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International POPs Elimination Project

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

‘HELLO ZINDAGI - ALVIDA POPS’ Public Awareness Activities and Campaign on POPs

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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'HELLO ZINDAGI - ALVIDA POPS'

Public Awareness Activities and Campaign on POPs

ABOUT THE ORGANIZATION

Prithvi Innovations is a non-government organization. It has been actively working in the areas of health, environment and education since 2002. It has been involved with sensitising the community through youth groups and schools about the various issues directly related to their well being.

In August 2005, during the workshop on Biomedical Waste organized by Toxics link in Lucknow, it became aware of POPs and its adverse impacts on human health and environment and planned to take up the issue and build capacity, largely disseminate information about POPs and their impact on public health and mobilize civil societies for strengthening the movement against POPs in the country.



The South Asia Regional Capacity Building Workshop organized by the South Asia Regional Hub, Toxics Link, helped build the organisation's capacity on issues related to POPs. The particular activity is a direct outcome of these deliberations under close guidance from Upasana Choudhry, Co-ordinator, South Asia Hub of International POPs Elimination Project (IPEP).

What follows is an overview of the awareness campaign on POPs titled 'HELLO ZINDAGI - ALVIDA POPS' (Zindagi = Life; Alvida = Goodbye) in the form of a report. This report highlights the major learning, experiences shared, activities undertaken, achievements and impacts, alliances formed and challenges encountered as Prithvi embarked on this knowledge-sharing journey of POPs.

ABOUT POPS

About 100,000 commercial chemicals are in use today and an estimated 3600 new compounds are introduced annually. The majority of these compounds are manmade and the bulk synthesis, transportation, and finally disposal of these hazardous compounds in the environment are issues of increasing concern both locally and at the global level. Some classes of these chemicals, due to the inherent qualities they possess are extremely dangerous.

These Persistent Organic Pollutants (POPs) are highly toxic in nature; they accumulate in fatty tissues of fishes, predatory birds, and mammals including human beings (from mother to the child before birth through the placenta and after birth through feeding) and can magnify many times their original level. Through food chain, water or air currents and soil these chemicals can travel thousands of kilometres and can be found in the Arctic, Antarctica and remote Pacific regions-far away from the places where they were originally produced or used.



Because of these features they cause severe damage to the nervous system, reproductive system, endocrine system and even low doses can result in serious problems like cancer, skin infectious, birth defects, and sexual deformities. An especially vulnerable group are the foetuses and infants, who are exposed to POPs via the placenta, breast-feeding, and other pathways during the critical early years of human development. These toxic chemicals travel in the environment through a variety of media and end up in the food chain, water, soil and air and in non-target species and ecological systems, causing massive environmental degradation.

Out of these, 12 chlorine- and carbon-based compounds have been chosen as priority pollutants by the International Community. These fall into three broad groups: the Pesticides (aldrin, dieldrin, endrin, chlordane, DDT, heptachlor, mirex, toxaphene, hexachlorobenzene (HCB); the Industrial Chemicals (PCBs-polychlorinated biphenyls and HCB) and; the unwanted by products (dioxins and furans).

POPs attracted international attention due to a growing body of scientific evidence indicating, that even very low doses of POPs exposure can harm human health. Health effects of POPs include cancer, damage to the central and peripheral nervous system, diseases of the immune system and interference with normal infant and child development.



The global risks associated with POPs called for collective global action to stop their spread and finally a multilateral, international legally binding treaty to ban POPs was signed on May 23, 2001 in Stockholm and it came to be known as the Stockholm Convention. It deals with the control measures that need to be adopted for the production, import, export, use and disposal of POPs.

The Convention, also known as the POPs Convention, aims to eliminate these 12 chemicals; help Governments to promote best available techniques and practices to replace existing POPs and prevent their formation; and also prevent the development and use of new POPs. The convention is a dynamic one since it will continue to monitor additional chemicals, which may be considered as POPs for addition to the Convention, on a regular basis.

ACTIVITY SUMMARY

The program aimed to sensitise, children and youth, the future citizens of the world about the threats posed by POPs and help them to find answers to the various questions related to POPs i.e. the WHAT, WHY, WHEN, WHERE, HOW and WHO by conducting thematic workshops and sessions on POPs in the schools and colleges.

By means of these interactive sessions both, the students and the teachers were encouraged to explore the issue of POPs in detail, to question and to take ownership of their learning by forming POPs clubs. They became Ambassadors to promote message against POPs and took the responsibility of informing the whole college about the harmful effects of POPs through assemblies. Plus they got an opportunity to voice their concern, to build consensus, create networks.

This program thus provided a platform to share knowledge, views and experience about POPs, to build consensus on the underlying issues, to make use of information and communication technologies to create networks and partnerships with other groups and to appeal to the Government, Media Houses and the wider community to unite against POPs. It initiated the spirit of scientific temper. This led to research and documentation, and built competencies needed to take ownership and responsibility of supporting the Stockholm Convention.

Also, the multidisciplinary nature of learning and experience sharing, throughout the campaign, was instrumental in providing a holistic view of the issue by connecting environment, social equity and economics. It thus helped to fulfil the vision of the Decade for Education for Sustainable Development (DESD) and also contribute to the Millennium Development Goals adopted by the international community in 2000.

People Involved

The chief coordinating official was Anuradha Gupta, founder Secretary of Prithvi Innovations. She was aided by experts such as Dr. PK Seth, CEO-Biotech Park, Dr KP Singh, Industrial Toxicology Research Centre (ITRC), and Dr Pradeep K Srivastava (CDRI).

Target groups

The target groups comprised of students, teachers, youth, relevant government officials and agencies, community leaders, media person, civil society and NGOs.

Achievements

Through the various activities, we reached around 1,500 students and teachers directly and more than 6,000 people indirectly through various local, national and international networks such as Media, District Science Club, Vigyan Prasar's VIPNET News, VOLVO Adventure, Clean up the World, etc. The activity inspired lot of ground action and basic research by students. It also mobilized people from various sections of the society to think about POPs and take action.

THE CAMPAIGN: HELLO ZINDAGI - ALVIDA POPS

I. JUSTIFICATION

Children of today will be the youth of tomorrow and the youth of today will be the decision makers and stakeholders like CEOs, Managers, Industrialists, Entrepreneurs, and Environmentalists. In this context it is very important that children and youth of today are well informed and well-prepared to face the future challenges posed before them. As serious and alarming subject as POPs remains unknown to them. Hence there is an urgent need to sensitise them about POPs, the twelve deadly chemicals.



Involving today's children and youth on issues of environment may be the best way to ensure an informed, experienced and creative-decision making in the future. It was felt that initiating a dialogue among the youth was one of the most powerful ways to inspire responsible behaviour. There is a need for a new generation of citizens and leaders who appreciate that thoughtful use of environment is fundamental and not optional. Any local, regional or global effort towards achieving sustainable development would be incomplete if the youth of today are not educated and empowered in the true sense.

The need of the hour is to provide them with an education that fosters an understanding of the interconnectedness of ecology, economics and social equity; an education which is future-oriented and ignites, guides and mobilizes the youngsters to acquire right knowledge, develop right perspectives, and practice values, behaviour and lifestyles that are essential for a sustainable future.

The main goal of education is not to memorize facts or answers but to learn to think critically about issues, and to ask questions and discover ways of finding sustainable solutions to various environmental and health issues, as complex as POPs. This would not only broaden the vision of the students but also lay the foundation for education for sustainable future – a prerequisite to achieve the Millennium Development Goals.

II. CAMPAIGN OBJECTIVES:

Based on the above premise a campaign was designed primarily aimed at:

- Providing basic understanding of POPs, their nature and the extent of their local and global impact;
- Informing and educating them about the various efforts being made locally and globally to combat the problem of POPs (i.e. the Stockholm Convention on POPs and the International POPs Elimination Network);
- Charging them so that they are able to reason, react and respond to the challenges posed by modern life-style and are able to differentiate between what is sustainable and what is not and act accordingly;
- Motivating them to spread the message around them in the most appropriate way by utilizing their creativity, energy and enthusiasm; and
- Empowering them to mobilize the larger community to unite in the fight against POPs, and thus ensure a better future for them.

In order to achieve the above objectives, the campaign was divided into various phases and utilized a multi-disciplinary approach and innovative style so as to present the complex issue of POPs in a simple, easy to understand medium. Lots of efforts were put in developing material in Hindi. This in itself was an uphill task since the available reference material was in English and the Resource Persons also preferred to present in English, the translation of technical details in Hindi was difficult. However with time, the organization developed the skills to take up the issue in the local language at the grassroots level such as with farmers.

III. PHASE WISE SUMMARY OF ACTIVITIES UNDERTAKEN:

1. School Campaign

Awareness Workshops in Schools and Colleges:

The first step was to provide correct information about POPs. Hence a number of awareness workshops were conducted in select schools located in different parts of the city. The targets were students of grades 8, 9 and 11.



These workshops were comprised of unique sessions and activities. Through fun games like dumb charades, role-play and others, the issue was introduced. Later with the help of informative presentation on the issue, the students were apprised of the status of POPs. These were followed by interaction sessions with experts like Dr. PK Seth and Dr. Pradeep Srivastava, to help students better understand the issue of POPs, their impact on human health and environment and the various other issues related to their emission and the efforts being made across the globe (the Stockholm Convention, etc.) to protect the planet from their harmful effects.

The students were divided into groups and information sheets on POPs were distributed. As a group they were asked to discuss the issue and develop action plans to further spread the knowledge gained from these sheets in a simple and innovative manner.

Each group chose a leader and gave itself a name, design a logo and submit an action plan as decided by it.

The aim of these workshops was not to overload them with too much of technical information about POPs, but to ignite their curiosity about POPs and other toxic chemicals, make them cautious and to motivate them to look for practical steps that they can take to prevent future exposure to POPs.

Contests such as slogan writing and poster making were organised at the end. Around 800 students participated in these workshops and beautiful posters and messages on POPs were produced which were later displayed on the notice boards in each of the participating school.

The schools in Lucknow that were selected for these workshops include New Way Senior Secondary School (Aliganj and Indiranagar Branches), Kendriya Vidyalay (IIM Branch), St. Antony's Inter College (Aliganj Branch), Nirmala Inter College (Kursi Road), and Mahanagar Boys Inter College (Mahanagar).

Follow-Up Capacity Building Workshops

The innovative style participative approach and the seriousness of the issue introduced by the awareness workshops generated a lot of enthusiasm among the students. The students were eager to understand the issue in greater detail and were keen on spreading this knowledge among their peers and within their respective areas. Thus arose the need for having follow-up workshops with the interested "Anti POPs Clubs" that were formed during the awareness workshops.

Since it was a new subject, it was necessary to orient both, the teacher co-ordinators and the student members of the Anti POPs Club. A series of follow-up sessions were conducted in the target schools wherein the groups were advised on various action projects chosen by them. Each group picked up an area and decided on a plan of action like decorating the notice board, conducting a survey on POPs in school, spreading the message through a school assembly, putting up an exhibition on POPs during science fair, preparing skits, songs, dances and others.



While some groups at St. Antony Inter College, Kendriya Vidyalay and Mahanagar Boys School prepared skits and musical role-plays on POPs, others at Nirmala Inter College and New Ways took to small projects on Waste Management, Resource recovery, Surveys and studies, Clean school, increasing the green cover, and designing cloth

banners to name a few. Regular meetings were held with these groups from time to time to take stock of their work and to evaluate the progress. These groups worked under direct guidance from experts.

Besides gaining knowledge and information about the emerging global issue of POPs, the workshops also helped to develop skills like critical thinking, reasoning, analysing, co-relating, researching, documenting, sharing, communicating, and problem solving among the students.

Some interesting groups such as 'POPs Control Group', 'Eco-rakshak (Protectors of Environment)', 'Prakriti' (Nature), 'POPs Destroyers' and others were formed at New Way Senior Secondary School. Other five groups were formed at Kendriya Vidyalay. These were 'Youth at work', 'Evergreen', 'POPs Reporters', 'Earth Savers', and 'POPs Dhamaka'. Likewise, 12 groups of around eight members each got activated in Nirmala Inter College as a result of these follow-up sessions. These groups took up number of interesting activities such as a signature campaign on chemicals awareness, musical show, surveys, waste management plan for the school, poems, suggestions box, collecting information on POPs and toxics, etc. It can be rightfully said that this campaign gave birth to a new generation of young leaders. The Mahanagar Boys had around 10 groups. Some of these groups created a beautiful song on POPs.



Other activities include posters and cloth banners that were designed by the students, besides number of action projects at the school level. The organization presented awards as a recognition of their hard work and concern.

These awareness workshops and follow-up activities further lead to real-life projects with visible and measurable results and a lifelong commitment to join the fight against POPs and other toxic chemicals.

Design and Development of IEC Material on POPs



While conducting awareness workshops and follow-up workshops in various schools, the need for illustrative material on POPs was felt. It was also felt that a campaign logo be designed to help gain identity as well as seen as a visible sign of increasing networks on POPs. The various interesting ideas that came from the students during the workshops in the form of slogans, cloth banners, posters, and others had to be shared with the larger community not only to display their talents but also to exhibit their enthusiasm levels to take on a challenging task.

The following material was therefore planned under the campaign in both English and Hindi: a set of five posters; a set of school banners on POPs; Campaign stickers; Campaign badges; Newsletter (bilingual); Cloth Banner/ Paper Posters; and campaign certificates

Study and Survey

Understanding and knowledge about POPs encouraged the students to take up the task of assessing the local status of POPs. They wanted to explore and analyse some of the activities commonly prevalent in the area that may be responsible for releasing of POPs.

The students took up exploratory studies under the expert guidance. The findings from these studies were shared in the form of reports and illustrative posters.

Some of the studies taken up by students are as follows:

A. Study of Brick Kiln units in Lucknow

The three brick kilns were identified for the study. These were the Gold Brick field near Kukrail picnic spot site, Kansal Brick field at Sitapur Road, and Prema brick kiln at Retha Road

Brick kiln units have been in existence for quite a long time in India. Due to rapid growth in infrastructure more and more brick kiln units have cropped up in the recent past.

Background:

The conventional burnt clay bricks will continue to be the main walling material for meeting the huge demand for housing in the foreseeable future, notwithstanding substantial efforts to develop alternatives. Current technologies for brick production such as clamps, downdraught kilns and Bull's Trench Kilns consume large quantities of fuel such as coal, firewood and other biomass materials. These result in huge amounts of emissions. In addition, Annex C of the Stockholm Convention lists fossil-fuel fired utility and industrial boilers and firing installations for wood as potential sources of dioxins and furans.

Geographical Description of the Sites:

The group visited three brickfields in Lucknow namely Gold brick field, Kansal brick field and Prema brick field. The Gold brick field is located at about 0.5 km from CIMAP and located in the vicinity of Kukrail picnic spot and residential colony within 200 meters. It has been operational for about 40 years and the land utilized for the purpose of erection of this site is on lease for a period of about 15 years. The owner of this field is Mr. Kishan Lal Kelwani while the main supervisors were Mr. Ramesh Chandra and Mr. Ram Parvesh.

Kansal brickfield is located at Sitapur road with agricultural land surrounding it and a power distribution substation in its vicinity of about 350-450 meters. It has been operational for about 40 years and the land utilized for the purpose of erection of this site is fully owned by the owner. The owner of this field is Mr. Chandan Lal Agarwal while the main supervisor was Mr. Ram Asrey.

The Prema brickfield located on Raitha road is again surrounded by agricultural land where chiefly wheat is grown. There are many other brick fields in the area. It has been operational for about 2 years and the land utilized for the purpose of erection of this site is fully owned by the owner. The owner of this field is Mr. Anil Kumar while the main supervisor was Mr. Subodh Kumar Singh.



Manufacturing process:

The process of manufacturing of bricks in brick clinker units is a four stage process, starting from casting of bricks in frames. In this stage soil from the nearby area is dug out and is cast in brick frames. After casting the bricks are laid down to dry out. This is then followed by arrangement of bricks in the unit for baking and the unit is properly sealed with an insulating material of about 6 inches thickness called *rabis*. Baking is done by burning coal in a refractory arrangement, which has gateways of about 5-6 feet high. Pots are placed over the insulating material so as to ensure proper baking of bricks. This takes about 4-5 hours. After baking these are cooled off for about a period of 15 to 20 days. The cooled bricks are then brought out by removing the arrangement that was used for sealing the unit.

Brick Kiln is a labour intensive industry, hence it's very important to understand the kind of hazards the workers are exposed to. Labour at these units comprises of men, women and also children. Efforts were made to gather more information about the health and other safety arrangements, but being working hours, interaction with workers was not possible. As per the observation it was apparent that no special arrangements were made to protect them from the exposures. The labour is largely unskilled except for purpose of insulation and baking. The unskilled labour is paid on the basis of output.

Regulatory authorities:

The State Pollution Control Board acts as the regulatory authority and has laid down certain norms regarding the functioning of the brick field units especially with regard to the height of chimney, materials used in manufacturing bricks, daily production etc.

Mr. KK Sharma, Chief Environmental Officer of Uttar Pradesh Pollution Control Board was contacted to find if these units posed any major threat to the environment. According to him, with the installation of permanent

chimneys and by increasing the height of the shaft, the pollution levels have come down or rather the emissions are not released too close to the surface. Hence, according to him, chances of soil or water contamination, has been reduced considerably.

Mr. Ajay Sharma of the Regional Office, UPPCB was also of the opinion that the brick kiln units in the present scenario are not a major threat, provided they operate as per the laid down norms and do not encroach in to the residential areas.

Central Pollution Control Board Environmental Standards for Brick Kilns

Size	Kiln Capacity	Maximum limit for the concentration of particulate matter. (mg/Nm ³)
Small	Less than 15,000 bricks per day (less than 15 ft trench width)	1000
Medium	15,000-30,000 bricks per day (15-22 ft trench width)	750
Large	More than 30,000 bricks per day (more than 22 ft trench width)	750

Stack Height Regulation

Kiln Capacity	Stack Height
Less than 15,000 bricks are day (less than 15 ft trench width)	Minimum stack height of 22 m, or, induced draught fan operating with minimum draught of 50 mm Water Gauge with 12 m stack height.
15,000-30,000 bricks per day (15-22 ft trench width)	Minimum stack height of 27 m with gravitational settling chamber or Induced draught fan operating with minimum draught of 50 mm Water Gauge with 15m stack height.
More than 30,000 bricks per day (more than 22 ft trench width)	Minimum stack height of 30 m with

Search for alternative cleaner practices:

The search for cleaner brick production technologies has led to the identification of Vertical Shaft Brick Kiln (VSBK) technology. The Vertical Shaft Brick Kiln technology originally developed in China is an energy efficient, environment friendly and economically viable means to produce quality bricks. It has been adapted to Indian conditions and successfully field tested. Further, it has received certification from the Central Pollution Control Board (CPCB) for operations in accordance with stipulated environmental norms.

Major advantages of VSBK technology are as follows:-

- It represents an extremely energy-efficient, low-cost method of firing bricks. The fired quality is high with very low wastage.
- Emissions from the kiln are well within acceptable limits
- The kilns require very little maintenance once constructed and are not complicated to build.
- The kiln is very compact not requiring a large area of land and can be built near to the clay source.
- The construction cost is low.
- The kiln is not affected by variations in the weather as long as dry green bricks are available.
- More than one shaft allows for firing flexibility to cope with seasonal and economical variations in brick production and demand.
- The kiln is highly suitable for use where fuel is incorporated into the brick.

Recommendations:

This was just a preliminary study to gain insight into the working of Brick Kilns and to assess their probability of being a major source of dioxins and furans. Samples of soil and water were collected but were not sent for analysis. To come to any conclusions an in-depth study of this industry needs to be taken up. Prithvi would like to take it up as a comprehensive study, if necessary support is provided to meet the basic costs of detailed research and documentation. Based on the preliminary findings, some of the recommendations are:

- The location of the site should not be near any residential area or any agricultural belt as it might cause health hazards to those living in its vicinity as well as affect the fertility of the land.
- Medical check ups of the workers on regular basis.
- Proper disposal of the waste generated in the process of production of waste at the production site.
- Fuel used for burning the bricks in trenches should be in accordance with the norms laid down by the Pollution Control Board and use of fuel (like wood) should be avoided in use with conjunction of other fuel materials. Waste should not be used as a fuel.

B. Plastic Waste: Usage, disposal, collection and recycling of Plastics

Here is a brief extract of the project done by the members of Anti POPs Club at the New Way Senior Secondary School, Aliganj. This project was also posted at the Volvo Adventure Site for the Young Environmental Action Award and the team received an official acknowledgement, certificate and souvenirs for their efforts from the Volvo Group.

The group visited a factory, Narain Plastics Ltd., to understand the process of making plastic. They then collected the information about the harmful effects of chemicals used in making plastics with the help of teachers and experts at ITRC (Industrial Toxicology Research Centre).



The group also met with the rag pickers and garbage collectors, an important component in the recycling process. They were told that the pickers are able to collect not more than 5 kilogram of plastic bags in a day since these are scattered all over. The group members visited six colonies in the vicinity and motivated the households to hand over the used poly bags to the rag pickers who visited them on alternate days.

They also worked with the rag pickers and motivated them to segregate colourful plastic bags from the ordinary ones. The coloured bags were for selling to the women from the rural areas for making handicraft items, which they could sell in the cities. The left over bags were sold to Narain Plastics for recycling.

The group also tried to explore the lesser-known issue i.e. bio medical waste, a significant portion of which is plastic. The group visited a small nursing home, Devki Nursing Home, and found the used disposable syringes, glucose bottles, surgical gloves, and other types of wastes thrown in the backyard. These are either openly burnt or just thrown in the municipal bins. The students tried to find out more about the issue of bio medical waste and its disposal options.



They also took up a small survey at the community level to understand the current awareness levels with regard to the harmful effects of plastics on our health and environment. There was very low awareness among the people and as expected no one was aware of POPs issue. This low awareness levels can be held responsible for the growing demand for plastics in our day to day life.

The group, at the end of the activity, organised a seminar at the school level with the help of the Principal. The aim was to share the learning and educate other children about the adverse impacts of plastics.

2. From Classroom to the Conference Room

Press Conference

A Press Conference was organized on 2 April 2006 at Mahanagar Boys Inter College. The main objectives of the conference were:

- To inform the media about POPs and their adverse effects;
- To inform about the global efforts and global networks working to eliminate POPs (i.e. the Stockholm Convention, IPEN, IPEP etc.)
- To share some facts about efforts being made by India to address the issue of POPs.

- To inform about the local campaign, *Hello Zindagi, Alvida POPs* -- its objective, learning, achievements and future plans.
- To announce the launch of an Exchange Program on 5 April 2006

The Press conference was attended by around 15 representatives from both, print and electronic media. The major media agencies such as The Times of India, Hindustan Times, Indian Express, Hindustan, Amar Ujjala, Rashtriya Sahara, Jan Satta, Rashtriya Swaroop, Punjab Kesari, Swatantra Chetna, ETV, Sahara Samay, Lucknow Doordarshan, and Khaas Khabaar were present.



Ms. Anuradha made a presentation on POPs and the specific campaign. She also shared some future plans of the organization to address the issue of POPs. Dr. PK Seth, National Coordinator of the POPs Project Team in India provided valuable insight into the POPs scenario in India and the efforts being made address them at the government level. Student members of the various Anti POPs Clubs too shared their experiences with the press.

Inter School Exchange Program on POPs

An Inter school exchange program was organised with the basic aim of facilitating sharing of information among the various schools. While the various schools have been actively taking up activities on POPs, it was important that they share their experiences, learning, achievements, challenges and future plans with other schools – those who participated in the campaign as well as those who did not.

A full day program was therefore organized on 5 April 2006 at Samanjasya Community Hall at Indian Institute of Management (IIM), Lucknow. Marking the World Health Day celebrations, the theme of the program was ‘Working Together for Health’. It stressed on how health is not possible without eliminating POPs and there is a need for collective and collaborative effort by all stakeholders to address the issue.



Around 300 students and teachers from 12 colleges located in different parts of the city participated in the program

The program was inaugurated by Dr. Devi Singh, Director IIM. He in his inaugural address appreciated the efforts of Prithvi Innovations and the students and further motivated them to continue their efforts targeted at a POPs free world. For those who have not been a part of the campaign, a presentation on POPs and their impacts on human health and environment along with a brief on various ongoing efforts world over to address the POPs issue was made. An overview of the current campaign was shared with the participants. The information was shared in an interesting way. The presentations were in simple language. A film show was prepared by Prateek Chandra, a student from Mahanagar Boys. Skits and plays were put up by the Anti POPs Clubs of Mahanagar Boys and St. Antony Inter College.



A Newsletter on POPs was also released on the occasion. This is bilingual and contains information about the various aspects of the issue in an easy to understand language. An open quiz was organized with the aim of sharing important facts about POPs. Prizes were given out for correct answers.

Several contests and activities were organized. These include Rangoli, Calligraphy, Face Painting and Action Statement. The theme of these contests were ‘Working Together for Health’ with a special focus on how POPs can affect our health and steps that needs to be taken to safeguard our health and environment from these poisonous chemicals. Interactive sessions with experts such as Dr. Pradeep Srivastava were also organized. The contests were judged and the best entries were awarded prizes.

The most interesting part of the program was the ‘Handprints Banner’ created by the students as an appeal to the adults of the country to ensure them a healthy future since children are more vulnerable to these toxic POPs. This banner was later presented to Dr. PK Seth, National Coordinator of the POPs Program in India. Dr. Seth appreciated the creative expression of students and promised his full support in all the endeavours.

IV. KEY ACHIEVEMENTS AND IMPACT

Undoubtedly, the campaign led to a better understanding and dissemination of information and knowledge about the adverse effects of POPs and of the benefits of supporting, ratifying and implementing the Stockholm Convention, from the classrooms to staff rooms, to the conference rooms and finally to the larger community.

Some of the major outcomes of this program can be listed as follows:

- The campaign reached out directly to around 1500 students and teachers from different parts of Lucknow
- In addition, it indirectly reached to over 6000 people from the various sections of the society such as the educational institutions, research Institutions, Government agencies including State Pollution Control Board, Directorate of Environment and Municipal Corporation, through medium such as stickers and banners, Posters, Newsletter, field projects by Anti POPs Clubs, media reports, and others.
- More than 250 slogans in Hindi and English were received from students. Around 100 cloth banners were created by students and teachers.
- Around 50 active Anti POPs Groups or Clubs were formed in the schools. Out of these, 30 clubs have specific action plans to work upon.
- Around 1,000 newsletters and 2,000 stickers were printed and circulated to disseminate the message. Resolutions from individuals to safeguard human and environment health were collected through the newsletters on the occasion of World Health Day.
- A set of posters with basic information on POPs has been developed. These could be exhibited at any occasion to spread the message about POPs.
- The campaign spread outside Lucknow to other States with the help of VIPNET News. Mr. Nimish Kapoor, Associate Editor of VIPNET News, a reputed registered monthly newsletter of Vigyan Prasar, was extremely impressed by the campaign objectives and approach and shall be covering it in their next issue. VIPNET is a popular network of science club with over 2000 members spread across India and acts as an outreach program of Vigyan Prasar, an autonomous organisation under Government of India's Department of Science and Technology set up in 1989 to undertake large scale science popularisation tasks in the country. Prithvi Innovations is working with VIPNET to look at ways of collaboratively taking the issue forward through a regular column on POPs and involving the youth in the long run.
- Another major achievement was that as a result of this campaign, students got highly motivated and undertook tasks related to issues such as biomedical waste, plastic management, recycling etc. Some of the activities were submitted for International Contests on Environmental Education and Action. One of the student's groups got rewarded by Volvo Group for their project on reducing POPs by managing plastic waste. The project received international recognition and students were given certificates and souvenirs. This had a rolling effect and many other schools are now encouraging their students to take up such projects on issues of local and global importance.
- The campaign has equipped the students for the future. It instilled the much needed commitment to join the fight against POPs. They are better prepared to make choices that are in the interest of their health and environment.
- It provided them a platform to voice their concern over vital ecological and health issues such as POPs.
- A number of schools have already expressed the desire to have workshops on POPs. There has been a commitment from a few to keep the issue live through their School Magazines. Schools also expressed interest in holding sessions on POPs at the forthcoming Inter School Events.
- The campaign has set a base that would contribute to the effective implementation of the Stockholm Convention. Appeals have been sent out to the representatives from media, corporate, academics, research institutions, government and the community at large to join the fight against POPs.

V. THE ROAD AHEAD

Whatever has been accomplished or achieved so far is perhaps just a beginning. The spark has been ignited and the flame has to catch on. As a result of exchange of information, sharing of experience and building up of networks, several opportunities have opened up to address this issue in a more comprehensive manner and at all fronts namely awareness, action, advocacy, training and capacity building, research and documentation..

There is strong need to expand the program to also cover other groups such as farmers since nine out of 12 POPs belong to the pesticides category and there is still unofficial use of these and other equally harmful pesticides in the agricultural sector. In cities too, it is important to inform the industrial units since they are the ones who have to look into their production processes and waste disposal methods so as to move towards best available technologies and eco-friendly practices.

Besides these, it is equally important to inform the community at large so that they remain alert and report any cases of stockpiles of POPs, or contamination or adverse practices in their locality. Unless they understand what POPs are and their sources they may not be able to play an effective role in its elimination.

The students, under this campaign, have initiated small field projects, which can actually take the shape of comprehensive studies and surveys, if adequate time, support and technical expertise are made available. These preliminary observations can be expanded into in-depth research and the findings documented and disseminated.

Besides, the various environmental groups and online networks could be used to spread message on POPs. Networks and forum such as SAYEN (South Asian Youth Environment Network), Clean Up The World, TUNZA, UNEP, ICYO (Indian Council Of Youth Organisation), Earthday network, India together and the IPEP website would be requested to post the highlights of this awareness program on their web pages.

This program could serve as an excellent model, which could be replicated, in other educational institutes across globe, because of its universal message, innovative approach and participative style. The learning from this program could be helpful in introducing new activities and projects on POPs, which could in turn be instrumental in the National Implementation Planning (NIPs) process and also support the Stockholm Convention.

Hence, there are innumerable opportunities of extending this program since it deals with an issue, which goes beyond borders, beyond time, beyond generations and lays ground for Education for Sustainable Development and suggests ways of achieving the Millennium Development Goals too.

