



## Asbestos kills everyone but us

**Country after country is banning asbestos because of its confirmed status as a killer. But the Indian government deems that asbestos does not harm Indian workers and citizens**

**O**n June 29, 2005, a spokesperson for Kubota Corporation, an industrial equipment manufacturer based in Osaka, Japan, confirmed the asbestos deaths of scores of former employees. Kubota executive Taichi Ito told reporters, "We followed laws and regulations properly (at that time), but it is extremely regrettable that the health of local residents was harmed."

The next day, officials at the Health, Labour and Welfare Ministry of Japan announced their intention to look into the labour conditions that led to these deaths. The news of the death of 86 former employees of another company, Nichias Corporation, due to asbestos-related disease since 1976 attracted media attention throughout Japan

in July 2005. There are several other Japanese companies which have recently disclosed asbestos deaths amongst their workforce.

As a result, Japan has wisely banned asbestos use in principle, except in cases where there are no substitutes. Asbestos is, therefore, still used in gaskets for machinery, insulating plates on switchboards, seals at chemical plants and ropes for industrial use.

Responding to the reports, the Japanese Health Ministry plans to completely ban the use of asbestos by 2008. Japan joins countries like Australia, Uruguay, the European Union, Honduras and others which have banned asbestos.

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## Cleaning up our act

**INDIA'S SIGNING THE STOCKHOLM CONVENTION** would imply that we are now joining the global regime for chemicals safety. Currently, a battery of conventions outlines the framework of making our planet safer from toxics. These include the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, the Rotterdam or PIC (Prior Informed Consent) Convention on hazardous chemicals which are traded internationally and now the Stockholm Convention which deals with the class of chemicals called POPs or Persistent Organic Pollutants. Similarly, there are several regional treaties that prohibit the dumping of hazardous waste into the oceans like the London Dumping Convention.

Over the past 15 years, post the Rio Summit, these internationally legally binding treaties have outlined some key principles, such as the precautionary approach, the concept of producer liability, the idea of using safer alternatives or best available techniques, information sharing, etc, which have been negotiated hard and long by the international community (with the NGOs egging them on!).

The world is clearly divided between those with the most industrial interest (countries such as the USA, Canada, Japan and Australia) and the others who have been the victims, such as nations from Africa, Asia, Latin America, etc.

However, of late, India's position in these treaties, which was earlier that of the leader of the developing countries, often banded together as G-77 (and China), has been moving from environmental protection to that of trade protection – clearly a reflection of the changing nature of economic development in the country. Rather than negotiate for a cleaner development process, we have been arguing for a 'right to development at any cost' and often are reluctant to take progressive stances. With the possible ratification of the POPs Convention in 2006, it is hoped that India will move towards marrying environmental focusses with its other agendas and realise that industry can no longer hide under the cloak of unquestioned protection.

However, the question is still open, whether our development will be 'clean', or whether we will continue to throw all caution to the winds and not learn from the painful lessons of the West.

**Ravi Agarwal**

*Continued from page 1*

Against this backdrop, the Indian Bureau of Mines (IBM), a subordinate office of the Union Ministry of Mines, deems that asbestos does not harm Indian workers and citizens. In fact, plans are afoot to lift the ban on asbestos mining.

This is despite the fact that the Union Ministry of Health had informed the Parliament in 2003 that studies by the National Institute of Occupational Health, Ahmedabad, had shown that exposure to any type of asbestos can lead to the development of asbestosis, lung cancer and mesothelioma.

White asbestos continues to be used in India; blue and brown asbestos are banned here. About 1 lakh workers are directly exposed and 3 crore construction workers are being subjected to asbestos dust on a daily basis. Even common citizens are at risk of exposure.

### Indian scenario

The Indian Government's signal to promote asbestos has outraged environmental, labour, consumer and human rights groups in the country. Grants of fresh mining leases and renewal of existing mining leases for asbestos are currently banned in India on health grounds but the Union Ministry of Commerce continues to import asbestos from countries like Canada. In Canada, there is a no-home-use policy for asbestos. It has lost its case in the World Trade Organisation (WTO) where it argued for continuing the trade of white asbestos.

Unmindful of the fact that poison does not become non-poisonous as a result of advertising or public relations campaigns and dubious scientific studies, the Canadian government has announced its continuing support for the 'safe and responsible use' of white asbestos. It renewed its funding to the Montreal-based Asbestos Institute for the promotion of white asbestos throughout the world. It has also earmarked \$775,000 for the promotion of asbestos. Consequently, the asbestos industry in India has flooded national dailies and television channels with sponsored features, advertisements and studies to promote the 'safe' and 'controlled use' of white asbestos cement.

### Status of asbestos in government records

In India, the total use of asbestos is 1.25 lakh tonnes, of which more than 1 lakh tonnes is being imported. Significant occupational exposure to asbestos occurs mainly in asbestos cement factories, the asbestos textile industry and during asbestos mining and milling. The National Institute for Occupational Health (NIOH) has carried out studies in all these industries and generated baseline data. A summary of these studies follows.

#### **Asbestos cement factories**

There are 18 asbestos cement factories located in different parts of the country. NIOH carried out environmental epidemiological studies in four asbestos cement factories located in Ahmedabad, Hyderabad, Coimbatore and Mumbai. The prevalence of asbestosis in these factories varies from 3 to 5 per cent.

#### **Asbestos textile industry**

Making of asbestos yarn and ropes is done mostly in the unor-

ganised sector of industries with very poor safety measures. The prevalence of asbestosis is 9 per cent in these industries. This relatively low prevalence of asbestosis despite high environmental levels is attributed to a high labour turnover. Cases of asbestosis were observed in workers having less than 10 years exposure in contrast to the reported average duration of over 20 years.

Dr Qamar Rahman of the Industrial Toxicology Research Centre, Lucknow, a body under the Union Ministry of Science and Technology, has conducted detailed studies on the illegal mining and milling of asbestos in Rajasthan. She has reported that workers in these illegal mines are exposed to very high asbestos fibre concentrations. They do not use gloves, masks or any other protective clothing. They use a primitive manual method for grinding. "Clinical studies revealed prevalence of a large number of asbestosis cases. In some cases, asbestosis had developed in less than five years. Under such alarming conditions, lifting the ban on asbestos mining would be a disaster for the workers," says Dr Rahman.

In a survey of UP Asbestos Limited, Mohanlalganj, Lucknow and Allied Nippon Pvt Ltd, Ghaziabad (UP), lung function impairment was found to be higher in subjects exposed for more than 11 years. This was the result of a Central Pollution Control Board sponsored project entitled 'Human risk assessment studies in asbestos industries in India'.<sup>1</sup>

The Directorate General, Factory Advice and Labour Institutes (DGFASLI), Union Ministry of Labour, seems ignorant of these studies, which concluded that even in controlled conditions, asbestos workers continued to suffer and it made no material difference in their condition.<sup>2</sup>

### Civil society, trade unions and health experts seek ban on asbestos

On April 13, 2002, the Indian Association of Occupational Health had passed a resolution demanding an immediate ban on all activities related to asbestos and its products.

On November 8, 2004, preventable but incurable diseases caused by asbestos were taken note of by India's central trade unions who endorsed a resolution calling for its ban. P.K. Ganguli of the Centre of Indian Trade Unions (CITU) said that at a

## Main uses of asbestos

- ▼ Water pipes or as roofing sheets in the construction industry.
- ▼ Manufacture of pressure and non-pressure pipes used for water supply, sewage, irrigation and drainage system in urban and rural areas
- ▼ Asbestos textiles
- ▼ Laminated products, tape, gland packing, packing ropes, brake lining and jointing used in core sector industries such as automobile, heavy equipment, petrochemicals, nuclear and thermal power plants, fertilisers, transportation, etc.



time when there is a worldwide movement to get asbestos banned with the entire developed world having already banned it, it was puzzling to note that the Indian Government is planning to lift the ban. He warned that it would contribute to more cancer and occupational hazards among workers. "We demand that the government should desist from lifting the ban on mining of all forms of asbestos," Ganguli said.

The Government has meanwhile reduced customs duties on asbestos. Earlier the import duty on asbestos was reduced from 110 per cent to 50 percent in 1992, thus reducing the total import cost by 25-30 per cent. India has also been reducing the customs duty on asbestos fibre in recent years (from 78 per cent in 1995-96 to 25 percent in 1999-2000). Fifty per cent of the sales of asbestos cement are in the rural sector, and 30 and 20 per cent in the industrial and urban sectors, respectively.

The Union Minister of State for Coal and Mines, Dr Dasari Narayana Rao, in a written reply in the Lok Sabha on April 29, 2005, announced the possibility of lifting the ban on asbestos mining in the light of a mining industry-supported study by the Indian Bureau of Mines.

### Conclusion

Besides workers, even common citizens are at a risk of exposure from asbestos, which becomes airborne through wind erosion and normal wear and tear. The epidemic of ill-

ness and death due to asbestos that is plaguing the developed countries with an estimated 30 deaths per day is being repeated in India. India is using asbestos in exactly the same way as the developed countries did until about 1980. The danger from asbestos was documented in India as early as 1968. Although there is indisputable evidence that asbestos causes asbestosis, lung cancer and mesothelioma, asbestos mining, milling and manufacturing continues.

The result of widespread use of asbestos in European countries, the United States, Canada and other nations has resulted in hundreds of thousands of deaths and over a trillion dollars in personal and property damage. But instead of learning anything from the experience, the asbestos companies from the developed world have shifted most of their operations to countries such as India, where there is little awareness about the hazards of using asbestos.

The choice before the Indian Government is clear – either it should ban the trade, manufacture and use of all kinds of asbestos or continue to misinform its citizens that while asbestos kills Japanese, Australians and Europeans, it is harmless to Indians.

By **Gopal Krishna**

<sup>1</sup> Reported in the Annual Report of Industrial Toxicology Research Centre (2001-2002), India

<sup>2</sup> [www.dgfasli.nic.in/newsletter/jan\\_march\\_96.pdf](http://www.dgfasli.nic.in/newsletter/jan_march_96.pdf)

## A waste of a technology

**T**aking note of the news report about the closure of the Rs 84 crore Municipal Solid Waste to Electricity plant in Lucknow, on May 6, 2005, the Supreme Court of India gave an order that stayed the sanction of any further subsidy to proposed municipal Waste-to-Energy (WTE) projects.

The court sought the inspection of the functioning and the records of the Lucknow plant and asked the Central Government to constitute a committee for this purpose.

When the Centre commissioned the plant, the projection was that it would generate 5 MW of electricity using bio-degradable waste but the plant ended up generating a mere 0.3 MW to 0.5 MW of electricity. The committee submitted its report by October 15, 2005 in the court. Sources have revealed that the report does seem fine-tuned to best waste management practices, which environmental groups like Alliance for Waste Management (AWM) have been advocating. AWM had given a presentation to the committee on August 9, 2005 in Hyderabad amidst heated exchanges.

Glossing over the facts about the composition of Indian waste which has low calorific value and hence is unsuitable for electricity generation, ministries in the Central Government continue to waste public money experimenting with this technology.

Lucknow produces 1,200 metric tonnes of waste per day but it was stated in the report that the plant was shut down due to lack of waste. No information on the project was made public and the concerned central authorities were secretive in their engagement with a Supreme Court committee.

The court has taken note of the incinerator plants in Gangdumguda and Elikkta villages in Andhra Pradesh.

Waste incineration represents the most polluting solid waste management technology. But an agreement has been signed by the Municipal Corporation Delhi (MCD) to generate electricity from waste despite the failure of the Timarpur incinerator which used the same technology. The agreement between MCD and Infrastructure Leasing and Financial Services Limited (IL&FSL) for an incineration plant was signed on March 14, 2005 despite massive protests from civil society groups. The technology is provided by Technology Information, Forecasting and Assessment Council (TIFAC), a department of the Union Ministry of Science and Technology.

A recent study estimates that recycling saves almost Rs 17.6 crore per annum. Other wastes like construction malba (which can be up to 40 per cent by weight) can be crushed and reused for reconstruction and roads. Hazardous wastes such as e-waste, healthcare waste, broken thermometers, fluorescent tubes, etc, must be separated and returned to the manufacturer. The remain-

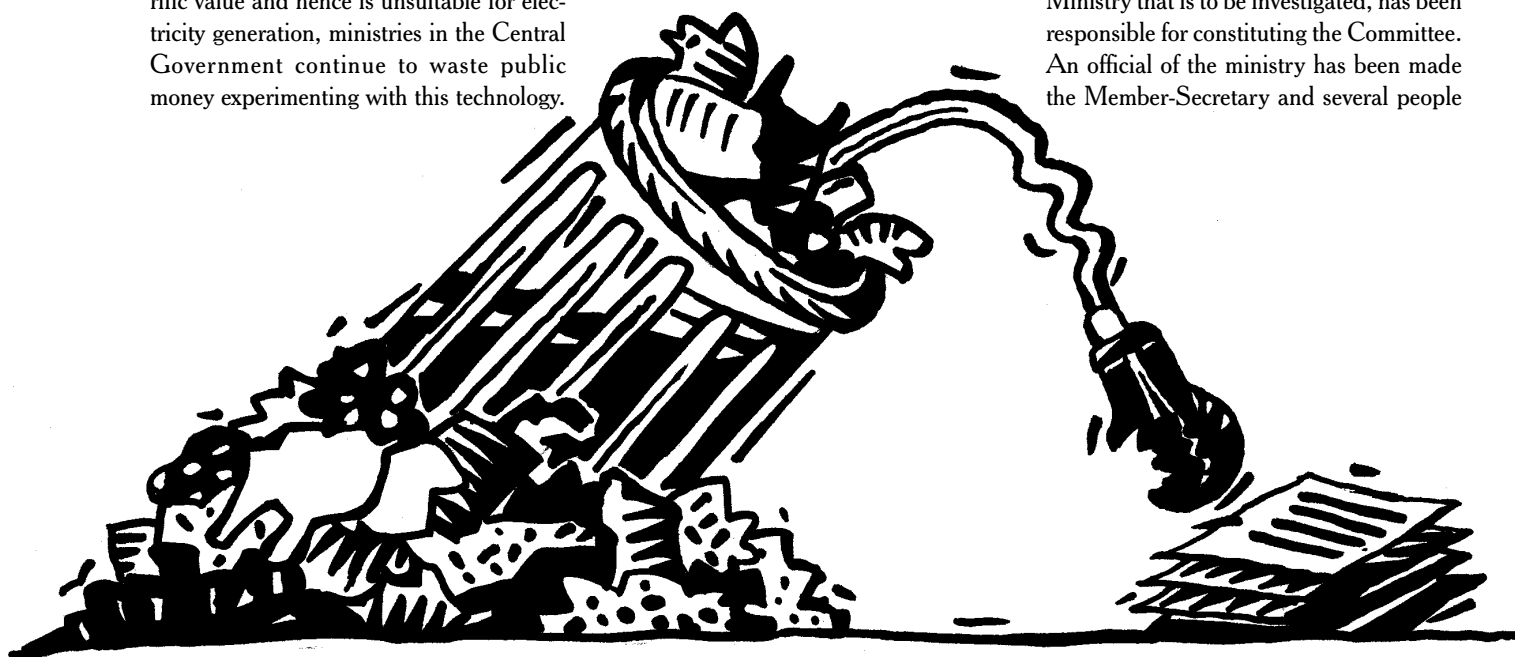
ing waste which is mostly organic can be processed in several ways like composting or conversion into biogas.

### Conflict of interest and contempt of court

In view of the predictable failures, squandering of public money and lack of accountability, as per the court order, the Central Government constituted a committee of experts to inspect the functioning of the waste-to-energy plants with a focus on the Lucknow-based plant. The main purpose of such an independent non-governmental committee's review was to investigate the propriety and need for ongoing massive subsidies for technically and economically unviable municipal WTE projects in the country. The promotion of such wasteful projects is beginning to resemble a national scam. Therefore, the court's order stated, "We hope that till the position is clear, the Government would not sanction any further subsidies [for municipal waste-to-electricity (WTE) projects]."

Far from investigating and preventing such potential abuse and despite the May 2005 court orders, the Committee constituted by the Union Ministry of Non-Conventional Sources (MNES) has, in July 2005, announced and widely publicised grants and subsidies for WTE, including 'burn technologies' that violate India's international commitments.

Interestingly, MNES, which is the very Ministry that is to be investigated, has been responsible for constituting the Committee. An official of the ministry has been made the Member-Secretary and several people



who directly or indirectly benefit from WTE promotion and the subsidies have been included in the Committee. Therefore, there is a fundamental conflict of interest.

In such a scenario, there is a need to reconstitute the Committee. Recently, the Parliamentary Standing Committee deliberating amendment of the Contempt of Courts Act also expressed the hope that a person against whom an allegation has been made will not himself or herself sit in judgment. So a subsidy provider cannot investigate its own subsidy regime.

### **Caught in a time warp**

Unmindful of the fact that waste incinerator technologies are net energy losers when the embodied energy of the materials burned is accounted for, the MNES is promoting it without any success.

The new committee can examine as to why it is doing so. Gurudas Kamat, the Chairman of the Parliamentary Standing Committee on Energy, has also written to the MNES seeking a review of its WTE Committee. The AWM has briefed him about the obsolete disposal technologies. In his letter, Mr Kamat has supported a ban on economic incentives for such WTE projects with specific reference to the Andhra Pradesh projects.

Researchers of waste suggest that composting and recycling materials is a better alternative from the standpoint of net energy generated by incineration. Waste incineration encourages a one-way flow of materials on a finite planet, thus making the task of conserving resources and reducing waste more difficult. On one occasion, Dr A.P.J. Abdul Kalam, the President rightly summed up the need for Integrated Zero Waste Management. He illustrated it by referring to a village of 2,400 families, which generates garbage of over 48 tonnes per year. This garbage is converted into manure and recyclable waste generating over Rs 3 lakh in revenue. This scheme provides employment to people of the panchayat. Such measures promote sustainable development as against the current trend of introducing failed polluting technologies, which turn citizens into guinea pigs for experiments.

Waste incineration systems (including waste pelletisation, pyrolysis and gasification systems) produce pollutants, which are detrimental to health and the environment.

They are expensive and do not eliminate or adequately control the toxic emissions from today's chemically complex municipal discards. Even new incinerators release toxic metals, dioxins and acid gases. Far from eliminating the need for a landfill, waste incinerator systems produce toxic ash and other residues. Such projects disperse incinerator ash throughout the environment which eventually enter our food chain.

The proposition of the MNES to maximise energy recovery through WTE is technologically untenable, as it will lead to increased dioxin emissions. Dioxins are the most lethal Persistent Organic Pollutants (POPs), and have irreparable environmental health consequences.

Incinerator technological intervention in the waste stream distorts waste management. Such systems rely on minimum guaranteed waste flows. It indirectly promotes continued waste generation while hindering waste prevention, reuse, composting, recycling and recycling-based community economic development. It costs cities and municipalities more and provides fewer jobs than comprehensive recycling and composting. It also prohibits the development of local recycling-based businesses.

It is also contrary to national legislations and norms such as Municipal Solid Waste (Management & Handling) Rules, 2000 because according to these rules it is illegal to incinerate chlorinated plastics (like PVC) and wastes chemically treated with any chlorinated disinfectant.

### **Contravening international treaties**

These WTE projects are being promoted violating international environmental norms. For example, incineration of waste violates the Kyoto Protocol which has identified waste incineration as an emitter of greenhouse gases. Waste incineration also violates the Stockholm Convention on POPs which calls for improvements in waste management with the aim of the cessation of open and other uncontrolled burning of wastes. Waste incineration also violates the recommendations of the United Nations Environment Programme's (UNEP's) Global Assessment on Mercury which includes measures such as reducing or eliminating the mercury emission from waste incineration because unlike other heavy metals, mercury has special properties that make

it difficult to capture in many control devices. It also violates the Dhaka Declaration on Waste Management adopted by the South Asian Association for Regional Cooperation (SAARC) in October 2004, which specifies that SAARC countries cannot opt for incineration and other unproven technologies.

### **Resource recovery gaining ground**

The 'White Paper on Pollution in Delhi with an Action Plan' prepared by the Union Ministry of Environment and Forests says, "The experience of the incineration plant at Timarpur, Delhi and the briquette plant at Bombay support the fact that thermal treatment of municipal solid waste is not feasible in situations where the waste has a low calorific value. A critical analysis of biological treatment as an option was undertaken for processing of municipal solid waste in Delhi and it has been recommended that composting will be a viable option. Considering the large quantities of waste requiring to be processed, a mechanical composting plant will be needed."

Therefore, it is incumbent upon the policy-makers to exclude waste, waste resources, waste pelletisation, waste incineration, pyrolysis, gasification technologies from qualifying as renewable energy or fuel and also exclude renewable energy subsidy/loan programmes for burn technology-based WTE programmes and policies. The high-cost routes must be avoided and instead only appropriate methods such as small-scale bi-methanation, composting and proper recycling should be propagated.

Meanwhile, the Inter-ministerial Task Force on Integrated Plant Nutrient Management has recommended setting up of 1,000 compost plants all over the country and has allocated Rs 800 crore for the task. It seems the fate of the present WTE policy is sealed. Incentives and subsidies should be offered in areas of 'cold' technologies alone, which are suited to our country economically, socially and also to our wastes.

The ideal resource management strategy for Municipal Solid Waste is to avoid its generation in the first place. This implies changing production and consumption patterns to eliminate the use of disposable, non-reusable, non-returnable products and packaging.

*By Gopal Krishna*

## Safe management of sharps waste

**S**harps are among the most hazardous wastes generated in healthcare facilities. Consequently, their disposal by these facilities has always been a prickly issue.

Injections constitute the largest quantity of infectious sharps generated during immunisation and curative practices. Due to the risks associated with sharps, it is very important to manage them properly and to ensure that they do not endanger the lives of healthcare workers and the community. The disposal option chosen requires meticulous planning, since sharps waste requires space and does not degrade with time.

To analyse the different disposal options available to hospitals in urban India, a documentation of 13 locations was carried out by WHO. Srishti/ TL was also a part of the documentation process in four centres. Successful sharps management systems were evaluated and alternative treatment and disposal technologies were studied.

The disposal options which were evaluated included needle cutters, chemical disinfection, autoclaving, microwaving, advanced autoclaves such as the hydroclave, cement encapsulation and the use of pits.

The study evaluated the relevance of these technologies within the current regulatory Health Care Waste Management (HCWM) framework in India. Given the nationwide introduction of Auto Disable (AD) syringes for the immunisation programme, the study also analysed the implications linked to their use and the possibilities of re-processing the decontaminated shredded plastic.

The findings of the study indicate that it is of paramount importance to contain the infectious sharps in puncture resistant containers, disinfect and to mutilate them at the point of generation.

The methods that are used currently for final disposal of sharps were not found to be sustainable. Healthcare workers felt that it is important to look into the option of material recovery from the injection units.

*By Ratna Singh*

*The full report can be downloaded at:  
[www.whosea.org/en/Section23\\_10305.htm](http://www.whosea.org/en/Section23_10305.htm)*

## UPDATES

### TOXICS FREE HEALTHCARE

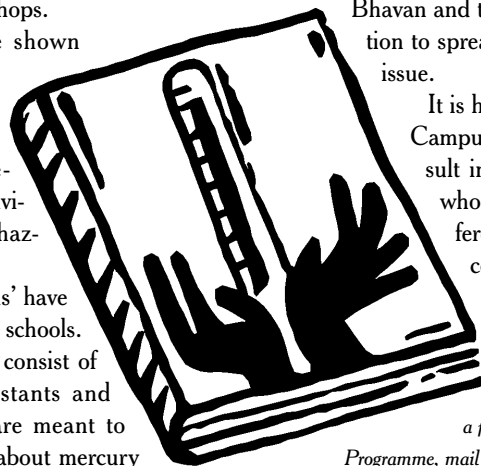
#### 'Mercury Teams' to monitor mercury usage in Delhi schools

**A**s part of its Clean Campus Programme, which aims to introduce school-going children and college youth to environmentally sound practices, Toxics Link conducted a series of workshops in Delhi schools to raise awareness regarding mercury.

The schools included St Columba's, Green Fields, Salwan Public and Sister Nivedita School. In all, more than 500 teachers, lab assistants and students participated in the workshops.

Children were shown presentations on the occurrence of mercury in the environment, especially the school environment, and its hazards.

'Mercury Teams' have been set up in these schools. The teams, which consist of teachers, lab assistants and school children, are meant to spread awareness about mercury



and monitor its usage. Mercury, though a highly hazardous chemical, is found extensively in our schools, in science laboratories, maintenance areas, medical rooms and classrooms.

In fact, the next phase of the programme will see a survey conducted with the help of the Mercury Teams to track the usage of mercury. The survey will focus on mercury management and handling procedures in the schools and will also inventorise mercury-containing equipment in the schools. This programme will not only create awareness but will also help the schools in proper management and handling of mercury.

Toxics Link also participated in the Eco-fest at Indraprastha College, 'Symposium on Emerging Trends in Chemistry' at Hindu College and a four-day programme from December 17-21 called 'The Young Visionary 2005' organised by National Bal Bhavan and the Tehelka Foundation to spread awareness on the issue.

It is hoped that the Clean Campus Programme will result in sensitised children who will make a big difference at the local and community levels.

*By Yamini Sharma*

*If you want your school or college to be a part of the Clean Campus Programme, mail us at [info@toxicslink.org](mailto:info@toxicslink.org)*

### Use of mercury in schools

#### ▲ In science and chemistry laboratories and classrooms:

Mercury thermometers, barometers, mercury compounds and elemental mercury. Mercury is used historically in school's laboratory. The laboratories may still have containers of mercury or mercury compounds in storage.

#### ▲ In classrooms and other facilities:

Mercury-containing thermostats, silent wall switches and fluorescent light bulbs.

#### ▲ In medical rooms:

Thermometers and blood pressure measuring devices may contain several grams of mercury. There are also certain nasal sprays and contact lens solutions that contain thimerosal, phenylmercuric acetate, or, phenylmercuric nitrate. Topical disinfectants contain mercurochrome or tincture of mercuriolate. All these compounds have mercury in them and have mercury-free alternatives.

## Mercury management in the Maldives: Hithadhoo Hospital takes the lead

**H**ithadhoo Regional Hospital of the Maldives recently partnered with Toxics Link to formulate a mercury management policy, making it the first hospital in the island nation to do so.

The protocol for mercury waste management has been approved by the hospital administration and will be in effect after the construction of the hazardous wastes storage facility. Following are the highlights of the adopted mercury protocol:

- ▲ Mercury containing compounds are to be considered hazardous waste.
- ▲ The hospital will search for alternatives to mercury-containing instruments.
- ▲ Mercury-based instruments will not be used in carpeted rooms.
- ▲ Mercury spills from broken equipment to be cleaned only by trained personnel using appropriate equipment. Workers in the area will secure the spill area and make sure there is adequate ventilation.
- ▲ Waste mercury to be collected in clean plastic containers with tight-fitting lids and containing enough water to cover the mercury to prevent its vapourisation.
- ▲ All containers of mercury waste will be labeled 'Waste Mercury – Hazardous Waste', and stored in a secure area. A record of all such containers will be maintained till their final disposal.
- ▲ No mercury waste to be incinerated.
- ▲ Mercury fillings to be avoided in young children, pregnant women and nursing mothers. Mercury fillings not to be used for people with kidney disorders and those allergic to mercury.
- ▲ Mercury-free dental fillings to be used wherever possible.
- ▲ Management of mercury waste to be part of the training programme.

Hithadhoo Regional Hospital had participated in a healthcare waste management workshop titled 'Consultation with friends from Maldives' in Bangalore in May, 2005 which was organised by the World Health Organisation (WHO) and the Health Care Waste Management (HCWM) Cell, Department of Community Medicine, M.S. Ramaiah Medical College, Bangalore.

By **Priti Mahesh**

## CMAI and Toxics Link hold a workshop on legal issues covering hospital administration

**T**he Christian Medical Association of India (CMAI) and Toxics Link jointly organised a two-day workshop in Kolkata on November 25-26, 2005 titled 'Consultative discussion on legal issues of hospitals.' Twenty-five healthcare professionals from the states of Bihar, West Bengal, Jharkhand and Maharashtra attended the workshop.

The workshop was in response to the new challenges faced by hospital administrators in the wake of heightened consumer awareness and increased legislation that governs hospitals.

The workshop was aimed at CEOs, medical superintendents, administrators and nursing superintendents of Christian hospitals in the North, East and North-eastern regions. Toxics Link's regional partner, Society for Direct Initiative for Social and Health Action (DISHA), also participated in the workshop.

The first day was dedicated to Bio-medical Waste Management (BMW). Toxics Link conducted various sessions aimed at creating awareness about BMW and effective management of hospital waste.

Participants showed a great interest in alternative technologies, disposal of sharps and deep burial options for small towns. Queries were also raised on waste-water treatment issues. The presentation on mercury was especially appreciated by all the participants.

The second day focussed on legal issues governing hospital registration, blood banks, X-ray departments, pharmacy laboratories, the Consumer Protection Act, Income Tax and FCRA, the Industrial Dispute Act and various disciplinary procedures.

Following the success of the workshop, Toxics Link aims to strengthen its collaboration with Christian Medical Association of India. More such measures will be undertaken to create awareness and build capacity of all stakeholders to improve the status of Bio-medical Waste Management in the country.

By **Yamini Sharma and Priti Mahesh**

## EEJP

### A great beginning for EEJP

**T**he Environmental Equity and Justice Partnership (EEJP), a new initiative of the Just Environment Charitable Trust, received a great response to its first call.

After an intensive selection process, the EEJP Board awarded grants to eight NGOs under its Environmental Small Grants Programme and eight fellowships under the Environmental Fellowship Programme. The list of awardees is available at [www.eejp.org](http://www.eejp.org).



The initiative was envisaged with the aim of helping groups and individuals foster lasting improvement in the area of environmental justice by catalysing grassroots initiatives, triggering new imagination and perspectives, encouraging crossover linkages and providing greater opportunities to connect to environmental thinking.

**Upasana Choudhry**

To find out more about the EEJP, please contact  
Upasana Choudhry at [upasana@eejp.org](mailto:upasana@eejp.org)

## CHEMICALS AND HEALTH

### Workshop on POPs for South Asia NGOs

**I**n order to build and strengthen the capacity of civil society organisations on the issue of Persistent Organic Pollutants (POPs), Toxics Link organised the first 'NGOs South Asia Regional Capacity Building Workshop on POPs' from November 17-19, 2005 in New Delhi.

Civil society groups from five South Asian countries – Bangladesh, India, Nepal, Pakistan and Sri Lanka – along with scientists, policy-makers, bilateral and multilateral funding agencies and UN agencies from India participated in the workshop. There were over 65 participants.

The workshop increased the awareness



*Stakeholders' panel discussion at the workshop.*

about POPs among various stakeholders, especially grassroots organisations. The focus of the workshop was to understand the status of POPs, discuss their impacts and alternatives to them. The workshop also provided a good opportunity to develop cross-sectoral synergies.

The expanded interest and competence in POPs-related issues is expected to result in the ongoing involvement of these organisations in the Stockholm Convention implementation efforts.

The participants identified some of the pollutants facing the region, such as DDT (widely used for malaria control) and dioxins and furans (unintended by-products of industrial processes like pulp and paper manufacture, metal smelting and medical and municipal waste incineration or even daily activities like open burning of PVC coated copper wires).

The region does not have any reliable facilities to even monitor or measure these pollutants. Also, there is little or no data on stockpiles of such used chemicals, despite studies showing environmental and food chain contamination in many places.

Such chemicals enter the human body through the food chain and transmit inter-generationally from mother to child, causing severe health effects like endocrine disruption, reproductive disorders and cancer.

The workshop was organised by Toxics Link in its capacity as the South Asia Regional Hub of the International POPs Elimination Project (IPEP), a global initiative taken up by the International POPs Elimination Network (IPEN), in partnership with the United Nations Industrial Development Organisation (UNIDO) and the United Nations Environment Programme (UNEP) with core funding from the Global Environment Facility (GEF).

**Upasana Choudhry**

## COMMUNITIES AND WASTE

### Solid waste management gets under way at Defence Colony and Gautampuri

**A**fter successfully facilitating a community-based solid waste management project in Sarita Vihar, a middle-income residential colony in South Delhi, Toxics Link is now implementing waste management projects in Defence Colony A-Block, a higher middle-income group community and in Gautampuri, Molarband, a lower-income group community near Badarpur, Delhi. The objective of the projects is to create zero waste residential colonies and to promote a sustainable community-based zero waste management system.

The Defence Colony programme was launched on June 22, 2005. Toxics Link is involving 450 households of the colony to develop a community-based decentralised composting unit. The Communities and Waste team of Toxics Link has brought together various stakeholders on the same platform to develop better communication and to foster a spirit of partnership. The stakeholders include the Residents Welfare Association (RWA), residents, waste collectors and sanitation staff of the Municipal Corporation of Delhi (MCD) for implementing the waste management programme. Regular meetings have resulted in greater trust and have encouraged the vari-

ous groups to work together towards long-term sustainable development.

The programme was kicked off with an orientation programme on solid waste management at the Junior Commissioned Officers' (JCOs') Club, A-Block, Defence Colony on June 2, 2005. The orientation programme dwelt upon the urgent need for waste management and helped to develop a consensus among the stakeholders regarding their roles.

Chandra Bhushan, Deputy Commissioner, Central Zone, MCD, promised all possible support towards promoting the programme.

### Waste management at Gautampuri

Toxics Link is partnering with Arpana Trust Delhi Services for the Gautampuri programme. The emphasis here is on door-to-door waste collection, segregation of waste and community-based decentralised composting.

The door-to-door waste collection system has been started with 1,000 households out of a total of 2,000 households. Waste management systems are new to residents who were not aware about segregating dry and wet waste. For the purpose, Toxics Link and Arpana Trust are organising a variety of activities ranging from door-to-door meetings, cluster meetings, awareness generation programmes, rallies and school programmes. The aim is to bring together Self Help Groups (SHGs), residents, school children, key persons of the community and waste collectors onto a common platform.



*Cluster meeting on Solid Waste Management at Gautampuri*





Top: Chandra Bhushan, Deputy Commissioner, Central Zone, MCD, addressing members of the Defence Colony community.

Above: Members of RWA Defence Colony and Toxics Link inaugurating the solid waste management programme.

Toxics Link is also strengthening the community's linkage with the MCD sanitation staff so that cleaning of dhalaos and drainage takes place on a regular basis.

In both the programmes, extensive distribution of educational material has resulted in heightened awareness about relevant issues. Calendars for 2005, emphasising the importance of source segregation and specifying elements that fall under the category of recyclable and organic waste, have been circulated among the residents. Also, a door-to-door awareness campaign on importance of source segregation has been undertaken in both communities.

The Communities and Waste team has also distributed posters on segregation of waste, leaflets in Hindi titled 'Kooda Kahan Se Aaye Aur Kooda Kahan Jaye,' and flyers in English on 'How to become a Zero Waste Community by implementing Supreme Court rulings on waste management'.

By **Mohammad Tariq**

## Three northern states hold regional workshops on bio-medical and municipal waste management

**I**n its ongoing effort of regional level capacity building of civil society groups, institutions and individuals on the issues of bio-medical and municipal solid waste management, Toxics Link organised a 'Regional Workshop on Bio-medical and Municipal Waste Management' at Lucknow on August 23-24, 2005.

The objective was to facilitate discussions and exchange information regarding comprehensive urban solid waste and medical waste management practices in the northern states of UP, Bihar and Uttaranchal. The issue of Persistent Organic Pollutants (POPs) was also introduced.

Forty-five individuals representing government, NGOs, professionals and practitioners on waste management of the three states participated in the workshop.

Vinod Malhotra, Principal Secretary, Environment Department of Uttar Pradesh, gave the inaugural address. He thanked the environmental organisations and NGOs for being largely responsible for the awareness created in the areas of bio-medical waste management. He lamented that hospitals were quickly turning into places for 'contracting diseases'. He felt that waste management was an important issue for the region and expressed his concern regarding hospitals that were not authorised.

S.K. Singh, Chief Environmental Officer, Uttar Pradesh Pollution Control Board (UPPCB), focussed on the waste status in the region and the technology of bio-medical waste management. He also highlighted the role of the private sector in this matter. He felt that though incineration was accepted as a modern technology suitable for treatment of bio-medical waste, other available technologies such as autoclaving should be looked at since incineration causes health and environment hazards through toxic emission and ash.

Dr Pratima of the Himalayan Institute Hospital (HIHT), Dehradun, in her presentation revealed that the hospital has shut down its incinerator, which not only saves cost but also prevents environmental pollu-

tion. She shared details of the current waste management practices within the hospital and the necessary follow-ups that were required to reach the present stage. The hospital has an effective waste management committee, which is responsible for surveillance and training within the hospital.

The workshop also saw discussions on bio-medical waste rules, mercury in health care and aspects of bio-medical waste management. During the discussions it also came to light that Uttar Pradesh does not have any advisory body, which is mandatory under Bio-medical Waste Management Rules of 1998. Ravi Agarwal of Toxics Link raised his concern on the absence of an advisory committee. He also mentioned that the government is wrongly giving subsidies to Waste to Energy (WTE) plants and ignoring other important aspects of segregation, collection, transportation and composting. This has led to investments in setting up of WTE plants.

Two presentations on POPs were also made by Toxics Link team members.

The two-day workshop ended with key recommendations made by the participants. They have largely opined that the region has very grave problems on both bio-medical and solid waste issues. Participants also raised their concern over the absence of medical institutions and hospitals in the workshop, despite the fact that they were invited well before the scheduled dates. Participants also recognised the importance of NGOs as an action group for the region. Following key recommendations were made in the end:

- ▲ Share information regularly.
- ▲ Make material available in local language for large-scale awareness generation.
- ▲ Hold more small-scale low-cost workshops/meetings at the regional level.
- ▲ Form a regional level group from the participating NGOs.
- ▲ Develop and share resources through networking.

The workshop had some immediate positive outcomes, of which the important one was the issuing of notices to two large healthcare facilities at Lucknow: King George Medical College and Sanjay Gandhi Post Graduate Institute, for not managing their waste properly.

By **Prashant Pastore**

## NEWS

### PIL filed in Mumbai on Bio-medical Waste

Mumbai-based Consumer Welfare Association, a non-governmental organisation, has filed a Public Interest Litigation (PIL) in the Bombay High Court to address the issue of bio-medical waste (BMW) management in Mumbai.

Filed in July 2005, the PIL states that the Brihanmumbai Municipal Corporation's (BMC's) reluctance to take firm action against the growing menace of mishandling of bio-medical waste is playing havoc with the health of the city's residents. Activist A.M. Mascarenhas, who filed the petition, said that improper handling and disposal of BMW is causing the spread of HIV and hepatitis B/C viruses.

In the petition, the BMC and the Maharashtra Pollution Control Board (MPCB) have been asked to construct in-

cinerators in all hospitals/nursing homes which have more than 50 beds, citing the reason that the existing guidelines published by the Central Pollution Control Board (CPCB) are not followed.

In the affidavit, the MPCB has informed the court that it has directed the local body to set up four BMW incinerators in Mumbai. According to the MPCB affidavit, a final report has been prepared and the new incinerators are expected to be built in the east, west, north and south parts of the city, each capable of handling waste generated by about 10,000 beds. MPCB officials said that the techno-environmental viability will be checked and the facilities will use MPCB licensed transporters to bring in the waste.

Currently, the city's 1,271 hospitals with 31,455 beds are linked to a single BMW management facility at the GTB hospital at Sewree. It is capable of handling 5,500 kg whereas 8,000 kg of waste is generated daily. The remainder is mixed with the municipal solid waste. There have also been reports of the Sewree incinerator not functioning. The garbage has not been segregated and there is a shortage of vehicles to transport the waste.

The PIL also seeks the formation of an advisory committee consisting of experts in the fields of medicine, health, environment and citizen's groups which will advise the MPCB on implementing the CPCB rules on BMW. The key is that MPCB must work closely with hospitals and their associations to reduce the quantity of waste generated.

*By Kishore Wankhade*



### WHO policy on mercury

WHO has released a policy on mercury usage in healthcare institutions. The policy goes beyond public healthcare, and depends on a country's governmental systems, such as the Ministry of Health, Ministry of Welfare, and the municipalities, as they have an important role to play. This document also proposes short-, medium- and long-term strategies to cope with the challenges of mercury exposure faced in many developing countries.

*For more information, visit [www.who.int/water\\_sanitation\\_health/medicalwaste/mercurypolpaper.pdf](http://www.who.int/water_sanitation_health/medicalwaste/mercurypolpaper.pdf)*

*By Ratna Singh*

## EVENTS

### Workshop on bio-medical and municipal solid waste management in Bhopal

The fourth regional workshop on municipal and bio-medical waste management was organised in Bhopal on February 24-25, 2006. The two-day event saw the participation of delegates from the states of Madhya Pradesh, Jharkand, Orissa and Chattisgarh.

The workshop aimed at creating a common platform for Pollution Control Boards (PCBs), municipalities, healthcare institutes, grassroot NGOs and individuals associated with solid waste and medical waste, so that they can share their skills and develop a wider understanding of practices on waste management in the region.

The first day of the workshop was dedicated to bio-medical waste issues and the second day focussed on municipal solid waste management. Apart from these two issues, the workshop also touched upon issues related to Persistent Organic Pollutants (POPs).

*For more information, contact: [info@toxicslink.org](mailto:info@toxicslink.org)*

### Conference on sustainable MSW management in developing countries

Kathmandu University (KU) and Development Network (DNet) organised an 'International Conference for a Better Tomorrow – Sustainable Solid Waste Management in Developing Countries' in Kathmandu, Nepal from January 8-13, 2006. The conference was organised in close cooperation with Kalmar University, LAQUA Group and International Foundation of Science (IFS).

The aim of the conference was to improve MSW management through strengthening scientific capacity, developing network and partnership, promoting research and developing local technologies.

Toxics Link made a presentation on 'Toxics Free Healthcare: A case for phasing out of mercury' at the conference.

*By Priti Mahesh*

## Samuha Vikas, Orissa

Samuha Vikas was initiated by a group of trained like-minded professionals working in Gram Vikas, a premier institute of Orissa working in the development field for the last three decades. Samuha Vikas was registered in 1992, and started field-based activities in 1994.

The organisation's mission is to start a sustainable process of intervention that will facilitate a dignified quality of life for the weaker sections of society and will enable them to participate in the mainstream development process through collective action and skill development.

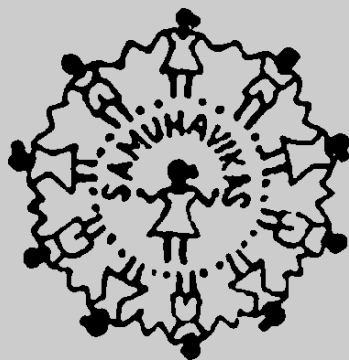
It also aims to institutionalise people's organisation for management of their own resource base such as land, water, forest, credit, livestock, social infrastructure, human resources and environment. The ultimate goals are sustained livelihood, eco-friendly environment and a gender-balanced society.

The organisation has taken up activities related to an alternative banking system, an integrated tribal development programme, and livelihood and environment concerns along with the issue of air and water pollution caused in the area of operation by Oswal Chemicals and Fertilisers Ltd. It has also taken up relief and rehabilitation work at the time of natural disasters.

Samuha Vikas is one of the recipients of the 2005 Environmental Small Grants awarded by the Environmental Equity and Justice Partnership (EEJP). Samuha has proposed a 12-month project to promote environmental equity and protection of industrial pollution in Jagatsingpur and Kendrapara districts of Orissa.

The project area is under serious threat from water and air pollution due to the existing and newly proposed factories in the area, along with the depletion of mangrove forests.

The project aims to create awareness among the people on environmental equity and the impact of industrial pollu-



tion on their lives and livelihoods. The objective is to institutionalise people's organisations, Panchayati Raj Institutions (PRI) and the Eco-Task Force to address environmental equity and pollution issues in a coordinated manner. Establishing proper linkages among people's organisations, the Eco-Task Force, Disaster Preparedness Groups, the Pollution Control Board and the district administration for mitigation of the issues in a sustainable manner is another objective of the programme.

The activities proposed include:

- ▲ A detailed study of environment and pollution issues of the villages situated along the 480 km coastline.
- ▲ Capacity building of people's organisations and PRI.
- ▲ Formation and strengthening of an Eco Task Force with legal education on environmental issues and pollution control.
- ▲ Organising village-level workshops and district level campaigns.
- ▲ Development of IEC materials to create awareness.
- ▲ Legal measures on restriction of prawn cultivation on coast lines.
- ▲ Developing linkages between the Pollution Control Boards and new factories for installing pollution-free safety measures.

For more details, contact:

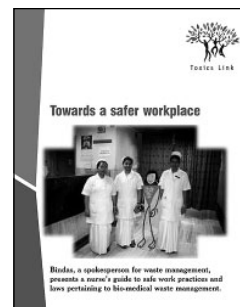
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## NURSES' BOOKLET

A handy pocket-sized booklet titled 'Towards a safer workplace' has been published by Toxics Link. The booklet is aimed at the nursing staff which plays a critical role in implementing the bio-medical waste management system of a hospital.

'Bindas', our spokesperson on waste issues, informs nurses about the potential hazards in their workplace and how to take due precautions. The booklet covers issues of sharps management, waste segregation, disinfection, treatment of chemicals such as mercury and glutaraldehyde and the importance of accident reporting.

In the booklet, Bindas stresses the importance of safe handling, collection, storage, treatment and disposal of bio-medical waste.



## POSTER: WARD KI SAFAI AAP KI SURAKSHA

The housekeeping staff of a hospital is often left out during training sessions pertaining to bio-medical waste management.

Toxics Link has released a poster in Hindi titled 'Ward ki safai aap ki suraksha'.

The poster focusses on various Do's and Don'ts regarding handling of waste in a hospital and stresses the use of protective gear such as gloves, shoes and masks.

For more information and to obtain your copies, contact [info@toxicslink.org](mailto:info@toxicslink.org)



# FACT FILE



## Ship-breaking facts

The French warship *Le Clemenceau* renewed media interest on the toxicity of ship-breaking and associated occupational hazards. We present here some ground realities about the ship-breaking industry:

- ▼ Up to the 1970s, ship-breaking was done in Europe but as the costs of environmental safety increased, the operation moved to poorer Asian countries.
- ▼ Approximately 600-700 large sea vessels are brought to the harbours of India, Bangladesh, Pakistan, China and Turkey for breaking.
- ▼ Most of the ships that are being scrapped now were built before the banning of many toxic substances. These hazardous wastes are now released on Asian beaches, polluting the environment.
- ▼ Heavy metals such as asbestos, chromium, mercury, lead and arsenic are

found in paints, coatings, anodes and electrical equipment of ships. These parts are often dumped on or burnt in the ship-breaking yards, causing widespread pollution of the area.

- ▼ The 'ballast water' that is intentionally brought on board ships in order to adjust their stability is released in these yards. This water pollutes the coastal area with oil, biocides and heavy metals.
- ▼ In India, there are three ship-breaking yards – in Alang and Pipavav in Gujarat, and Mumbai in Maharashtra. The Government of Andhra Pradesh has given permission for a mega ship-breaking project at Vodarevu.
- ▼ It has been found that about one in four workers in Alang suffer from cancer.
- ▼ Worldwide, more than 100,000 workers face the hazards of ship-breaking without any protective gear such as shoes, gloves or masks.
- ▼ Under an amendment of the Basel Convention, passed in October 2004, the ships to be broken cannot leave a country without permission of the importing state. Moreover, the signatories to the treaty must assure that ship-breaking is performed in an environmentally sound manner.

*Compiled by Sejuti Sarkar De*

*Source: [www.greenpeaceweb.org/shipbreak](http://www.greenpeaceweb.org/shipbreak)*



## etoxics group

Toxics Link coordinates an electronic discussion group for sharing and disseminating information on toxic wastes and its management. If you would like to join the group, please e-mail us at [info@toxicslink.org](mailto:info@toxicslink.org)

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

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*Toxics Link is an initiative of the  
Just Environment Charitable Trust*

## Quotes from the Earth

Quotes from the Earth is a compilation of films on the themes of Hunger, Water and Survival. Films can be borrowed for screening against a nominal security deposit.

**Entries are invited for the forthcoming film festival on November 3-5, 2006.**

**View the details at [www.toxicslink.org/filmfestival/](http://www.toxicslink.org/filmfestival/).**