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## **International POPs Elimination Project**

*Fostering Active and Efficient Civil Society Participation in  
Preparation for Implementation of the Stockholm Convention*

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# **Public awareness project on POPs in Turkey**

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**Turkey**  
**January 2006**

## **About the International POPs Elimination Project**

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

IPEP has three principal objectives:

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

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

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

IPEN gratefully acknowledges the financial support of the Global Environment Facility, Swiss Agency for Development and Cooperation, Swiss Agency for the Environment Forests and Landscape, the Canada POPs Fund, the Dutch Ministry of Housing, Spatial Planning and the Environment (VROM), Mitchell Kapor Foundation, Sigrid Rausing Trust, New York Community Trust and others.

The views expressed in this report are those of the authors and not necessarily the views of the institutions providing management and/or financial support.

This report is available in the following languages: English, Turkish

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## **I. Introduction**

Turkey signed the Stockholm Convention in 2001 but has not ratified it yet. Article 10 of the Stockholm Convention calls for “development and exchange of educational and public awareness materials at the national and international levels”. This project was focused on public awareness about POPs, the Stockholm Convention and related issues.

Like in many developing countries, in Turkey there is a great lack of adequate waste management policies and understanding about a healthy way of living. Waste by itself represents a big problem but when it comes to the content it is so clear that it needs more precautions.

Turkey has signed Stockholm Convention, but unfortunately except for the preparation of the National Implementation Plan (NIP), there have not been any attempts to reconsider the assessment of waste and toxic chemicals. In the name of warning authorities for taking responsibility about toxic chemicals, Bumerang and Greenpeace have taken a big role with public awareness studies. Also building awareness among scientists was targeted for better implementation.

There are important deficiencies in the inventories defining emission levels and sources causing environmental damage.

## **II. Meetings, Workshops and Public Actions**

### **II. 1 Recycling Fair in Istanbul**

On 1 July 2006 Arnika/ Bumerang participated in the Istanbul Recycling Fair and organised a press release to highlight the urgent need for a sustainable waste management strategy in Turkey. The inadequate attempts for solving waste management and the wrong perspective for waste disposal were revealed and alternative proposals were underlined.

Incineration and waste dumping has been always the first choice for disposal for the Turkish Government. In Arnika/ Bumerang and Greenpeace’s press release incineration was criticised and Governmental authorities were invited to plan for urgent action on Clean Production and Zero Waste Principles. Arnika / Bumerang shared the same booth with Greenpeace Mediterranean. The media and public attention was high but only for the first day of the Recycling Fair. Unfortunately there was a terrorist attack so that the agenda of the media shifted to the case of terrorism.

Osman Pepe, Minister of Environment visited the Arnika / Bumerang and Greenpeace booth and a small meeting was held with him. We distributed documents from IPEN, Bumerang and Greenpeace to the Minister and the other governmental authorities during this visit.

### **II.2 POPs Symposium**

Arnika Association / Bumerang together with the non-governmental organization Association of Physicians for the Environment of Turkey – APET (<http://www.cevrehekim.org/>),

**International POPs Elimination Project – IPEP**

Website – [www.ipen.org](http://www.ipen.org)

Regional Environmental Center (REC), and International POPs Elimination Network - IPEN (<http://www.ipen.org>) organized the POPs workshop in Istanbul, December, 2005 – “Persistent Organic Pollutants and Health Symposium”. The agenda of the symposium is available in Annex 1.

The important outcome of this symposium is the common declaration (Annex 2 – English version) and press release. The press release related to this symposium – “*Ratification of the Stockholm Convention by Turkey is near - IPEN supported the first conference on persistent organic pollutants in Turkey*” – is available in Annex 3.

## **II. 3 Meetings with local Turkish NGOs**

Izmit, Adana, Tarsus, İzmir has been visited and meetings have been arranged with local NGOs. Because of financial problems, Diyarbakir, Konya, Trabzon and Edirne have not been visited but via mails and phone the needed info has been shared with people and local NGOs. Again all the documents related to the problems that region is facing have been distributed.

## **III. Publications**

Arnika together with Bumerang prepared and printed the leaflet which is about Bumerang’s mission and the campaigns that Bumerang is working on. In this leaflet also information about POPs, waste management, clean production, sustainable life and the Stockholm Convention is explained. This leaflet has been distributed in many places like in organisations like the Public Health and POPs Symposium and in all public awareness activities. Also this leaflet has been sent to all authorities and people related with the issues.

Arnika with the Bumerang’s help translated from the English language into the Turkish language two IPEN factsheets –

- a) Health and Environmental Hazards of Polybrominated Diphenyl Ethers and (PBDEs) and Other Brominated Flame Retardants (BFRs),
- b) Alternatives for the Persistent Organic Pollutants (POPs) Disposal. These factsheets will be available at: [www.bumerang-tr.org](http://www.bumerang-tr.org)

There are still some factsheets undergoing translation: The Next Generation of POPs, BAT/BEP Guidelines (Work In Progress) (Factsheet). While the ratification process of Stockholm Convention is improving in Turkey, the alternative solutions should be in discussion. With this factsheet alternatives will be enlightened for raising awareness about the paths that must be chosen while determining new waste management strategies.

The Next Generation of POPs PBDEs and Lindane (Report): With this report the results of the Egg Sampling Project will be underlined once again in the name of showing that not only are the “dirty dozen” targeted in Stockholm Convention but also other POPs-like chemicals are causing adverse environmental effects. The scientific data given in this document are also giving an opportunity to compare the levels of PBDEs and lindane in different countries where the egg sampling project has been done. All of the POPs sources are examined in detail and the report clearly indicates likely sources of the egg contamination. As a participant country in the egg sampling project, the results from Turkey have been discussed in this report which will show Turkey’s situation with respect to this new generation of POPs.

For more information what materials (IPEN and IPEP materials) are available in Turkish language, please, see Annex 4.

The IPEN / IPEP reports and factsheets and other materials have been sent to scientists; Prof. Dr. Ilhan Talinli- Istanbul Technical University, Environmental Engineering Department, Prof. Dr. Ali Osman Karababa – Ege University, Faculty of Medicine Community, Prof. Dr. Çağatay Güler – Hacettepe University, Faculty of Medicine Community Health and most known NGOs like Iskenderun Cevre Koruma Dernegi (Iskenderun), Ceksam ( Tarsus), Izmit Environmental Initiative ( Izmit), Edirne Environmental Initiative (Edirne), Sofulu Cevre Insiyatifi (Adana) ,Karadeniz Cevrecileri Dogal Cevre Koruma Dernegi ( Trabzon) and governmental authorities; Ministry of Environment General Management of Environmental Management, MoE Department of Chemicals, Ministry of Agriculture and Rural Affairs, A Type Food Control Battalion Command Headquarters .

These materials were also distributed during the public actions and the POPs Symposium.

#### **IV. Documentary movie**

Technical problems that Arnika / Bumerang have faced with inadequate supply of materials needed for the documentary movie resulted in a change of plan to a photo gallery. The gallery will consist of the messages and solution suggestions under the new campaign called “Sustainable Life”.

#### **Conclusions**

Toxic chemicals including POPs are one of the major problems that have continued for a long time in Turkey. In the last few years it is clearly understood that the industrial pollution Turkey is facing is not going to be handled without governmental authorities taking serious actions. Especially the adverse environmental effects of incineration and industrial waste problems caused by decisions taken with the purpose of finding short term solutions for waste management are now known by the public, environmental NGOs and academics.

Turkey has come to an important point in the ratification of Stockholm Convention. According to the Ministry of Environment, the Stockholm Convention ratification has to be taken under consideration and discussion in the parliament. The process of ratification is going to be ended soon after the subject has arisen in the parliament.

Environmental hazards and damages have been discussed many times but the question of the best way to manage the wastes and sustainable waste management has not found any answers. The most important way to cope the environmental disasters is absolutely to come to the concept of clean production and zero waste.

## **Annexes:**

### **Annex 1: Agenda of the POPs Symposium**



## **PERSISTANT ORGANIC POLLUTANTS AND HEALTH SYMPOSIUM**

### **Organisers:**

ISDE and Bumerang

### **Supporters:**

International POPs Elimination Network (IPEN)

**Date:** 24 December 2005 Saturday, İstanbul

**Place:** Cerrahpaşa Tıp Fakültesi Yeni Profesörler Kurulu Salonu, Merkez Kütüphane Binası

There will be interpretation.

This symposium is supported by Regional Environmental Center (REC) under the Persistent Organic Pollutants Public Awareness Project.

### **Organisation Committee:**

Prof. Dr. Çağatay Güler (president), Prof. Dr. İlhan Talınlı, Prof. Dr. Ali Osman Karababa, Dr. Ümit Şahin (secretary), Dr. Seval Alkoy, Dr. Nadi Bakırcı, Dr. Günay Can, Dr. Murat Aral, Dr. Hülya Gül, Teoman Dikerler, Gözde Baykara (secretary), Banu Dökmecibaşı

## **PROGRAM**

9:00 – 9:30 Entry

### **9:30-10:00 Opening**

10:00-11:30 Session 1: The Problem of POPs, Sources, Importance according to Environmental Health, Effects on Human and Environmental Health

- Prof. Dr. İlhan Talınlı – İstanbul Teknik University, Environmental Engineering Faculty – Member of university
- Prof. Dr. Çağatay Güler – Hacettepe University, Faculty of Medicine Community Health Professor
- Prof. Dr. Ali Osman Karababa – Ege University, Faculty of Medicine Community Health Professor

### **11:30-12:00 Coffee Break**

12:00-13:00 Session 2: Solutions for the problems generated from POPs problems and Alternatives

- Celal Armangil – United Nations Industrial Development Organisation (UNIDO)
- Martin Skalsky – International POPs Elimination Network (IPEN)

**13:00-14:00 Lunch Break**

14:00-15:30 Policy Presentations-1

- Ministry of Environment and Forest, Department of Inventory and Risk Assessment
- Prof. Dr. Murat Tuncer – Ministry of Health Department of Action Against Cancer
- Hana Kuncova – International POPs Elimination Network (IPEN)
- Chamber of Doctors
- Chamber of Environmental Engineers

**15:30-16:00 Coffee Break**

16:00-16:30 Policy Presentations -2

- Dr. Seval Alkoy - ISDE
- Banu Dökmecibaşı - Greenpeace Mediterranean Turkey
- Gözde Baykara - Bumerang

16:30-17:30 Discussion and Announcement of Declaration of Persistent Organic Pollutants

**17:30 Closing of the Symposium**



## **Annex 2: Declaration of the POPs Symposium**

### **PERSISTENT ORGANIC POLLUTANTS (POPs) DECLARATION İSTANBUL, DECEMBER 24<sup>th</sup>, 2005**

#### **Introduction:**

This declaration aims to warn the public about Persistent Organic Pollutants, chemicals which have adverse effects on environment and human health; to share the suggestions to solve the problem; and to call all the parties from public to universities, trade associations and non-governmental organizations to fulfill their duties about the issue.

The declaration has been prepared during the period of the POPs and Health Symposium, which was organised in İstanbul on December 24<sup>th</sup>, 2005 under the scope of a POPs Public Awareness Project, that was run in 2005 by contributions of Çevre Association of Physicians for Environment of Turkey, Bumerang Environment Initiative and the International Persistent Organic Pollutants Elimination Network (IPEN) and with the support of Regional Environmental Center REC Turkey, and it was announced at the time of the symposium.

#### **Suggestions for Solution:**

##### *I- Public Health*

- In order to minimize the adverse effects of Persistent Organic Pollutants on human health, determination and protection of risk groups should be prioritized.
- Effects of Persistent Organic Pollutants should also be considered in disease load studies.
- Adverse effects of Persistent Organic Pollutants on environment and health should be considered in action plans which are being prepared on environmental health, and risk assessment must be involved in all the action plans to be prepared.
- The personnel responsible for territorial inspections on environmental health should have adequate knowledge and facilities about in-place measurements of Persistent Organic Pollutants; those substances should be considered especially in pollution measurements in which air of closed environment is assessed.
- Since it is possible for Persistent Organic Pollutants to be taken into the human body through foods, the risks that the contaminated foods and drugs possess should be controlled and the public should be informed about the issue.
- Ministry of Health should be held responsible for all the assessments and regulations on effects of Persistent Organic Pollutants on human health. Opinions of health commissioners and professionals on environment and human health should be considered.
- In pesticide applications, applied areas should be surrounded with warning lines and a second entrance time should be stated. Municipalities should be encouraged to consult with Public Health Departments under Faculties of Medicine in municipal pesticide applications.
- Pesticides should not be the first choice in pest control; environmental bio-wrestle methods should be prioritized.

##### *II- Legal Arrangements*

1. The Stockholm Convention, which was signed by Turkey in May 23<sup>rd</sup>, 2001, should be approved, ratified, and enforced immediately by Turkish Parliament.
2. Politicians, bureaucrats involved and scientists who are in decision making positions on environmental health should fulfill their roles in minimizing Persistent Organic

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Pollutants and in protecting the public from the hazardous effects resulting from those substances.

3. Turkey should improve legal mechanisms by producing plans, projects and programmes on Persistent Organic Pollutants, and should review and re-organize relevant regulations.
4. Minimizing of Persistent Organic Pollutants should be included in Five-Year Development Plans prepared by the State Planning Organization.
5. International importing and exporting and of Persistent Organic Pollutants and their entrance into and exit out of the country should be controlled. For that reason, control mechanisms such as entrance and exit weight measurements of tankers in case of leakage should be established.

### *III- The Issue of Incineration*

1. Incinerators and incineration technology are amongst the most important sources of dioxins and furans, which are the most well known Persistent Organic Polluters with regards to their hazardous effects on human health, and those substances are classified as definite carcinogens by the International Agency for Research on Cancer (IARC). Therefore, all of the incineration methods used for disposal and changing the wastes should no more be used.
2. Techniques which cause dioxin production in incineration processes should be banned.
3. No more incinerators should be founded in our country and this method should no more be adopted as a waste management policy.
4. Priority in waste control should be on stopping those production methods that cause hazardous waste to pollute the environment and on clean production technologies that minimise waste production where necessary.

### *IV- Changing into harmless:*

1. 12 POPs that has been banned according to Stockholm Convention and the chemicals that have been pointed to be taken under control must be subject to an inventory and must be disposed with appropriate technologies that will not cause adverse impacts on environment and produce new POPs.

#### **Association of Physicians for Environment of Turkey**

#### **Association of Turkish Physicians**

#### **TMMOB Chamber of Environmental Engineers**

#### **Bumerang**

#### **Greenpeace Mediterranean**

**Prof. Dr. Çağatay Güler** (Hacettepe University, Faculty of Medicine, Head of Public Health Department)

**Prof. Dr. İlhan Talınlı** (Istanbul Technical University, Professor in Department of Environmental Engineering)

**Prof. Dr. Ali Osman Karababa** (Ege University, Faculty of Medicine, Professor in Public Health)

- **Prof. Dr. Murat Tuncer** (Ministry of Health Department of Action Against Cancer)

**Yrd. Doç. Dr. Nadi Bakırcı** (Marmara University, Faculty of Medicine,

**Uz. Dr. Günay Can** (Cerrahpaşa University, Faculty of Medicine, Public Health Department)

**Dr. Hülya Gül** (Istanbul University, Faculty of Medicine, Public Health Department )

**Dr. Ümit Şahin** ( Public Health Expert- Association of Physicians for Environment of Turkey)  
**Dr. Seval Alkoy** ( Public Health Expert- Association of Physicians for Environment of Turkey)  
**Dr. Murat Aral** ( Ministry of Health, Bakirkoy Cancer Search and Center of Education)  
**Teoman Dikerler** (TMMOB Chamber of Environmental Engineers )  
**Gözde Baykara** (Bumerang Environmental Initiative)  
**Banu Dökmecibaşı** (Greenpeace Mediterranean)

**Annex 3 : Press Release - “Ratification of the Stockholm Convention by Turkey is near - IPEN supported the first conference on persistent organic pollutants in Turkey”**

29.12.2005 - The historically first conference dedicated to the issue of highly hazardous persistent organic pollutants (POPs) (1) in Turkey took place in the end of December in Istanbul. In its organising, there participated Turkish non-governmental organisations Association of Physicians for the Environment of Turkey - APET (2) and Bumerang (3) in co-operation with the International POPs Elimination Network - IPEN (4), Czech association Arnika, and Regional Environmental Center (REC). At the conference, a representative of the Ministry of Forests and the Environment of the Republic of Turkey announced that the Ministry had just started the process of the Stockholm Convention (5) ratification. This Convention should lead to a world-wide elimination of POPs in the environment. Nongovernmental organisations consider this step as the first big success of their campaign against pollution by toxic substances, such as dioxins (6), DDT, or brominated flame retardants (7) in Turkey. The Arnika Association helped start the campaign as IPEP regional hub.

„Until quite recently, very small attention was paid to the issue of persistent organic pollutants in Turkey,“ says Hana Kuncová, MSc, co-ordinator of the Dioxin, PCBs and Waste Working Group of the IPEN, and the IPEP Project (8) in the Arnika Association, for Turkey. Although Greenpeace worked on the situation systematically for several years, state bodies refused to get down to any measures. „Thanks to our support, new studies, mapping „hot spots“ – the biggest sources of POPs releases, were produced in the last year. We are convinced that just thanks to this information and pressure of the public also the Ministry of Forests and the Environment began to take an active approach to this issue. Starting of the ratification process of the Stockholm Convention is a big success,“ summarises Kuncová.

According to Melis Yarman from the non-governmental organisation Bumerang, ratification of the Stockholm Convention is important, but the main part of the work will come in the future only. Turkey will now be obliged to prepare the so-called National Implementation Plan which should describe, in detail, all POPs releases into the environment, old environmental burdens, and ways to their elimination. Only then, actual steps to protection of the environment and human health will be started. „Responsibility of the Turkish government does not end with ratification of the Stockholm Convention. It is only the beginning. Nongovernmental organisations must actively participate in preparation of the National Implementation Plan to Stockholm Convention, and they must push through really effective and up-to-date measures - i.e., principles of clean production and sustainable life be present therein. In view of small progressiveness of state authorities, as well as strength of the industry, this surely will not be easy,“ says Yarman.

Concrete steps to elimination of POPs from the environment were required also by numerous representatives of the academic community, and doctors, at the conference in Istanbul. „Persistent organic pollutants are one of the biggest threats to human health, and their elimination should be a priority for Turkey in the field of the environment,“ said Seval Alkoy, MB, from the APET. In his presentation, professor Ilhan Talinli, MB, from the Istanbul Technical University, drew attention to the fact that Turkey should progressively head for full ban of use of PVC, and waste incineration. According to him, this could result in considerable reduction of endangering of the environment by persistent organic pollutants.

The issue of POPs was brought into attention of the Turkish public more markedly in 2004, when the IPEP project enabled preparation of the first studies on this subject. At that time, the organisation Bumerang published comprehensive reports on the municipal waste incinerator near the town of Izmit, obsolete pesticides storage near the Derince municipality, and petrochemical complex Petkim which, among others, produces PVC. In 2005, Turkey, together with seventeen countries of the world, participated in a global campaign of the IPEN network "Keep the Promise – Eliminate POPs", based on comparison of results of chemical analyses of chicken eggs for content of persistent organic pollutants. Samples were taken in the vicinity of the incinerator in Izmit. At that time, eggs from Turkey were tested for the content of substances such as dioxins, hexachlorobenzene (9) and brominated flame retardants historically for the first time. Results of the analysis were alarming - doctors classified the eggs as uneatable and hazardous for human health.

At the end of the conference in Istanbul, organised on December, 24, there was written a declaration of non-governmental organisations, doctors, and academicians, addressed to the Government of the Turkish Republic, and the Ministry of the Environment. The Declaration requires stopping of processes which are sources of releases of persistent organic pollutants into the environment, such as, for example, waste incineration. It invites state authorities to prepare an inventory of the current sources of POPs in Turkey, and to eliminate existing environmental burdens, for example, stores of old pesticides. Further, the Declaration requires support of public information campaigns that would inform the population about hazards of persistent organic pollutants for human health.

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More information sources:

[Global report on testing of eggs](#)

[Report on testing of eggs in Turkey](#)

[Reports on „hot spots“ in Turkey](#)

[Pages of Greenpeace Mediterranean on toxic substances](#)

Appendix:

(1) POPs – persistent organic pollutants - are substances which persist in the environment for a long time, and show bioaccumulative properties, which means that they accumulate in living organisms, in particular in their adipose tissues. They cause disorders of hormonal and reproductive systems, some of them are carcinogenic, others harm foetus, unborn baby. These substances include, for example: DDT, lindane, polychlorinated biphenyls (PCBs), hexachlorobenzene, and others.

(2) APET is non-governmental association of doctors, concentrating on the environment. It

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was established in 1998, and it became member of the International Society of Doctors for Environment, a network associating national organisations from more than 35 countries. [www.cevrehkim.org](http://www.cevrehkim.org)

(3) Bumerang is non-governmental organisation concentrating on campaigns based on results of scientific research. Its main activity is campaigns against presence of toxic substances in the environment. It was established thanks to support of the IPEP project in this year. Bumerang informs the public on hazards ensuing from pollution by toxic substances, and tries to push through introduction of cleaner production, and search of long-term solutions preventing creation of toxic pollution. [www.bumerang-tr.org](http://www.bumerang-tr.org)

(4) IPEN – International POPs Elimination Network is an international network of nongovernmental organisations which co-operate on pushing through the Stockholm Convention on persistent organic pollutants. The aim of this network is prohibition and elimination of these substances (for example aldrin, dieldrin, endrin, DDT, chlordane, heptachlor, hexachlorobenzene, mirex, toxaphene, PCBs and dioxins). The network was formed at the same time with the beginning of the process of preparation of the international convention on elimination of persistent organic pollutants in the spring of 1998. Arnika has been its member organisation from the very beginning. At present, over 400 non-governmental organisations from the whole world are taking part in the work of IPEN. [www.ipen.org](http://www.ipen.org)

(5) The Stockholm Convention on Persistent Organic Pollutants is an international convention, by ratification of which the Czech Republic committed itself to eliminate 12 most toxic substances in the world. These substances include, for example, dioxins (= polychlorinated dibenzo-p-dioxins and dibenzofurans, PCDD/F), DDT, PCBs, hexachlorobenzene, and others. The Convention became binding for the Czech Republic on May 17, 2004. The text of the Stockholm Convention may be downloaded from the www pages of the Ministry of the Environment of the Czech Republic: [www.env.cz/AIS/web-pub.nsf/\\$pid/MZPKQF6Y247O/](http://www.env.cz/AIS/web-pub.nsf/$pid/MZPKQF6Y247O/) . The Czech Republic joined the Convention in 2002, and, by this, it committed itself to eliminate these substances from the environment. Official pages of the Convention: [www.pops.int](http://www.pops.int)

(6) Dioxins are highly toxic substances, and dangerous in trace concentrations. They accumulate in the adipose tissues of animals. Their concentration in the environment is increased also by small dust particles. A long-term action of dioxins and PCBs results in harm to immune and nerve systems, further in changes of endocrine system (especially thyroid gland) and of reproductive functions. Some studies proved also their impact on decrease of intelligence, decrease of ability to concentrate, and impact on behaviour (hyperactivity of children). Dioxins are substances which accumulate in the body in the long term. Source:www pages of the State Health Institute: [www.chpr.szu.cz](http://www.chpr.szu.cz) (Dioxin in foodstuffs )

(7) Brominated flame retardants are various chemical substances used in products (for example, electronics, carpets, or curtains) to retard burning. Their typical representatives include polybrominated diphenyl ethers (PBDEs), a group of 209 chemical substances with similar properties. PBDE may cause very serious harms to the environment, because they are toxic to water organisms (they cause growth and reproduction problems), and show high ability to persist and accumulate in the environment. In fire, they can decompose, producing highly toxic brominated chemicals. Toxicity and bioaccumulative potential of PBDEs in water environment decrease with higher number of bromine atoms in the molecule. Action of

PBDEs has a global nature, because they were detected in samples of water and sediments, and in bodies of organisms, on localities very far from the site of the source of their release. Source: [www.irz.cz](http://www.irz.cz)

(8) IPEP - International POPs Elimination Project is a project of the international network IPEN, financed through the financial mechanism of the Stockholm Convention from the Global Environment Facility (GEF) funds. The global co-ordination centre of the project is a US nongovernmental organization EHF (Environmental Health Fund). Eight regional co-ordination centres were established for eight regions of the world. Arnika was selected as one of the centres, for the area called "Central and Eastern Europe" (including the Balkan states). In this region, non-governmental organisations are recently active in the following countries: Estonia, Belarus, Poland, Slovakia, Czech Republic, Hungary, Romania, Bulgaria, Albania, and Turkey. Internet pages of the project: [www.oztoxics.org/ipepweb](http://www.oztoxics.org/ipepweb)

(9) Hexachlorobenzene (HCB) was, in the past, produced as a pesticide or for technical use, or was formed as an unwanted by-product. Up to the present, it is formed as an intermediate product in Spolchemie in Ústí nad Labem (production of chlorinated solvents, incineration of chlorinated residues). Similarly as dioxins or PCBs, it is formed also as an unintended by-product, for example during incineration of chlorinated substances. Its effects on human health are comparable to that of PCBs and dioxins - it negatively affects immune and hormonal systems of humans.

The materials about POPs issue available in Turkish language. These materials were prepared by Arnika together with Bumerang.

#### Annex 4: Available IPEN / IPEP materials in Turkish language

<b>Document</b>	<b>Title in Turkish language</b>	<b>Title in English language</b>
<b>Factsheet</b>	Kalici Organik Kirleticiler Icin Alternatif Bertaraf Yontemleri	Alternatives for the Persistent Organic Pollutants (POPs) Disposal
<b>Factsheet</b>	PBDE ve BFR' lerin Insan Sagligi ve Cevre Uzerindeki Etkileri	Health and Environmental Hazards of Polybrominated Diphenyl Ethers and (PBDEs) and Other Brominated Flame Retardants (BFRs)
<b>Hot Spot Report</b>	PETKIM Petrokimya A.S. (PVC Uretim Tesisi)	PETKIM Petrochemical co. (PVC Plant)
<b>Hot Spot Report</b>	Derince Pestisit Stoğu, Kocaeli	Derince Pesticide Stockpile

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