www.ipen.org ipen@ipen.org

International SAICM Implementation Project (ISIP)

In 2010, in an effort to demonstrate SAICM implementation via IPEN Participating Organizations, IPEN launched an International SAICM Implementation Project, also known as ISIP. ISIP aims to mobilize resources for initial enabling activities pertaining to national priorities, in keeping with the work areas set out in the strategic objectives of section IV of the SAICM Overarching Policy Strategy.

In particular, the ISIP supports the Governance objective of SAICM's Overarching Policy Strategy paragraph 26, which calls for enhanced "cooperation on the sound management of chemicals between Governments, the private sector and civil society at the national, regional and global levels."

In addition, ISIP builds on the 2008-2009 Global SAICM Outreach Campaign to raise awareness about SAICM and strengthen collaboration among the public interest, health and labor sectors.

ISIP Objectives

ISIP's four objectives include:
• Promoting the need for sound chemicals management
• Advancing National SAICM Implementation
• Promoting global SAICM implementation by global civil society
• Building capacity among NGOs developing countries and countries with economies in transition

Title of activity: Survey of Bisphenol A in Russian foods
NGO: Chapaevsk Medical Association
Country: Russia
Date: November, 2010

Elements of SAICM Covered:

Participation in the collection, review, and assessment of existing information on information systems pertaining to chemicals in products including but not limited to regulations, standards and industry practices; Develop specific recommendations for actions to promote implementation of the Strategic Approach with regard to such information, incorporating identified priorities and access and delivery mechanisms; and follow up activities for the SAICM OEWG and ICMM3; Promote the use of safe and effective alternatives, including non-chemical alternatives to organic chemicals that are highly toxic, persistent and bioaccumulative; Promote the development and use of products and processes that pose lesser risks; Articles and products containing hazardous substances should all be accompanied by relevant information for users, workplaces and at disposal sites; Promote provision of information for all chemicals in commerce, including appropriate information detailing their inherent hazards should be made

available to the public at no charge and generated where needed with essential health, safety and environmental information made available (ICCM2 decision II/4, GPA items 54, 44, 108,111)

Description of the specific product(s) and chemical(s) related to the activity:
Bisphenol A (BPA) is the common name for 2,2-(4,4'-dihydroxydiphenyl)propane, 4,4'-isopropyllidenediphenol, or 2,2'-bis(4-hydroxyphenyl)propane. It is used as an intermediate in the production of epoxy resins, and epoxy resins are used in the internal coating for food and beverage cans to protect the food from direct contact with metal. BPA can migrate from cans with epoxy coating into foods, especially at elevated temperatures (for example, for hot-fill or heat-processed canned foods). While high dose toxicity studies in animals have clearly demonstrated adverse health effects, controversy exists regarding low dose effects of BPA and their relevance to human health. There is no data about BPA in food in Russia.

Description of the toxic effects of the chemicals contained in the product(s):
Epidemiological studies have suggested some statistically significant associations of BPA exposure (urine concentrations) and health effects (coronary heart disease, reproductive disorders, breast cancer) in adults and behavioural changes in young girls.
BPA has been the subject of intense research as it is a known endocrine disrupter which in large quantities interferes with the release of hormones.

Earlier studies have linked it to low sex drive, impotence and DNA damage in sperm.
Recent studies show that, compared with men without detectable BPA in their urine, , those with detectable BPA in their urine had more than three times the risk of lowered sperm concentration and lower sperm vitality, more than four times the risk of a lower sperm count, and more than twice the risk of lower sperm motility.

Description of how consumers are exposed to these toxic chemicals:
BPA is used to manufacture:

- Polycarbonate plastic products. Polycarbonate is inexpensive, durable, and lends itself to rigorous manufacturing processes. These qualities and its aesthetic appeal made it the material of choice for most big name bottle companies, including Nalgene, Camelbak, and Rubbermaid. Polycarbonate is the biggest offender when it comes to the leaching of Bisphenol A.
- Epoxy resins to line metal cans
- Dental sealants and composites
- Toys and consumer products.

It is still widely used in plastic water jugs, soft drink cans, hockey helmets, mobile phone housings, computers, car bumpers and other consumer products.

Primary exposure to BPA is through the consumption of foods. The chemical migrates from packaging such as baby bottles and coated food cans into the food. Non-dietary exposure, which can occur from house dust, soil or toys, dental treatments and cash register receipts, for example, was found to be of "minor relevance".

Description of what information (or level of information) is available to consumers about the toxic chemicals in the product:
Some producers of baby bottles and other baby accessories wrote "BPA free" if product doesn't include BPA. No indication is labeled about BPA, if BPA potentially exists in product.

Description of what types of similar products are available on the market, including safer alternatives:
Containers made of alternative materials such as stainless steel, glass, or BPA-free plastics.
It is now possible to find water bottles that are just as durable and attractive as polycarbonate bottles but are made of 100% BPA-free materials. Though the prices of these bottles remain on

the high end of the scale, many consumers feel that the extra few dollars are worth the peace of mind. More information: http://www.trailspace.com/articles/building-a-better-water-bottle.html

Project Outcomes:

Description of the activity conducted:

- Food samples were collected in three different towns of Russia, 7 samples per site
  - Moscow – capital of Russia, foods from large supermarket
  - Samara – large city, 1.3 ml population, foods from supermarket
  - Chapaevsk – small city near Samara, chemical center (organochlorine pesticides production), foods from small grocery store and mini-market
- Assay using Gas Chromatography-Mass Spectrometry (GC-MS) for bisphenol A analysis was developed with good sensitivity and accuracy
- 21 food samples from 3 different Russian cities were analyzed
- BPA was determined in 17 of 21 samples (81%)
- Highest level was determined in canned (tin) food including
  - infant poultry pure “Tema” (35,22 ng/g)
  - Infant chicken and beef pure “Agusha” (21.52 ng/g)
  - Canned tomatoes "Zelyony Velikan (42,9 ng/g)
  - Canned beef "Tushenka govyazhya osobaya“ (19,39 ng/g)
- BPA was also determined in baby’s dummy
  - Baby's latex dummy "Lubby" (17,04 ng/g)
- The average level of BPA in Russia was similar (slightly higher) to that of the level of BPA for beverages and infant formulas published in Canada
- No significant difference between BPA levels in food in different Russian cities was revealed

Impact on target groups:

The project target groups included NGOs, scientific community and industry. So far there was no concrete result of the activity on these groups. They all were informed about the project outcomes as well as different activities going on at the international level regarding BPA impact in human health.

Impact on target policies:

There was no result of the project activity on the target policy yet. It is a pioneer project in Russia and the results should be highly promoted at the policy level. So far we managed to communicate the results to some experts in the Ministry of Natural Resources and the Environment as well as with some experts from the Ministry of Health and Social Development. Unfortunately, the latest decision on BPA made by the WHO expert meeting held in early November 2010 made our work on BPA in Russia much more difficult. Even though WHO experts did not conclude that BPA was safe, and acknowledged that there are low dose studies that raise concerns, they concluded, "Until these associations can be confirmed, initiation of public health measures would be premature."

Outreach to stakeholders:

- Chemists;
- Producers of bottled water;
- Physicians;
- Leaders of environmental NGOs

Deliverables, outputs and/or products:

- Presentation in Russian (presented at workshop “Bottled water”, June 2010, where producers of bottled water, chemists and consumers discussed issues related to chemicals in products);
- Technical report of “Evaluation of Bisphenol A level in Russian foodstuffs” shared among Russian chemists.

- Presentation in English (presented at 2010 IPEN General Assembly)

The results of the survey were broadly disseminated by Eco-Accord News service on Chemical Safety which allowed us to make the outcomes of the project public in the EECCA region.

SAICM National Focal Point:
There is no National SAICM Focal point in Russia

NGO Recommendations for next steps:

- To calculate daily dietary intake, based on measured concentrations:
  - For breast-fed babies;
  - For formula-fed babies using non-PC bottles,
  - For formula-fed babies using PC bottles;
  - For adults
- Assessment of daily human exposure to BPA in the general population by biomonitoring of urinary excretion of BPA metabolites (using samples from Chapaevsk bank of biological samples)
  - To develop the assay in the Russian lab
- To assess the impact of exposure in epidemiological studies, which can be part of ongoing study in Chapaevsk
- To inform consumers in the EECCA about the toxic effects of BPA and the available alternatives, as well as BPA-free products
- Start information and awareness campaign in Russian and other EECCA countries with the aim to stop BPA use in children's products including food, baby-formula and toys.