



## Asbestos epidemic in India

**T**hirty Indians will die every day – an untimely and painful death – for the first 50 years of this century, due to asbestos related diseases. The diseases could take the form of lung cancer, mesothelioma or asbestosis.

The responsibility of these deaths lies squarely on the shoulders of an apathetic government and a callous industry. The ‘asbestos epidemic’ is completely preventable.

A newsletter on Occupational Safety, Health and Conditions Work, January-March 1996, published by Directorate General Factory Advice Service and Labour Institutes (DGFASLI), Union Ministry of Commerce and Industry, reported that “In the year 1987 an occupational health study of 200 asbestos workers was conducted by the Regional Labour Institute (RLI), Calcutta. The report of the study was sent to the employer for imple-

mentation of control measures suggested. Necessary technical and medical measures were also enforced through the Chief Inspector of Factories, Government of West Bengal where the asbestos unit was located. The enforced measures were complied by the employer.”

Subsequently the workers were subjected to a medical examination at the Occupational Health Clinic at RLI, Calcutta in 1994-95. The results were compared to their earlier reports. It was seen that the prevalence of overall morbidity of asbestos workers over a period of seven years had not changed materially.

This finding based on the government’s study and reported by the government’s own publication debunks the claim of safety in controlled use of asbestos. The Indian Ministry of Commerce and Industry still refuses to take cognisance of the ongoing poison-

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## EDITORIAL

### Fulfill responsibility, not abdicate it!

In 1997, the Supreme Court of India imposed a ban on the import of hazardous wastes into India, putting its seal on an earlier ban imposed by the Delhi High Court. This ban recognised that India was becoming the waste destination of the world.

Plastics, old lead batteries, waste oils, zinc and lead ash were being dumped here, despite special laws to deal with hazardous waste. It showed that not only were we not implementing our laws, but that they had been framed without adequate insight. Today, six years after the ban, and despite strict monitoring by the Hon'ble Court itself, we continue to be flooded by new types of wastes.

The new revised waste laws legitimise imports of waste instead of banning them, even as there are moves of opening up imports of even deadlier wastes such as lead bearing ones.

We seem to be busy sounding a death knell for our environmental legislation with murmurs of 'they do not work,' or are 'impractical'. Instead we are now propagating more voluntary and market based norms. In reality the industry sees our environmental laws as a big bottleneck in their expansion and investment plans. Hence the story doing the rounds is how the laws need to be 'rationalised.' Surprisingly the government seems to be listening and is keen to position itself as friendly to industry, while the industry itself has not improved its environmental consciousness. The 'globalised' Indian industry does not participate in global conversations about cleaner approaches and requirements, but openly opposes India's adherence to any such possibility. People's health and concerns evidently do not figure in their vision!

If the environmental bureaucracy and its several institutional counterparts merely set themselves out to honestly and sincerely carrying out their regulatory roles in a transparent manner, and fulfill their mandatory obligations, we may actually breathe cleaner air, drink cleaner water and live in cleaner surroundings.

Rather than throwing away our existing system, it is time to expand it with other approaches. Abdicating responsibility will not lead to better functioning; it will only legitimise inaction.

*Ravi Agarwal*

### Asbestos kills

Fine asbestos fibres enter the body mainly through breathing. A typical fibre is approximately 2,000 times thinner than a human hair. Some of the small fibres remain in the lower parts of the lung for years.

*Continued from page 1*

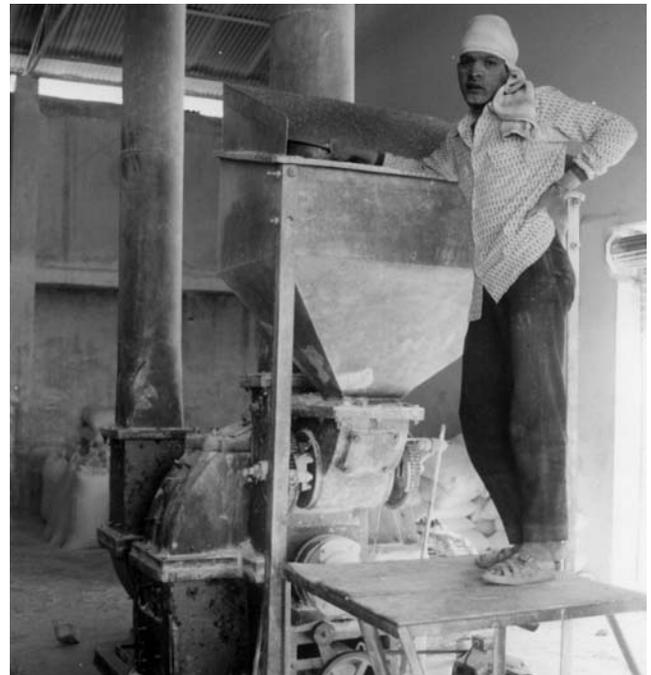
ing and allows import of asbestos from Canada and other countries. In such a scenario, it is alarming that instead of recommending a ban, recommendations were made for immediate isolation of affected workers from dusty areas and suitable pre-placement examination. A notification to the State Factory Inspectorate was issued for suitable enforcement of dust control measures and medical supervision of exposed workers.

Given this backdrop, it was not surprising when The Times of India reported on November 8, 2001 that the Delhi government is considering imposing a ban on asbestos. No one seems to know what happened to that consideration of the Delhi government or why the Union Government remains oblivious of the death toll.

Much water has flown since the 2001 news report: several countries have banned asbestos since then and a petition seeking a complete ban on the import and use of asbestos has been filed on May 5, 2004 in the Supreme Court of India in the backdrop of the incessant campaign of the Ban Asbestos Network of India (BANI).

The report said that the Union Environment Ministry was examining the modalities of issuing directives aimed at phasing out the use of asbestos in water pipes and roofing material used by schools. Following the receipt of reports pointing to the inhalation of asbestos inducing cancer, the Union Environment Ministry has appointed a 12-member committee to look into the hazardous effects of asbestos. This Committee's term expired without the submission of its report. Dr V Rajgopalan (the then Joint Secretary in the Environment Ministry who is now the chairperson of Central Pollution Control Board) headed the Committee.

The Delhi Jal Board (DJB) Chief Executive Officer, P.K. Tripathy, on his part, has maintained that the DJB has already taken a decision not to make use of asbestos in the construction of



*Trapped between all the politics and power-plays are workers who are unaware of the toxic environment they work in.*

water pipes.

The then commissioner of Municipal Corporation of Delhi, S.P. Aggarwal (who is now Director General, Health Services, Union Ministry of Health and Family Welfare) had contended that new schools being built under the MCD's purview are steering clear of asbestos. "Alternate roofing materials are being used. But unless there is a blanket ban on the use of asbestos, it will be difficult to do away with the use of the material completely," he said.

Groups that are exposed to asbestos include metal-plate workers, shipyard workers, builders of vehicle bodies and railway wagons, building workers including plumbers, gas fitters and construction managers and other professionals. Other labour groups which figure are: chemical and electrical engineers and scientists; welders and laboratory technicians.

There are 8,00,000 construction workers in Delhi and three crore construction workers all over the country besides crores of plumbers, carpenters and electricians who are getting exposed to asbestos on a day-to-day basis but no one seems to be concerned about their plight. Ordinary citizens are also at risk to asbestos-

## The asbestos epidemic in America

Deaths from asbestos in the United States appear to be increasing.

Asbestos kills thousands more than skin cancer each year, and nearly the number that are slain in assaults with firearms. According to epidemiological studies by the Environmental Working Group Action Fund, 10,000 Americans die each year from diseases caused by asbestos.

Asbestosis mortality rose steadily from 1979 through 1998. Over the 24-year period, 1979-2001, asbestosis mortality rose at 7.8 per cent per year. In the US, asbestos disease epidemic is on the way to reaching its peak – claiming the life of one out of every 125 American men who die over the age of 50.

related diseases as is evidenced by the October 1995 issue of the Indian Journal of Chest Diseases and Allied Sciences, which has reported a case of malignant pleural mesothelioma in a patient with no history of asbestos exposure!

Only action by environment or health groups and trade unions can save lives. It is high time that the Ban Asbestos Campaign became more strident than before and debunked the myths about safe and controlled use of white asbestos (since other kinds of asbestos are banned in the country).

Instead of allowing controlled usage of asbestos, civil society groups and trade unions must educate the workers on the ills of asbestos. They should refuse working with the substance and must insist that substitutes of this killer fibre be found. They must strive earnestly for an immediate ban on import and use of asbestos and asbestos products, the development of safe procedures for removing asbestos from buildings, and for adequate compensation for victims.

Both the National Capital Region government and the Union Government must ban the import and use of asbestos without any further delay.

*Gopal Krishna*

## FEATURES

### A Zero Waste vision

Instead of seeing used materials as garbage that needs to be disposed of, imagine seeing them as valuable resources. That is the vision of Zero Waste – a new way of looking at our waste.

A pile of 'discards' represents jobs, financial opportunity, and raw material for new products.

*Resources up in Flames: The Economic Pitfalls of Incineration Versus a Zero Waste Approach in the Global South* is a report by Brenda Platt, Institute of Local Self-Reliance, for Global Alliance for Incinerator Alternatives (GAIA). This is a historical report, which could go a long way in furthering the cause of Zero Waste. (Access the complete report at: [www.no-burn.org/ResourcesupinFlames.zip](http://www.no-burn.org/ResourcesupinFlames.zip).)

The fact that this Zero Waste vision calls for integration of the informal sector and community initiatives with city-wide discard

management planning illustrates its holistic approach. Arguing against wasting natural fertilisers in incinerators, the report quotes chemist Bruno Terne's statement made in 1893 that it's "...barbarism to destroy valuable material simply for the purpose of getting rid of it."

The foreword of the report begins with quite a pithy viewpoint from Dr Paul Connet, a chemist: "It's not waste until it's wasted."

The ten steps suggested in the report for Zero Waste at the local level ought to be made the Hippocratic Oath for all municipal corporations and municipalities, the world over. If these steps are followed, very soon, from a situation where we do not have even one completely Zero Waste city, there could be several cities that are implementing every aspect of Zero Waste.

The document also cites case studies from India showcasing failed waste-to-energy projects of the Australian company,

Energy Developments Limited in Chennai, Bhopal, Jaipur and Mumbai, although it has missed out the Delhi and Kanpur waste-to-energy projects which have been shelved following campaigns by environmental groups.

A Zero Waste vision includes recycling, but goes beyond recycling. To fully implement Zero Waste, one needs to combine recycling and waste diversion with upstream approaches to reduce the total volume and toxicity of materials used.

The report makes it clear that municipal waste incineration is a costly, polluting, unsustainable and outmoded approach to waste management. However, a comprehensive Zero Waste approach not only uses valuable resources contained in municipal waste (such as paper, compostables, glass, etc.) into the local economy, but also creates job opportunities in many sectors.

The expedient of burning waste instead

of recycling it is loaded with danger. Residual incinerator ash contains toxic materials and presents a grave health threat. Incinerators are a major source of mercury, which is a powerful neurotoxin, impairing motor, sensory and cognitive functions.

Acid gases, such as hydrogen chloride, hydrogen fluoride, hydrogen bromide, and sulphur oxides can damage incinerators, primarily by corroding air pollution control equipment. Incinerator emissions have also been shown to be mutagenic, meaning that they alter human DNA.

According to the United Nations Environment Programme (UNEP), incinerators are the leading source of dioxin release into the global environment. Dioxin is the most toxic man-made substance. It causes cancer and neurological damage, and disrupts reproductive systems, thyroid systems, respiratory systems, and has many more serious health effects.

It is clear that incineration is an unacceptable way of addressing municipal waste management.

### **Producer Responsibility**

Programmes such as Extended Producer Responsibility (EPR), under which firms take responsibility for their goods over the entire product lifecycle, encourage producers to redesign their products for easy and safe recycling. A comprehensive approach towards clean production in manufacturing facilities is necessary for preventing the environmental, public health, and economic burdens of industrial and municipal waste.

According to another ground-breaking report of Brenda Platt, "On a per-ton basis, sorting and processing recyclables alone sustains ten times more jobs than land filling or incineration." A report titled *Recycling Economic Development through Scrap-based Manufacturing*, by Michael Lewis, reveals that some recycling-based paper mills and recycled plastic product manufacturers employ 60 times more workers on a per-tonne basis than do landfills. The report adds, "Each recycling step a community takes locally means more jobs, more business expenditures on supplies and services, and more money circulating in the local economy through spending and tax payments."

Zero Waste puts the responsibility for materials entering the waste stream on the



front-end with the manufacturer, not on the consumer at the back-end. The result is that manufacturers redesign products to reduce material consumption and facilitate reuse, recycling and recovery.

### **True-cost accounting**

The price of a product does not currently reflect the costs of environmental degradation and public health impacts associated with virgin resource extraction, processing, manufacture, transportation, and disposal of that product. When the market prices begin to include such costs, the more environmentally-friendly products will also be the less expensive ones.

### **Investing in infrastructure, not landfills**

In many communities, strategies like unit-based pricing for garbage collection (commonly known as pay-as-you-throw) have created tremendous incentives for residents and businesses to reduce waste and have resulted in higher landfill diversion rates. Rather than using the tax-base to build new landfills or incinerators, communities have also invested in recycling, composting, and reuse facilities. In some cases, communities have created integrated discard "malls" where various recycling and reuse businesses coexist in a location where consumers can come to drop-off any unwanted item.

Zero Waste is a systems approach which is gaining global ground. One hopes that it will not be too late by the time it gains ground in India.

Gopal Krishna

## **Administrative failure leads to cancellation of public hearing**

In what activists feel is a possible move by the government to limit public opinion in the case of the setting up of a hazardous waste disposal facility in Tamil Nadu, the Public Hearing (PH), fraught with administrative problems, was cancelled.

More than 600 people from the village and nearby areas of the proposed facility attended the hearing to voice their opinion about the project. The hearing had been organised in a small room at the Kancheepuram Collectorate, which could accommodate, at the most, 50-60 people.

When hundreds of villagers started entering the premises, the authorities were unnerved and restrained the public from entering the venue. However, the villagers had given up their daily wages and had travelled quite a distance to attend the hearing, and were in a riotous mood. After brief negotiations with community representatives, the Collector announced that the hearing would be rescheduled and everyone with an opinion would be heard.

### **Melakottaiyur and its environs**

The landfill facility for hazardous waste, proposed to be situated at Melakottaiyur, near Chennai, is meant to cater to industries of the entire state. Melakottaiyur is about 40 kilometres south of Chennai just off the Chennai-Dindivanam road (NH45). It is about nine kilometres away from the Vandalur Zoo and two kilometres from reserve forest pockets. The proposed site is an abandoned stone quarry spread across about 168 acres. Though there are no official figures, the local people estimate that 7,000-10,000 people live in the region. They also mention that there are four large water bodies within a five kilometre radius of the project site, with the Melakottaiyur pond being within a one kilometre radius.

### **Treatment, Storage and Disposal Facility (TSDF) at Melakottaiyur**

The Industrial Waste Management Association (IWMA), a body formed by industries of Tamil Nadu under the auspices of Confederation of Indian Industry, Tamil

Nadu (CII-TN), proposed to set up a Treatment Storage and Disposal Facility (TSDF) for the treatment of hazardous wastes generated by industries in Tamil Nadu. Facilitated by the TNCPB, the IWMA identified a site at Melakottaiyur village near Vandalur. According to the Environment Impact Assessment (prepared by Ramky Engineers, the project proponents), the TSDF will consist of an engineered landfill and an incinerator. The total quantity of waste to be disposed of in this facility for 2004-2005 is 1,00,000 to 1,20,000 TPA (Tonnes Per Annum). The typical types of wastes to be disposed in this facility will include wastes containing heavy metals, cyanides and pesticides, complex organic compounds such as hydrogen acids, aromatic compounds like polychlorinated biphenyls, etc, generated by petrochemical, pharmaceutical, pesticide, paint and dye, petroleum, fertiliser, asbestos, caustic soda, inorganic chemicals and general engineering industries.

### Landfills are not solutions!

Experiences world-wide have shown that landfills are not secure; all landfills eventually leak. Given current industrial practices and types of wastes that are being generated it is impossible to say what kind of wastes would be dumped into the landfill five or six years from now. The liner systems that are being designed for present day wastes may not be suitable five years hence. Even with modern liner systems experts believe that landfills represent an ongoing threat to groundwater quality. Composite

liners eventually deteriorate and leak, a fact acknowledged by the US Environment Protection Agency (USEPA). There is virtually no guarantee that landfill covers of the type being made today will keep out moisture. Inevitably, they will let leachate migrate through the liner to pollute the groundwater.

Using incineration technology, where waste is destroyed at high temperatures, is another dangerous proposition. Disposing hazardous waste, even in state-of-the-art incinerators, releases heavy metals, unburnt wastes, dioxins and products of incomplete combustion (PICs) – new chemicals formed during the incineration process – many of which are more toxic than the original waste. According to the USEPA, hazardous waste incinerators release several PICs. In addition, they also produce several tonnes of ash residues, contaminated by PICs, which have to be buried in landfills. So it's back to square one.

The wastes to be incinerated at the TSDF in Melakottaiyur include spent solvents, waste oils and related wastes, pesticide wastes, refinery wastes, pharmaceutical wastes, phenolic wastes, organic wastes containing halogens, sulphur, phosphorous or nitrogen and capacitors containing polychlorinated biphenyls



*Hundreds attended the public hearing, taking the authorities by complete surprise. The hearing was postponed due to lack of space.*

(PCBs). Several studies of industrial dumps and contaminated water supplies (particularly in the US) during the last decade have reported adverse health effects among exposed human populations.

### Landfills and environmental justice

One of the most contentious issues with hazardous waste disposal facilities is its location in rural or impoverished areas, where communities are unaware of what is being dumped in their backyards. Environmentalists and social activists the world over claim that a majority of hazardous waste dumping sites are located in poor and minority communities. Situating a hazardous waste facility in Melakottaiyur is a clear example of environmental injustice, where toxic wastes generated by industries located far away will be dumped on communities who have nothing to do with the production of the waste. During a visit to the proposed site, for the purpose of interacting with the local community, members of ACDS (the local NGO), Community Environmental Monitor (Chennai) and Toxics Link (Chennai), it was revealed that the public hearing announcement had not really reached the villagers and people of the surrounding areas.

### Alternatives

The best alternative to end-of-pipe technologies like landfills or incineration is to adopt cleaner production and products. Toxic-use reduction, waste minimisation, changes in consumption patterns which demand the creation and discard of toxic and hazardous products and wastes, and related practices are economically and environmentally profitable for industries in

### The persistent dioxin scare!

As a family of more than 75 chemicals, dioxins are formed when products containing chlorine are subjected to combustion processes such as incineration. The Melakottaiyur facility will

be incinerating chlorine-containing wastes including polychlorinated biphenyls (PCBs). The US Environment Protection Agency has identified waste incinerators as the primary source of dioxins which are cancer-causing. It is estimated that dioxins can be carcinogenic even in trace quantities. Apart from cancer, they have wide-ranging and extremely serious health effects which include immune system dysfunction, reproductive and development disorders and hormonal disruption.



the long term. There are numerous examples from around the world where such safe practices have reduced toxic releases tremendously over a period of time.

To conclude, the creation of waste is evidence to the fact that industries have wasted resources, for in nature nothing is wasted. In many ways, Melakottaiyur, will stand testimony to the 'burying of evidence' in the landfill and 'burning of evidence' in the incinerator. Either way, it is communities who are going to be poisoned. One hopes that the opinions voiced at the public hearing will be duly considered before any approval is given.

*Rajesh Rangarajan*

## AWM meeting in Mumbai takes stock of ground realities

**A**lliance for Waste Management (AWM) is a Bangalore-based collaborative platform created by Toxics Link in December 2003.

Its aim is to bring organisations, individuals and willing government personnel together in order to create a sustainable waste management system, reduce the quantity of landfill waste and encourage non-burn options for waste treatment.

Since the Bangalore workshop, many more organisations and individuals have joined the group to support its cause. The second workshop of AWM was held in Mumbai on May 19-20, 2004, and great emphasis was given to local participation.

The participants gathered to discuss the strategies needed to enlarge the role of

AWM and also to review the implementation of the Municipal Solid Waste Rules, 2000. It prepared a small status report on the implementation of MSW Rules in a few Indian cities.

The mission statement of the AWM network is: "A network of voluntary organisations, community groups, professional organisations and interested persons committed to working on environmentally sustainable solid waste management and moving towards the concept of Zero Waste management."

With the rapid pace of unplanned urbanisation in India, the problem of municipal solid waste has become acute. Traditional systems of collection and disposal have not only proven inadequate and inefficient, but also environmentally disastrous. The government has come out with the Municipal Solid Waste (Management and Handling) Rules, 2000 to be implemented by January 2004. But a status report prepared by Toxics Link and AWM has clearly shown that, except for a few cities, the implementation has been a total failure.

India produces nearly 40 million tonnes of waste per annum and this figure is likely to be tripled in the next 20 years. With the constraints of space and land in the cities, the current unscientific and environmentally dangerous practice of open dumping of waste in landfills won't remain an option.

It needs to be mentioned here that urban waste management is an obligatory function of municipalities in India, now more so with the MSW Rules coming into force. But smaller municipalities are ignorant about the rules as well as the date of implementation. This aspect of civic administration has not

been given due attention by the authorities.

Though the Supreme Court gave a three-year notice to implement the Municipal Solid Waste Management and Handling Rules, 2000, nothing substantial has happened so far. There has been hardly any capacity building, evaluation and monitoring of the municipalities to carry out the activities for implementation of the MSW Rules, 2000.

There are several communities across the country that have initiated door-to-door waste collection and segregation. In some cases they have even obtained land for local composting of organic materials, thereby reducing waste by 70 to 80 per cent.

Such initiatives have gone unnoticed and have no legal status. Experts agree that with a pro-active approach from the municipalities, substantial quantity of waste could be utilised through composting and recyclable recovery, thereby reducing waste-resource going to the dumping yards. But in many cases successful initiatives have been wiped out when the municipality has chosen to bring in a private operator instead of incorporating the community programme into the city system.

One of the concerns is the sale of the compost produced. While the government provides a huge subsidy for chemical fertilisers, there is no incentive for the use of organic compost. Similar concerns were also expressed about packaging materials. Such material has little or no recycling value, for example tetra-packs, and 'gutkha' sachets.

It is the above concern that brought NGOs and experts together to deliberate on strategies to be developed for creating pressure on relevant government departments. Keeping the rapidly changing waste scenario in mind, the AWM decided to:

- ▲ Advocate and lobby for promoting and supporting sustainable waste management systems,
- ▲ Track the different policies of the government and analyse them,
- ▲ Collect and disseminate information on good practices, and to find out the implementation status of MSW Rules, 2000.

We hope that by the time of the next meeting in November, the AWM will have made significant progress in convincing the local and central government to create sustainable waste management systems.

*Sanjay K. Gupta*



*The well-attended AWM session in Mumbai provided a good opportunity to re-energise the alliance and draw up a plan of action*

## Where there is smoke there lurks death

Countries, the world over, are facing challenges to confront difficult public health issues and make policy decisions to deal with these issues. Diseases and death, caused by the use of tobacco – once a problem in high-income developed countries – are now a large and increasing part of the burden of diseases and a matter of grave public health concern in developing countries.

A World Health Organization (WHO) estimate says that 4.9 million people worldwide died in the year 2000 (half of them prematurely) as a result of their addiction to tobacco. Developing countries account for almost half of these deaths. Developing countries also account for half of the world's disease burden related to tobacco.

Tobacco is responsible for a significant amount of morbidity and mortality among middle-aged adults. India has one of the highest rates of oral cancer in the world, and the rates are increasing. Tobacco-related cancers account for about half of all cancers among men and one-fourth among women.

Oral cancer accounts for one-third of the total cancer cases, with 90 per cent of the patients being tobacco chewers. Clinical observations in some areas have revealed that over 60 per cent of heart disease patients, less than 40 years of age, are tobacco users; over half of the patients aged 41-60 years are also smokers.

Tobacco is a very addictive substance. Smoking delivers nicotine to the brain in eight seconds, which explains why a new smoker takes so easily to the habit. Nicotine-dependence is now formally classified as a medical disease. Addiction to nicotine implies suspension of free will from which flows the concept of free choice.

The Framework Convention on Tobacco Control (FCTC), the world's first public health and corporate accountability treaty, hopes to confront the manner in which the tobacco industry operates globally.

Initiated by the WHO, the FCTC bans tobacco advertising, promotion and sponsorship and protects public health policy from interference by the tobacco industry. The treaty sets a precedent for



international regulation of other industries that threaten health, the environment and human rights; such as pharmaceuticals, oil and agri-businesses.

FCTC is one of the most important recent examples of a successful challenge to a powerful, deadly industry that profits at the expense of human health. India and other countries of the 'Global South' stood up to US high-handed diplomacy throughout the FCTC negotiating process. The treaty has been signed by 119 governments. It will enter into force and become an international law after 40 countries ratify it. Seventeen countries have ratified it so far, India being one of them.

On May 18, 2003, even before the FCTC was adopted at the World Health Assembly (WHA), the Government of India initiated and enacted the national tobacco-control legislation, namely, 'The Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003'. The salient features of this legislation include a total ban on direct and indirect advertisements of all tobacco products; prohibition on sponsorship of sports and cultural events which encourage tobacco use; ban on smoking in public places; ban on sale of tobacco products to minors; ban on sale of cigarettes and tobacco products within a radius of 100 yards of educational institutions; mandatory pictorial depiction of specified health warnings and clear indication of nicotine and tar contents on packets and cartons of all tobacco products.

A violation of any of these provisions is a punishable offence, whose punishment includes fine and/or imprisonment.

The ban will result in a huge loss of rev-

enue to the media but it must be weighed against the irreparable loss of human health and life in the community. This is particularly true of a country like India where the public health system is already overburdened. The benefits of employment generated by production, manufacture and distribution of tobacco products are balanced against the cost of treating diseases caused by its use.

It is hoped that with the implementation of the legislation and the provisions of FCTC, the burden of tobacco related morbidity and mortality would be substantially reduced over the next few years.

*Papiya Sarkar*

## E-waste in Chennai – time is running out

While Information Technology (IT) was becoming a buzz-word during the nineties, and computers were entering households in the country in a big way, the dark side of these hi-tech components went unnoticed.

Today, toxic-laden E-waste generated by the IT industry has reached gigantic proportions. The shocking facts about E-waste in our country were first brought to light by Toxics Link when it deflated the hi-tech euphoria by studying the recycling markets of Delhi, a few years ago.

The E-waste issue was larger than assumed at first, and there were indications that it would have spread its deadly tentacles



*E-waste markets have sprung up in Chennai as well, as is revealed in a Toxics Link study*

## Mechanism of E-waste recovery and the recovered components

Computer component	Recovered component	Mechanism employed
Monitor	Cathode ray tube, circuit board copper, plastics	Dismantling using screw drivers (the broken CRTs are dumped)
Hard disk	China steel, aluminium, (magnet) actuator, platter, circuit board	Broken using a hammer
Circuit board	Capacitor, condenser, copper gold, chipped board	Gold recovery through acid treatment; Copper recovery through heating; Crushing of boards by custom-made crushers
Printer	Motor, plastics	Dismantling using screw drivers
Cables and wires	Copper, aluminium	Burning or stripping

all over the country. This gave birth to an E-waste study in Chennai.

The report titled 'E-waste in Chennai – Time is running out' was an outcome of a six-month study on the status of E-waste management in this southern metropolis.

This report revealed some startling facts.

The study revealed that the E-waste hotspots are spread across the city. The

important areas include New Moore Market, Puzhal, Madras Export Processing Zone (MEPZ), near Tambaram, Urapakkam and others. E-waste comes from various quarters like government offices, banks, software companies, etc. The scrap

dealers acquire them through auctions or tenders. Some of the bigger players in the city import E-waste from offshore sources.

Chennai Port is pounded regularly by toxic E-waste imports from offshore sources. They are imported as "used/second-hand computers" (Indian EXIM policy allows the import of computers not older than 10 years), "metal/cable scrap" and even

"electronic scrap." Even the PRO of Chennai Customs has endorsed that computer scrap is imported into Chennai port as second-hand computers. Countries that send their E-waste to Chennai include USA, European Union (Belgium), the Middle East, Singapore and Malaysia.

E-waste reaches MEPZ and Puzhal where the computer scrap is sorted for copper recovery. One unit in MEPZ imports circuit boards, crushes them into five millimetre pieces and then exports the chips to Singapore for metal recovery. The second unit in MEPZ has been clandestinely importing computer, photocopier and other electronic scrap from the Middle East in the guise of cable and metal scrap.

E-waste from offshore sources also trickles down to smaller scrap dealers in the narrow lanes of Moore Market through the larger players who outsource when quantities are high.

Here, E-waste undergoes crude recycling wherein the lead-filled monitors are broken to recover copper (they've even tried to reuse the glass by melting it!), the circuit boards are treated with acids to recover gold and the wires are also burnt to recover copper. The workforce involved in the E-waste recycling business is unaware of the potential hazards of the materials they are handling and hence do not use any safety gear.

The E-waste problem requires

immediate attention as it is all set to blow out of control. With China shutting its doors to imports of E-waste and the Waste Electrical and Electronic Equipment (WEEE) directive coming into force this year, there is every possibility of India inheriting the status from China as the most favoured destination for E-waste dumping.

The only possible solution for this problem would be to ban the import of E-waste by implementing the Basel Ban and to bring about a policy which directs industries to adopt Extended Producer Responsibility (EPR) wherein the manufacturers are made responsible not only for the production and distribution of their products, but also for the post-consumer phase.

This cannot be treated as an extra burden for industries as they already have the capacity and expertise to handle this toxic-filled E-waste and are already doing it elsewhere. For example, IBM started its take-back programme almost a decade back in Europe. The industry needs to demonstrate that it is as concerned about the health of Indian citizens as it is of citizens in the West.

On a practical note, the government also needs to stir the conscience of the industry through stringent policies, as has been the case in Western countries.

K. S. Sudhakar

## UPDATES

### MSW UPDATE

#### Public hearing of women waste-pickers in Mumbai

Well!, doesn't it sound strange that the poor, abused and ostracised women waste pickers of Mumbai got a public hearing from the bureaucrats of the government as well as from the Chairperson of National Commission of Women?

As hard as it is to believe these underprivileged workers managed to voice their woes under the auspices of Stree Mukti Sangathna (SMS) on May 18, 2004!

Stree Mukti Sangathna, an NGO working for poor urban women, organised the public hearing, along with National Commission of Women. The women waste-





*The public hearing gave a rare opportunity to women waste-pickers to raise important issues*

pickers showed incredible courage to come and speak out in public.

The public hearing raised many questions for the local government, the municipality and the state government. The

issues discussed ranged from the rights of the waste pickers to collect recyclables from the dump yard site at Deonar; receiving medical health facilities; harassment from the municipal staff at the dumpyard; and the complete lack of civic amenities like potable water, toilets, first aid, and solid waste management services for these groups.

The women complained that they were subjected to abuse and exploitation at the hands of municipal staff, and waste dealers (kantewala). They did not receive any health or medical facilities from government hospitals.

Satyabam Arak, a woman waste-picker at the Deonar dumpyard says, "We are often abused, threatened and thrown out from the dumpyard for picking waste."

Most women do not get the ration card of Public Distribution Centre. Some of those who received them could not avail the

facilities as their income on the card was shown between Rs. 57,000-1,00,000! SMS helped them to get organised and got identity cards issued to them and now to some extent they are able to resist the pressure from the dumping yard staff.

According to a conservative estimate this group recovers nearly 300 tonnes of waste from streets, municipal bins and landfill sites, thereby feeding an informal recycling processing industry. The women carry tonnes of recyclables from the waste bind and dump yards and help save on transportation cost of the municipality and landfill (or dumpyard) space.

For doing such a great service, they are surely entitled to receiving basic civic services including education for their children. Hopefully, the public hearing should result in well-deserved benefits.

*Sanjay K Gupta*

## Second training workshop held in New Delhi focusses on recycling technologies

Managing urban solid waste in India is increasingly becoming an uphill task. Currently, India produces about 40 million tonnes of urban waste per day, which is likely to increase to over 1,25,000 million tonnes by 2030.

To manage this towering waste menace, the Supreme Court appointed a committee which formulated the Municipal Solid Waste (Management and Handling) Rules,

2000. The Supreme Court gave a three-year notice to all municipalities to make necessary arrangements for conducting compulsory activities like organising door-to-door collection of waste, segregation of waste at source, creating sanitary landfills and composting organic materials.

In the last three years, neither the government nor the municipalities have taken any initiative to train and build the

capacity of its staff to manage waste as per the guidelines. Toxics Link realised the need to bring about a change in the working of civil society organisations and municipalities. We organised a four-day training and skill share workshop, named 'Up-scaling People's Participation in Waste Management Focusing on Recycling and Composting' in August 2003.

The second and final workshop was held from April 20-23, 2004 at India International Centre, Delhi. While the former workshop focused on imparting knowledge on community mobilisation, processes of composting and field exposure to good practices, the focus of the latter was on recycling technologies. Representatives from environmental NGOs and municipalities across India, Sri Lanka and Nepal participated in the workshop.

Eminent speakers like Dr S.K. Nigam, from Central Pollution Control Board, Mr R.C. Jain from Municipal Corporation of Delhi, Prof Manoj Datta from Indian Institute of Technology, Delhi and Mr S.A. Khadar Saheb, Commissioner of Suryapet district (Andhra Pradesh) contributed extensively to the workshop. The workshop surmised that community interventions will be critical in emerging waste policies.

*Tanya Sengupta*



*Exposure visits to landfill sites (left), composting plants (below left) and paper recycling units (below) were organised for the participants of the training workshop.*



## E-WASTE UPDATE

### Indian government to examine possibility of ban on E-waste import

The Central Pollution Control Board, along with GTC (German Technical Cooperation) and Toxics Link organised a one-day national workshop on Electronic Waste Management on March 15, 2004.

The workshop brought together the electronic and computer industry,

government, NGOs, international experts, recyclers and media. The aim of the workshop was to generate ideas and evolve strategies, interact and share knowledge, and work out solutions for better e-waste management in the country.

The workshop focussed on some key issues which included the environment and health aspects of the current E-waste situation, the perception of the problem by the government, industry and NGOs, a comparison with management schemes in other countries and producer responsibility.

The workshop was attended by 50-70

individuals/groups involved in the issue or related to the issue in their respective regions. These included representatives from the electronic and computer industry (HP, MAIT), recyclers (CITIRAYA, E-Parisara), international experts from SWICO, EMPA (Switzerland) and GTZ (Germany), and government officials including secretaries and members of some State Pollution Control Boards.

Several important decisions and resolutions were made at the end of the workshop. The notable ones included examining the possibility of a ban on E-waste import into India and the formation of a national level working group on E-waste, comprising of regulatory bodies, NGOs, members of the industry, experts and recyclers.

*Kishore Wankhade*

### Panel discussion explores contemporary environmental issues concerning India

It is often argued that nothing has really changed in India's environmental policy. It is alleged that several mini-Bhopals are just waiting to happen, and that the attitude and approach of industry towards the environment has not changed.

The mercury catastrophe of Kodaikanal attributed to Hindustan Lever Limited (part of the Unilever Group) is an often-quoted example. Environmental injustice seems rampant with hazardous industries proliferating in natural resource-rich areas amidst poor communities. Public participation in decision-making seems to be a mere formality. The continued displacement of indigenous communities to make way for another large development project – a dam, a highway or a power plant – has further muted the voice of the voiceless. Rampant corruption, and the poor state of governance contribute to a feeling of hopelessness for many of us. Despite all this, there is a ray of hope – increased access to information, allies from around the world, the development of international principles focussing on sustainability and the rights of future

generations. It is to discuss India's environment in this context, that Toxics Link, CAG and the Institute of Shipboard Education organised a panel discussion titled 'Contemporary Environmental Issues Concerning India', at the Loyola College in Chennai on March 10, 2004.

The panel comprised of Professor Armin Rosencranz, a leading academician and environmentalist from Stanford University, Mr Sriram Panchu, a senior advocate at the Madras High Court, Mr T.Mohan, a well-known environmental activist, Mr Ajay Narayan, the environment head of Infrastructure Development Finance Company (IDFC) and Mr Bharath Jairaj, consumer activist from CAG.

The panelists covered a wide gamut of issues relevant to current environmental priorities of the country while answering the following questions: Is there something wrong with our laws? Can environmental justice ever become a reality? Can courts provide the answer to environmental problems? Can industry truly become green? Can sustainable development ever happen?

*Rajesh Rangarajan*

## PUBLIC LECTURE UPDATE

### Toxics Link participates in IPEN Global Day of Action

On May 17, 2004, the International POPs Elimination Network (IPEN) celebrated the Stockholm Convention's entry into force with an IPEN Global Day of Action.

NGOs the world over celebrated the day with activities that raised public awareness about POPs and the Stockholm Convention.

The Convention sets out measures to control production, import, export, disposal and use of Persistent Organic Pollutants (POPs).

Toxics Link, too, celebrated the Global Day of Action by holding a public lecture on May 18, 2004 to discuss the Stockholm Convention in the Indian context and its future regarding chemical and environment health safety.

A very eminent panel comprising of Dr N.H. Hosabettu, Director, Ministry of Environment and Forests and Dr V.P. Sharma, Former Director, Malaria Research Centre started the discussion on the issue with presentations.

The lecture was well attended with people from diverse fields participating wholeheartedly to discuss the various aspects of the issue.

*Papiya Sarkar*

## Hazardous chemical units reluctant to shift to new industrial estates

The Delhi government undertook a survey of units dealing in hazardous chemicals in the capital after the Lal Kuan fire tragedy. The survey found that 883 units dealing in hazardous chemicals were located in congested areas like Lal Kuan and Roshanara Road.

A decision was therefore taken to shift these units out of the city to a special zone by December 31, 2005. The Delhi Developmental Authority (DDA) has offered alternate plots in Holambi Kalan to the owners of 521 chemical units in 2002. The plots remain as they were, without any evidence of construction. None of the owners have claimed these plots, despite continuous pressure from the DDA.

DDA has also served a public notice to the owners to claim their respective plots by April 30, 2004. This too has been ignored and the deadline for shifting the industries has expired. As a result, the Municipality, with the help of Delhi Pollution Control Committee, will start closing these units.

The Times of India  
Chandigarh, May 24, 2004

## Notices issued against units piling up chemical waste

The Sahibabad State Pollution Control Board has come down hard on industrial units which are mismanaging their hazardous chemical waste. Recently, the board issued show cause notices to 400 industrial units in Ghaziabad and Noida that have been piling dangerous chemical waste around their premises.

Of the 400 rogue units, more than 250 are located in Ghaziabad and 150 are based in Noida. Most of these units, covered under the violation of norms list, are electronics, textiles, chemicals and dying units.

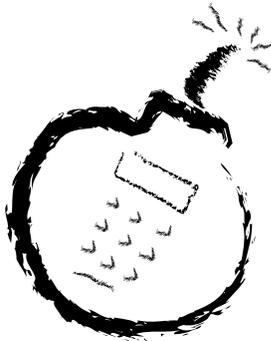
The government had enacted the Hazardous Wastes (Management and Handling) Rules 1989, amendments to which was released in 2000 and 2003.

According to these rules all industrial

units generating hazardous chemical waste are bound to ensure their safe disposal as well. The units are also required to earmark sufficient space and develop a suitable design for storage and disposal enclosures.

The Tribune  
New Delhi, May 21, 2004

## Mobile phones found to be toxic time bombs



Recent studies reveal that cell phones, despite their relatively small size, are a highly potent toxic threat to our environment and health.

Two independent studies funded by the US Environmental Protection Agency and the State of California found that obsolete or non-working mobile phones qualify as hazardous waste. The toxicity is due to the presence of lead in the phones and its propensity to leach in the landfill.

According to another study, conducted by the University of Florida, cell phones contain 45% plastics, 40% printed wiring (or circuit board), 4% liquid crystal display (LCD), 3% magnesium plate, and 8% metals. The toxic elements include lead, brominated flame-retardants, beryllium, hexavalent chromium, arsenic, cadmium, and antimony.

India, one of the fastest growing mobile telephone markets in the world, boasted over 28 million mobile phone users in April 2004. This number is expected to rise to over 120 million by 2008. The rapid growth rate, combined with the obsolescence of cell phones, will create very significant volumes of waste, posing a serious global pollution threat both from the standpoint of disposal and recycling as well as the possibility of transboundary movements of such wastes.

Kishore Wankhade

## INCINERATORS 2004: STATE THE BIGGEST POLLUTER

Toxics Link has released its recent survey titled 'Incinerators in Delhi – State the Biggest Polluter'. The survey shows that New Delhi is still burdened with 27 medical waste incinerators, two of which are run by private hospitals and 25 by government hospitals.

The survey presents case studies of eight hospitals of varied bed-strength and documents their reasons for closure of incinerators. It highlights the economic burden of operating an onsite incinerator in comparison with the savings that accrue when waste is outsourced for treatment to a centralised facility.

Recent directives to hospitals to install pollution control equipment has discouraged many institutes from investing in incinerators due to the substantial capital investment involved in retro-fitting. At the same time, hospitals have begun to realise that the cost of running incinerators is very high. Most hospitals have started shutting down their incinerators due to factors like non-compliance with standards, economic burden of running them, high upgradation and PCE costs involved in complying with standards mandated by the law.

The emergence of centralised facilities has contributed to the phase-out of onsite incinerators.

Continuous pressure by NGOs to eliminate incineration of medical waste has also influenced hospitals. Four hospitals in Delhi – Sunder Lal Jain, Apollo Hospital, Maharaja Agrasen Hospital and Mata Chanan Devi Hospital – plan to stop using incinerators.

Ratna Singh

# FACT FILE

## Behind the shine

All of us like a sparkling home? But none of us realise that behind the shine is a potent cocktail of hazardous substances. People rarely stop to think about the phosphate-rich dishwashing and laundry



detergents, which are a deadly mix of bleach and corrosives. These cleaning products have the potential to damage our skin, eyes and lungs. They may also affect the environment by accelerating the natural process of eutrophication which is a process by which water bodies gradually age and become more productive. Detergents hasten the process and clog water bodies with algae which thrive on excessive plant nutrients that cause pollution of water bodies. The toxicity of detergents decreases by non-addition of additives like perfumes, colour and brightening agents. There have been a number of success stories in northern countries where conventional cleaning products have been replaced by items that are biodegradable and safe.

## Did you know?

- ▲ Cleaning products were responsible for nearly 10 per cent of all toxic exposures reported at US poison control centres in 2000. Of the total 2,06,636 calls, nearly two-thirds involved children under six, who swallowed cleaners stored or left open inside the home.
- ▲ According to the estimates of the US Environmental Protection Agency the air inside a typical home is on an average two to five times more polluted than the outside air. In extreme cases it is 100 times more contaminated largely because of household cleaners and pesticides.
- ▲ A US Geological survey study conducted in year 2002 reveals 69 per cent of US stream samples contained persistent detergent metabolites and 66 per cent contained disinfectants.
- ▲ At least 11 US states have banned phosphate from detergents sold within their borders. Other states have gone a step further by not just banning certain products, but also requiring the use of non-polluting cleaners.

Source – *Good stuff ?*, Worldwatch Institute, 2004 and *Counting the Cost of Cleanliness*, Toxics Link Factsheet



## 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 [tidelhi@vsnl.com](mailto:tidelhi@vsnl.com)

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## Quotes from the Earth

Quotes from the Earth is a compilation of films on the themes of Hunger, Water and Survival. To screen the films in your city, please get in touch with Ruchita Khurana at [ruchita@toxicslink.org](mailto:ruchita@toxicslink.org). The films are available against a nominal security deposit. You can view details about the films at <http://www.toxicslink.org/earthquotes/>