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Recognizing Health Hazards for Safer Livelihoods.

Project Title	: Partnership Project for Reducing Persistent Organic Pollutants Generated through Indiscriminate Human Activities
Project No	: SRL/SGP/OP4 Year 2/CORE/08/05
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Background

The Stockholm Convention of 1972 ratified by Sri Lanka in December 2001 lists put 12 chemical substances that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to human health and the environment" termed Persistent Organic Pollutants (POPs). PCBs as one of the most hazardous chemicals in use at present are one of the twelve to be phased out. Under the provisions of the convention, Sri Lanka has to concede to the requirement of phasing out PCB's in an environmentally safe manner by 2025 or to 1998. Sri Lanka used PCB coolant oils in transformers and capacitors. These are not imported anymore, however PCB containing coolant oil from discarded or damaged transformers and capacitors are being indiscriminately used for variety of purposes, in particular in home based welding industries. PCB contaminated oil available through illegal selling and transformer auctions, has a high demand in the open market due to its low price making it difficult for the authorities to control the situation. Due to lack of awareness on the health hazards in being exposed to PCBs, the workers of the transformer repair sector and those operating home based welding plants handle the oil without protection.





Implementation

The initiative was implemented in the two districts of Kalutara in the Western Province and Badulla in the Uva Province with the aims of -

- i) Raising awareness of stakeholders such as local authorities ,welders and school children through the use of media i e .local radio channels ,exhibitions ,informative literature and posters on the harmful effects of PCBs and of Persistent Organic Pollutants (POPs) in general and especially on correct storage and disposal of contaminated oil ,
- ii) Carrying out studies in cooperation with two Universities (Sri Jayawardenapura and Colombo) on the on the health effects on welders who use PCB contaminated coolant oil in welding plants and,
- iii) Facilitating information exchange between policy makers ,local authorities NGOs , Electricity Board ,Central Environment Authority ,and Ministry of Environment's Hazardous Waste Division ,on PCBs and the health hazards involved in their use .

Results

The welders are not purchasing used transformer oils anymore and handle coolant oil with more care wearing protective masks and other clothes as safety measures . They also buy uncontaminated oil as they have been made aware of places where oil in which PCBs are not mixed is available. The possibility of exposure of themselves and their families to PCBs through self -contamination and cross -contamination and the pollution of the environment by the PCBs has been reduced .Public Health Officers are now aware and alert to the oil contamination related health hazards in particular of its affects on welders .

Awareness programmes for local level government officers , private sector organizations ,school children ,teachers and parents have heightened awareness on the risks of PCB contamination .

The initiative has provided field level information hitherto unavailable to institutes such as the Central Environment Authority (CEA) which has now issued notice to obtain an environment license to industries and to the Ceylon Electricity Board (CEB) Lanka Transformer limited Ltd and Lanka Electric Company (LECO) who produce ,use ,store or transport transformer oil .Each industry has also to maintain the required standards specified by the CEA.

The globally used SGP POPs training module has been translated in to Sinhala language for use in training programmes and for other interested persons to gain knowledge.

A Welder's Welfare Society has been formed to address occupational hazards ,health and welfare matters .The welders in the two districts are now spreading the knowledge they have gained on PCBs to welders in other districts of Sri Lanka.

In addition ,solid waste management through sorting and recycling of organic waste has been initiated in 22 schools in the two districts .School Environment Committees conduct awareness programmes to reduce the amount of non degradable waste such as polythene being brought in to school premises .

Results of the Studies on PCB use

The sample of the studies carried out in the two districts comprised 7 welding plants involving 13 welders. 5 % of welding plants were contaminated with PCBs and 9 % of workers were not using protective gear when refilling or using coolant oil. In addition the containers used for transporting oil are usually reused for other purposes or disposed in unsafe conditions. The commonest health risks revealed were eye problems 47.7% , skin rashes 28.6% , skin discoloration 17.5% , diabetes mellitus 15.9% , weight loss 11.1% and anorexia 7.9% .

On the status of health of welder families, 6.8% abortions and 1.7% still births were reported. With regard to children, 2.8% were detected with developmental delay, 0.9% congenital defects and 4.7% eye problems and gum diseases. While the direct link of these health problems to exposure to PCBs cannot be established in a study of this nature, it can be stated that the incidences are higher than the national averages.

Sustainability

Awareness raising on POPs and PCBs especially among school children is an effective method of conveying a strong message on the hazards involved which can span three generations i.e. their own ,their parents' and the future generation .

The effort to minimize the use of PCB contaminated oil will be sustained due to the mandatory licence system introduced by the CEA regarding the safe handling of PCBs .

The production of the training module in Sinhala language fulfils the gap of non availability of a document for the use of trainers and trainees who desire to acquire knowledge on POPs ,now and in the future .



People to People

“Preventing further dispersion of PCB chemicals within the country is a great challenge. Taking one step at a time is the only way for e.g. We have been able to identify new means of PCB management such as temporary storing mechanisms of PCB contaminated transformer oil prior to incineration. We have been able to pass on this information to the relevant authorities. Through this project we were able to motivate all stakeholders especially the local level workers towards sound PCB management by sharing knowledge and information. We will continue to work in line with the objectives of the Ministry of Environment and Natural Resources, the Central Environment Authority and PEN (PCB Elimination Network) an international partner, towards the goal of eliminating PCB chemicals in Sri Lanka”.



Anuradha Prabath