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## **The International POPs Elimination Project**

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

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# **Environmental Safety of Residents of Ararat Oblast English Summary**

## **Armenian Women for Health and Healthy Environment**

Armenia  
January 2005

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

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

IPEP has three principal objectives:

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

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

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

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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 Summary and Full report in Russian

# Environmental Safety of Residents of Ararat Oblast

## English Summary

According to the Armenian Women for Health and Healthy Environment (AWHHE) project plan, samples of soils, water and food were analysed. Actual analysis costs exceeded initial cost estimates. As a result, only 23 samples were tested. Samples were taken in 3 settlements in close proximity to the pesticide burial site (the cluster of summer houses without any administrative subordination, where residents stay only in good weather, and 2 villages - Jrashen and Mushavan with population of 1700 and 1500 residents respectively). The below data incorporate also results of analysis of breast milk samples, taken in these two villages, that were analysed due to financial support of the IPEN Pesticides Working Group.

**Water** for irrigation purposes (drinking water is delivered from Yerevan)

HCCH - 0.00006 mg/l;

DDT (sum) - 0.0003 mg/l,

### **Soil**

HCCH - 0.0005 mg/kg.

DDT (sum) - 0.0127 mg/kg

### **Fruit/vegetables**

HCCH - from 0.00015 to 0.00024 mg/kg

DDT (sum) - 0.002 mg/kg

### **Cow milk**

HCCH - from 0.00004 to 0.00006 mg/l

DDT (sum) - 0.02 mg/l

### **Breast milk**

HCCH - from 0.01 to 0.07 mg/l

DDT (sum) - from 0.002 to 0.32 mg/l

The study results suggest that both recent contamination and long-term accumulation of organochlorine pesticides in humans and environmental media occurred.

Order No. 181 28032003 of the Minister of Public Health of Armenia approved sanitary safety requirements for food products - the new requirements stipulate the same standards as Sanitary Rules and Norms 2.3.2.1078 -01 RF "Requirements to Sanitary Safety and Nutrition Value of Food Products". The standards for DDT and HCCH levels are set as 0.05 mg/l for milk, 0.1 mg/kg DDT and 0.1-0.5 mg/kg HCCH for

fruits and vegetables. No specific standards are set for drinking water, however, in Sanitary Rules and Norms 2.1.4.1074-01 "Drinking Water", maximal DDT and HCCH levels in water are set as 0.002 mg/l.

According to the above standards, in AWWE studies excessive levels of DDT and HCCH in water and fruits were not identified. Samples of cow milk also did not reveal excessive levels of DDT and HCCH, but these substances were identified in 100% of samples.

There are no standards for DDT and HCCH levels in breast milk, but these substances were found in all the breast milk samples examined. Some samples contained levels of DDT that were six times higher than permitted levels of the pesticide in cow's milk. In other words, breast milk used to nourish infants would be illegal if sold in a store. Levels of DDT in these samples were higher than comparisons with cow's milk observed in Germany (2-fold) or the US (4-fold).

In all official standards, maximal allowable levels in water are measured in mg/l - AWHHE laboratory data also use these units of measure.

In order to identify linkages between organochlorine pesticides in the pesticide burial site and POPs levels in the breast milk of village residents, AWHHE conducted additional studies in Ararat Marz and other villages. It was found that levels of organochlorine pesticides in the additional samples of breast milk varied within the same range.

According to the Governmental Decision on Ensuring Security of the Pesticide Burial Site, specialists of the National Academy of Sciences completed a topographic survey and confirmed AWHHE assumption on destruction of the burial site and active landslide processes in the site area. The relevant information was aired by the National TV (Epikentron) on 03.12.04, and noted a particular role of AWHHE in attracting attention to the problem.

The laboratory studies were conducted in villages nearby the pesticide burial site in order to assess environmental impacts of the burial site. As a result, AWHHE has found that levels of organochlorine pesticides in environmental media are under the maximal allowable levels and we cannot make a conclusion on existence of adverse impacts of the pesticide burial site on the above human settlements.

No direct linkages were identified between the pesticide burial site and environmental contamination in adjacent villages.

The study results were presented in mass media outlets and processed for submission to relevant governmental agencies.

Members of the organisation regularly made field visits of the pesticide burial site (6 field visits) in order to assess its dynamic state. In the course of every consecutive visit, new manifestations of landslide processes were identified. According to Governmental Resolution No. 526a "On Ensuring Safety of the Pesticide Burial Site" of 24.04.03 (it was our organisation that had approached the Government with the request on

the need to ensure safety of the site) the Emergency Response Directorate of the Republic of Armenia was instructed to take some measures to improve safety of the site:

- Installation of fences, repair and rehabilitation of drainages; additional analysis of soil samples to identify levels of persistent organochlorine pesticides at the territory of the burial site; assessment of landslide processes. Necessary finance resources were allocated for these purposes. However, the last field visit to the burial site (on November 8, 2004) revealed that actually no action had been taken at the site. On November 16, 2004 we submitted our letter to Mr. A. Markaryan, the Prime Minister of Armenia. We described the situation and expressed our concerns in connection with developments at the site and potential threats of more intensive landslides due to rain and snow that might result in pesticide releases.

A specialised Committee was established in *Marzpetaran* (the oblast level executive committee). Members of the Committee include representatives of different *Marzpetaran* departments interested in safe application of pesticides (environmental protection, agriculture, public health, education, territorial management) and mass media representatives. The Committee is chaired by S. Minasyan, the deputy Governor (*Marzpet*), A. Bagiryan (the *Marspet* advisor) is the Committee co-ordinator. Besides that, representatives of local environmental NGOs also participate in the Committee's activities. The Committee provided assistance in organisation of meetings with local village activists and public health workers and discussed issues pertaining to safety of the pesticide burial site, and other potential storages of banned and obsolete pesticides.

Later on, new field visits to villages demonstrated that our co-operation with the *Marzpetaran* produced positive results. Local chief officials were instructed to control application of pesticides and to report on these issues. Our organisation maintained control in the course of field visits and meetings with village activists and members of the *Marzpetaran*.

Now, we are developing proposals for incorporation into the National Plan of Implementation of the Stockholm Convention. The Plan was drafted by the Ministry of Nature Protection and was provided to us for review.

We developed and printed a series of booklets on these issues - 4 booklets (see [www.awhhe.am](http://www.awhhe.am)). 500 copies of booklets, 30 posters and 600 copies of leaflets were distributed among residents of two villages.

We have recently published 3 articles (1 article in Ararat *Marz* newspaper and 2 articles in national magazines). On October 28, 2004 we organised a meeting with participation of all local environmental and health-oriented NGOs and media representatives “On Problems Associated with Agriculture Application of Pesticides in Ararat *Marz*”. In particular, the meeting participants discussed the issue of banned and obsolete pesticides. K. Khachatryan - the National Radio representative in the region - made two topical broadcasts on activities of our NGO in the *Marz*.

On September 15, the topical broadcast was aired on issues of POPs, including banned pesticides. The broadcast was developed by L. Simonyan, an expert of our NGO.

Results of our survey work suggest that safety of the pesticide burial site has not yet been ensured, despite the Governmental Resolution on the matter. High concentrations of organochlorine pesticides were found at the territory of the burial site and in sampling points at distances up to 50 m from the site - these findings suggest infiltration of organochlorine pesticides into soil.

So far, the pesticide burial site is still a zone of active landslide processes.

Elena Manvelyan, the Chief of AWHHE