

Waste incineration projects violate Kyoto Protocol

Ironically, it is the cure that is going to bring on the disease for most Indian cities. The disease we talk of here is common to Indian cities – the problem of garbage. The deadly cure comes in the form of incineration technologies. More than 12 cities around the country are being subsidised to install waste incineration technologies for solid waste management.

These technologies give rise to extremely toxic chemicals such as dioxins and furans, besides being anti-recycling and putting at stake the livelihood of millions of people who help recycle waste and conserve valuable resources.

While India has ratified the Kyoto Protocol, Annexure A of which marks

out waste incineration as a source of climate change, its internal policies are actively promoting this very method of waste destruction by heavily subsidising it. In classic doublespeak, A.K. Mangotra, Joint Secretary, the Ministry of Non-Conventional Energy Sources (MNES) said, "(The) Indian government does not promote incineration," contradicting the fact that an executive order asking for inclusion of Waste-to-Energy through these processes has been issued to all the State Chief Secretaries and the Administrators of the Union Territories.

G-77 and China managed to resist the industrialised nations to sacrifice their freedom for survival emission in the Delhi Declaration on Climate

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Heaping insult upon injury

Delhi Government proposes landfill in Ridge Forest; calls it "forest activity for green forests"

Despite a year-long protest by the citizens of Delhi, the Delhi Government has moved the Supreme Court to locate its garbage landfill in the Bhatti Wildlife Sanctuary, which is part of the Reserve Forest. A settlement exists within 200 m of the sanctuary's radius.

Garbage is no doubt a problem that municipalities all over the country are wrestling with. However, one environmental problem cannot be converted into another. Amazingly, the Delhi government is even trying to convert a chunk of the Delhi Ridge forest to make garbage landfills without examining ways of tackling the problems of garbage.

The Ridge: Delhi's green lungs

The Ridge, by its very presence in the midst of the ever-growing city of Delhi, forms the green lung of the metropolis. It represents a characteristic eco-system with its unique bio-diversity.

Satellite images indicate clearly that the Ridge (which is an extension of the Aravallis) provides a natural boundary between the desert and green areas. It acts as a barrier to keep out the sands of Rajasthan and also, to an extent, hot winds from the plains to the North. With its vegetation, the Ridge acts as a moderator of the climate and absorbs dust. Temperatures inside the Ridge are significantly lower than in the city and the cooling extends to a larger area. The vegetation acts as a sink for many pollutants, acts as a purifier of air and replenisher of oxygen in the atmosphere and plays

an important role as an effective noise buffer.

This time they are calling a landfill a green initiative, despite the fact that it needs a massive infrastructure of roads, housing, lining the landfill, leachate collection systems, etc.

Landfills are not safe – they leak.



PHOTO: RAVI AGARWAL

Often, dumps are unlined, unhygienic and sit on groundwater reservoirs. Groundwater samples in landfills are frequently found contaminated with heavy metals and pesticides.

The proposed landfill will kill the nascent forest that has only just begun to come back to life after years of efforts, since it was notified as a Sanctuary in 1991, and later, as a Reserve Forest in 1996 by the Supreme Court after concerted citizen action. The pits proposed for landfilling are currently green and lush with vegetation.

Violation of Municipal Waste laws

Under the Municipal Waste Management and Handling Rules of 2000, notified by the Ministry of Environment and Forests under the Environment Protection Act, 1986, landfill siting cannot be allowed in a location, which is close to "habitation clusters, forest areas, water bodies, monuments, National Parks, wetlands and places of important cultural, histori-

cal or religious interest".

In this case the proposed site is clearly close to a Reserve Forest that is the green lung of Delhi.

The deep pits in the Bhatti area are ideal rainwater harvesting areas, and it is an irony that while the Delhi Government is escalating efforts to increase rainwater harvesting, some of the largest areas of its potential are now being turned into a garbage dump. Delhi's waste, which is a mixture of industrial, toxic household and medical waste, is sure to contaminate the groundwater and surrounding areas. The deadly mixture of all these has already caused groundwater contamination at existing landfill sites at Bhalsawa as studies have shown. The landfill operation requires a constant movement of trucks

and men, and roadrollers to cover the landfill with mud, causing extensive disturbance in the forest area. It will involve construction of access ramps, preparation of pit base and filling operations, leachate control systems involving the laying of holding pits, PVC pipes located in 1 m wide and 1 m deep trenches surrounded by gravel, landfill gas recovery systems, a compost plant, access roads, weigh bridge, site offices and stores, electricity and lighting arrangements, etc.

Managing waste in Delhi requires creative solutions like setting up large-scale composting plants on existing landfill sites, promoting recycling of plastics and metals, and involving communities in collection schemes. Destroying the forest will only result in choking and desertification of Delhi – a situation that is not retrievable.

Ravi Agarwal

Change and Sustainable Development but it remains to be seen how developing countries like India monitor the dumping of failed technology in the name of technology-transfer.

Since projects based on these technologies are not commercially viable through a normal funding mechanism, the United States has introduced waste incineration as renewable energy in its Energy Bill amidst fierce opposition. This is despite the fact that the Kyoto Protocol mentions solid waste disposal and waste incineration, among others, in its Annexure A as sources of greenhouse gases. In India, MNCs such as the Australia-based Energy Developments Limited (EDL) as well as the Department of Science and Technology's TIFAC are promoting incineration, with support subsidies from the Indian Ministry of Non-Conventional Energy Sources. This includes processes such as incineration, gasification, pyrolysis and plasma pyrolysis, on the pretext that they are renewable energy, even though these technologies are inappropriate for Indian waste.

The Clean Development Mechanism (CDM), provided for under Article 12 of the Kyoto Protocol, is also being misused. The Article enables developing countries to participate in joint Greenhouse Gas (GHG) mitigation projects by benefitting from the project activities resulting in Certified Emissions Reduction (CER). Article 10 (b) (I) of the Kyoto Protocol mentions waste management but taking advantage of Article 10 (c), which seeks to facilitate transfer of, or access to, environmentally sound technologies pertinent to climate change, environmentally disastrous non-renewable incinerator technologies are being pushed through the CDM.

As a consequence, Resource Incineration Projects (referred to as Waste-to-Energy) are being defined as Renewable Energy Technologies (RETs) under the CDM of the Kyoto Protocol. RETs like incineration technologies are likely to figure in COP-8.

On the other hand, the municipal waste laws prohibit the incineration of chlorinated plastics, whereas these technologies thrive on mixed waste.

As a result, segregation of waste gets thrown out of the equation and recycling becomes a dirty word. In Delhi alone, the waste recycling industry employs 100,000 people. The CDM Executive Board, deliberating over the criteria for small-scale project activities with a maximum output capacity equivalent of up to 15 megawatts, defines renewable energy as "a project activity that uses partly, or in its entirety, sources of energy that do not use up the earth's finite mineral resources and that is replaced rapidly by the natural processes". Professor Avinash Chandra, Centre for Energy Studies, IIT, Delhi says, "Renewable energy is any source of energy that can be used without depleting its reserves. The incineration/gasification processes are resource-depleting initiatives, and cannot be termed renewable."

"Incineration, gasification/pyrolysis are toxic processes which cause tar problem and can cause carboxyl poisoning," says Professor H.B. Mathur, renowned professor (retd) of IIT Delhi and professor emeritus, Delhi College of Engineering.

"Indian waste has a very low calorific value. One must learn from the experience of the Phillipines and adopt indigenous technologies like composting for waste management," he avers. Interpreting organic waste destruction for electricity generation as a renewable process makes a farce of the CDM of Kyoto Protocol negotiations, which encourages Renewable Energy Technologies (RETs) to reduce carbon emissions.

The MNES seems to have directed all its efforts and attention towards technological innovations offered by MNCs while ignoring the social and cultural patterns that influence a community's response to new technologies. The ministry itself has identified some critical factors in the way of

quicker expansion: high initial cost; low perceived reliability; lack of a market environment; lack of a level playing field; and failure to stabilise technology. MNCs, international financial institutions (IFIs) and aid agencies are pushing resource destruction technologies such as incinerators, calling them Resource Incineration Projects.

A case in point is EDL, the Australian MNC whose subsidiary, Brightstar Environmental, has signed more than half a dozen Resource Incineration Projects in several Indian cities such as Mumbai, Jaipur, Kanpur, Bhopal



and Lucknow. EDL's Solid Waste Energy Recycling Facility (SWERF) projects in Delhi and Chennai have been dumped following the detection of its polluting nature by the respective State Pollution Control Boards. According to Randall Spalding-Fecher of Energy Development Research Centre, University of Cape Town, three things must be taken into account before allowing a CDM project. One, the project must not lead to loss of jobs; secondly, it must not have an adverse environmental impact and thirdly, the viability of such projects must be decided by the local people. The Indian MNES Waste-to-Energy policy has failed on all the three counts.

Gopal Krishna

Persisting perils

The previous century has witnessed tremendous advances in science and technology. In many aspects of life, products derived from chemical processes have replaced natural products. About 70,000 commercial chemicals are in use in the world today and an estimated 3,600 new compounds are introduced annually. Most of these compounds are man-made. Human interventions, while utilising and manipulating natural resources, have produced planet-wide environmental and ecological side-effects that are of great concern. The bulk synthesis, transportation, and finally disposal of materials provides ample opportunities for their release into the environment.¹ The proliferation of toxic and hazardous compounds in the environment is an issue of increasing concern, both regionally and at a global level.

What are PTSs?

Persistent Toxic Substances (PTSs) are those with toxicity, a tendency to bio-accumulate and persistence of concern. The toxicity could be expressed as effects on organs, organ systems or functions in intact animals or humans. The toxic effects would include but not be restricted to death, disease, behavioural abnormalities, cancer, genetic mutations, endocrine disruption, and physiological, developmental, reproductive or physical deformities in any living species or its offspring.

The environmental persistence of the chemical could be due to its inherent properties, for example, resistance to degradation or because of its persistent release from significant local or regional sources.

What are POPs?

Persistent Organic Pollutants (POPs) are carbon containing chemical compounds that, to a varying degree, resist photochemical, biological and chemical degradation. Although many different chemicals may be defined as POPs, 12 chemicals (all chlo-

rine organic compounds) have been chosen as priority pollutants by the United Nations Environment Programme (UNEP) for their impact on the human environment (see box below).

Connection between POPs and PTSs

POPs are sub-groups of PTSs. PTSs other than POPs are Lindane, Polycyclic Aromatic Hydrocarbon (PAHs), Endosulphan, Atrazene, Pentachlorophenol (PCP), Organo-Mercurial Compounds, Organo-Tin Compounds, Organo-Lead Compounds and Phthalates. These are all conventional chemicals manufactured mostly in developing countries.

International attention on POPs and PTSs

POPs attracted international attention due to a growing body of scientific evidence indicating that exposure to even very low doses of POPs can lead to cancer, damage to the central and peripheral nervous systems, diseases of the immune system, reproductive disorders and interference with normal infant and child development. The Stockholm (POPs) Conven-

tion – adopted on May 22, 2001 – sets out control measures covering the production, import, export, disposal and use of an initial list of 12 POPs. It calls for the elimination of production and use of intentionally produced POPs, eliminating unintentionally produced POPs where feasible, and managing and disposing of POPs waste in an environmentally sound manner. India signed the treaty on May 14, 2002.

For PTSs though, a region-wise assessment was not done in any organised survey. Several country reports have been prepared from time to time. Due to the regional importance of pesticide residues, most of the surveys have been on this group of PTSs. In India, several comprehensive localised as well as national surveys on pesticide residues in air, water, soil, food items and biological samples have been undertaken. Toxics Link has released a status report on POPs in India. Under Mussel Watch, Global Environment Management System (GEMS) and Global Environment Facility (GEF) programmes, a few studies have been done on POPs and PTSs. However, most studies revealed data gaps on the sources, levels and pathways of POPs and PTSs.

UNEP/GEF RBA PTS project

The programme aims at making regional assessment of the damages and threats posed by PTSs. It relies upon the collection and interpretation of existing data through a country-level questionnaire and integrating it into a regional report.

Industry viewpoint

The industry is of the opinion that international environmental treaties are repetitive and multiple-proscriptive, putting unnecessary load on the chemical industries in developing countries. According to them, environment protection is a tool to covertly bring in trade restrictions and/or ban select products. In the Indian perspective industry is of the opinion that India is economically, environmentally and agriculturally different. They recommend that most of the identified substances in the PTS list must be delisted for action.

¹ Hites, et al. 1977

UNEP's 12 Persistent Organic Pollutants (POPs)

Pesticides

Aldrin

Dieldrin

Endrin

Chlordane

DDT

Heptachlor

Mirex

Toxaphene

Hexachlorobenzene (HCB)

Industrial Chemical Products

Polychlorinated biphenyls (PCBs)

Hexachlorobenzene (HCB)

Unwanted By-products

Polychlorinated biphenyls (PCBs)

Polychlorinated dibenzo-p-dioxins

Polychlorinated dibenzo furans

Hazardous Waste Inquiry Committee report: an eyewash

The Hazardous Waste Inquiry Committee recently submitted its final report to the Ministry of Environment and Forests (MEF). The Inquiry Committee was set up by the MEF in response to the Supreme Court's order dated December 3, 2001 in the Research Foundation for Science Technology and Natural Resource Policy vs Union of India and Others case. The case dealt with hazardous wastes lying at various ports/Inland Container Depots (ICDs)/Container Freight Stations (CFSs).

A.C. Wadhawan, head of the committee, and other members visited five ports, two ICDs, and one CFS. They visited ICD Tughlaqabad, Kandla Port, Mumbai Port, Nhava Sheva Port, Kolkata Port, Chennai Port, ICD Bangalore and CFS Ludhiana.

The inventory of hazardous wastes, namely waste oil, lead-acid batteries and other non-ferrous metal wastes, seized under orders of the Supreme Court dated February 6, 1998, and March 20, 1998, has been verified and the shortages identified by the Committee.

The lack of coordination between the concerned government agencies is evident from the Committee's findings to the effect that the authorities have cleared some kinds of hazardous waste as per the Exim Policy although these items mentioned in the Exim policy are restricted under the Hazardous Wastes Rules, 1989.

The manner in which the port authorities reported to the police the shortage of zinc-ash drums imported during 1996-97 as missing is a clear case of cover up on the whole issue of Chennai Customs, between 1996-97 and 2001-02.

The fast-track clearance for the special public auction to dispose of all the unclaimed cargo, including hazardous waste stocks by the Kandla Port Trust/Chennai Port Trust authorities is another example of flouting well-laid out procedures regarding hazardous wastes. These recommendations of the Ministry of Finance

is totally against the Supreme Court Order dated May 5, 1997, on ban of Hazardous Waste Imports. According to a Central Pollution Control Board official this should be considered as a case of contempt of court. The authorities plead that they have referred to the guidelines issued by the Ministry of Finance, Central Board of Excise & Customs (CBES) dated October 17, 1997, for the disposal of unclaimed/unclaimed cargo landed prior to December 31, 1996, to reduce congestions in ports.

Importers who have imported the consignment without valid permissions and whose consignment was later seized are also to blame. The Committee felt that actions against the erring importer have to be taken as per Customs Act 1962. We feel that the action against the importers should be taken according to the Hazardous Waste Rules.

Although the list of erring importers has already been furnished by the Ports/ICDs/CFSs to the Ministry of Environment and Forests, it has not been made public.

It is learnt that due to corroding of containers and drums containing hazardous waste, the problem of environmental damage to the ports is becoming serious and needs to be taken care of. We feel that these problems should be solved as per provisions of the Hazardous Waste (Management and Handling) Rules, 2000.

The Committee also felt that the re-export of the material to the original exporters would in no way be feasible at present. "But there is a provision of re-export to the exporter under the Basel Convention and this should be considered as a case of hazardous waste dumping. There should be negotiations on the part of the Ministry of Environment and Forests to re-export the hazardous waste - it should be tried out," says Ravi Agarwal, Basel Action Network.

"The callousness towards the management of earlier records of hazardous waste imports is outrageously criminal and this kind of record-keeping needs to be enquired into thoroughly and the truth should be made public," says Agarwal. "The ICDs of Tughlaqabad, Mumbai and Kandla Port Trust have mentioned that they are not able to locate records due to the manual nature of record-keeping. There have been errors in the earlier figures reported by JNPT and Nhava Sheva. Likewise, the figures given by the Kolkata and Chennai Port Trusts have also been revised."

The excuse of the port authorities on ignorance of a clear-cut idea as to what constitutes hazardous waste does not hold water. Import of such materials as recyclables is regulated as per the Exim policy, though the Exim policy in different financial years has undergone significant changes with inputs from the Minis-



try of Environment and Forests. Battery scrap/battery plates were freely importable during 1996-97, but were made a restricted item in 1997-98 in the Exim policy. "The explanation given by the authorities is questionable since this was done despite the Delhi High Court's order dated April 2, 1995, by which these items were banned from import. The Ministry of Environment & Forest was aware of the order," says Agarwal.

The release of large consignments of waste oil, (2,334 containers containing 41,425 MT of waste oil and 16,748 drums) to various importers by the Container Freight Station (CFS), Ludhiana, is alarming since hazardous waste containing PCBs (a known carcinogen), PCTs, heavy metals, and sulphur, etc, have been released, posing a serious threat to the environment and health. Custom authorities have reported that this has been done in accordance with orders from the



Haryana and Punjab High Court under writ petitions filed by the importers.

"The recommendations suggested by the Committee are not pursuant to the laws and rules dealing with hazardous waste in India," says Agarwal. The Committee does not address the problem and is an eyewash to the problem of illegal imports of hazardous waste, he adds.

Kishore Wankhade

Pollution Control Board serves notices to five hospitals

Five hospitals in Delhi, and 13 hospitals across the country, have been issued notices by the Central Pollution Control Board (CPCB) for violating the norms of bio-medical waste disposal. Delhi based hospitals like the Army Research and Referral Hospital, Hindu Rao Hospital, Lady Hardinge Medical College and hospital, Batra Hospital and Research Centre and Tirathram Shah Hospital have been issued show cause notices under Section 5 of the Environment (Protection) Act, 1986.

Although the CPCB has served these institutions with notices, it feels that they hardly take it seriously.

The inspection of LHMC hospital revealed that the incinerator was not operating at the prescribed temperature. Besides, the secondary chamber burner was also not working. Despite repeated reminders, the medical superintendent was not available for comments.

At Hindu Rao Hospital, the CPCB found that the incinerators had not been operating for some time.

The 13 hospitals outside Delhi, which have been served with notices, include KGMC Hospital, Lucknow, GSVM College and Hospital, Kanpur, SMS Hospital, Jaipur, Medical College, Raipur, Sanjay Gandhi Medical College, Rewa, and others.

Ratna Singh

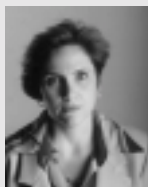
Source: The Statesman, New Delhi, December 14, 2002



PHOTO: SRISHTI

AWARDS

Fernanda Giannasi gets Brazil's Claudia Award



For her work on behalf of Brazilian asbestos victims, Fernanda Giannasi has been awarded the prestigious Claudia Award for Brazil's Woman of the Year. She is one of the co-founders of Ban Asbestos Network of India (BANI). Giannasi, a factory inspector for the Ministry of Labour, in Sao Paulo, Brazil, has campaigned for a ban on asbestos for many years. Working closely with the Brazilian Asbestos Victims' Group, she organised The Global Asbestos Congress in Osasco, Brazil, in September 2001. Since then, many Brazilian towns and cities have banned asbestos.

Giannasi's superb work in protecting the public health of workers, both in Brazil and globally, has been recognised by the Occupational Health and Safety Section of the American Public Health Association (APHA); in 1999, she received the award for International Occupational Health at the APHA's annual meeting in Chicago. Her Fellowship of the renowned Collegium Ramazzini displays the enormous respect she enjoys amongst the international community of occupational scientists and doctors. On June 26, 2002, Giannasi was the winner of a Brazilian Occupational Health competition run by CIPA magazine; she was only the second woman to receive this award in 15 years. Her unstinting efforts on behalf of Brazilian workers were the subject of a documentary shown in prime time on the country's most popular television channel on September 21, 2002.

Gopal Krishna

REPORTS

Mercury spill in Andaman Island

A spill of 50 kg of mercury has been reported from a lighthouse in the East Islands of Andaman, after an earthquake hit the island on the morning of September 14, 2002. Mercury is used as a floater in the lighthouse that helps it rotate the light in different directions. The initial report was that 50 litres of mercury was spilled from the lighthouse in East Island. The Lighthouse Department subsequently stated that only 25 kg of mercury was spilled and the spill was contained inside the lantern room of the lighthouse. The lantern rooms of all lighthouses are surrounded by glass. It appears that the glass there did not break.

The Lighthouse Department has reported that the mercury has subsequently been sucked up and put back into the mercury trough. But using a conventional vacuum pump could have devastating results both environmentally, and more immediately, on the worker involved in the clean-up due to the vapourisation potential.

East Island is uninhabited, with only two duty men at the lighthouse. Awareness about mercury and its hazards is minimal; even in the media, as is evident from the comment

of the Door-darshan correspondent reporting the incident, who stated that 25 kg of mercury is a very small quantity and could pose no risk even if it had spilled outside. The media needs to be briefed on Minamata and on mercury and its hazards.

The Pollution Control Committee of the Andaman & Nicobar Islands has investigated the reported spill and submitted a report to the Central Pollution Control Board (CPCB) saying that the leakage is confined to the room containing the light beam and that there was no danger of the mercury spilling into the sea. The CPCB would coordinate with the committee on the future action plan.

Besides being a heavy metal, mercury settles down fast and has a tendency of slow evaporation; if it reaches the sea, it will definitely enter the food chain and threaten humans. Mercury becomes the more toxic methyl mercury when it is methylated in the presence of organic material in water. The possibility of methylation did exist as there was a lot of



organic material in the sea and there are chances that it can be ingested by fishes and, from them, enter human beings.

The threat comes from the vapours of mercury, which are readily absorbed by the lungs and could potentially reach the brain. Mercury could also enter the body through the skin.

Symptoms of chronic over-exposure to mercury are inflammation of gums and mouth, excessive salivation or metallic taste and tremors, particularly of the hands. The symptoms of acute exposure are bronchitis, cough, chest pain, and irritability.

We feel that the persons involved in the clean-up are at high risk of mercury exposure and they should be examined for poisoning symptoms.

Kishore Wankhade

California Department of Pesticide Regulation sued for frog declines

A number of organophosphate pesticides, namely, chlorpyrifos, diazinon, endosulfan, malathion and parathion are said to be responsible for the severe decline in the amphibian population of Sierra Nevada. Most of these amphibian species have been already enlisted under the Federal Endangered Species Act.

The California Department of Pesticide Regulation (DPR) is bound to comply with the California Environmental Quality Act (CEQA), failing which it was sued on December 4, 2002, by an NGO, Californians for Alternatives to Toxics (CATs). CATs is a north Carolina based information clearing house dedicated to preventing harm caused by the unwise use of toxic chemicals, particularly pesticides.

The steep decline in the population of the California red-legged frog has been attributed to the pesticide drift taking place since 1993 due to application of

pesticides to agricultural crops. It is estimated that every year around 156 million pounds of pesticides are applied, which find their way to the waters of Sierra Nevada

The US Geological Survey reported the presence of these pesticides in the pristine habitat of Sierra Nevada. Diazinon and chlorpyrifos have been detected in the tissues of more than 50 per cent of the frogs caught in Yosemite National Park and 86 per cent of frogs tested in the Lake Tahoe area. Another study by the California Water Quality Control Board also confirmed the diazinon concentrations in winter rainwater to be exceedingly high – enough to kill a small invertebrate.

Despite being aware of the recent studies that correlate the decline in the amphibian population to the pesticide drift, DPR went for re-registering these pesticides for a year's time. A number of other pesticides are also reported to be drifting into the Sierra habitat.

Ruchita Khurana

Source: PANUPS, December 9, 2002

Incinerators being considered for list of environmental goods

Globalisation has increased flows of trade and investment between parts of the world for common good. Yet, it is destroying a common resource that is shared by all humankind – the environment.

The problem of Persistent Organic Pollutants (POPs) travelling beyond borders as a consequence of hazardous waste and technology transfer is nothing but toxic trade. In 1914 there were eight great powers, now there is the Group of 8 (G-8). These powers have always usurped common resources and community initiatives.

In the case of waste management, globalisation has come to mean an increasing flow of trade and investment in waste technologies unmindful of specific local circumstances.

The causes of these global consequences are local. International financial institutions are promoting burning of waste at a municipal level. Toxic emissions resulting from this makes it a cure worse than the disease. This is being done with the ulterior motive of treating the burgeoning waste problem as a business opportunity instead of as an issue of resource management to conserve natural capital.

The World Bank Group is financing incinerator technologies and has also floated a Prototype Carbon Fund to misuse even Clean Development

Mechanism (CDM) of Kyoto Protocol to fund non-renewable and toxic waste burning technologies for energy generation. It is attempting to term waste incineration as renewable energy. In India, the Ministry of Non-Conventional Energy Sources and Department of Science and Technology's Technology Information Forecasting and Assessment Council (TIFAC) is also doing the same. In the aftermath of the World Trade Organisation's (WTO) Doha Declaration, the way incinerators – known for their emission of greenhouse gases, heavy metals and POPs – are being listed as environmental goods is a cause for serious concern.

Ministers agreed at the Fourth Ministerial Conference in Doha, Qatar, in November 2001, to start negotiations on certain aspects of the trade and environment linkage. The WTO Committee on Trade and Environment (CTE) has been conducting negotiations in the Special Sessions on the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements. The negotiations will address how WTO rules are to apply to WTO members that are parties to environmental agreements. There are approximately 200 multilateral environmental agreements in place, of which only 20 contain trade provisions.

The ministers also agreed to negotiations on the reduction or elimination of tariff and non-tariff barriers to environmental goods and services. Examples of environmental goods and services are catalytic converters, air filters or consultancy serv-

ices on waste water management. The CTE is paying particular attention to the effect of environmental measures on market access, especially for developing countries. WTO members recognise that removing trade restrictions and distortions can benefit both the multilateral trading system and the environment. This applies particularly to removing

high tariffs, tariff escalation, export restrictions, subsidies and non-tariff barriers.

Paragraph 31 (iii) of the Doha Ministerial Declaration calls for negotiations on the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services. Under the negotiating structure adopted by the Trade Negotiations Committee, negotiations on market access for non-agricultural products are taking place in the Negotiating Group on Market Access.

Although 'environmental goods' are not defined in the Doha Declaration, negotiations are on to come up with a list of environmental goods. The WTO, Asia-Pacific Economic Cooperation (APEC) and OPEC have already drawn up a list.

The APEC list of 109 environmental goods mentions incinerators as an 'environmental good'. Japan has a list of 160 environmental goods. Ministries seem to be rushing through the formality of public participation, as they have to negotiate these by March 2003. If technologies like incinerators become environmental goods, it will lead to situations where unviable economic and environmental problems cannot be resolved at the level of the community.

A case in point is Energy Developments Limited (EDL), an Australian multinational company whose subsidiary Brightstar Environmental has signed more than half a dozen Resource Incineration Projects in several Indian cities like Mumbai, Jaipur, Kanpur and Bhopal without either technology clearance or a demonstrated capacity to deal with such volumes of waste. Its Solid Waste Energy Recycling Facility (SWERF) projects in Delhi and Chennai have been dumped following the detection of its polluting nature by the respective State Pollution Control Boards.

The only saving grace in India is that due to the 74th Constitutional Amendment, the government cannot commit on behalf of local municipalities and corporations, and even if they do, it has to be subject to their approval. The implementation of the Amendment, however, leaves a lot to be desired.

Gopal Krishna



National Convention calls for an alliance

The Third National Convention of Mines, Minerals and People (MM&P) was held from December 8-11, 2002, in Anandvan, Warora, Chandrapur district, near Nagpur, Maharashtra. The theme of the Convention was 'Towards Building an Alliance'.

Situated on the western coalfields, Anandvan was established in 1951, and houses the headquarters of Maharogi Sewa Samiti, a leprosy rehabilitation centre. Anandvan symbolises, perhaps unwittingly, what happens if mining is done away with, and traditional community living accepted as a way of life.

Ravi Pragda of Samata, Coordinator of the MM&P network, stated the eight objectives of the Convention: to ensure linkages with local struggles; to get to know mining in areas in all the states of India; to ensure regional skill share; to research and document the mining struggles; to ensure participation in national events; to build international linkages; to monitor Indian and global lobbies; and to undertake political lobbying.

He sought Toxics Link's help in understanding the relationship between mining and toxicity. The delegates, representing the states of Tamil Nadu, West Bengal, Jharkhand, Orissa, Andhra Pradesh, Uttar Pradesh, Gujarat, Kerala, Bihar, Uttaranchal, Karnataka and Delhi, shared the stories of their struggles. They sought to have a national assembly to monitor not only current mining operations but also those which are on the anvil.

The scraping of topsoil and removal of forest cover interrupts agricultural cycles, the test drilling interferes with the aquifers, road building and site construction drives away the wildlife. All this happens even before the mining starts. Sustainable mining is a chimera, said Roger Moody, Director of the London-based Nostromo Foundation. He said that the

global mining industry is in bad shape and is asking whether the world does want minerals or not. All the three mining giants – B.H.P. Billiton, Anglo De Beers and Rio Tinto – have operations in India.

At the Convention, Toxics Link released a paper titled *Mines and Mineral Waste in India*.

Gopal Krishna

BHOPAL UPDATE

Dow Chemical accepts brooms from Bhopal survivors; will recommend remediation measures

In a major step, Dow Chemical, India, accepted contaminated soil, water and brooms from the Bhopal gas tragedy survivors and their international supporters on the eve of the 18th anniversary of the Union Carbide disaster. Anand Vohra, Director, Finance, Dow Chemical, assured the delegation from the International Campaign for Justice in Bhopal that he would personally recommend to "higher authorities" in Dow that remediation measures be undertaken to alleviate the suffering of the gas-affected people.

In a symbolic gesture, the activists of the International Campaign for Justice in Bhopal delivered to Dow Chemical more than 4,000 brooms collected from Bhopal, Chennai and

Trivandrum, and told the company to clean up Bhopal and address all pending liabilities without further delay. Dow Chemical, which acquired Union Carbide in February 2001, has so far refused to address Carbide's pending liabilities in Bhopal.

Last October, gas-affected women issued an international appeal, asking people to collect used *jhadoos* (brooms) to use against Dow. "In India, the broomstick is a woman's weapon. Being struck by a *jhadoo* is the ultimate insult, and we feel that Dow deserves this treatment. By delivering *jhadoos* to Dow, we are telling the company to clean up its mess in Bhopal or be prepared to be swept out of the planet," said Champa Devi Shukla, a gas victim and leader of a woman's trade union of gas-affected women workers. "Dow's reluctance to clean up the contamination and take responsibility for the pending liabilities in Bhopal is poisoning people daily and aggravating the sufferings of survivors and their children."

Union Carbide's confidential internal documents released recently (view 'Poison Papers' on www.bhopal.net) reveal that the company knew about the extent and nature of the contamination at the factory. However, it did little to clean up the contamination before handing over the site to the State government.

Hundreds of tonnes of highly toxic waste lies abandoned at the pesticide factory since the multinational fled the country after a poisonous gas leak plant caused the world's worst



PHOTO: WWW.BHOPAL.NET

industrial disaster, killing 8,000 people within hours. More than 20,000 people have died till date. Even today, at least one person dies every day from gas-exposure related diseases and 150,000 are in urgent need of medical attention. The poisons have seeped into the groundwater and a recent study by the Fact Finding Mission, New Delhi, has found high levels of mercury in the milk of mothers residing around the factory.

POLLUTION UPDATE

IPT hearing on alleged human rights violation by chemical industries in Cuddalore

An Indian People's Tribunal (IPT) team, headed by former Judge of the Madras High Court, J. Kanakraj, visited the coastal villages near the Small Industries Promotion Corporation of Tamil Nadu (SIPCOT) area on November 16-17, 2002. The team studied the issue of alleged human rights violation and pollution caused by the chemical industries.

The IPT team consisting of V. Vasanthi Devi, former Vice-Chancellor of the Manonmaniam Sundaranar University, Thiruvannamalai; Dr M.P. Kannabiran, former health officer of Chennai Municipal Corporation; and Dr Amit Nair, New Delhi-based toxicologist, met the residents of

"Although the containment action by ICJB members on November 25 was brutally thwarted by the Bhopal Police, we will continue targetting Dow with reminders of its ongoing crimes against the victims of the world's worst disaster until Dow cleans up the contamination in Bhopal and addresses all pending issues including provision of medical and economic rehabilitation," said Von Hernandez, spokesperson for

Panchayankuppam, Thaikal, Eechan-kadu and Sonahanchavadi and heard their cases.

Members of the self-help groups, fishermen, representatives of local bodies, functionaries of the 'Oor committees' and factory workers apprised the teams of the problems they have faced due to contamination of water, air and land for the past 15 years.

The fisherfolk were the worst affected people in the area – their revenue had fallen owing to poor catches as the Uppanar, which had been their lifeline for generations, had been polluted. People were not prepared to buy fish from the river knowing that the fish might be contaminated with toxic substances released in the river.

Residents of the area also complained about various skin diseases and disorders, which they had developed after contact with the river water. They were also of the view that the chemical industries exploited employment "to hoodwink the public". Most industries have been accused of not providing safe working conditions for workers. The villagers complained about the illegal release of the effluents in the river and also pointed out that the seepage of the same has now polluted the groundwater to the effect that the water from the wells and bore-wells that are around 200 feet deep contain contaminated water.

On the second day, the Tribunal held a separate hearing with the government officials and representatives of the industries, and questioned them regarding the allegations of the local residents of the SIPCOT zone.

The Tribunal is expected to come out with a comprehensive report on human rights violations and the pollution of the area soon.

Shweta Narain

Greenpeace International.

"Over the coming months, Dow will have to face up to growing public opposition to its irresponsible behaviour in India," said Vinod Shetty, Mumbai convener for the National Campaign for Justice in Bhopal. "Already, the people of Mumbai have been alerted about their unfriendly neighbour. We'll continue to build public opinion against Dow Chemical until it owns up to its liabilities in Bhopal."

Shweta Narain

PESTICIDES UPDATE

Community Action for Pesticide Elimination (CAPE) – a coalition to fight pesticides

A national meeting on pesticides and health held in Bangalore from October 8-10, 2002, resulted in the formation of a coalition called Community Action for Pesticide Elimination (CAPE). The coalition is a recently formed collective of pesticide-impacted communities, public interest doctors, scientists and voluntary groups.

CAPE has been launched with the objectives of

- ▲ waging a national campaign geared towards stopping and reversing the entry into India of agro-chemical MNCs and their new poisons;
- ▲ eliminating the use and sale of synthetic pesticides; and
- ▲ promoting organic agriculture.

CAPE will also aim at identifying health problems, assessing the damage and communicating the issues to the policy-makers. The coalition intends to look into the gaps in the earlier struggles against pesticides, to address the lacunae and build up a collective movement.

More than 50 people from nine states in India and from the Philippines and Malaysia attended the three-day meeting.

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Papiya Sarkar



RESOURCES

REPORTS

Need for a comprehensive investigation of the pollution caused by leather industries in Kanpur

Eco friends, a Kanpur-based NGO, along with IIT Kanpur, conducted extensive tests to determine hazardous substances in the effluents from tanneries in Kanpur, which is of major concern to the health and environment of the people of the city. A report titled *Pollution from Leather Industries As We Know and Pollution from Leather Industries We Do Not Know: Urgent Need for a Comprehensive Investigation at Kanpur* has been released by Eco Friends.

Treated sewage effluents from three treatment plants are being utilised either for irrigation on farmlands in the Jajmau region of Kanpur or are discharged into the river Ganga. However, at Jajmau the post-treated waste water is causing damage to the river ecology and affecting the health of the people.

Extensive tests were conducted on raw tannery effluents, raw Kanpur city sewage, post-treated water (used either for irrigation or routed to river Ganga) and post-treated tannery effluents being generated from the Combined Effluent Treatment Plant (CETP) at Unnao. The analysis revealed alarming levels of arsenic, cadmium, mercury, nickel and chrome VI in the samples. It was usually assumed that the only hazardous chemical being discharged by the leather industries is chromium, a known carcinogen. The latest findings have discovered even more lethal toxicants in the wastestream, holding the leather industries accountable for the pollution. Of great concern is the fact that not only are these toxic substances found in raw tannery waste water generated at the Kanpur and Unnao industrial areas but

they have also been detected in the raw Kanpur city sewage reaching the main pumping station in Jajmau. This indicates that the domestic sewage line is also being fed with toxic industrial effluents. Again, similar toxicants are also present in the post-treated sewage irrigation water channel used for farmland irrigation in the Jajmau area. High levels of arsenic, mercury, nickel and chrome VI have also been detected in post-treated tannery effluents at CETP Unnao. The CETP at Unnao caters exclusively to the effluent from big tanneries and has no inflow of domestic sewage. This clearly indicates that tanneries are responsible for the presence of these toxicants. The present pollution abatement mechanisms fail to address the threats that the tanneries have posed to the public health and environment of the people of Kanpur. There is need for an integrated pollution control approach in Kanpur. The pollution control authorities should also devise an effective and verifiable monitoring mechanism.

Papiya Sarkar

Financing polluting Technology: World Bank Group



The Global Alliance for Incinerator Alternatives (GAIA) has recently released a report on how the World Bank Group (WBG), as a lender and as a policy advisory group, is promoting various toxic technologies including incineration as development projects. The report, titled *Bankrolling Polluting Technology: The World Bank Group and Incineration*, outlines the various problems concerning incineration. India is a host to six incineration projects funded by the WBG. These projects do

not imply a single incineration project but multiples of the same. The proposed incineration projects cater to a wide range of waste streams, which includes industrial and manufacturing waste streams (59%), health care wastes (29%), and general municipal waste (12%). There are 12 projects that recommend the incineration of pesticide residues, of which six are specifically for the incineration of organochlorines. This is of great concern due to the fact that burning of these compounds may lead to the release of Persistent Organic Pollutants that pose a great risk to environment and health.

Incineration technologies are a non-viable choice for southern countries due to a lack of technical ability to test releases; absence of monitoring mechanisms; secure landfills for ash disposal; and budget uncertainties that can affect maintenance.

The report narrates how incineration has come under attack from various countries that include Japan, which is the primary shareholder of World Bank and India, which is the primary borrower of the World Bank Group.

The promotion of such toxic technologies can further lead to the failure of the WBG's own policies that talk about categorisation of projects under their environmental viability regime. For example, all projects that propose construction and purchase of incinerators; projects that aim at greater waste generation which can be an aid to these operating incinerators; and also the promotion of these technologies as green options for waste disposal through various publications.

The report also details WBG funded incineration projects compiled from various public information documents, summaries of project information and environmental review summaries posted on websites.

The report makes recommendations to the World Bank regarding instituting an operational policy that will prohibit projects that include waste incineration; stopping the dissemination of publications that endorse incineration; instituting an operational policy that prohibits all projects which are not compliant with the Stockholm Convention regardless of the Convention's legal status within the host country and prohibit projects that employ produce, or release POPs; instituting a bank procedure that uses the precautionary principle to evaluate all projects and

avoid funding projects that may cause harm to human health or the environment; instituting a bank procedure that requires industrial projects to implement clean production which prioritises the minimisation of hazards and waste, rather than waste disposal.

It also makes recommendations to the borrowing countries, World Bank member countries, and to civil society around the world. The closing pages detail various resources available on alternatives to incineration and clean production.

Ruchita Khurana



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 tldelhi@vsnl.com

FACT FILE

Children vulnerable to pesticides

It is not just agricultural workers who are at risk of exposure to pesticides; their kith and kin are also at risk. This has been proven by a recent study done by a team of investigators from the University of Washington and the Fred Hutchinson Cancer Research Center on 218 farm workers' households in the Yakima valley area of Washington State.

The analysis was done to detect the presence of six organophosphorus pesticides, namely azinphosmethyl, malathion, methyl parathion, phosmer, chlorpyrifos and diazinon which are



sprayed over apple, pear and cherry grown in that area.

The dust samples collected from 156 homes confirmed the presence of 85 per cent of azinphosmethyl. The high levels of this pesticide are due to its heavy use during 1999. The urine samples from the adult farmers and their children aged between 2-6 years were also analysed for the presence of dialkylphosphate (DAP) compounds – produced by the metabolism of most organophosphate pesticides. Eighty-eight per cent children and 92 per cent adults tested positive for the presence of DAP compounds.

Similar measurements were also collected in 2002, dividing the communities into intervention or control status. The data confirms that the take-home pathway is exposing the children of agricultural workers to health risks from the extremely toxic pesticide compounds.

*Sources: Environmental Health Perspectives, December 2002
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