

T O X I C S

DISPATCH



Toxics Link
for a toxics-free world

A newsletter from Toxics Link

Number 40 May 2011

FOR PRIVATE CIRCULATION ONLY

Silicosis: A battle to fight

Introduction

Silicosis is one of the oldest occupational diseases of the workmen exposed to the free silica dust and is still prevalent in most part of the world including India. The disease is, however, not being identified and most cases of it are still being counted as tuberculosis. This is more so, because the silicosis renders the respiratory system vulnerable to infection, which in turn becomes the terminal disease. The seriousness of it is that the mean age death due to silicosis is 35 years in India. About 10 million workers are exposed in India. In a WHO report 55% people were found of suffering silicosis in a group of workers.

For decades, over exposure to dust containing crystalline silica has caused disease and health problems in workers around the world. According to reports compiled by the World Health Organisation, there is wide spread silicosis in many countries. Getting accurate numbers

is difficult because of under-diagnosis as well as under-reporting. In many cases the statistical and epidemiological data is poor, because many countries lack these resources to track occupational diseases and thousands of workers in these places are not registered or accounted for.

In India, it is estimated that 10 million persons employed in various such occupations are exposed to crystalline silica dust. Many young workers in sedimentary rock shale quarries in poorly ventilated working areas have had silicosis at very high rates in certain studies over 50% of workers.

In USA, of the estimated 2 million workers who are exposed, 1 million eventually develop silicosis and finally 300 people are reported to die due to silicosis.

In the first half of the 1990's there were more than 5,00,000 cases of silicosis in Chinese workers and more than 24,000 deaths each year due to the disease. Lack of safety equipment and a long history of primitive working conditions are contributing factors in these staggering statistics.

In Vietnam, with large numbers of people working in surface coal mining and quarrying areas silicosis constitutes an

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estimated 90% of all cases of occupational diseases.

In Brazil, Rio de Janeiro has ended sandblasting after a 25% of its shipyard workers were diagnosed with silicosis.

Worldwide there is a widespread lack of awareness of the magnitude of the problem and consequently too few solutions are being examined. Many nations do not employ adequate preventive measures, such as control of dust generation, release and

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Another Toxic Banned!

Endosulphan, one of the most toxic chemicals in use today, has now been banned. In a decision taken in Geneva recently under the legally binding Stockholm Convention on Persistent Organic Pollutants, the pesticide will not be used, manufactured, or traded any longer in a maximum of 11 years. India produces over 80% of the twelve thousand tonnes of the chemical being produced globally, consuming over half of it on cotton, cashew, tea, fruits, horticulture and other crops.

Three companies in India control endosulphan worldwide. Over the past years, the Industry has resorted filing criminal cases against activists and academics, preventing any report that even hinted at a link between endosulphan and health, disrupting international scientific review committees, and even raising the bogey of an European conspiracy. Ultimately they lost. The evidence against endosulphan was overwhelming enough to convince over 170 countries to stop its production or use. Last week, Hindustan Insecticides Ltd (one of the manufacturer) has been asked to shut production in Kerala.

With the ban now in place, it is time to mainstream alternatives, Alternatives do not necessarily imply a one-on-one replacement of one chemical by another. They lie in carrying out pest management through adopting different farming practices and even by chemical free farming. The ban, and the time India has to implement it, opens up space to take all such successes seriously and propagate them

Over the years several studies in India have shown the presence of pesticide residues in food and water. At no stage do our water filtration or food screening systems remove or detect these. Pesticides once registered cannot be de-registered, despite new data relating to their toxicity which is not released in the public domain, and is treated as propriety. This equation needs to be reversed and the burden of proof of a chemical being safe needs to reside on the industry. The future is in prevention.

(adapted from, as first published in Tehlka magazine, Vol 8, Issue 19, Dated 14 May, 2011)

Ravi Agarwal
Director, Toxics Link

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spread into the workplace, and respiratory protection, shortcomings in legislation and labour inspection for enforcement.

The causative agent, crystalline silica, SiO₂, is one of the most common mineral in the earth's crust. It is found in sands and many rocks like granite, sandstone, flint & slate, in some varieties of coal and other ores used in metallurgical industries. Quartz, tridynite and cristobalite are the three most common forms of silica.

Seriousness of silicosis

Silicon Dioxide or Crystallized Silica causes fine levels of dust to be deposited in the lungs. The lungs react in several ways. They get inflamed, create lesions, and then form nodules and fibroids. Those affected may experience shortness of breath, fever, chest pain, exhaustion, fatigue, loss of appetite and dry cough. More advanced forms of the disease will show cyanotic mucus membranes and asthma or other breathing difficulties, similar to advanced emphysema.

The worst aspects of the disease is that very fine invisible particles reaching the deeper surface of the lungs ordinarily not noticed by the exposed persons are maximally harmful. This disease renders the lungs vulnerable for bacterial infections leading to its diagnosis as TB or other bacterial infections and also has been linked to the development of autoimmune disorder such as lupus and rheumatoid arthritis. This is how the disease exists in abundance, without getting reported.

There are three main types of silicosis as Acute Chronic and Accelerated. Acute occurs after heavy exposure to high concentrations of silica and can develop within a few weeks and as long as five years after the exposure. Chronic occurs after long-term exposure of low concentration of silica dust, which does not reveal the disease for as long as 20 years after exposure. Accelerated occurs after the exposure to high concentration of silica which develops within 5 to 10 years after exposure.

Currently, awareness and government regulations are resulting in fewer new cases of silicosis. Unfortunately many newly industrialized countries skimp on the cost of prevention at the expense of their workers. These countries will expectedly see a rise in contraction of silicosis until they implement the guidelines protecting their workers. Silicosis will often develop between 20 to 45 years after the exposure. But certain forms of the disease can occur after a single heavy dose to a very high concentration of silica in a short period of time.

Though some operations have been recognized as dangerous operations and special measures have been laid down for them, there is a need to review all the industrial activities and make a comprehensive list of operations.

Activities put workers at risk are:

Manufacturing (Metal casting, Glass products, Ceramics, clay, and pottery Asphalt paving material, Cut stone and stone products, Abrasives, Paint and rubber products, Filtered foods and beverages).

Construction (Chipping, hammering, and drilling rock, Crushing, loading, hauling, and dumping rock, Abrasive blasting, Sawing, hammering, drilling, grinding, and chipping masonry or concrete, Demolition of concrete or masonry structures, Dry sweeping or using pressurized air to blow concrete, rock or sand dust).

Agriculture (Onion harvesting, topping, sorting, grading, and bagging Potato harvesting, sorting, grading, washing and bagging, Sand used in agriculture chemicals).

Silicosis Diagnosis & Treatment:

Workers have been overexposed to silica dust should visit a doctors specializing in lung disease, a pulmonologist. Silicosis often goes untreated and undiagnosed especially chronic silicosis because its symptoms are not unique. Patients are administered oxygen and steroids to help them breathe as the disease runs its course. Unfortunately the only good treatment for end-stage silicosis is a lung transplant, which can be a lifesaving treatment. What doctors and experts recommend regarding the general control of the disease is the Use of oxygen, patient stops smoking, monitoring the person for signs of lung infection.

Awareness and the Scheme:

The awareness and government regulations, National Human Rights Commissions interference, NGOs such as PRASAR has initiated the seriousness of this deadliest occupational disease. The strategies taken are:

Reduction of new cases of Silicosis in Delhi adopting engineering measures specially PPE and keeping fly dust wet.

Capacity building of health care personnel through trainings, seminars, workshop and advocacy meetings.

Strengthening of diagnostic facilities in health care institutions.

Awareness generation in the community through IEC/BCC activities specially silicosis prone area.

Clinical care of people affected with silicosis.

Rehabilitation of silicosis affected people in collaboration with social welfare, urban development department and involvement of NGOs.

The National Human Rights Commission held a meeting under Chairmanship of Justice Dr. Shivraj V. Patil, Hon'ble



Member with the Secretary, Ministry of Labour & Employment on 24.4.2007. The meeting was attended by senior officials from Ministry of Labour & Employment and its attached & subordinate offices. It was then decided that a national programme on elimination of silicosis in all occupations should be prepared and implemented. Accordingly, initiation has been taken by the Ministry of Labour & Employment by proposing the plan scheme.

The Centrally sponsored scheme will be implemented in all States and Union Territories by the Ministry of Labour & Employment. A technical body will be constituted at DGFASLI, Mumbai which will assist the Ministry in monitoring the progress of each project of the State Government. The technical body at DGFASLI will be comprised of several technical officers (Table-II). The Physical and financial progress will be monitored as per the approved physical and financial phasing. To educate doctors from Primary Health Centres, Medical Colleges etc. training programmes on occupational health with special reference to silicosis are to be organized from time to time. An international state of art medical laboratory has to be developed at Central Labour Institute, Mumbai.

In the XII Five year plan (2009-10) identification and elimination of silicosis in India was included. The purpose and objective of the scheme was to:

- To assess the prevalence of Silicosis in India, especially amongst the work-

ers employed in manufacturing, port, construction and un-organised sectors.

- To develop a system for creating and updating a data base on mortality and morbidity due to silicosis in India.
- To suggest appropriate preventive and control measures for elimination of silicosis at respective work places.
- To generate awareness of Silicosis among the working population as well as employers by imparting health education through various means of communications like seminars, symposiums, workshops, training programmes, mass-media etc.
- To take initiative measures for rehabilitation of the afflicted workers.
- To work out the compensation and its modalities towards the victims of silicosis.

But, the sad part is this that with so many rules, regulations, National Human Rights Commission's guidelines, Supreme Court's order, government and NGOs awareness programmes much has not been done in this regards. This scheme is very low on the priority of state government. As marginalised section is very much effected from this the voice of them does not goes up. Some of the steps in this regard is that for the first time Delhi Government has started Silicosis programme, 3 lakh compensation in Madhya Pradesh has been announced by NHRC which government has to give to the victims which has yet not being given, NHRC has also prepared a guideline for it. Supreme Court has issued 2 orders regarding this. But, people/victims were not benefited as such from these guidelines and supreme court order.

There is a need for true awareness among the workers, the industrialists, the government and the policy makers. We can't ignore the deadliest end of silicosis. The industry needs to understand the after effects of it and to take proper precautionary measures. Regular medical check ups, wet technology needs to be integrated. It has to monitor that rules and regulations are properly implemented. The issue of compensation is also very important. Thus, the battle against silicosis needs to be strengthened.

*Compiled by: Rambha Tripathy
Inputs from S.A. Azad, Satish Sinha*

FEATURES

Moradabad: Brass Work has turned into E-waste Recycling

Moradabad a western city in Uttar Pradesh is situated at the bank of Ram Ganga River. It is 170 Km away from Delhi and well connected via road & railway to the other parts of India. The city has been traditionally famous for bangle and brass works and is known as 'Peetal Nagri' or the Brass city. It has the distinction of being the biggest exporter of brassware in the country. But shrinking of brass market due to decreasing demand, nationally and internationally, has left many people jobless here in the last few years. Many households, which were engaged in brass works earlier, were left with no choices but to explore other means of livelihood. E-waste was one of the natural choices because of their metal processing knowledge.

E-waste is one of fastest growing waste stream globally. E-waste contains ferrous & non-ferrous metals, plastic, glass, printed circuit boards (PCBs), etc, and are 'hazardous' because of the presence of elements like lead, mercury, arsenic, chromium, cadmium, barium, flame-retardants etc. E-waste also contains precious metals and many rare materials like gold, silver etc., which are highly valuable. Currently, most e-waste recycling activities in India are done by the unorganized sectors. Some of the processes involve burning or direct heating, use of acid baths, mercury amalgamation and other chemical processes to recover materials. These result in the release of toxics such as heavy metals, hydrocarbons, dioxin & furan etc. into the environment through emissions or effluents. Most workers engaged in these recycling operations are the urban poor and unaware of the hazards associated with it. The recycling operation especially the process of material recovery being rudimentary, results in very low recovery of materials and non-recovery of many rare elements. This loss is significant, making the whole process highly inefficient.

E-waste recycling in India, till a few years back, was concentrated in large cities like Delhi, Mumbai, Bangalore, Chennai and Kolkata. But with the increase in the genera-



A teenager burns the Printed Circuit Boards

tion of E-waste and increasing land costs in big cities, the recycling centres have started spreading in neighboring cities and towns. Moradabad is one such example. Recyclers in Moradabad buy PCB boards from Delhi, Kolkata, Chennai, Bangalore and other parts of India. The circuit boards are sourced from computer monitors, CPUs, keyboards, television, remote control sets, radios, CD/DVD players, cell phones, compact fluorescent lamps (CFLs) and other electrical appliances. According to some estimations, 50% of the printed circuit boards used in appliances in India end up in Moradabad. They process it to recover metals such as copper, aluminum, gold and silver. Some of the recycling hubs in Moradabad are Warsi Nagar, Nawabpura, Karula and Bhojpur village.

- More than 4.8 lakh tonnes of E-waste generated in India annually
- E-waste contains many toxins like lead, mercury, cadmium and BFRs etc.
- In India around 95% of e-waste is recycled by the Informal sector
- Improper recycling can lead to severe health and environmental problems

The boards are initially heated on gas stove or through blowtorch to loosen the lead soldering. The attached capacitors, ICs, diodes, resistors etc are then removed through a hammer and segregated. The working parts are sold to traders for reuse. The non-working

components are further processed (grinding or burning) for recovery of materials. Poor people for recovery of metals through washing buy ash and dust, from the grinding processes.

Some areas in Moradabad are also famous for gold and silver recovery from E-waste, through the cyanide and mercury process. The recyclers buy the gold plated board at Rs.170-190/Kg; 1 Kg gold plated boards give around 200 mg gold. The people, who recover the costly metal gold & silver, sell it to the big jewelers. The jewelers give loan to these recyclers on higher interest and buy the gold & silver on the low rate less than the market.

E-waste recycling is a home business in Moradabad, with most members in a family involved in material recovery the workers employed earn around Rs.100-150/ per day. The processes are rudimentary and very risky. As the working spaces are very congested, the workers are exposed to noise, smell and fumes, sometime very toxic and harmful to health. Though there have been no studies to understand it, the emissions, effluent discharges and dumping of non-recyclables clearly indicate huge damage to environment.

Emergence of a small city like Moradabad as an E-waste recycling hub points out towards intensity of the E-waste problem India is facing today. It is important to look at the reasons and find solutions; otherwise we will soon end up with toxic hotspots all over the country.

Vinod Kumar Sharma
vinod@toxicslink.org

UPDATES

Overview of Ipen General Assembly at “Almaty”

International PoPs Elimination Network (IPEN) is a unique global network of people and public interest organizations, which respects and enjoys a wide diversity of cultures, skills and knowledge. Together we share a common commitment to achieve a toxic-free future where chemical production, use and disposal does not harm people and the environment. In every two years IPEN had its general assembly to discuss strategy and highlights the future course of action on the issues pertaining to chemicals safety. Similarly the last general assembly was held from October 18-22, 2010 at Almaty, a beautiful city of the Republic of Kazakhstan.

There were about 60 people from 31 countries including 51 IPENers and representatives of the United Nations Development Program's small grant program (UNDP SG) from Africa, Kazakhstan, Tajikistan and Kirgizstan. From India, only Toxics Link represented this meeting.

The assembly began with a “Welcome to Almaty” note from the representative of local NGO ‘Green Women’ followed by formal opening of the assembly IPEN

co chair Olga Speranskaya. Latter IPEN international coordinator Bjorn Beeler up dated meeting participants on IPEN international policy developments, including IPEN campaign such as the Mercury – Free Campaign and Eliminate Lead from Paint Campaign, as well as work related to chemicals in products, new PoPs, and Stockholm convention effectiveness evaluation/PoPs monitoring. Bjorn also gave an overview of the SAICM global outreach campaign and IPEN's follow up response, the development and launch of the international SAICM implementation program.

From the day two onward, focus was on substantive matters, with presentations on various priority themes from IPENers around the world. The IPENers briefed about their respective works on the various chemical safety issues. These sessions were very much informative and were across learning's in nature. In addition to the planned sessions there were some specific discussion on the disastrous toxics flood at Hungary and short talk about the communication skills by Tactical Tech. However the session on XRF device has generated lots of excitement. Joe Diangi, senior science and technical advisor of IPEN, talked about how XRF can be used for the measure of different elements and chemicals in products and also highlighted the success

of many NGOs campaign in US, as the device provides data about the chemicals in products within seconds.

There was also a planned field trip to obsolete stockpiles in the hills outside Almaty, which was cancelled due to rain and logistical challenges. Therefore this was substituted with the sessions to discuss on action planning on strategic issues of chemicals in products, lead in paint campaign, mercury free campaign, monitoring, dioxin and nanotechnology.

In the last day, representatives of the United Nations Development Programme (UNDP) Small Grant Programme (SGP) presented the SGP, including the structure, focal areas of work related to PoPs/Chemicals, SGP information resources, national SGP operations/obligations; and planned expansion of SGP scope of work beyond PoPs to mercury and sound chemical management. However at the end it was noted that the amount of PoPs project funded under the SGP was disappointing and there was a detail discussion to find out new solution on how to cooperate between SGP and IPEN.

Finally in the general assembly, following action points have been finalized for the year 2011.

- Campaign on new PoPs
- Endosulfan Action
- Promoting mercury free campaign
- SAICM chemical product process
- SAICM e waste process
- On the issues of dioxin
- General information/Data on chemicals in products
- Developing nano action group
- Small Grant Program and IPEN partnership

Overall GA 2010 was a very successful meeting and overwhelming response from the IPENers indicated the importance of such events and the need to meet in person and share the views, ideas, knowledge and experience for the future.

Source: IPEN (International PoPs Elimination Network)

Piyush Mohapatra
piyush@toxicslink.org



Quotes From The Earth: The Environment Film Festival

Toxics Link and India International Centre organized Environment Film Festival, 2010 “Quotes from the Earth” during 4th & 5th December 2010 at India International Centre, New Delhi. The theme was “Ecological Citizenship.”

This was the fourth such festival, which was organized in every two years. Quotes from the Earth has been the first of its kind in the Capital since 2004.

The film festival was a platform for highlighting environmental challenges at the national and international level through films. As a powerful medium of communication and discussion, the non-commercial and non-competitive festival attempts to act as a catalyst for helping mainstream environmental issues. This year the festival focuses on issues of climate change, mining, floods, diminishing species of animals and plants, energy, water contamination, agriculture, conservation, tigers, lions, elephants, sea life, urbanscapes and its adverse effects, and more. It brings under one umbrella, struggles both at a national and international level and analyses the magnitude of the situation from the perspective of Earth, Water, Wildlife and Sustainability.

The festival begins with an inaugural book reading, and has panel discussions on both days along with the screening of the films on themes. The book reading was from the recently published book ‘The Secret Abode of Fireflies- loving and losing spaces of Nature in the City’ by YouthReach. Nanni Singh, Editor of the book introduces the book and readers were Bharat Kapur editor First City Parenting, Bhavan Pankaj renowned journalist and Ritika Dhameja, Manager Public relations YouthReach.

The first day was focused on Earth and Water themes. In the Earth section, a film from The Netherlands – ‘The Last days of Shishmaref’ by Jan Louter talked about the Shishmaref community and its struggles due to climate change in Alaska. Collated with the same was an animation of 90 seconds right after ‘The Earth Story’ by Megha Mathur and Suchi Tripathi. On the issue of climate change impacting human health film ‘India’s Climate Fever’, directed by



Arjun Pandey was shown which explores the health security of India.

The focus of the film ‘You Can Only Clap With Two Hands’ by Jenny Van Houten from the Netherlands was on prevention of illegal waste equipments. A 5-minute film ‘Last Words of a Dying Tree’ directed by Avinash Kumar Singh and Geeta Singh talked about a desperate call for restraint and understanding from the point of view of a tree. Film ‘Goa Goa Gone’, directed by Kurush Canteenwala talks about the illegal and rapacious mining for iron ore is ravaging Goa. Film ‘Tears’, directed by Rashmi Rajarao talks about the importance of saving water. Through a mother’s acumen we see the future struggle, which every living thing on earth may face one day. Film ‘Light of the Night’ directed by Megha Mathur is shot in a few un-electrified villages of Rajasthan and Assam where the impact of solar lanterns has been tremendous in the lives of the local people. The film ‘Diamonds and Rust’, directed by Karuna D’Souza shows the vulnerability of a small village named Kuchidi in Jharkhand where people are surviving on the sponge iron plant set up very close to the village.

In the Water section seven films were shown. The film ‘Deluge’, directed by Delwyn Jude Remedios featured a giant ship, which emerges through the city to rescue two schoolboys from drowning during the 2005 floods in Mumbai. The film ‘Ganpati Bappa Moraya!’ directed by Mayuri Panse explores the Ganpati festival’s idols immersion process. It shows the clay, plaster

of paris, even concrete coated with paints containing cancer causing heavy metals go into water. In the film ‘The miracle water village’, directed by Rintu Thomas and Sushmit Ghosh explores the inspirational story of village Hiware Bazar’s model of water management. The film ‘The land of vanishing lakes’, directed by Ishani K. Dutta talks about the water bodies of the Aravallis-Surajkund, Badkal and Dumduma lakes of NCR that has dried up. The film ‘Reviving Faith’, directed by Rishu Nigam takes its viewers into sacred groves of the Himalayas that are still alive because of the faith of its people. 2 Netherlands films - ‘Bridging the Gap’ directed by Corinne Van Egeraat & Kataja Draaijer talks about Daniel is the new advisor to the Cameroonian government on exploiting the natural resources. And ‘4 Elements’ directed by Jiska Rickels, shows workers in four different countries contending with fire, ocean waves and bowels of the earth and space travel.

The second day was devoted on the themes of Wildlife and Sustainability.

In the section of Wildlife five films were screened. The film ‘Tiger Queen’, directed by S. Nallamuthu tells us a story of a Tiger family, which resides near Ranthambhore fort. The battle for the kingship is prevalent in the story. Film ‘On the Right Track’, directed by Rita Banerjee shares the story of elephants, which were being killed by rail hits. ‘Diminishing Resources’ film directed by Himanshu Malhotra and Sabina Kidwai sensitizes the audience to these invisible crimes, which are going on with the coral reefs. ‘Asiatic Lion-On A

Roll Call' film directed by Praveen Singh features the crisis of the Asiatic Lions Chinese film 'Kekexili' (Mountain Patrol), directed by Lu Chuan Huayi Brothers talks about Tibetan Antelope, the demanding natural environment, poverty and their own feelings.

In the Sustainability section six films were shown. The film 'Cowboys in India' directed by Simon Chambers reveals the dreadful truth of how industries are taking away the land of tribals and then harming them by the toxins they release in the air, water and affecting the whole environment and their health. The film 'The Latent City', a winner of the Eco-green award at Greece in 2010 directed by Krishnendu Bose gave way to the need for discussing the state of the environment with respect to what goes behind shaping it at the decision making level.

Film 'Iron is hot' is on the sponge iron industry by Meghnath and Biju Topo, '4th Revolution: The Energy Autonomy' by Carl A Frechner on the energy revolution world over and 'Invisible' by Roz Mortimer on chemical toxicity. The films made a sincere attempt to raise issues and concerns much relevant and of importance to all.



The festival ended with the screening of the critically acclaimed bollywood film Peepli Live by Anusha Rizvi and Mahmood Farooqui.

The panel discussion on the first day was on **'Is Environment Education still confined to moral relativism'** with panelists: Sabina Kidwai, Educationist AJK Mass Communication Centre, Jamia Millia

Islamia, Mita Goswami, Director Education World Wildlife Fund, Arjun Pandey, filmmaker and student Priyanjali Dasgupta from Lady Shriram College. The session moderated by Sabina Kidwai, Professor AJK Mass Communication and Research Center, Jamia Millia Islamia highlighted some of the key concerns all centered around the fact that Environment and its understanding should come from practical learning and also need to be taken forward in the same regard.

The second day's discussion was on **'Politics of the Environment: State of the Environment Blame it or own it?'** with experts such as Dr Sanjay Parikh, Senior Advocate Supreme Court of India, Rohan D'Souza, Professor Indian Council for Social Science Research, JNU, and Kanchi Kohli, Director Kalpvriksh discussed to enable better understanding of the socio-political dynamics of the environment.

A total of 28 films were screened in this film festival. The festival saw more than 500 audiences which includes academicians, activists, students from schools and colleges and even people from the media, embassies and corporate.

Mercury Phase out in Health Care Sector

Toxics Link in partnership with Indira Gandhi National Open University (IGNOU) and Tamil Nadu Pollution Control Board (TNPCB), organized a workshop on "Mercury Phase Out in Health Care Sector" on December 15th, 2010 in Chennai, Tamil Nadu. The Global Environment Facility (GEF) supported it.

The objective of the workshop was to sensitize the issue of mercury in health care sector in the region by providing a platform to all the stakeholders for knowledge and experience sharing. The workshop led the major emphasis on the areas of Mercury Toxicity in health care sector, Occupational health hazard of Mercury, Role and responsibilities of important stakeholders, Mercury phase out plan and challenges, Mercury policy and global initiative.

There were 2 technical sessions during the workshop. Session 1 was on "Mercury



Issues and Policies". It was chaired by Prof. P.R. Ramanujam (Pro Vice Chancellor, IGNOU) and co-chaired by Mr. Ravi Agarwal (Director- Toxics Link). Dr. Gajendran, (Consultant – TNHSP), Dr. S. Sankar, (Assistant Professor, Sri Ramachandra University), Dr. S. Balaji (Additional Chief Environmental Engineer, Tamil Nadu Pollution Control Board) and Dr. Mohd. Tariq (Sr. Programme Officer, Toxics Link) were the panelists.

Session 2 was on "Managing Mercury

Waste in Healthcare". The session was chaired by Prof. A.K. Agarwal, (School of Health and Science, IGNOU) and co-chaired by Dr. Vinay Kumar (DD-TNHSP). Dr. Arun Senthil Ram, (Toxics Link), Mr. J. Chandra Babu (Scientist C – HWM CPCB Delhi) and Dr. Vidya Hari Iyer (Director – Smile Dental Clinic, Chennai) were the panelists.

During the inauguration Prof. A.K. Agarwal mentioned that considering the great importance of sanitizing public, Uni-

versity has started a course on Bio medical waste management. He shared that IGNOU has already developed module on bio medical waste management and mercury, which is a great contribution towards education medical community and the students about the said issues, which results to positive contribution. Dr. Gajendran focused on the health hazards of mercury and its health and environmental consequences. He emphasized on the need of policy for mercury phase out in health care. Shri. Ravi Agarwal, stated that mercury with numerous uses is being acknowledged as a global pollutant and there is an urgent need to find measures for its phase out and alternatives. No threshold for exposure for mercury, hence it is imperative to find alternatives, not only through environmental but also economic and political initiatives. Prof. P.R. Ramanujam elaborated the seriousness of the mercury toxicity and its consequences. Mercury has been categorized as one of the top pollutant by the global health watchdogs. Considering the facts, the governments of the various countries and national/international bilateral agencies like UNEP, WHO etc. have taken steps for the phase out of mercury from the different sectors including healthcare.

In the technical session Dr. Gajendran stated that Mercury poisoning could result from vapour inhalation, ingestion, injection, or absorption through the skin. Elemental mercury as a vapour has the ability to

penetrate the CNS, where it is ionized and trapped, attributing to its significant toxic effects. Mercury is not well absorbed by the Gastro Intestinal tract, therefore, if it is ingested, is mildly toxic. Dr. Sankar shared the facts about the mercury in dentistry. He said that in 2005, 270 tonnes of mercury were used in dental amalgam worldwide and Mercury vapour is also released during chewing. Dr. S. Balaji focused on the usage, hazards, and environmental threat of mercury and the initiatives taken by the TNPCB in the region. Dr. Tariq emphasized on the problems and health hazards, usage of mercury in health care, alternatives of mercury based devices and dental amalgam. He also had special focus on the challenges in shifting towards the non-mercury based equipments. Dr. Arun presented a case study focused on Analysis of mercury usage in the health care settings and to detect the mercury vapour level in hospital indoor in Chennai. Mr. J. Chandra Babu shared the information about the chemical properties, pathway for the mercury exposure, the hazards and poisoning of mercury. Dr. Vidya Hari said Mercury is a highly toxic, persistent and bio-accumulative neurotoxin. Once released, mercury will remain in the environment for years, dispersing over a wide area and accumulating in the tissues of plants, insects, and animals, concentrating on creatures higher up the food chain (e.g., humans).

She also said mercury spills are a problem. Small spills of mercury on a smooth, non-porous surface can be cleaned up safely and easily with proper techniques. Beads of mercury are heavy and readily sink into cracked floors or other open surfaces. Mercury spill cleanup must be thorough and complete.

The key recommendation of the panel discussion were: The government should take initiative to make the public more aware of mercury toxicity, The Directorate of medical education should inculcate syllabus on mercury poison in medical education, The Indian council for medical research should make accuracy report on non mercury instruments. The central government should give subsidy to non-mercury equipment manufacturing industries, All health care institutions should have mercury spill management kit and should train the health care professionals on safe handling of mercury spills, The SPCB should promote awareness among public, The hospitals practicing alternatives should form a consortium and take the mission forward to other HCF, All CTF's should enter an agreement with TSD Facility in the nearby town, Government should plan for banning mercury in a phased manner.

More than 80 participants attended the workshop.

*Dr. Mohd. Tariq
info@toxicslink.org*

National Eco-Meet Exhibition 10-12th December 2010

Toxics Link participated in the National Eco-Meet cum Exhibition organized by the department of Environment, Delhi from 10th to 12th December 2010.

Delhi Chief Minister, Sheila Dixit, inaugurated the event. Many schools, government and private schools of Delhi and NCR participated in the exhibition. Students, teachers and different government non-government and private organisations participated and set up their exhibition stall. Toxics Link set up a stall for information dissemination through placing posters, books, pamphlets, bookmarks and other learning materials and also distributing them.



A picturesque model depicting presence of Lead in paints and jewelry was also placed. Along with this an e-waste corner was also made which showcased an unbolted

computer with different toxics and hazardous elements present in its parts.

*Rambha Tripathy
rambha@toxicslink.org*

PUBLIC LECTURE ON

The Urban Tree: Lost in Concrete?

Around 35000 trees were cut in the first phase of metro construction. This wasn't all. The number of trees cut so far for phase 2, phase 3 metro, BRT, flyovers, road widening, commonwealth is not even available from the forest department. The entire 7,777-hectare of protected area in the Delhi Ridge is facing acute danger from all corners in the name of urbanization and construction.

Such and more revelations, were brought

to light through the platform: Public Lecture on the topic: 'The Urban Tree: Lost in Concrete?' organised by toxics Link on the 22nd of November in Conference Room No.1, India International Centre, New Delhi. The event was a consistent part of the Environment and Health Public Lecture Series organised by Toxics Link.

The speakers for the lecture included activists such as — Prabhakar Rao, member Kalpavriksh, Vinay Sreenivasa, Hasiru Usuru, Bangalore, who came together to discuss the pressing issue of the illogical depleting of trees in urban scapes. While Prabhakar emphasised on the situation

of trees in the Delhi region, Vinay gave insight to the missing trees' reason detere' in Bangalore.

Some of the key discussants at the lecture were the present status of trees in Delhi and Bangalore, role of government in dealing with the situation, government policies and programmes such as the plantation scheme and more, role of citizens and residents in sustaining these trees. The lecture had participants from different cross-sections of society that included media, academicians, activists, and government officials.

Anjali Pandey
info@toxicslink.org

Diminishing Delhi Ground Water Level: Issues & Concerns

In the Environment and Health Public Lecture Series Toxics Link with collaboration of India International Centre organized a Public Lecture on 11th February 2011 titled, "Diminishing Delhi Ground Water Level: Issues & Concerns" at India International Centre.

Mr. Satish Sinha (Associate Director – Toxics Link) inaugurated the session by raising concern on the issue and its importance in today's scenario. He welcomed the guests for viewing a film "The Ground Water UP Project" directed by Tarini Manchanda. The film talks about the delhi water crisis and explores current solutions like dams and sewage treatment plants. The film was followed by a panel discussion. The eminent speakers during the discussion were Mr. A.D. Rao (Officer Incharge, State Unit Office, Delhi), Mr. Sureshwar Sinha (Chairman, Paani Morcha), Mr. Sandip Das (Special Correspondent, The Financial Express). Mr Ravi Agarwal (Director, Toxics Link) moderated the session.

Mr. Rao shared some of the facts regarding ground water. He said that there are 2 kinds of setup of ground water in Delhi. One is in urban and the other is in rural areas. Groundwater in Delhi is declining by 20-30 meter year by year. This is particularly in south Delhi. The problem with Delhi's ground water is that



beyond 70-80 meter the water is saline. The quality is as such that it will be of no use. The recharge is difficult. A normal rainfall cannot recharge the ground water in comparison to the extraction of the ground water. We are withdrawing much water from deep ground water. It is difficult to recharge the deep ground water, but we have to make people aware of this. In the rocky areas it becomes very difficult to recharge the deep ground water.

Mr. Sandip Das shared his experiences as a journalist. He stressed on raising awareness on understanding the value of water. The techniques of water conservation should be adopted. The distribution pattern of water should be taken care. The variation of water supply is so much that in some places you have to get up at 4 am

to fill water and in some places you get 24 hours enough water even to run open the tap. We have to understand that water cannot be recharged so easily and quickly. So, awareness generation and may be strict rules on wastage of water will work.

COM. Surehwar Sinha said that 70% of irrigation is done by ground water. People are using it but they are not thinking about ground water recharge. During the development pattern of the city all the streams are being destroyed which in return destroying ground water. Very little recharge is done which is by polluted water. This aspect needs to understand. He suggested that only solution to this is to keep the channels free. Allow the river to flow with enough water by taking care of the environment.

During the open discussion lots of queries and suggestions were shared. There was also a discussion on sewage treatment plant. Mr. Ravi Agarwal moderated the session and shared that it is a true fact that every colony is extracting water from beneath. We need to re-think

on how to plan to build the city. Should we continue it and continue extracting ground water. How do we even think of recovering the amount of water, which we are extracting? The little rainwater goes to drains. 30-40% open land should be left there in Delhi to refill the ground water.

It should be incorporated in the plan and the system.

More than 25 participants attended the session from government, NGOs, students, activists, and filmmakers.

Rambha Tripathy
rambha@toxicslink.org

Toxics Link's South Asia Campaign on Chemical Safety

Toxics Link along with local partners in the South Asia region initiated a campaign on the issue of chemical safety in the year 2009 with the support from Swedish Society for Nature Conservation. The main objective of this campaign is to build capacity of partners/CSOs in the region so that indigenous efforts are strengthened in each country of the region on chemicals safety issues. At present Toxics Link is partnering with Civil Society Organisations in Nepal, Bangladesh, Sri Lanka and Bhutan. The broad areas of engagements are as follows; a) campaign for lead-free household paints, b) mercury phase-out from healthcare sector, c) Programme on elimination of Persistent Organic Pollutants (POPs) and their management and d) Electronic waste management programme.

a. Campaign against lead in paint

In the region, lead in paint campaign has now entered the decisive phase. The high level of lead added to paints is now a well-known fact and in all countries of the region media took up this on expected lines raising the overall awareness about the health impact from leaded household paints. As an impact of our concerted effort a few paint manufacturers have gone lead free in the region and, the respective Environment Ministries in Nepal, Bangladesh, Sri Lanka and India have taken contingency of the seriousness of the issue and are working towards appropriate standards for lead in paints.

b. Mercury phase-out campaign in healthcare

Mercury use in the healthcare sector has been quite significant in this part of the world. The major uses are in thermometers and sphygmomanometers. The mercury released in the environment from broken

medical equipment is a cause of worry and therefore, alternatives such as digital instruments being available, this programme aims to phase-out mercury use from healthcare sector from the region.

The partners have been involved in two pronged strategic movement – one, sensitizing the demand side (healthcare professionals and establishment, medical equipment manufacturers) and two, guiding appropriate authorities to bring in legislations so that the supply side is well regulated. The partners are also establishing model mercury free hospitals in the region.

The partners are also actively engaging with international bodies such as WHO, Zero Mercury Working Group, UNEP and IPEN to press for desired changes.

c. Programme on elimination of Persistent Organic Pollutants (POPs) and their management

Elimination of POPs and management of pesticides are some major concerns in sound chemicals management in the region. The overall understanding and the capacity to research the issue itself is a big question. Toxics Link having worked on this issue for the past several years have build up a credible understanding in the region. The main aim of this programme is to generate baseline information, capacity building on the issue, raise awareness about issue and related international treaties (such as Stockholm Convention), public IEC materials on the issue and engage with policy people

to address the issue in each country as appropriate.

The partners are at present working on creating data resource on PCB, DDT, Dioxins and Furans apart from creating awareness about POP elimination and pesticide management in general. The partners are also helping their respective governments to bring in appropriate sections in their chemical profiles and policy.

d. Electronic waste management campaign

E-waste management is perhaps the latest challenge the region is facing. As the nations in the region climb up the ladder of development, their dependence on electronic and electrical gadgets is galloping at alarming rates with most not having proper system in place to manage the waste generated at the end of life of these gadgets. Since most of them (PCs, TV tubes, mobile cells etc) have value components such as lead, mercury, gold etc. it has resulted in mushrooming informal sector that extract these material in the most primitive manner and thus present a grave threat to the environment and health.

The campaign aims at creating baseline database on e-waste, building capacity, raise awareness level and engaging with policy people and other stakeholders such as informal recycling sector for designing appropriate framework for e-waste handling and management in the region.

Rajeev Betne
rajeev@toxicslink.org



INTERVIEW



Dr. Vidyaa was working in Ragas Dental College and Hospital, Uthandi, Chennai in the Department of Conservative Dentistry and Endodontics for 11 years. Smile Dental

Clinic is an oral and dental care centre at Chennai, specializing in root canal therapy, family dentistry, cosmetic dentistry, conservative dentistry, implants, orthodontics and preventive dentistry for children, crowns & bridges and complete dentures. This is the first clinic at Chennai to launch "Bio Medical Waste Management System". Smile Dental Clinic has been recognised as a satellite centre for Tobacco Cessation and Counselling clinic by WHO and Adyar Cancer Institute WIA, Chennai. It has also ingrained into its format Laser dentistry- "The Generation Next" in Dentistry for painless, bloodless dental treatment.

In this interview Dr. Vidyaa shared her experience of making smile dental clinic mercury free and the process of adopting other options of mercury amalgam.

1. How and when did the concept of opening smile dental clinic come in your mind?

Dr. Vidyaa: Smile dental clinic was entirely inception and the planning was executed within two weeks of its initiation in my mind in 2000 Feb. I started off as a one chair dental clinic in February 2000 and gradual up gradation of the practice is followed till date.

2. How and what inclined you to take initiatives to make your clinic mercury free. To what extent you feel yourself success in this direction.

Dr. Vidyaa: I started to study allied dental sciences and completed a course on Hospital and Health Care Management from Symbiosis Centre of Health Care, Pune in 2003. I had submitted a thesis on Dental Waste Management – a study I carried out in Ragas Dental College and hospital, Chennai in 2003. The thesis was well appreciated in the hospital and Symbiosis. Later I brought out the first-of-its-kind

brochure on Dental Waste Management in Feb 2004, which was unfurled by Mr.S.P Thiagarajan, Chancellor Madras University. The thesis findings were later written in a form of book. "Going Green – A Manual of Waste Management for the Dental Practitioner". The book was released by Mr Jitender. P.Vij, Director-Jaypee Publication in 2007. Dr Meer Mustafa Hussain -the Vice Chancellor of The Tamil Nadu Dr. M.G.R Medical University had felicitated me on my achievements too in this regard.

All these volley of events had initiated me to start the first stepping-stone in making my clinic as a mercury free dental clinic in 2004 itself and I have been successfully practicing it till date.

Science is ever evolving and hence I would say that this is just a humble beginning and lots more to come hopefully for a better and greener tomorrow.

3. In what respect Smile Dental Clinic is unique in practicing the environment friendly activities and express your views, how you have contributed for a mercury free environment.

Dr. Vidyaa: Smile dental clinic had ingrained into its format to slowly start disposing the dental waste in an environmentally safe manner keeping abreast with the current regulations given by the Pollution Control Board and the Environment Protection Act. It's almost one-of-the-first dental clinics to imbibe this format into every day practice and thus being unique in its endeavor in practicing the environment friendly activities.

Mercury is used in dental practice basically in form of filling materials, but with the advent of newer dental materials in terms of mercury less and mercury free the acceptance of such materials by patients have paved a way to strengthen the intentions behind the mercury free dental clinic due to its colour compatibility and non – toxic nature.

4. What are the health concerns due to the exposure of mercury amongst the dentists as well as patients? What do you suggest if somebody is exposed to poison. Are there any curative

measures towards mercury health hazards?

Dr. Vidyaa: Mercury is a highly toxic, persistent and bio-accumulative neurotoxin. Once released, mercury will remain in the environment for years, dispersing over a wide area and accumulating in the tissues of plants, insects, and animals, concentrating on creatures higher up the food chain (e.g., humans). Health effects of mercury can be severe, particularly to a fetus in utero and to younger children.

The general health concerns of mercury vapour exposure are as follows:

Acute exposure: Acute inhalation of mercury vapor may result in toxicity including chills, nausea, general malaise, tightness in the chest, chest pains, dyspnea, cough, stomatitis, gingivitis, salivation, and diarrhea

Short exposure: To high levels of mercury can cause severe respiratory irritation, digestive disturbances, and marked renal damage.

Chronic exposure: Chronic exposure to mercury may result in weakness, fatigue, anorexia, weight loss, and disturbance of gastrointestinal function.

Exposure of mercury as in hand trituration of silver alloy with mercury in a dental office can lead to short exposure. Such practices are done by dental students' right from the first year of their course. Very few dental colleges and dental offices have an amalgam triturator where amalgam capsules are used.

Even though safe practices of mercury are followed it's not completely fool proof. Dental assistants and nurses along with doctors are the most affected with mercury vapours.

Patients in particular are exposed only for a short period. Never-the-less while placing the amalgam fillings in the tooth there is exposure of mercury either as contact amalgam which gets packed in the gingival sulcus or frank mercury during removal from the amalgam mix. These can penetrate through abrasions in the gingiva and skin and can also be inhaled.

As the old adage goes- "Prevention is better than cure" I personally feel all steps for prevention and minimizing the mercury exposure should be taken. However when

encountered with an exposure the following steps needs to be followed:

- Prevent the spill in the first place by replacing outdated glass thermometers, and sphygmomanometers with mercury free devices.
- Use mercury spill kits to help clean up small spills of 25ml or less. Kits should contain gloves, protective glasses, Hg absorb powder, mercury sponges, and a disposal bag.
- Make sure that spills are cleaned up promptly and safe, and clean-up of spills is done by workers or a team trained in proper procedures.
- Small spills of mercury on a smooth, non-porous surface can be cleaned up safely and easily with proper techniques.
- Beads of mercury are heavy and readily sink into cracked floors or other open surfaces. Mercury can be tracked beyond the original spill area on footwear or on pets' feet. Mercury also clings to porous materials like fabric, carpet or wood, making it difficult to remove.
- Put in place procedures to isolate the contaminated area.
- Be aware that mercury can unknowingly be carried home on clothing, skin, or hair.
- Spills that may have resulted in the presence of mercury in carpets, floor cracks, behind moldings and other areas where elemental mercury may have been used, or where amalgam capsules may have been spilled should be documented.
- Use a Mercury Vapor Analyzer to verify that the area is safe to reenter.
- Care should be taken even while removing the amalgam sludge from separators as this also leads to accidental contact with contact amalgam.

5. What are the mercury alternatives being used in your clinic. What do you recommend in terms of cost and the environment concerns?

Dr. Vidyaa: Mercury alternatives used in my dental practice are composite resins, glass ionomer cements etc. Considering the safety and health, the cost of such filling materials is miniscule and hence

implementation of such materials can be done quite effectively in all private practices.

6. What are the regulations worldwide in the mercury waste management in dental sector? What do you think of it and how is Smile Dental Clinic implementing it.

Dr. Vidyaa: The regulations worldwide in mercury waste management in dental sector include:

- Mercury-containing equipment should catalog those items and develop a spill response policy.
- Mercury-containing items should be replaced with mercury-free items as much as possible, either as phase-out schedule or need replacement.
- Proper handling of a mercury spill.
- Staff should be trained.
- Do not allow workers who are not trained in proper procedures attempt to clean up spills.

These regulations must come into force at all levels and strict regulatory norms should be practiced. Smile dental clinic is working on this issue since 2004 and is successful in its endeavor.

7. Is there any state level government policy of mercury phase out in dental healthcare sector? If yes, then what is it and what do you think of it that it is effective in implementing it at state level.

Dr. Vidyaa: I am aware of state level government policy of mercury phase out in the medical health care sector especially in government sector and few private sectors. In the dental sector such practices are yet to seep into the format; however the efforts are put sincerely towards it. The implementation must be rather easy so as to effectively bring it into regulation in dental schools all across the country. There is not much of documented evidence to show the increase levels of mercury vapours in dental schools and private practice in India. Hence mercury vapor analysis should be done and a study in India should be carried out to bring into light such findings, which in turn would definitely be an eye opener in this field. "Facts speak louder than

words" – hence this step definitely bring about the sensitivity of the issue to the dental fraternity.

8. Are other clinics are also doing this mercury waste management after seeing your example. If yes, then what is the growth rate and if no, then what are the problems and challenges.

Dr. Vidyaa: Yes, there are other clinics who have adapted the mercury free dental clinic but the phase out is rather slow. More information on the health hazards should definitely be documented and brought out as articles so that dentists' become aware of the effects and a paradigm shift from the mercury – amalgam filling to non mercury fillings should be encouraged. The reason for the phase out being slow is mainly because of the curriculum in dental schools where dental amalgam fillings are still the practice. Being exposed to mercury vapours from the first year the dental students have just accepted the norm. Revisions of the curriculum along with attitude change from the dentists' mind set are the two major hiccups to handle at this juncture.

9. What further steps you are planning to introduce in your clinic and what are your recommendations for the dental professionals.

Dr. Vidyaa: Smile dental clinic has been mercury free since 2004 and has taken stern steps to even replace all mercury containing surgical equipments such as sphygmomanometer, dental amalgams etc. I would encourage my fellow practitioners to just follow suit at the earliest.

10. Any important suggestions and comments, would you like to assert for the medical fraternity.

Dr. Vidyaa: "Practice only leads to perfection"-whatever baby steps which has been taken towards mercury hygiene is still in its infancy and hence such regulations should be eagerly embraced by dental professionals keeping the larger interest of the public and patients into consideration. Just let's do our tiny bit to save the mother Earth.

RESOURCES

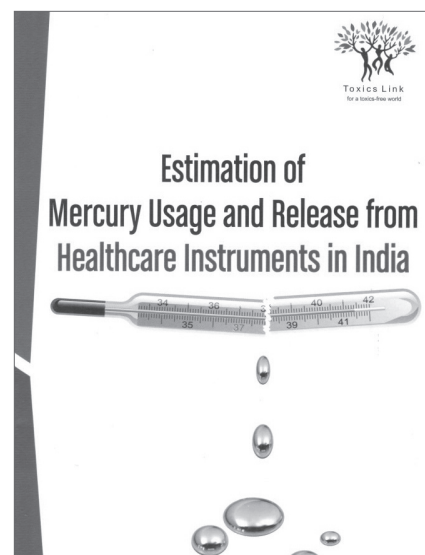
Toxics Trinkets (Book)

Toxics Link published a study report "Toxic Trinkets: An investigation of lead in Children's Jewellery in India". It is a study on lead in jewellery examining jewellery used by children. The study reveals that artificial jewellery can have health impacts on health as it contains considerable amount of lead. Now a days children use many varieties of jewelleries like bracelets, pendants, rings etc. To attract children even more, the manufacturers of these jewellery items coat them with bright colours. This coating can prove to be a problem as, most of these colours are organo-metallic compounds, which are loosely bound to the surface and can leach easily. Usually, children (especially toddlers) chew or suck jewellery items they or their mothers wear. So, the toxic elements in these jewellery some or the other way goes inside. The aim

of the report is to examine the usage of lead in products especially those used by children and youth, as well as to survey the size of the market for artificial jewellery in India.

Estimation of Mercury Usage and Release from Healthcare Instruments in India (Book)

Toxics Link published a book titled "Estimation of Mercury Usage and Release from Healthcare Instruments in India". It talks about the healthcare facilities in India, which have been using Mercury (Hg) thermometers and sphygmomanometers for many years, but some of them have started the process of shifting to Hg free products. This report estimated the usage of (Hg) containing thermometers and sphygmomanometer in urban (government and private) and rural healthcare (community Health Centre, Primary Health Centre and Sub-centre) settings in India taking into account the "Indian Public Health Standards (IPHS)"



recommended usage of these products in healthcare facilities. The breakage patterns of these instruments in respective healthcare settings were calculated on the basis of sampling done in five states of India.

NEWS

Total ban on plastic bags in Delhi

NEW DELHI: The Delhi Cabinet on Monday (April, 3 2011) approved a blanket ban on manufacture, sale, storage and usage of plastic bags under Section 5 of the Environment (Protection) Act, 1986.

Delhi Chief Minister Sheila Dikshit said the Municipal Corporation of Delhi, New Delhi Municipal Council and Delhi Police would be instructed to strictly enforce the ban. The ban would apply to all plastic bags and those involved in their manufacturing and distribution.

The principal Act was amended in 2008 by which the thickness of plastic bags had been increased from the existing 20 microns to 40 microns for the manufactures.

The Delhi Government had then forbidden the sale, storage and usage of all kinds of plastic bags in certain notified places on January 7, 2009, as per Delhi High Court's directions. The notified places included all five and four star hotels, hos-

pitals with 100 or more beds, restaurant and eating places with a seating capacity of more than 50, all Mother Dairy fruits and vegetable outlets, all liquor vends, all shopping malls, all shops in main markets and local shopping centres and all retail and wholesale outlets of various brands of consumer products.

Use of plastic bags was only allowed as per the Bio-Medical Waste Management and Handling Rules-1998.

Following the imposition of the ban it was observed that street vendors of vegetables and fruits vendors and those engaged in sales in daily and weekly vegetable markets were still using plastic bags. In view of this, the Delhi Government decided to promote alternative bags, carry out awareness campaigns and declared the paper/alternate bags-manufacturing as a household industry. At the same time, fines ranging from Rs.10,000 to Rs.1 lakh were imposed on 250 violators.

Ms. Dikshit said the Delhi Government has since decided to repeal the existing Delhi Degradable Plastic Bags (Manufacturing, Sales and Usage) and Garbage (Controlled) Act-2000 and has issued a notification under the Environment (Protection) Act-

1986 for a complete ban on manufacturing and sales, storage and usage of all kinds of plastic bags in Delhi.

Source: The Hindu, New Delhi, April 5, 2011

Colour-coded antibiotics soon to stop misuse

NEW DELHI: Life-saving antibiotic medicines will soon be colour-coded to avoid overuse and misuse, which has led to proliferation of drug-resistant bugs that cannot be treated with the current medicines.

The colour coding will be on the basis of the efficacy, rarity, habit-forming nature etc of the antibiotics under the much awaited newly-drafted Antibiotic Policy, which is likely to be unveiled in next few months.

Framed by the Health Ministry, the policy which calls for the creation of a new schedule under the Drugs and Cosmetics Act aims to address issues such as over-the-counter sale of prescription antibiotics, faulty dosages, no standard treatment protocol for antibiotics prescription, lack of awareness among stakeholders, truncated treatment and counterfeit medicines.

As per policy, doctors will have to give two copies of prescriptions to every patient. One copy will have to be kept for two years by the chemists while the other one will be audited by the DCGI. Those violating norms would face penal action.

"We have to put a regulatory system in place besides creating awareness among the people who have been getting drugs over-the-counter which has the potential of misuse. I favour a deterrent factor for the violators," Dr VM Katoch, Director-General, ICMR said.

Dr Nata Menabde, World Health Organisation (WHO) representative to India noted that the problem of antimicrobial resistance in some pathogens poses grave challenges for some of the national disease control programmes.

"The new policy will help plug various loopholes as presently the drugs which are available over-the-counter are being over-used or misused, resulting in long-term side-effects and drug-resistant organisms," she said on the eve of the World Health Day on Wednesday in Delhi.

Sharing the findings of a survey done recently by the WHO in Delhi, Dr Menabde further said that around 53 participants did not hesitate in saying that they would self-subscribe antibiotics.

"This is a dangerous trend as bacteria becomes resistant to the first-line of antibiotics, forcing doctors to prescribe stronger, more toxic and more expensive drugs to treat the disease as has happened in Malaria and HIV to name a few. We need to safeguard antimicrobials as a valuable resource for future generation."

Madhu Gupta from WHO added that the premier health body has provided technical assistance to the Government in framing the proposed policy.

Source: The Pioneer, April 7, 2011

Japan stops leak, still pumps toxic water into sea

TOKYO: Japan stopped highly radioactive water leaking into the sea on Wednesday from a crippled nuclear plant, a breakthrough in the battle to contain the worst nuclear crisis since Chernobyl, but contaminated water was still be pumped into the ocean.

Analysts said the damaged reactors, whose fuel rods operator Tokyo Electric Power (Tepco) is desperately trying to cool, were still not under control almost a month after they were hit by a massive earthquake and tsunami. Tepco said it had stemmed the radioactive leak using liquid glass at one of six reactors at the Fukushima Daiichi plant in northeast Japan that were damaged on March 11.

"The leaks were slowed on Tuesday after we injected a mixture of liquid glass and a hardening agent and it has now stopped," a TEPCO spokesman said. Engineers had been frantically struggling to stop the leaks from reactor number 2, even using sawdust and newspapers. It was liquid glass that finally stemmed the flow of the highly-contaminated water.

Engineers are still faced with the massive problem of how to store 60,000 tonnes of contaminated seawater used to cool overheated fuel rods and are being forced to pump 11,500 tonnes of low-level radioactive water back into the sea.

Local newspapers said neighbours South Korea and China were getting concerned over the ongoing nuclear crisis and radioactive water being pumped into the sea. "Perhaps we should have given more detailed explanations to the relevant ministries and to our neighbours. We are instructing the trade and foreign ministries to work better together so that detailed explanations are supplied especially to neighbouring countries," chief cabinet secretary Yukio Edano said on Wednesday.

Source: Financial Express, New Delhi, April 7, 2011

Survey identifies 4,000 victims of Endosulfan

THIRUVANANTHAPURAM: Evidence is mounting on the ill-effects of Endosulfan sprayed on cashew plantations in Kasaragod district, even as the Union government continues to be ambivalent on the issue.

A survey done by the Health Department has identified nearly 4,000 victims after screening 16,000. The household survey and the screening done in 11 affected panchayats during December and

January identified 3,937 victims, besides 336 in nearby panchayats. The numbers are likely to go up at least by 500 as the Health Department continues to receive complaints about non-inclusion on the list. The survey and accompanying studies officially confirmed the extent of damage done by the pesticide, which the Centre denies.

Mohammed Asheel, Assistant Nodal Officer of the Sneha Santvanam project, which is overseeing the remediation programme for the victims, says new cases will continue to be reported as the effects of Endosulfan will persist for another 20 years. The department has constituted an expert team to screen fresh cases.

Union Minister for Agriculture Sharad Pawar had maintained in Parliament that some States had opposed a national-level ban on Endosulfan. However, Right to Information activists have found out that no State government had so far written to the Centre opposing a ban. Only a few farmers and the 'Endosulfan lobby' had argued against the ban.

The Banerji Committee and R.B. Singh Committee, appointed by the Union government, had advised the government against use of Endosulfan near waterbodies.

Endosulfan is a broad-spectrum organochloride insecticide, which is very toxic to organisms and the environment. Studies in India and abroad had detected its residues in nearly 5,000 most widely consumed foods, including fruits, vegetables, fish and meat. High levels of residues were detected in all samples of cauliflower and brinjal taken in Ranchi (Jharkhand) in 2005. It has been found in grapes, guava, rice and mangoes in India (research studies by Shahi et al, Kumari et al, Singh et al, Jayashree and Vasudevan).

While acute toxicity from the chemical can cause death and several other problems, chronic exposure of smaller quantities of pesticide over a long period hits the immune, endocrine, reproductive and nervous systems, causing a wide range of problems. The health survey showed that 526 victims of Endosulfan in Kasaragod district were bedridden.

Source: The Hindu, New Delhi, April 4, 2011

Vegetables to be double tested for pesticides

NEW DELHI: The Delhi High Court has set up a committee of lawyers and tasked it to collect vegetable and fruit samples for simultaneous testing at a Delhi Government laboratory as well as one certified by National Board for Testing and Calibration for presence of residue of pesticides.

A Division Bench of the Court comprising Justice Dipak Misra and Justice Sanjiv Khanna directed the committee comprising Additional Solicitor-General A.S. Chandhiok, Delhi Government Standing Counsel Najmi Waziri, Union Government lawyer Meira Bhatia and Delhi Legal Services Authority Member Secretary Asha Menon to collect the samples from ten different places in the city, send them for testing to the two laboratories and thereafter file a report in the Court.

Earlier, the Delhi Government submitted that in the past three years it had collected 11,000 samples of vegetables and fruits for examination of toxic substances and prosecution had been initiated in 1,440 cases.

The Court ordered double tests of the samples after non-government organisation Consumer Voice submitted that every State other than Delhi got samples of vegetables and fruits tested by National Board for Testing and Calibration-certified laboratories of the Union Government.

The Court has been hearing a suo motu petition on the basis of a media report about rampant use of banned pesticides in vegetable and fruits in the Capital.

The report quoting a study on use of banned pesticides by farmers conducted by a non-government organisation said the amount of pesticides used in India is as much as 750 times the European standards.

Of the five internationally banned pesticides, four were found to be common in vegetables and fruits, the report said.

These pesticides cause headache and affect fertility and can damage kidney and liver, the report said.

Source: The Hindu, March 14, 2011

High financial stakes dictate agenda

By Ravi Agarwal: WHEN Sharad Pawar, India's powerful agricultural minister, recently spoke in defence of endosulfan in Parliament, it was a first of sorts. Probably, never before had a mere chemical attracted the interest of such a high-profile minister.

However, endosulfan is no mere chemical.

It is one whose recent history has been written in guile, intrigue and politics.

Endosulfan is arguably one of the most toxic pesticides being used on the planet today. The international scientific community has formally recommended it for a global ban in the upcoming 172-nation meeting of the Stockholm Convention, an international legally binding UN treaty dealing with the most toxic chemicals in use.

Endosulfan currently tops this notorious list, with 21 already having been acted upon previously. The pesticide can cause severe health impacts including deformities in limbs, loss of motor control, brain damage, delayed puberty and cancer. It persists in the environment for a long time, circulates globally and passes on from the mother to the child, causing intergenerational health effects. On all these counts, banning it should be an open and shut case, as has already been done by over 60 countries in order to prevent harm to their citizens and the environment.

In India, there is a twist to the tale. We produce about 4500 crore worth of the pesticide annually, which is over 70 per cent of the world's supply, and consume almost half of it for our horticulture, pulses, cashew, cotton and other plantations.

Two Indian companies are the largest global manufacturers, one of them being a public sector company, Hindustan Insecticides Ltd.

It is no wonder then that with such huge economic stakes, the Union government has blatantly resisted any attempt to talk science regarding endosulfan's toxicity ever since the debate became international four years ago. It has not only cocked a

snook at global research, stating it inapplicable to the tropics (are Indian bodies so different?), but has made valiant (though seemingly futile) efforts to disrupt the process without presenting any research to back its claims.

Government delegates to the International Science Review Committee have, invariably accompanied by representatives of the companies, attempted to block any discussion. Often company representatives have made official statements on behalf of the government.

It has been international diplomacy at its worst and the Indian behaviour has been whispered about in the UN corridors.

Activists and even academics from reputed institutions such as IIT Kanpur or the National Institute of Occupational Health, who dared to speak on the issue, have been publicly maligned, served legal notices or had criminal cases filed against them by the industry. Despite this, Kerala banned the use of endosulfan in 2002. The pesticide was widely used for aerial spraying on cashew crops in the state. The Karnataka government followed suit in 2010. A recent ban in Australia cited the health impacts in Kerala's Kasaragod as one of the reasons for the ban.

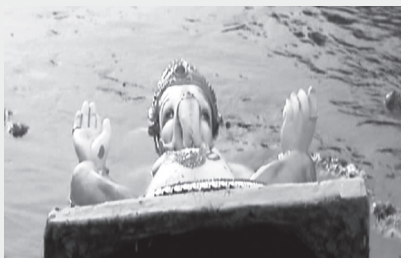
Ironically, our very vociferous environment minister Jairam Ramesh chided the Kerala government for "politicising the issue" and stated that a ban would have "national implications". Farmer leader Sharad Joshi has spoken against the proposed ban, fearing its impact on farmers and imputing motives on the EU to capture the market with new chemicals instead.

In fact, many alternative non-chemical approaches exist and have been documented. Simultaneously, the industry lobbying machinery is in full swing as the convention meeting draws closer.

Its representatives can be seen stalking the corridors of the environment and agriculture ministries. They should be less cocky, since India can be isolated in a global meeting.

Ravi Agarwal is director, Toxics Link

Source: Mail Today, 20 April, 2011



Ganapati Bappa Moraya!

“Ganapati Bappa Moraya!” film is a 8.33 minutes film directed by Dr. Mayuri Panse from Pune produced in the year 2008. It has very few dialogues, which is in marathi language with english subtitles. The film explores the religious-rational dichotomy! Ganpati festival—Ten days of tremendous festivities and fanfare

followed by the immersion of the Ganpati idols. Clay, Plaster of Paris, even concrete coated with paints containing cancer causing heavy metals go into our valuable natural resource—water. People argue on continuing the festival in the name of tradition. The fact remains – in tradition lies the solution! The film travels from the traditional religious festivities to the idols emersion day near river and then the following days of the emersion place. The riverside is full of broken idols and the clean water has become toxic and with lots of waste and the scene there is pathetic to see. The film shows the traditional methods of idol making which dissolves very easily in the water which keeps the water clean.



The Miracle Water Village film is directed by Rintu Thomas and Sushmit Ghosh. Its' a 12 minute Marathi/English Film with English subtitles. Lying in one of the worst drought-prone regions of India, the village of Hiware Bazar battled many decades of sparse rained and failed crops. However, 20 years ago, the entire village came together to script a silent revolution by designing a

rainwater-harvesting model that saved every drop of the scanty rain they received. Today, the village is literally an oasis in the middle of the desert, boasting of bumper harvests, daily cooperatives, millionaire families and visionary farmers. An inspirational story of improvised farming industry in India that reversed its fortune through its visionary model of water management.



Reviving Faith

Reviving Faith is directed by Rishu Nigam and produced by PSBT. Its 57 minutes film in english language. The woods of Anushuya Devi in Uttarakhand remain untouched by human influence. The film takes its viewers into sacred groves of the Himalayas that are still alive because of the faith of its people. It traces the struggles of the Himalayan people to save their resources from being plundered.



Toxics Link

for a toxics-free world



E-toxic listserve

Toxics Link coordinates an electronic discussion group for sharing and disseminating information. If you would like to join the group, please e-mail us at tl Delhi@toxicslink.org

If you have any suggestions or require information, please contact:

Toxics Link – Delhi

H2 (Ground Floor)
Jungpura Extension
New Delhi 110 014
T: +91-(0)11-24328006, 24320711
E: tl Delhi@toxicslink.org

Toxics Link – Chennai

9/5 (2nd Floor), Second Street,
Padmanabha Nagar, Adyar,
Chennai 600 020
T: 91-44- 42607642
E: tl Chennai@toxicslink.org
info@toxicslink.org

I: www.toxicslink.org