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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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# **Empowering a Community to Improve Environmental Health through Reduction in POPs**

**Students Relief Society  
Rajasthan, India**

**India  
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## About the International POPs Elimination Project

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

IPEP has three principal objectives:

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

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

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

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This report is available in the following languages: English

# Empowering a Community to Improve Environmental Health Through Reduction in POPs

## INTRODUCTION

The State of Rajasthan is peculiar in many ways. The area is infested with persistent drought and acute rainfall. The situation gets worsened with the high usage of pesticides and other chemicals, including the persistent organic pollutants (POPs) for agricultural purposes. The harmful effects of these chemicals are becoming quite evident.

Students Relief Society (SRS) has for over two decades been working towards ensuring health in the community. In line with the organizational goal, SRS planned to engage with the issue of POPs since it endangers the health of the community at large.

The main objectives of the activities were:

- To raise awareness/knowledge in the community about Persistent Organic Pollutants.
- To improve environmental health by educating community about the available alternate options to POPs using participatory approach.
- To advocate for replication of model at other locations

The activity was taken up in five villages of two Gram Panchayats of Niwai Block, under District Tonk in Rajasthan. These villages were: Jamdholi, Rahed, Nohata, Kaririya and Ramnagar Dhaturi.

## ACTIVITIES OVERVIEW AND MAJOR ACCOMPLISHMENTS

- ***Development of detail operational plan***

A detail participatory plan in consultation with the community was developed during the preparatory phase of the project.

- ***Recruitment and capacity building of staff***

The staff was recruited and a day long orientation about the project design was planned with the project staff. This also included apprising them of the various community mobilization techniques and knowledge about POPs as well as their harmful affects.

- ***Rapid Assessment of POPs/ other harmful chemicals used in the project area***

A quick assessment of POPs and its affects on the environment and human health in the area was conducted with support from the experts Dr. Kuldeep Sharma, Mr. Hemant Sharma, Mr. Devendra Shukla and other professionals. The information collected was helpful in identifying the real problem based on which further intervention was planned. The findings are annexed to this report.

- ***Formation of 'Environment Health Awareness Forum'***

In each village an "Environment Health Awareness Forum" was formed. This comprised of local farmers, community leaders, panchayat members and teachers. The group helped with the implementation of activities in their respective areas as well as transferring their knowledge among the peers. This forum will be responsible for keeping the issue live among the community beyond the activity duration. They have been involved in all the stages of implementation right from inception to planning, execution and monitoring and evaluation. This has in turn also enhanced their capacities as implementers.

- ***Awareness material highlighting harmful affects of POPs and promoting alternatives***

Handouts were developed in local language highlighting the adverse affects of POPs and other harmful chemicals and promoting alternatives. These were distributed among the community for awareness generation.

- ***Behaviour Change Communication (BCC) activities***

In addition, various BCC activities such as rallies, public speaking, film shows and street plays were also planned in the community in order to create awareness and disseminate the message about POPs and its adverse affects especially for those who are most at risk.



- ***Networking with local government bodies (Panchayat) for sustainable approach and advocacy***

The local agencies including the panchayat members were sensitised on the issue of POPs and their role in addressing the same. They provided all the necessary support in the implementation of the activities.



The activities also linked with experts from the Agriculture University. They provided expert guidance on the issue at all stages of planning and implementation.

As a result of all the various interventions in the area:

- There is an increased level of knowledge on POPs in the community
- Information and awareness material on POPs in local language for dissemination among the community.
- The stakeholders and community leaders are sensitised to address the issue at their levels.

## **OUTCOMES**

- An immediate outcome of this activity has been enhanced capacity of the organization on POPs issue. This was the first level of engagement with POPs. In the process of gathering and preparing POPs related documents and conducting other activities, the organisation has build its capacity which would help in taking the issue further.
- In addition, the activities resulted in increased awareness, understanding, and knowledge about POPs within the community. This also includes knowledge about the harms caused by POPs to human health and environment and the measures required to reduce and eliminate them.
- The activities also created enhanced facilitation and support mechanisms at the government levels for the civil society efforts relating to POPs.

## **ANNEXURE: Findings of the Rapid Assessment of POPs in the area**

In order to find the affects of the use of POPs pesticides, three locations were selected namely Rahed, Jamdoli and Nohata, all located in District Tonk.

A survey was conducted at all the three locations and observations were recorded. A sample size of 10 from each location was selected and observed for the usage of POPs in agricultural process and their adverse affects on the users.

The findings can be summarized as below:

### **Cropping Pattern and the use of Chemicals**

It has been observed that the farmers in these locations largely grow crops like wheat, barley and maize. In addition they grow vegetables such as potato, chilli, brinjal, gourd and fruit plantations. With the intention of increasing their produce and to protect the crops from insects and pests and fungi, farmers increasingly use chemical pesticides and fertilizers. The most common of these are 4-D, Aldicarb, Binomial, Carboxyl, Delrina, Hexaconazole, Lindane, Malathion, Endosulfan, Chlorpyrifos, Carbofuran and the likes. Some of these are proven to be POPs and the adverse impacts on human health and environment has been documented world over. Farmers are not aware of the proper use of these chemicals which often results in their over use. They take no safety precautions while applying these chemicals thereby clearly endangering their health.

### **Effects on Environment:**

It was found that the excessive use of chemicals has been having detrimental affects on the environment. The physical, chemical and biological properties of the soil changed over the period. These chemicals have also harmed the beneficial micro-organisms present in the soil the population of which has reduced drastically. This in turn affects the growth of crops/ plants. In addition, the water holding capacity of the soil has also reduced in these areas. This is the prime reason for soil erosion, which further deteriorates the soil quality. Since this area is water scarce, the levels of many metallic compounds have increased which ultimately causes harmful affects on the mammals. Some respondents also reported mutagenic changes in the crops due to the use of the chemicals, which ultimately changes the genetic makeup of the crop.

### **Effects on human health:**

The fact that the chemicals, including POPs are having an adverse affect on human health may be indicated by the growing incidence of reproductive and developmental disorders, birth defects, heart diseases, skin rashes, skin discoloration, excessive body hair, and liver damage in the area. Cases of cancer have increased manifold.

### **Effect on Cattle:**

Fodder high in pesticides residues has resulted in food poisoning and skin diseases in the cattle/ livestock. Continued exposure to these chemicals also results in death.

### **Route of transmission of POPs:**

During the study it was found that human and animals are largely exposed to POPs through contaminated foods. Less common exposure routes include drinking contaminated water and direct contact with the chemicals. POPs are transferred through the placenta and breast milk to developing offspring. This goes on to show that the risks from POPs are greater in the case of children and babies because of their higher milk intake, including breast milk and other dairy products.

## **RECOMMENDATIONS:**

The recommendations based on the findings of study to elimination the adverse affect of POPs:

1. The best one method to eliminate the adverse affect of POPs is to switch to traditional methods of crop husbandry such as farmyard manure, vermicompost and others.
2. Use of plant by-products to reduce the population of insects and pests.
3. To phase out the production as well as the use of POPs.
4. No chemical should be allowed into the market before sufficient evidence that proves that it is safe and has no adverse impacts on human health and environment, both short-term and long-term.
5. To recognise that breast milk, which is the best nutrition for the optimal development of the child, has to be POPs free.
6. To provide the systematic control on food production and consumption to identify the harmful chemicals and fully protect the consumers.
7. To develop labelling schemes for products and goods containing POPs, so that consumers can take informed decisions.
8. To enable a POPs-free approach in the control of malaria and other vector borne diseases.
9. To prohibit the use of POPs in public health care and veterinary treatment, e.g. the use of lindane as a treatment for lice and scabies in humans and against ectoparasites in sheep.
10. To develop and implement National and Local Environment and Health Action Plans (NEHAPs and LEHAPs) containing policies to protect human health and environment from POPs.
11. To provide governmental support for the monitoring and mapping of the environmental health status, particularly the impacts from the growing use of chemicals. The results should be taken into account while framing national policies.