TOXICS DISPATCH
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Toxics Link
for a toxics-free world

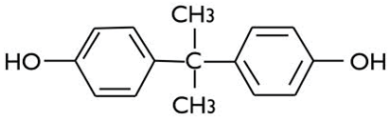
PHASING OUT BISPHENOL – A IN BABY FEEDING BOTTLES

Is Bureau of Indian Standards (BIS) dragging its feet!

About Bisphenol-A

Bisphenol-A (BPA) or 2,4-isopropylidenediphenol is a carbon-based synthetic compound with chemical formula $(CH_3)_2C(C_6H_4OH)_2$ belonging to the group of diphenylmethane derivatives and Bisphenols. BPA was first synthesized in 1881 and is primarily used as a monomer for the manufacture of polycarbonates.

Figure 1 Chemical structure of Bisphenol-A



At present two kinds of BPA based plastics are available in the market: one is Polycarbonate (PC), and the other one is Epoxy Resins (ER). The polycarbonate is commonly used in baby feeding plastic bottles. However after the health impact of Bisphenol –A came into lime light, many countries across the globe have phased out or restricted its use in baby feeding bottles.

The health impacts of BPA has now been an accepted fact and a number of research findings have concluded that BPA has the potential to cause harm to human health; especially the children are most prone to the impact of BPA. BPA has been associated with heart diseases, liver toxicity and metabolic syndrome, further BPA has the ability to disruptive effects in androgen or estrogen responsive tissues, within the immune system, the thyroid, and the developing nervous system, that is why BPA has been put in the category of EDCs. Further there are number studies that have linked the presence of BPA with depression, anxiety and abnormal behavior among children. Even low dose of BPA in children are found to be harmful.

In the Toxics Link study "Bottles can be Toxic" out of the fourteen baby feeding bottle samples analyzed, 78.5% samples contained BPA

BPA exposure of children is perhaps also due to higher daily intake of food/beverages per body volume unit than adults. So, many countries across the globe have phased out and banned the use of BPA in baby feeding bottles.

BPA in baby feeding bottles in India

Feeding bottles in India are regulated by the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992 as Amended in 2003 (IMS Act). The act mandates that all the baby feeding bottles to be sold in India will be subjected to the standard IS-14625 specified by the Bureau of Indian Standards (BIS). The IS-14625 was adopted in 1999 and has been revised in 2002 and 2004 considering certain environmental parameters. According to the 2002 amendment of IS-14625, only virgin Polycarbonate is allowed for the baby feeding bottles. The Bureau of Indian

IN THIS ISSUE

EDITORIAL

Bharat to Swach Bharat

The Swach Bharat Campaign is a laudable political initiative. It has components of both building toilets, but also of waste disposal, though the message is basically aimed at changing citizen's behavior. Of course, both need to go hand in hand and that is why the political messaging is important.

However on the other side of the message, is the need for infrastructure and capacity in the system to deal with the massive and growing amounts of waste both in rural and urban areas. What happens to various streams of waste, after people dispose it off properly, is mainly determined by a network of environmental laws, developed mainly over the past 15 years. These legislate municipal waste, plastic waste, biomedical waste, electronic waste, lead battery waste and industrial waste and effluents. Most of these have been notified after 1990. However despite they having been in existence for over 25 years, they have only worked partially, or not at all.

It is surprising that despite these laws being mandatory with very strict penal provisions, and prescribed actions by different stakeholders, including municipalities, industry, consumers, recyclers etc., hardly anyone has been prosecuted for non-compliance. In fact time and again these laws have been revised, and even currently at least 4 of them are under revision, awaiting fresh notifications.

There are several reasons why these laws could seem perfunctory. None of them, for example, have any targets defined to determine progress. Hence though the laws come into force on a particular day, there is no concept of progressive improvement.

Secondly, these are all based on 'policing' the stakeholders, rather than helping build infrastructure and capacity needed for implementation. The Ministry of Environment which makes these laws, stops at the point of making them. The State Environmental Regulators who are meant to implement them, only look out for non-compliance, and perhaps not even that. So who is looking at bridging the gap between investments, systemic innovations needed, and stakeholder coordination? No body!

Thirdly, even the regulator has neither the required manpower, technical skills and infrastructure (especially for new kinds of emissions like dioxin and furans, benzene etc. for example) to even implement compliance. Equally importantly, is the fact that the regulator is subservient to its political masters, and not independent.

Fourthly environmental infrastructure needs finance and technology. There is currently no linkage between the legislation and the needed financial and its technological aspects.

Fifthly, one of the key stakeholders in waste, industry (both manufacturing and recycling) has hardly ever come forward for any new initiative. Hence even though mandated by law, companies do not pick up e-waste. The packaging industry, for example, has resisted any attempts to make it more responsible, even though it behaves differently in Europe.

Finally, a key group of stakeholders, the waste pickers and the informal sector, already engaged in recycling and collection, albeit in polluting and harmful to health ways, have been ignored or only grudgingly acknowledged. Often the laws seek to carve out new systems of waste collection and recycling, ignoring the reality on the ground. Instead of building capacity and creating opportunities for participation by the informal sector, the laws have tended to make them 'illegal'. To survive, they have turned into successful competitors rather than collaborators in the waste scenario, often undermining new systems and nothing has really changed on the ground.

One can go on about the reasons. However the translation of India into Swach Bharat is possible. It needs more than rhetoric and laws which end up being perfunctory. It needs real work and investments, and that is what the political will must translate to, if the campaign is to be successful, which is everyone's hope.

– Ravi Agarwal

Global Regulation of BPA in Baby Feeding Bottles

COUNTRY	REGULATION OF BPA IN BABY FEEDING BOTTLES
Canada	First country to ban the import, sale, and advertisement of baby bottles containing Bisphenol A.
USA	Banned
European Union	Banned the use of Bisphenol-A (BPA).
Australia	The Australian Govt. has introduced a voluntary phase out of BPA use in baby feeding bottles. The Australia and New Zealand Food Safety Authority (Food Standards Australia New Zealand) suggests the use of glass baby bottles.
Japan	Voluntary phase out by the industries
France	Banned
Germany	Banned
Denmark	Banned
Belgium	Banned
China	Banned
Malaysia	Banned
South Africa	Banned
Turkey	Banned
India	Not Banned

In the study, BPA was detected above EU threshold limit of 0.6 ppm in 50% of BPA free samples

Standards (BIS) has revised the standard for baby feeding bottle in 2013. The draft notification has stated that BPA will not be used in the baby feeding bottles. However the draft has not been notified yet.

Toxics Link recently conducted a study on BPA in baby feeding bottles sold in Indian market. Fourteen samples were taken randomly from three cities across the country. The study found that most of the samples contain BPA and the max. BPA concentration was detected as 9.8 PPM in one of the samples. In half of the samples BPA was detected above the EU threshold limit of 0.68 ppm. Ironically BPA was detected in a sample that was mentioned as BPA free.

BIS is dragging its feet to phase out BPA from the baby feeding bottles

It has been accepted by the Bureau of Indian Standards (BIS) that BPA can be harmful to the new born child, while preparing the draft to phase out BPA from the baby feeding bottles. Though the draft notification has been issued in 2013, however the final notification has not been published yet. The position of BIS is quite strange considering the importance of the issue and playing with health of the children. It seems that BIS is protecting BPA industries at the cost of health of the children.

Finally BPA has been well accepted as an endocrine disrupting chemical and many countries have taken steps to phase out BPA not only from baby feeding bottles but also from other products. Stringent regulations are in place especially on the presence of

BPA in children products. Even the countries are monitoring the daily intake of BPA in food and have notified advisory on TDI limit of BPA. However in India, there is very little headway in this direction. Ironically there is hardly any awareness among the policy makers and other stakeholders on the issue. In fact no research studies are being conducted in India, linking the use of BPA with the health impact. Moreover in cities, various products are now being available that have been labeled as BPA free.

BPA was also detected in a bottle that was marked as 0% BPA

This shows the level of awareness among the consumers, but as there is no monitoring mechanism in place, one cannot guarantee that these products are BPA free. Toxics Link study is an example, how BPA has been detected in the product that has been labeled as 0 % BPA.

In this scenario, there is an urgent need of action among the regulators to develop a policy and suggest suitable regulation on BPA use in the products, to minimize impact on human health and environment.

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BRINGING CHANGE THROUGH VISUAL MEDIA

This article is an attempt to examine how film festivals in psychological terms impact "attitude" of the audience especially students, towards environment.

Having positive attitude towards environment is one of the keys to conservation of nature. It helps in connecting us with nature and makes us feel that we are a part of it. It reminds us of the fact that we have to live in harmony with her, and not utilize her for short term gains of modern day development. The same message was emphasized by the chief guest of our recently organized film festival "Quotes from the Earth", Padmshree and Kathak Guru - Smt. Shovana Narayan. She said if you are positive towards something, that thing will be positive towards you; and she also cautioned the audience by metaphorically linking the current state of environment with that of Mahabharata's "chir haran" of the earth. Mr. Ravi Agarwal, Director of Toxics Link also said - the films connect to our inner selves with the nature, and that is why we have been persistently organizing the film festival "Quotes from the Earth".

In fact, numerous research studies have shown that visual media has a strong impact on audience attitude (which comprises of how we think and feel) and behavior, especially among children and the youth.

The term attitude can be defined as the way one thinks and feels about someone or something (Merriam Webster). It is a perception/belief of a person about an issue/object as favourable or unfavourable. Attitude can be rated on the basis of how strongly he/she feels. For instance a person may feel very strongly about environmental issues, another person may take it moderately, while the third person can take it very lightly.

It sometimes evokes and enhances violent behavior and negative attitude, while at other times it has a very positive influence on growing children, students, youth and the adults. It all depends upon the kinds of visual and the messages that are provided to the audience.

The film festival "Quotes from the Earth" which is a bouquet of well directed films has a strong impact in effusing a positive feel and thought, on environment. The 6th edition of "Quotes from the Earth" held on the 5th and the 6th of December, 2014 drew an enthusiastic audience over 300; about 60 of them were over and above the seating capacity. The students' enthusiasm got clearly reflected in their requests to their teachers to let them watch more films, and ask the school bus-drivers to stay on for more time. The representatives of the civil society organizations and other institutions wanted such films to be screened in their own cities, which was another testimony of the impact such film festivals can have. The audience glued to the screen, and the eagerness in interacting with the film directors are other indications of enthusiasm carried by the audience.

Undoubtedly, the film festival "Quotes from the Earth" had a strong influence on the attitude of the audience. But in technical terms how exactly does film festivals impact attitude of the audience, especially the students?

Link of behavior, attitude and awareness

Behaviour is technically defined as the "way someone functions or operates" and is guided by the attitude that we carry. The term attitude can be defined as the "way one thinks and feels about someone or something". It is a perception of a person about an issue/object as being favourable or unfavourable. Attitude can be rated/graded on the basis of how strongly he/she feels about an issue. For instance a person may feel very strongly about environment, another person may take it moderately, while the third person may take it very lightly, and the fourth person may take it carelessly.

Here it should be noted that attitude is an important key to processing of any information inside the mind. Simply increasing awareness level does not necessarily mean that the person will start thinking positively about an issue. Perhaps many awareness programs in the non-profit become a little less successful as most of the efforts are devoted in increasing the level of awareness; less effort is given on how the information is provided which can change the attitude of the person, or in common terms how the message can enhance positivity towards a particular issue.

"Attitude" has been studied exhaustively and they are very frequently applied in many campaigns in India and abroad, to infuse positive influence among the audience. One such example is the recent anti-smoking drive in India. The video uses strong images and metaphors to create a very negative attitude toward the product, so that the addicts leave it or the relatives force them to leave it. The strong caption written on the cigarette cover "smoking kills" is another very strongly worded message that impacts the attitude. Here it should be mentioned that most the smokers very well know that smoking is injurious to health, it is the way messages are produced and delivered, which makes an impact on attitude.

Film festival's influence on attitude

Technically "attitude" is explained in more than one ways however, one of the popular explanations is done through a very old model of persuasion called "ELM" or Elaboration Likelihood Model (Petty and Cacioppo, 1986*). According to this study, attitude of a person depends upon how a person receives and processes information. The model states that he/she does that in two ways (or the persuasion of attitude in a person takes place in two way)—through "central route" which is based upon his logical elaborate thinking that interacts with the messages/issues; and through the "peripheral cues" such as facial expressions of a speaker, his/her dress, the kind of voice, impactful visuals and music in a documentary, etc.

The films shown during the festival "Quotes from the Earth" and the interactions with the film directors (there may be other elements during the festival for instance the inauguration ceremony, the speeches, etc, that may have positively impacted the attitude of the audience; over here however only the films and the audience interactions with the film makers have been taken up) can be distinctly categorized in these two categories – the central route and the peripheral cues.

For instance one of the films on biodiversity was on flora and fauna that thrive in the Western Ghats of India. The visuals of the animals and the plants on how they live and thrive, the historical perspective, and the script narration are more likely to initiate the central route of persuasion. The peripheral cues on the other hand add to the positivity of the messages that are entering the mind through the central route. The music, the quality of voice-over, the graphics are some of the peripheral cues that add to the positivity towards the subject in the film. Similarly, the film on Yamuna, which was a poetic expression of the dilapidated state of the river, is another case that can be taken up. Here the meaning/message of the poem and the visuals may be considered as the elements of central route, while the music may provide the peripheral cues. Since festivals provide a platform for screening a lot of films, it gives a wide scope for influencing the attitude of a variety of audience—depending upon how the audience relate and react to the films on environment.

The additional attitudinal reinforcements come from audience interaction with the film-director. These interactions help in quelling the queries of the audience, and may fall into the central route category of processing information. Both the messages and the peripheral cues are strong elements in building positive attitude towards the subject, in this case environment. The film festival "Quotes from the Earth" endeavours to spread far and wide across India to strengthen positive attitude towards environment. It intends to reach out to remote areas with collaborations with schools and local civil society organization, and tries to engage the audience with other related communication activities, to enhance positivity and influence on a long term basis.

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** Petty E.R. & Cacioppo J.T. (1986). The Elaboration Likelihood Model of Persuasion. Advances in Experimental Social Psychology.*

SAVE YAMUNA BEFORE IT DIES!

It seems that almost every day there is a story about pollution of one form or the other, in the food we eat, the water we drink and the air we breathe. Very often our own actions lead to that pollution and actually in many cases we can do something about it. Nowadays rivers are considered as natural drainage; the water quality of Indian rivers have gone down because of dumping of different types of wastes, like municipal waste, industrial waste, surface run off, agriculture waste, etc.

A river is a natural watercourse, usually of fresh water, flowing towards an ocean, a lake, a sea, or another river. Rivers form part of the hydrological cycle, and there are more than 150 small and big rivers in India. The River Yamuna originating from the Yamunotri glacier in the lower Himalayas is one of the largest tributaries of the Ganges river network.

The river water of Yamuna is found "reasonably good" (physical appearance) before it enters Wazirabad (one location of Delhi) but from Wazirabad onwards besides the pollution load, the physical appearance of the river changes drastically due to the discharge of waste water from the drains.

There are many published research studies on water and sediment quality of Yamuna which indicate the load of the different pollutants, sources and its health impacts. The recent study carried out in the pre and post monsoon season in year 2013 by Toxics Link also indicated the bad condition of the river. Water and the sediments were collected before and after Wazirabad and tested for pH, turbidity, solids and heavy metals for water and only heavy metals for sediments. The results indicated that the water was turbid and solids load was very high in both the seasons when compared with the Indian Standards as well as before Wazirabad location.

In case of the sediments there are no specific standards and hence the samples were compared with that of before Wazirabad location and they revealed high amount of heavy metals in post monsoon season. It indicated that there is continuous discharge of the effluents in the river stream.

There are some locations near river Yamuna, where the vegetable are being grown, washed and supplied to different parts of the city. Certain researches have that the vegetables grown in contaminated soil/sediments absorb some degree of heavy metals. It means there may be a chance that vegetables that we eat may be contaminated with some degree of heavy metals.

Types of the pollutants and their sources

POLLUTANTS	SOURCES
Pesticides	Run-off from farms
Sewage	Untreated or inadequately treated municipal sewage
Nutrients	Domestic waste water, agricultural run-off, and industrial effluents contain phosphorus and nitrogen
Synthetic organics	Chemicals and agricultural pesticides
Heavy Metals	Industrial effluents, Domestic waste water, hazardous waste dumps
Microorganisms	Untreated or inadequately treated municipal sewage

Action Plans

The problem is not small and the solution is not easy, but the efforts are being taken by the Indian government to clean Yamuna which reflects in the Yamuna Action Plan. The Yamuna Action Plan (YAP) is a bilateral project between the Government of India and Japan. It is one of the largest river restoration projects in India. The government of Japan, via the Japanese Bank for International Cooperation (JBIC), has provided financial aid of 17.7 billion yen to carry out the project, which is being executed by the National River Conservation Directorate, the Ministry of Environment and Forests, and the Government of India.

Taking its maiden step towards cleaning Yamuna, the Delhi Jal Board (DJB) will set up an interceptor sewer with a length of 59 kilometers along the three major drains (supplementary, Najafgarh and Shahdara) to intercept sewerage from around 190 subsidiary small drains and transport it to the nearest Sewage Treatment Plant (STP) to ensure that only treated effluent is discharged into these major drains. According to sources it is assumed around 70 per cent of pollution load in the river shall be reduced by this effort.

In addition to this in January 2013, the NGT had banned dumping of debris, including construction material, into Yamuna and had directed the states of Delhi and Uttar Pradesh to remove the debris immediately. It had also directed Delhi Pollution Control Committee not to grant permission to any industrial unit discharging effluents directly or indirectly into Yamuna.

Conclusion

There are number of studies on pollution load of river Yamuna however, there remains a need for generation of data periodically to monitor pollution load of the river. We also find that there are several sources such as small drain, municipal waste, etc that still continue to contaminate the river. Hopefully, Yamuna Action Plan as well as the decision taken by NGT would be helpful in achieving the clean Yamuna goal in the near future.

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SET STANDARDS FOR LEAD - FOR THE SAKE OF CHILDREN!

Bright yellow, green, blue, red, pink!. These are a few colors that don the walls of kindergartens and primary sections of most schools. Look around a little more and you will see swings and furniture too, painted in these colors.

Looking at them, one wonders what gives these beautiful colors their shine and texture.

Well that is where lead (Pb) comes in. It has been historically used by paint manufacturers as a coloring agent, to enhance durability, longevity and to make it corrosion resistant. What many are unaware of is that lead is a well-known neurotoxin, which damages, destroys or impairs the function of the nervous system.

The Blacksmith Institute's World's Worst Pollution Problem Report 2010 indicated that lead (Pb) is the deadliest of top six toxics threats globally. It estimates about 10-22 million people worldwide are affected by lead poisoning. World Health Organization (WHO) is reviewing the current science on lead toxicity. It is now widely accepted that there is "no safe blood lead level" in humans.

The effects of lead toxicity have been well established, with clear evidence of harm found in children whose blood lead levels are above 10μg/dL (Microgram per deciliter) and some evidence that harm may occur at lower levels. The centre for disease control (CDC) reduce "blood lead level of concern" by 50 percent from the previous level of 10 micrograms per deciliter to the new CDC blood lead level of 5 micrograms per deciliter of lead in the blood. The new recommendation was enacted based on a growing number of scientific studies that showed that even low blood lead levels can cause lifelong health effects.

Standards on lead in paints

In 1904, lead based paints were linked to childhood lead poisoning. It was found to be a toxic threat to the young children, especially between the age group of 0-6 years. Studies illustrate that lead impacts about 40 million children worldwide, over 97 per cent of who live in developing countries. Health and environmental concerns prompted many countries to sit up and take steps.

KEY FACTS

- Lead is a cumulative toxicant that affects multiple body systems and is particularly harmful to young children.
- Childhood lead exposure is estimated to contribute to about 600 000 new cases of children developing intellectual disabilities every year.
- Lead exposure is estimated to account for 143 000 deaths per year with the highest burden in developing regions.
- About one half of the burden of disease from lead occurs in the WHO South-East Asia Region, with about one-fifth each in the WHO Western Pacific and Eastern Mediterranean Regions.
- Lead in the body is distributed to the brain, liver, kidney and bones. It is stored in the teeth and bones, where it accumulates over time. Human exposure is usually assessed through the measurement of lead in blood.
- There is no known level of lead exposure that is considered safe.
- Lead poisoning is entirely preventable.

Source: Lead Poisoning and Health, Factsheet No. 379, WHO

In 1909, France, Belgium and Austria became the first countries to ban use of lead in household paints. By 1935, many European countries had banned the use of lead in household paints. In 1971, the US banned lead in paints, making way for the Lead Based Paint Poisoning Prevention Act.

In Asia, however, things have been moving slow.

INDIA: In December 2013, Bureau of Indian Standards (BIS), the National Standards Body, revised the standards for lead in paint from 1000 ppm to 90 ppm for household decorative paints. However, these standards are voluntary in nature. This means manufactures (in organized and unorganized sector) are not bound by law to provide safe household paints, even if they pose serious health risks. Exposure to lead from paint remains a problem for many decades after the lead paint is applied to a surface.

SRI LANKA: The mandatory regulation on lead paints came in effect in Sri Lanka from January 1, 2013. Under the regulations, limit for in floor and enamel paints (wood/metal) was set at 600ppm.

PHILIPPINES: The Chemical Control Order for Lead and Lead Compounds was issued by the Department of Environment and Natural Resources, Philippines in December 2013.

NEPAL: Ministry of Science Technology and Environment, Nepal has enacted a Gazette Notification and set the Lead Paint Standard of 90 ppm to eliminate leaded paint from the country.

BANGLADESH: The Bangladesh Paint Manufacturers Association has shown interest and support for a mandatory regulation limiting lead content to 50 ppm – which, if passed – would be the lowest in the world.

THAILAND: Draft legislation is pending on lead in paints though efforts made by non-government organizations have received public support from high level officials at public events.

INDONESIA: The country is still struggling to bring in any standards for limiting the use of lead in paints.

All these Asian countries are also part of the ongoing EU-SWITCH Asia Lead Paint Elimination Project which is working on reducing children's exposure to lead from paints in the project countries.

The way lead (Pb) was removed from gasoline at a war footing, elimination of lead from paints being a part of the millennium development goals 2020, will be dealt with in the same way. The international standard for lead in paints is 90 parts per million (ppm).

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DANGER LURKING AROUND EVERY BEND!

In the modern day world you find batteries almost everywhere; from small electronic gadgets to medical and engineering equipment to large industrial machines. The speed at which portability is advancing hinges much on the battery.

With advancement in technology, more and more battery using products are coming into the market and this will rise in the future. Hence, it is critical to understand if batteries are a sustainable option or not. As this product segment advances, little attention is being paid on potential environmental and heath impact from its end-of-life. Perhaps, it is time to start thinking if we are prepared to deal with this new waste, and for that we need to understand the possible risks associated with batteries, the quantum of waste generated, and possible solutions to tackle this threat.

Let's start with the basic question: what is a battery? Battery is a cell or connected group of cells that converts chemical energy into electrical energy by reversible chemical reactions. Batteries may be recharged by passing a current in opposite direction to that of its discharge. Each cell contains a positive terminal (cathode) and a negative terminal (anode). Electrolytes inside the battery allow ions to move between the electrodes and terminals, which allows current to flow out of the battery to perform work.

Battery has different properties and chemical composition in accordance to their applicability. They are mainly of two types – Primary (non-rechargeable) or Secondary (rechargeable). Most of the households use both the kinds of batteries.

"Household batteries" are the small portable batteries used daily by most people in devices such as radios, toys, flashlights, games, watches, calculators, hearing aids, cameras, telephones, among several others.

Similar to e-waste, volumes of spent batteries are going to be an issue in future; and until and unless we know exactly what we are dealing with, it will be a mammoth task to handle them. Different batteries contain different kinds of chemicals and metals, most of which are toxic and hazardous to both environment and human health.

In India, we have Battery (Management & Handling) Rules, 2001 to deal with Lead Acid Batteries containing lead and sulphuric acid. But we neither have regulation nor recycling infrastructure to handle other batteries like Ni-Cd, pencil cell, button cell, Li-ion that contain cadmium, nickel, carbon, zinc, copper, mercury, alkaline solutions, etc. Also, mishandling of spent batteries can be highly dangerous due to corrosive nature of electrolyte inside them.

Globally, batteries have been considered hazardous and proper regulations and infrastructure are in place to take care of this waste. In 2006, European Union passed the Battery Directive. One of the aims of this directive is higher rate of battery recycling. Similarly, United Kingdom has taken various initiatives time and again, to deal with batteries:

- A scheme was started in 2008 by a large retail company that allowed household batteries to be posted free of charge in envelopes available at their shops.
- In 2010, shop and online retailers who sold more than 32 kg of battery a year were mandated to open recycling centres.

The developed countries are way ahead in taking care of this issue whereas in India, people are not even aware. Lack of proper regulatory framework on battery disposal and infrastructure is making the situation worse and adding to our landfill burdens. Much attention needs to be paid to solve this problem in our country so that we have a cleaner, greener, and healthier environment, for us and our future generations to live-in!

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PRIMARY BATTERY

Pencil Cell -remote control, torch, camera, etc.
Button cell – wrist watch, calculator, etc.

SECONDARY BATTERY

Nickel Cadmium (Ni-Cd) – toy, photographic equipment, etc.
Lithium Ion (Li-ion) – mobile phone, laptop, etc.
Lead Acid – Car, inverter, etc.

UPDATES

Film Festival "Quotes from the Earth"- 2014

Toxics Link organized the 6th edition of "Quotes from the Earth" an environmental festival at India International Centre, on 5th and 6th December 2014. Inaugurated by Padmshree and Kathak Guru Smt. Shovana Narayan, the festival drew a huge audience of over 300, comprising students, film lovers, environmentalists, and also researchers working on environmental issues. Song and dance performances were made during the inaugural ceremony by students from Queen Mary's School and Create to Inspire fellow. Speaking on the occasion Smt. Narayan emphasized the need for being concerned about environment and having a positive approach towards it, and cautioned the audience that currently we human beings are becoming the mythical "Kaliya Daman" by spilling venom into the environment.

During the span of 2 days, the festival brought the audience a bouquet of 24 films from all shades of environment ranging from vanishing bio-diversity to rampant mining, lives of tribes to global climate change, threats to lakes and rivers to forest conservation, and toxic waste to sustainable development. The films intended to make the audience feel the glory of nature and at the same time see the conflicts of modern day development with nature. Speaking on the occasion, Mr. Ravi Agarwal pointed out that films connect environment with our inner selves, and this is the reason why we have been persistently organizing environment based film festivals. Besides, screening of films, a panel discussion on "Shaping environmental discourse-The role of media" was held during the festival. Eminent personalities from news media, film-making, environment and from academics joined the discussion. The film festival was organized in coordination with India International Centre, with support from SSNC.

The 2nd Open-ended Working Group (OEWG2) meeting of SAICM

Strategic Approach to International Chemical Management (SAICM) is an important global platform to create the scope to minimise and reduce the impact of chemicals on health and environment at large. The 2nd Open-ended Working Group (OEWG2) meeting of the SAICM was held in Geneva from 14 – 17 December 2014 to discuss the future agenda of SAICM. The meeting was very crucial considering the forthcoming ICCM-4 to be held in September, 2015.

Following are some of the key developments of SAICM-OEWG2:

- Proposal for time bound action on Lead in Paint, EDCs, Chemicals in products, and hazardous chemicals in the lifecycle of electrical and electronic products
- Addition of highly hazardous pesticides (HHP) to the agenda of ICCM4 and proposal for creation for a Global Alliance to Phase-out Highly Hazardous Pesticides
- Recommendation of environmentally persistent pharmaceutical pollutants as a new emerging policy issue
- Finalise the draft on Overall Orientation and Guidance document which outlines priority actions and goals of SAICM between now and 2020

Seminar on Mercury Toxicity & Medical Waste Management

Toxics Link in collaboration with the State Department of Health, West Bengal conducted a daylong seminar on 19 December 2014, in Kolkata on issues relating to medical waste management and mercury toxicity in the healthcare sector. The seminar focused upon the entire government healthcare set up in thirteen districts (except six districts) of North Bengal region.

The seminar was inaugurated by Dr. Biswaranjan Satpathi, Director of Health Services, Department of Health & Family Welfare, Govt. of West Bengal, where he acknowledged the initiatives taken by Toxics Link and expressed concerns over the condition of medical waste management in the state of West Bengal. He attributed the deteriorating scenario of handling waste to the attitude of the healthcare professionals and asked them to be more responsible in handling medical waste in their respective healthcare facilities. Mr. Satish Sinha, Associate Director, Toxics Link in his inaugural speech pointed out the gaps that persist in the implementation of bio-medical waste management practices in the state. He also talked about the global stand on mercury and highlighted the need for phasing out the heavy metal from the healthcare sector, given the presence of a global legally binding treaty, named Minamata Convention. A private healthcare facility which has shifted from mercury to mercury free alternatives presented case study of their hospital in which they highlighted the benefits and challenges faced by them during the process of becoming mercury free.

Noida-Ghaziabad Schools Turn Green Ambassadors

'Create to Inspire' programme, supported by Microsoft, was started in the twin cities of Noida-Ghaziabad in August 2014 and culminated with a felicitation event on 26th December'14 at Bal Bharti School (BBPS), Noida. The programme, through working with teachers, aimed at motivating students or youth leaders to be drivers for sustainable future. The programme was a big success as it not only brought students closer to environment but also inculcated the idea that they can make a difference through their actions. Through this initiative, many of the schools worked closely with their neighbouring communities to address concerns relating to waste management, energy and water conservation and become Green Ambassadors.

The felicitation event awarded 29 schools from Noida-Ghaziabad for their efforts to conserve environment The programme also saw the participating schools and teachers being awarded on several categories like 'Environmentally Sustainable School of the City,' 'Best Community Outreach', 'Best Use of Creative Means', among others.

The programme was inaugurated with a prayer by the students of BBPS Noida, followed by inspiring words from Satish Sinha, Associate Director, Toxics Link and Anupama Motwani, Vice Principal, BBPS. Manjri Gopalan, Manager, Sustainability Microsoft shared her experience of working with schools throughout the country

and specifically with schools of Noida and Ghaziabad. This was followed by certificate distribution and various performances by schools on different themes of environment.

Fuel or energy crisis was the theme of performance by students from Indirapuram Public School (IPS), Ghaziabad. They performed a street play (nukkad natak) on 'Be Fuelish or Be Smart' where the students effectively showcased the fuel crisis and provided solutions for the same, leaving many in the audience inspired and eager to contribute. Girls from Ryan International School, Noida sang self composed songs on the theme of earth & water and trees. Their beautiful thoughts and singing left the listeners mesmerized.

Little children from Radiant Academy enacted a musical skit named 'Story of Sparrow' where they portrayed the reasons for extinction of sparrows and urged people to bring back the birds. Issue of resource scarcity was the focus of the skit performed by students of Everest Public Schools, Ghaziabad. Through their lively performance, they talked about reducing consumption and waste.

Teachers were also made to share their experiences and learning during the 4 months through rapid fire Q & A sessions. Teachers of BBPS and IPS, who did exceptional work under the programme, shared their success story and motivated the remaining schools for future endeavours. The event ended on a high note with teachers expressing their happiness on being part of the entire 'Create to Inspire' programme and conveying excitement about participating in the next phase of this inspiring journey.

FACT FILE

DICOFOL

What is DICOFOL?

Dicofol [2,2,2-trichloro-1,1-bis (4-chlorophenyl)ethanol] is an organochlorine pesticide that is chemically related to DDT. Dicofol is usually synthesized from technical DDT. There are two forms of isomers of DDT p,p'-dicofol and o,p'-dicofol.

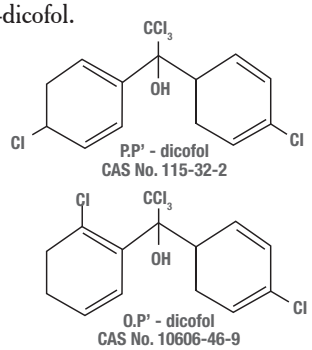

Figure 1: Chemical Structure of Dicofol

What are the uses of DICOFOL?

Crop	*MRL prescribed (mg/kg)*
Fruits & vegetables	5.0
Tea	5.0
Chilli	1.0

Dicofol is a miticide and generally used to control phytophagous mites on fruits, vines, ornamentals, vegetables, teas, & field crops. Dicofol is also used in agricultural and domestic buildings for mite control. In India Dicofol is permitted to use as pesticide for tea, citrus, litchi, cotton, Chilli, Brinjal etc.

Does DICOFOL pose a risk to human health?

Dicofol has the persistent characteristics, so it can store in the fatty tissue of the human being & animal and can cause potential health risks to the human being. The acute effects of Dicofol exposure can cause nausea, dizziness, weakness, conjunctivitis, vomiting, etc. Other Chronic effects of Diocofol includes convulsions, coma and even death from respiratory failure. The WHO has classified Diocfol as a Class –II carcinogens.

What are the environmental impacts of DICOFOL?

Dicofol is persistent in soil, with a half-life of 60 days. It breaks down in moist soils and in water or when exposed to ultraviolet light at pH levels above 7. However, Dicofol is persistent and bio accumulative in acidic condition. It is reported to be repro-toxic in wildlife. Research shows that Dicofol interferes with the normal behavioral patterns in aquatic organisms. The rResearches studies have found that Dicofol impacts the eggshell thinning and reduced offspring survival were noted in the mallard duck, American kestrel, ring dove, and screech owl.

Is Dicofol a Persistent Organic Pollutant(POP)?

Dicofol has the similar properties as of DDT. DDT has been considered as a POP and has been restricted for the agricultural use. In 2008, on the basis of Risk Profile and Summary Report for Dicofol prepared by the Netherlands, the EU first nominated Dicofol for listing as a POP in Stockholm Convention. Now Dicofol has been put in the list of candidate POP. In Stockholm Convention, POPs Review Committee (POPRC) Meeting in 2014, All Committee Members agreed that Dicofol met each of the four POPs screening requirements.

What is the status of Dicofol use across the globe?

Many countries have either banned or restricted the use of Dicofol and have opted for better alternatives. The current manufacturers include Hindustan Insecticides Limited (India), Lainco (Spain), and Makhteshim-Agan (Israel). The use of Dicofol is banned in EU countries. In USA EPA (Environmental Protection Agency) is planning to phase out Dicofol by 2016.

What is Indian scenario on Dicofol?

In India Dicofol is permitted to be used as pesticide for tea, citrus, litchi, cotton, chilli, brinjal, etc. Hindustan Insecticides Limited (HIL) is the manufacturer of Dicofol in India. It is the world's largest producer of the Dicofol with manufacturing capacity of 150MT/annum. Incidentally, Indian Govt. is opposing to the inclusion of Dicofol as POPs in Stockholm convention.

Are any alternatives to Dicofol available?

There are Suitable alternatives to Dicofol available in market such as Chlorfenapyr, Hydramethylnon, Pyridaben, Oxythioquinox, Fenbutatin-oxide, Formetanate hydrochloride, etc.

– Alka Dubey
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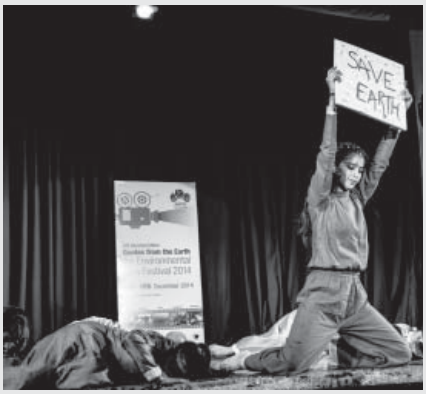
PHOTO FEATURE

The 6th edition of environmental film festival "Quotes from the Earth" was organized at India International Centre by Toxics Link, on 5th and 6th December 2014. Inaugurated by Padmshree and Kathak Guru Smt. Shovana Narayan, the festival drew a huge audience of over 300, comprising students, film lovers, environmentalists, and also researchers working on environmental issues. Following are some of the pictures of the festival.

Smt. Shovana Narayan inaugurating "Quotes from the Earth"

Inaugural speech by Ravi Agarwal



Inaugural performances by the students of Queen Mary's School and Create to Inspire fellow

Audience watching films and the performances

Film directors interacting with the audience

Panel Discussion

Toxics Link team that made the whole event a grand success

CYTOTOXIC DRUG – RELIEVER TO CANCER PATIENTS OR AN AGENT OF CANCER!

What is Cytotoxic drug?

Cytotoxic drug, popularly known to be used in cancer treatment is gaining its popularity in a country like India, owing to the huge increase in the number of cancer patients in the country. In India it is estimated that there are 2 to 2.5 million cancer patients at any given point of time with about 0.7 million new cases coming every year and nearly half die every year. Two-third of the new cancers is presented in advance and incurable stage at the time of diagnosis. This again confirms the obvious increase in the use of Cytotoxic drugs in India. In spite of this fact, India does not have any guideline for handling and disposal of these drugs and other wastes contaminated with this drug.

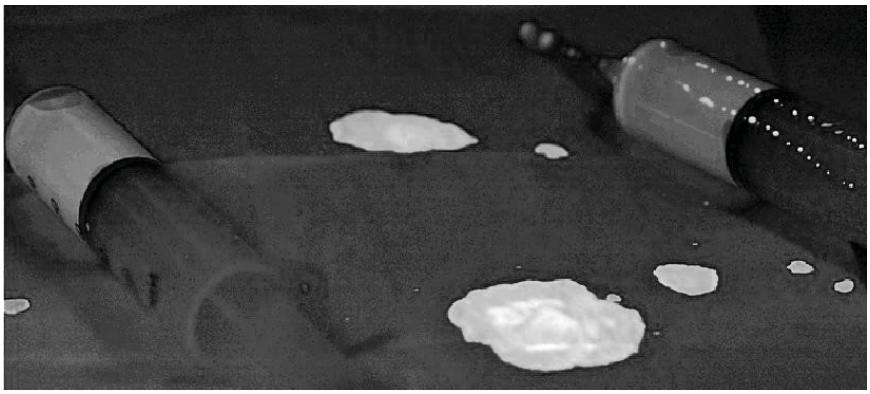
Due to lack of any Indian Guideline on the use and handling of Cytotoxic drugs, all the big hospitals are developing their own protocols; however the smaller setups are still lagging behind. Therefore both the occupational safety and patient safety issues have been compromised.

Issues/Problems with Cytotoxic Drugs

It should be mentioned here that Cytotoxic drugs are used to destroy cancer cells in cancer patients and if not handled properly are likely to damage the live cells at the place of its contact. Add to it, one of the surveys conducted recently by Toxics Link brought into light some shocking facts.

DRUG HAND OVER: Most of the Cancer Health Care Facilities & Research Centers are also handing over the used Cytotoxic drug vials to the patients or to their attendants for the purpose of availing the medical insurance claims. Since these drugs are very expensive, patients ask for the leftover drugs - thus the hospital is forced to give the drugs in the hands of common men who are least aware of the problems with the drug they are carrying. This handing over of the used drugs can eventually increase the probability of exposure to the patients and/or their attendants and even to the insurance personnel, if no precautions are taken.

CONTINUOUS EXPOSURE: Sometimes a single person does admixtures of drugs for 8 hrs continuously. There is no guideline on maximum exposure in a day, neither in terms of the hours of exposure, nor the numbers of admixtures, to be conducted by a single person. In most of the cases, this preparation is being handled by the junior pharmacists, who are less experienced and therefore prone to mistakes and subsequent exposures.



Spilled traces of cytotoxic drugs that eventually spread to other locations

IMPACT ON CHILD: It is seen that junior doctors are largely in child bearing age. This increases the potentiality of the toxicity to be transferred to the next generation.

NATURE OF THE STAFF DEALING WITH THIS DRUG: According to the recent survey, in some of the hospitals, drug preparation is being done by contract workers, hence no one could be made responsible for any emergency that may occur.

MONITORING RECORD KEEPING: This is attributable to the ever changing nature of workers. Most of the time, hospitals appoint contract workers, thereby making it impossible to maintain any records of the accidents or other spill occurrences. Even for hospital administrators it becomes difficult to get any record of chronic impact of continuous exposure.

No monitoring check can be kept on preparation and transfer of the drugs as this work has been outsourced by some hospitals.

SPILL MANAGEMENT: The hospitals which are dealing with these drugs hardly ensure any spill management system of these drugs neither they follow any post drug-administering checks within the hospital premise.

One hospital performed an in-house experiment using a fluorescent liquid and found that the traces of drugs were almost everywhere (tray carrying the injection, on floor, water taps, and phone receiver).This experiment highlighted the indirect exposure to the entire hospital staff and visitors who are not in the suspected exposed group. At the same time, this highlights the dire need of training and proper guidelines for the hospital staff.

Hospitals also highlighted the problem with incineration of large quantities of empty glass vials of Cytotoxic Drugs. The hospital was informed that glass damages the hearth of the incinerator.

Toxics Link's role & India's position

To address these issues, documented here, Toxics Link created a platform, where all the relevant stakeholders met together and came to a common consensus of coming up with a national level country specific universal guideline on the handling & disposal of Cytotoxic drugs. An expert committee has been formed under the Secretary, Ministry of Health & Directorate General of Indian Council for Medical Research (ICMR).

Toxics Link endeavours that the new guideline will be a stepping stone towards improving the situations in handling of Cytotoxic drugs before and after usage, ensuring the treatment of the deadly disease of cancer.

– Kankana Das

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NEWS

Your fish curry may be laced with mercury

Is the fish-crazy population of Bengal at a greater risk of mercury contamination than the rest of the country? They are, according to a study by a green NGO. In support of its claim, the NGO cited random tests, which revealed traces of mercury, conducted across five districts.

Fish samples collected from five city markets — Manicktala, Sealdah, Gariahat, Behala and Sahababur Bajar — also revealed that mercury content was often higher than the permissible limit.

The state pollution control board, however, dispelled fears, pointing out that influx of sea water in the lower reaches of the Gangabasin made Bengal less prone to mercury contamination.

The survey conducted by Toxic Links, the NGO, has concluded that typical fish consumption among residents of Bengal, particularly in the middle income groups, easily ranges between 300 and 400gm, with a large number consuming over 500gm of fish per week.

Source: *Times of India, Kolkata, 7 January 2015*

Read the full news report: http://timesofindia.indiatimes.com/city/kolkata/Your-fish-curry-may-be-laced-with-mercury/articleshow/45783623.cms

Forced to live with e-waste

E-waste! What is e-waste? I have not heard of e-waste and its concept of recycling. I do not even know if any collection center exists in our market," said Ankit Chhabra (name changed) who has been running a laptop store in Asia's largest electronic market Nehru Place for last 15 years says when asked about the disposal of old laptops and desktops.

This is the extent to which Delhi Pollution Control Board (DPCC) and Central Pollution Control Board (CPCB) have managed to reach in creating awareness about e-waste and its adverse impact on environment and people who deal with it under minimum safeguards in not only Delhi but also in most other cities of India.

The Associated Chambers of Commerce and Industry of India (ASSOCHAM), one of the apex trade associations of India, has put out a study saying Delhi-NCR is emerging as the world's dumping ground for e-waste and may generate about 95,000 metric tonnes (MT) per annum by 2017 from the current level of 55,000 metric tonnes per annum growing at a compound annual growth rate of about 25 per cent.

Domestic e-waste including computer, TV, mobiles and refrigerators contain over 1,000 toxic material, which contaminate soil and ground water. Exposure can cause headache, irritability, nausea, vomiting and eyes pain. Recyclers with minimum infrastructure and safeguards may suffer liver, kidney and neurological disorders.

Source: *Millennium Post, New Delhi, 4 January 2015*

Read the full news report: *http://www.millenniumpost.in/NewsContent.aspx?NID=90792*

Despite ban, plastic bags still in vogue

Despite ban on use of plastic bags in most States and Union Territories, a recent study conducted in Chandigarh, Sikkim and Delhi shows that it is being rampantly used not only by roadside vendors but even by big brand stores. The study finds that it is a big urban phenomenon. Though aware of its hazardous effects, most of the people covered under study continued to use it as a matter of convenience and easy availability.

The study called "Plastics and the Environment — Assessing the Impact of the Complete Ban on Plastic Carry Bags" has been conducted by Toxics Link, an organisation that works on management of various kinds of waste. It was conducted with the objective of checking the compliance of plastic bag ban, reasons for success and failures and providing alternatives for improving the compliance.

The study surveyed a total of 834 respondents in Delhi. It was found that majority of consumers and vendors continue to use plastic bags in spite of the ban. Plastic bags are freely available in the market areas and there seem to be no check on its usage.

Total number of respondents in Chandigarh were 500, of which about 74 per cent of the consumers and 75 per cent of the vendors used plastic bags because of convenience. In Sikkim, on the other hand, the usage of plastics bags was comparatively lesser. Newspaper wrappings and paper bags were being used as alternatives to plastic bags.

Source: *Daily Pioneer, New Delhi, 24 December 2014*

Read the full news report: http://www.dailypioneer.com/nation/despite-ban-plastic-bags-still-in-vogue.html

Karnataka state pollution control board sends out show-cause notices to 32 electronics producers

Karnataka state pollution control board is sending out show-cause notices to 32 electronics producers including Apple and Samsung for failing to comply with the e-waste (Management and Handling) Rules, 2011.

The notices are being sent after a report by a Delhi-based NGO, Toxics Link, found that 32 of the 50 top producers failing to abide by the rules, even two-and-a-half years after they were enacted. The rules came into force in May 2012. "We are in the process of sending out notices to all the 32 companies, which have been found to be violating the rules in this report," Venkatesh Shekhar, senior environmental officer at the KSPCB, told ET.

Source: *Economic Times, Bengaluru, 24 December 2014*

Read the full news report: http://articles.economictimes.indiatimes.com/2014-12-24/news/57376123_1_state-pollution-control-board-show-cause-notices-nair

Yamuna Water is Unfit for Human Consumption: NGO

Toxic Link, an NGO has claimed that Yamuna is highly polluted with heavy metals and toxics contaminating the river's water to the extent that it is unfit for human consumption.

In a research conducted by Toxic Link, an advisory organisation on environmental

issues, it has been detected that high concentration of turbidity and total solids in Yamuna river were alarming in the Wazirabad stretch of the river in the national capital.

At a time when a lot is being done for ridding the Ganga of pollution, the NGO's finding would draw the attention of the NDA Government, which for the first time, has set up a special ministry headed by Uma Bharti to improve the health and hygiene of the major rivers of the country.

The findings show that on an average, the turbidity level is 20 NTU (Nephelometric Turbidity Units) and for total solids it is 687 mg/l (milligram per litre) in water which is alarming as compared to the Indian standards of turbidity at 5 NTU, and total solids is 500 mg/l in water.

Source : New Indian Express,New Delhi, 15 December 2014

Read the full news report: http://www.newindianexpress.com/nation/Yamuna-Water-is-Unfit-for-Human-Consumption-NGO/2014/12/15/article2571536.ece

Film festival dedicated to environment

The festival showcased several films based on environmental issues faced by people in India and beyond.

In an effort to spread awareness about environmental issues a film festival named 'Quotes from the Earth', was organised in the Capital by Toxics Link, an environmental group at the India International Centre.

According to the organisers, the festival which concluded on December 6, aimed to sensitise and inspire people 'to join the campaign on environmental pollution and strive for a clean India, contributing to the on-going Swatch Bharat campaign.

Inaugurated by Padmashri Shovana Narayan, the two-day festival at IIC, also included a series of panel discussions, culturalprogrammes and music shows which organisers termed as 'important' in order 'to stimulate dialogue on environmental struggles and concerns. The festival also screened winning entries from a student film competition organised by Toxics Link on 'Let's make our city plastic bags free'.

"We are acting like modern day Duryodhans and Dusshasans and are ripping mother earth of her protective covering as was done toDraupadi," said Shovana Narayan adding that there has to be 'mutual respect between humanity and Nature'.

Apart from diverse themes by renowned Indian environmental filmmakers like Sunanda Bhatt, Krishnendu Bose, S. Nallamuthu,Nandan Saxena and Kavita Bahl, the film fiesta showcased some internationally acclaimed films from countries like Australia, Germany and Netherlands. The themes chosen for this year are Biodiversity, Livelihood, Water, Sustainability, and Climate Change.

Source : *Deccan Herald,New Delhi, 9 December 2014*

Read the full news report: http://www.deccanherald.com/content/446466/film-festival-dedicated-environment.html.

Toxic chemical found in feeding bottles

The innocuous feeding bottle could be silently causing serious harm to babies' health in many cities. A study by Toxics Link, an environmental NGO, has found high bisphenol A levels even in BPA-free feeding bottles. Persistent exposure to BPA, a chemical used to harden plastics, has been linked to disruption of normal hormone levels, behavioural problems, increased risk of cancer and many other health issues. Several scientific studies have confirmed that BPA often leaches out from the bottles during boiling, brushing, or vigorous washing.

For the Toxics Link's study, 14 samples of feeding bottles were collected from Delhi, Baripada in Odisha and Bhopal in MP. Researchers were shocked to find 50% of BPA-free samples with BPA levels exceeding the EU threshold of 0.6 parts per million (PPM). In one of the bottles, the BPA concentration was 9.8ppm, about 16 times the limit, and 78.5% of the samples contained BPA.

The feeding bottles in India are regulated by the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992, as amended in 2003. The act mandates that all the feeding bottles sold in India will have to adhere to the specifications of the Bureau of Indian Standards. "The BIS revised the standard for feeding bottles in 2013 and prepared a draft notification banning BPA. Leave aside enforcement, even the changes have not been notified," said Satish Sinha, Associate Director, Toxics Link.

Considering the mental and physical impacts on infants, most countries have either phased out BPA or very stringently regulate its use. Canada was the first to ban the use of BPA in baby feeding bottles. The European Union has followed suit, while countries such as the US, France, Japan, China, Malaysia and Turkey have either imposed a ban or opted for a voluntary phase-out.

In one of the bottles, the BPA concentration was 9.8ppm, about 16 times the limit, and 78.5% of the samples had BPA.

Source : *Times of India, New Delhi, 5 November 2014*

Read the full news report: http://toxicslink.org/?q=article/toxic-chemical-found-feeding-bottles

Debate continues on mercury content in CFLs

While Compact Fluorescent Lamps (CFLs) are a step towards conservation of energy compared to incandescent bulbs, which the government phased out through its 'Bachat Lamp Yojna', the debate on the standard of mercury content in CFLs and its impact on human health continues.

The Bureau of Indian Standards (BIS) has said the maximum standard for mercury in CFL is five mg.

The reply was filed before the National Green Tribunal (NGT), which is hearing a petition filed by NGO Toxic Links. The NGO has filed a plea requesting framing of standard of mercury content in CFLs in keeping with the international standards and also their safe disposal.

"As far as mercury content in individual lamp is concerned, the limit has been prescribed as five mg maximum in IS 15111 [part 1]: 2002. As such, the standard binds the mercury content per individual lamp," the BIS said.

Source : *The Hindu,New Delhi, 8 December 2014*

Read the full news report: http://toxicslink.org/?q=article/debate-continues-mercury-content-cfls

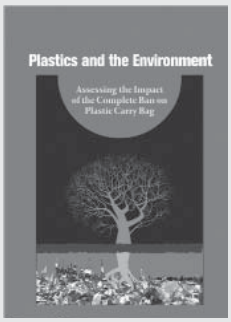
RESOURCES

Report: Bottles can be Toxic

Toxics Link published a well researched report on Bisphenol-A, which is used in making baby feeding bottles. The report named "Bottles can be Toxic: An Investigative Study on Bisphenol-A in baby Feeding Bottles in India" found that most of the baby feeding bottles sold in India are made of Bisphenol-A or BPA; a chemical which is endocrine disrupting and impacts the mental and physical health.

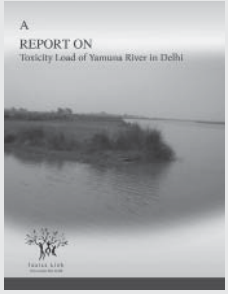
As a part of the study, samples of feeding bottles were randomly collected from three regions of India; Delhi's National Capital Region (NCR), Baripada –Odisha and Bhopal-Madhya Pradesh, and sent for lab testing at Shriram Institute for Industrial Research (SIIR), Delhi. The study found that 78.5% of the fourteen samples collected were found to be having high amount of BPA chemical. To know more please go through the report.

Report: Plastics and the Environment



Toxics Link released the latest study "Plastics and the Environment - Assessing the Impact of the Complete Ban on Plastic Carry Bags". The study was conducted in – Delhi, Chandigarh and Sikkim with the objective of checking the compliance of plastic bag ban, reasons for success and failures and providing recommendations for improving the compliance. It conducted a survey of two important stakeholders-vendors and consumers in these three states/UTs. It's really shocking that in spite of plastic being banned in many states/UTs, including Delhi, it's rampantly used by local shopkeepers, fruit sellers, by branded shop owners, and most of all, by the common people.

Report: Toxicity Load of Yamuna River in Delhi



Toxics Link released a research based report "Toxicity Load of Yamuna River in Delhi" that examines toxics load (such as pH, turbidity, solids, and heavy metals) in water and sediments of Yamuna River. The samples were collected at different locations in Delhi (before Wazirabad and after Wazirabad) during pre and post monsoon season. The results indicate high concentration of turbidity and total solids at both before and after Wazirabad locations. For instance in the samples collected at both before and after Wazirabad locations during pre monsoon season the results show that on an average turbidity level is 20 NTU and for total solids it is 687 mg/l (milligram per liter) in water. To know more, please go through the report.

Factsheet: Solar Technology

Toxics Link published a factsheet on Solar Technology that gives detail information on its status in the country, technology used, end of life of solar panels, etc. It may be noted that India is the fourth largest primary energy consumer, after China, USA and Russia and accounts for more than 4.6 % of total global annual energy consumption. The increasing demand for energy in the country has been putting pressure on its supply sources. To meet the energy demand in coming years, Indian government has put its focus towards renewable sources. Although the country has wide renewable energy sources, solar energy in particular has been in limelight, because India's potential for receiving solar energy is around 5000 trillion KWh yearly. To know more on solar technology, please contact us for the factsheet.

Brochures & other outreach materials for "Quotes from the Earth"

Toxics Link released various outreach materials on Environmental Film Festival "Quotes from the Earth" that was held on December 5th and 6th 2014, at India International Centre, New Delhi. These outreach materials give detail information about the directors and the films that were screened during the festival. The outreach materials targeted audience from various fields such as mass media professionals, environmentalists, school students, activists, non-profit organizations, government and private institutes, among others.

TRAVELING FILM FESTIVAL- "QUOTES FROM THE EARTH"

Along with the biennial "Quotes from the Earth", Toxics Link also organizes traveling film festival at cities, towns and remote locations of our country. The purpose is to provide a platform for local residents/institutes to connect their surrounding issues with that of larger global environmental concerns, to further enhance awareness and strengthen the policy advocacy initiatives at all level. The traveling film festival is organized with support of local civil society organizations or schools or any other environment based institution. If you are interested in organizing "Quotes from the Earth" in your area, please write to us or call us at our office numbers.

LEAD SAFE PAINTS CAMPAIGN

We got quite good response on signing the petition for the Lead Safe Paints Campaign however, we expect much more support to raise the issue, and therefore in case you have missed please sign it and also ask your friends/relatives to sign the petition and join our crusade. As you very well know the exposure to lead (Pb) has adverse health effects on children which includes delayed mental and physical development. In India, numerous manufacturers are still using lead (Pb) in paints and Toxics Link has been fighting for a government policy to refrain these manufacturers from using lead.

Join us in our Lead Safe Paints Campaign!
To sign the petition log on to: http://goo.gl/OVwlzh

TOXICS LINK LIBRARY-A TREASURE HOUSE OF KNOWLEDGE

The library of Toxics Link houses a variety of books, magazines and reports which are well-stocked, classified and indexed, for the benefit of the readers. One can also get the entire collection of around 460 documentary films from around the world on various issues concerning environmental. It has over 4900 books and research based reports; and new books, magazines and periodicals are added from time to time. One can also find media coverage on environment that are updated on a regular basis. Besides, the library also has stock of parliament questions that are raised on the research based studies on environment done by Toxics Link. The readers can find all the studies done by Toxics Link on its website.

TOXICS ALERT (E-NEWS)

An environment news Bulletin

Visit: http://enews.toxicslink.org/, for our monthly e-newsletter on environment related news, articles, policy interventions, events on toxicity and its management. You can also subscribe to receive its update via e-mail.

KEEP YOUR HOSPITALS CLEAN & GREEN WITH TOXICS LINK

The Clean & Green Hospitals (CGH), an initiative of Toxics Link, in association with STENUM Asia Sustainable Development Society, is aimed at supporting and facilitating health care facilities in the country to provide environmentally sustainable healthcare to the masses. It also offers handholding support for hospitals to implement its suggestions which includes capacity building of internal resources. Besides, CGH has an array of training and awareness materials meant at aiding the process of greening the hospital. Please write to us or call us to get detail information about the support that we provide.

Toxics Link
for a toxics-free world

STAY CONNECTED

For more information materials, invitations and updates on environmental issues please write to us at info@toxicslink.org

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