan presented their view on how to tackle the problems around obsolete pesticides at national and regional level. FAO is implementing the four year project in cooperation with the International HCH and Pesticides Association (IHPA), MilieuKontakt International and Green Cross Switzerland. FAO is also linking the work under the project with existing initiatives implemented by UNDP, UNEP Chemicals, UNIDO and World Bank in order to provide a coordinated approach to the issue across the region. The contribution of EUR6 Million from the European Commission under the EC Programme for Environment and Sustainable Management of Natural Resources including Energy (ENRTP) is co-financed by an additional EUR1.5Million under FAO management from donors including the Global Environment Facility (GEF), the FAO / Turkish Trust Fund, Government of Greece and the FAO Regular Programme.

The overall objective of the project is to contribute to the reduction of risk to public health and the environment from pesticides in the ENPI East Region, Russian Federation and Central Asia Countries. Each of the designated 12 post Soviet partner countries will have to sign an agreement of cooperation with FAO before actual project activities can start. The agreements between FAO and the recipient countries are necessary to provide a legal basis for the implementation of activities at national level.

Project activities will include on an as-needed basis the inventory of obsolete pesticides and associated wastes in countries where a complete inventory is not available, environmental risk assessment and prioritisation of risks to public health and the environment at country level, safeguarding of obsolete pesticides at high risk locations, environmentally sound disposal of safeguarded stocks according to the requirements of the Basel and Stockholm Conventions as well as a component on pesticide life-cycle management which looks as the long term sustainable management of pesticides in line with the FAO Code of Conduct on the Distribution and Use of Pesticides. The project will look to maximise impact through linking with previous and on-going national programmes to safeguard obsolete pesticides.



Group exercise during the Steering Committee meeting



Group photo of Steering Committee Members

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