

Public hearings in Gujarat: a complete farce

Amidst the ongoing genocide in Gujarat, public hearings for 19 industries took place on 27 March – all in a single day – entailing that the affected communities do not get to attend the hearings. The hearings, which involved 15 units manufacturing synthetic dyes in the Vatva Industrial estate, near Ahmedabad, were about industries that had been operating without any environmental clearance, and with a higher installed capacity than permitted by the Gujarat State Pollution Control Board (GPCB) and the Ministry of Environment and Forests (MoEF).

In effect, the public hearings were only for post-facto regularisation. This is taking place in connivance with the GPCB.

All efforts by the Paryavarán Suraksha Samiti, a Gujarat-based NGO, to seek GPCB's fair and just intervention failed in spite of repeated

representations. The Centre for Social Justice, another NGO, had filed an application in the Ahmedabad High Court against the hearings being held on a single day. The court in its wisdom did not even entertain the plea!

The affected people and environmental groups met the Chairman and Member Secretary of the Pollution Control Board but were asked to express their grievances before the Public Hearing Committee. The Public Hearing Committee, however, refused to entertain the issue under the specious plea that it did not have any powers. While the government agencies keep passing the buck to each other, the communities continue to bear the brunt of toxic pollution from illegal industries that are mushrooming all over Gujarat.

*(Inputs from
Paryavarán Suraksha Samiti)*



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Matters of convention

Towards the World Summit on Sustainable Development

The sustainable development movement – from the 1972 Stockholm Conference up till the 2002 Johannesburg Summit – has taken cognisance of the adverse effects of modern economics on our ecological space. The movement has increased its understanding of the link between the ecological space and development.

The World Commission on Environment and Development (Brundtland Commission) of Geneva, in October 1984, concluded that environmental policy is usually accorded secondary status and is considered long after the harmful decisions have already been taken.

Environment – a low priority

In India, the secondary status accorded to global environmental negotiations is a well-known fact.

At the Environment Ministers' Meet in Colombia on the Road to the World Summit on Sustainable Development, experts had informed the United Nations Environment Programme (UNEP) of their concern that many poorer nations did not have adequate safeguards or emergency response systems in place to deal with chemical spills or accidents of the kind that occurred in Bhopal. According to the UNEP, the number

of chemicals in commercial use have increased dramatically, with an estimated 80,000 being introduced over the last 50 years.

Before the World Summit on Sustainable Development, 2002, the Indian environment community is keen to see India signing and ratifying four key international treaties. The treaties, if ratified, hold great promise for protecting public health, wildlife and the environment from the threat of persistent organic pollutants (POPs) and other toxic chemicals.

The four treaties are:

- ▲ the Stockholm POPs Convention;
- ▲ the Rotterdam Convention on Prior Informed Consent;
- ▲ the Basel Convention on trans-boundary movement of hazardous wastes, together with its 1995 Ban on OECD to non-OECD waste transfers; and
- ▲ the 1996 Protocol to the London Convention on Ocean Dumping.

India is yet to sign the Stockholm Convention, though in a meeting organised by the Confederation of India Industries, Resource Futures International, Canada and the World Bank on 6-7 March, 2002, the Union Environment Minister, Mr T.R. Baalu, announced India's intention to sign the POPs treaty.

Indian industry would have us be-

lieve that India, being a tropical country, has greater assimilative capacity for POPs and therefore POPs pose no problem. The argument does not hold water in the face of a growing body of scientific evidence not only from temperate countries, but also countries with similar climatic conditions as India, showing high levels of POPs in humans and wildlife.

In fact, three recent scientific studies published in India in 2001, show the presence of high levels of dioxins, furans and DDT in human milk, meat, butter, and Gangetic dolphins.¹

Limiting chemical harm



The Stockholm Convention calls for an outright ban and destruction of some of the world's most dangerous chemicals. The treaty is designed to eliminate, or severely restrict, the production and use of 12 POPs (with provisions to include more in the future); ensure environmentally sound management and chemical transformation of POP waste; and prevent the emergence of new chemicals with POP-like characteristics. The 'toxic 12' include the pesticides aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene, the industrial chemicals polychlorinated biphenyls (PCBs), hexachlorobenzene, which is also a pesticide, and finally the combustion by-products, dioxins and furans.

Restricting movement of harmful chemicals



The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, alerts governments about chemicals that are banned or severely restricted, by which countries, and for what reasons. The cornerstone of the treaty – Prior Informed Consent – enables parties to review basic health and environmental data on specified chemicals and to permit or refuse any incoming shipments of those chemicals.



Preventing dumping of chemicals



The Basel Convention and the Basel Ban Amendment emerged from the public outcry following international scandals in the late 1980s involving hazardous waste trafficking and dumping. The Basel Convention aims to control the trans-boundary movement of hazardous wastes, promote their environmentally sound management and disposal, and prevent illegal waste trafficking. The 1995 Ban Amendment significantly strengthens the convention by barring the export of hazardous wastes from member states of the OECD countries to non-OECD countries. It is important that nations ratify each of these instruments.

Protecting the seas



The 1996 Protocol to the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matters aims at controlling all sources of marine pollution. The London Convention focuses primarily on the dumping at sea of wastes generated on land. It includes a blacklist of substances for which dumping is prohibited and a grey-list for which dumping may be authorised by permit. The 1996 Protocol, when in force, will replace the outmoded 1972 Convention. The new text embraces strong precautionary language in its general obligations; urges parties to consider the polluter-pays principle; and calls for waste prevention audits to carefully assess alternatives to dumping.

1. a. Kalantze, O. I, et al: *The global distribution of PCBs and organochlorine pesticides in Butte.*
- b. Kumar, K.S, et al: *Polychlorinated dibenzo-p-dioxins, dibenzofurans, and polychlorinated biphenyls in human tissues, meat, fish and wildlife samples from India.*
- c. Kunisue, Tatsuya, et al: *Dioxin-related compounds in human breast milk collected from Asian developing countries.*



Last month, the Basel Action Network (an international waste trade watchdog organisation), and the Silicon Valley Toxics Coalition, exposed the murky side of the modern day wonder – computers.

In a report titled 'Exporting Harm: The High-tech Trashing of Asia' the groups revealed the booming trade in obsolete electronic wastes (e-waste) from the developed world to Asian countries where environmental controls and regulations are either lax or non-existent.

An alarming rise in e-waste

Due to the high obsolescence rate of computers and the limited domestic recycling infrastructure in the US and the European countries, packing off used systems to developing countries has become the easiest option. Estimates reveal that by the year 2005, one computer will become obsolete for every new one put on the market in the US. In California alone, over \$1.2 billion will be spent on e-waste disposal over the next five years. European studies estimate that the volume of e-waste is increasing by 3 to 5 per cent per year, which is almost three times faster than the growth of the municipal waste stream.

It is not only the quantity of the e-waste that is alarming, but the toxic ingredients contained in them, which pose serious threat to occupational and environmental health. It contains over 1,000 different substances, many of which are toxic. But to date, indus-

try, government and the consumers have not given any thought to this looming problem.

e-waste encompasses a broad spectrum of electronic devices ranging from large household appliances such as refrigerators, air conditioners, hand-held cellular phones, personal stereos, and consumer electronics to computers.

The toxic fallout

A preliminary investigation by Toxics Link reveals the highly dangerous conditions of recycling of e-waste in India. Manual handling, open burning, acid baths and waste dumping are a common sight at any recycling facility, dangerously exposing workers and residents around these facilities to toxic chemicals, polluting land, water and air.

Backyard recyclers use crude methods to retrieve trace amounts of useful metals without protecting themselves from the toxic materials contained in them. For example, the



Toxins in e-waste

Lead: The negative effects of lead are well established and recognized. It causes damage to the central and peripheral nervous systems, blood systems, kidney and reproductive system in humans.

Cadmium: Cadmium compounds are toxic with a possible risk of irreversible effects on human health, and accumulate in the human body, particularly the kidneys.

Mercury: Mercury can cause damage to various organs including the brain and kidneys, as well as the foetus. Most importantly, the developing foetus is highly susceptible through maternal exposure to mercury.

Hexavalent Chromium/Chromium VI: It easily passes through cell membranes and is then absorbed, producing various toxic effects in contaminated cells. Chromium VI can cause damage to DNA and is highly toxic in the environment.

Plastics including PVC: Plastics make up 13.8 pounds of an average computer. The largest volume of plastics (26%) used in electronics has been polyvinylchloride (PVC). Dioxin can be formed when PVC is burned within a certain temperature range.

Brominated Flame Retardants (BFRs): BFRs are used in the plastic housings of electronic equipment and in circuit boards to prevent flammability. Some BFRs have been targeted for phase out by the European Parliament between the years of 2003 and 2006.

Barium: Studies have shown that short-term exposure to barium has caused brain swelling, muscle weakness, damage to the heart, liver and spleen. There is still a lack of data on the effects of chronic barium exposures to humans.

Beryllium: Beryllium has recently been classified as a human carcinogen as exposure to it can cause lung cancer. The primary health concern is inhalation of beryllium dust, fumes or mist. Workers who are constantly exposed to beryllium, even in small amounts, and who become sensitised to it can develop what is known as Chronic Beryllium Disease (berylliosis), a disease which primarily affects the lungs. Exposure to beryllium also causes a form of skin disease that is characterised by poor wound healing and wart-like bumps.

Toners: One of the ubiquitous computer peripheral scraps and post-consumer e-waste is the plastic printer cartridge containing black and colour toners. The main ingredient of the black toner is a pigment commonly called, carbon black – the general term used to describe the commercial powder form of carbon. Inhalation is the primary exposure pathway, and acute exposure may lead to respiratory tract irritation.

Phosphor and Additives: The phosphor coating contains heavy metals, such as cadmium, and other rare earth metals, for example, zinc, vanadium, etc as additives. These metals and their compounds are very toxic. This is a serious hazard posed for those who dismantle CRTs by hand.



circuit board recycling process involves either open burning of the circuit boards or using acid stripping. Both processes begin with the removal of the chips, condensers and capacitors from the boards. Very often, child labour is employed to separate the parts from the circuit boards utilising wire cutters and pliers.

After some pin straightening, some of the IC chips and components are sold for re-use. The items that are not worthy of re-use go directly to the outdoor fires to reduce them to metals. Following the chip extraction and burning, the boards themselves are burned in an open pit to retrieve the rest of the solder and copper. After burning, the ashes are floated in water to remove lighter ash.

Another process involves using nitric acid on the circuit boards to remove gold and platinum. Both methods—open burning and acid baths—are fraught with occupational health risks as well as risks to the people living in the surrounding area.

In Delhi the e-waste trade is a thriving business. Trading areas in Delhi include Mandaoli, Sadar Bazar, Kanti Nagar Extension, Old Seelampur and Turkman Gate.

"Exporting Harm: The High-tech Trashing of Asia" can be downloaded from www.ban.org or www.svtc.org

The Asbestos industry – fibres of subterfuge

Environmental activists, trade unionists, medical and occupational health professionals from India, Australia, Brazil, the USA, Malaysia, Italy and South Korea, along with the Indian medical community represented by the Indian Association of Occupational Health (IAOH), called for a ban on all activities related to the mining, manufacture, use and trade of asbestos in India.

In a symposium on Banning Asbestos, organised by the IAOH in April, experts from around the world deliberated on the dangers posed to human health by asbestos and demanded an immediate ban on all activities related to asbestos. An Asbestos Resolution supported by the participants was passed at the symposium.

The world over, 36 countries have already banned asbestos and even the World Trade Organisation has passed a judgement against it, upholding France's decision to ban import of asbestos from Canada. In the US, asbestos usage is down to 2 per cent of the peak level used in 1974 due to public health concerns, regulations and liabilities involved. Alarmed at the continuing asbestos usage in India, its dangerous consequences and the minimal public knowledge about it, Ban Asbestos Network of India (BANI) has been launched to raise public awareness about the hazards of asbestos.

In India, asbestos is used in the manufacture of pressure and non-pressure pipes used for water supply, sewage and drainage, packing material, brake linings and jointing used in automobiles, heavy equipment, nuclear power plants and thermal power plants, among others. The current demand for asbestos in India is to the tune of 100,000 metric tonnes, one-fifth of which is mined domestically. The asbestos rich states, Andhra Pradesh, Rajasthan and Bihar account for 20,000 tonnes yearly. In addition, raw asbestos worth Rs 40 to 50 crore is imported every year.

Resolution on Asbestos

Date: April 13, 2002, New Delhi

Taking cognisance of the inhuman, barbaric and pathetic conditions of the asbestos mining operations in India in general and Rajasthan in particular, and also taking note of the European Union's asbestos ban, Collegium Ramazzini's¹ call for an international ban on asbestos states that "all forms of asbestos are an occupational and environmental hazard of a catastrophic proportion. The profound tragedy of the asbestos epidemic is that all illnesses and deaths related to asbestos are entirely preventable".

The International Programme on Chemical Safety (IPCS), Environment Health Criteria 203, concludes and recommends protection of human health from exposure to chrysotile asbestos because it poses increased risks for asbestosis, lung cancer and mesothelioma. "No threshold has been identified for carcinogenic risks." It adds, where safer substitute materials for chrysotile asbestos are available, they should be considered for use. IPCS specifically discourages the use of chrysotile asbestos in construction materials, the area of use for 90 per cent of all asbestos in India.

We at the *International Symposium on Health Effects of Hazardous Materials—Phasing Out the Most Hazardous One—Asbestos* on 13 April, 2002, in New Delhi, are alarmed by the misinformation brought to our notice by a report of the Asbestos Information Centre (AIC), calling chrysotile asbestos, a magic mineral – it will have us believe that the pattern of asbestos is entirely different in India, hence most of the disease patterns seen in the West bear no relevance to the Indian experience.

Contrary to these misleading facts, Dr Qamar Rahman, head of the toxicology division of Industrial Toxicology Research Centre (ITRC), Lucknow, one of the most renowned toxicologists of India, revealed shocking data on cellular and genetic mutations and the plight of the asbestos mine workers, especially women. She informed the scientific and medical community present here about the occurrences of asbestos-related diseases that includes cases where women have died after six to seven years of the first exposure as was reported by the government doctors.

We, the delegates present here, publicly denounce the wanton greed and callousness of the asbestos industry and the inhuman conditions prevailing in the asbestos mines and mills. The industry has started harassing even the occupational and medical professionals who have disclosed the gravity of the hazards of asbestos, particularly Dr Tushaar Kant Joshi, a well-known occupational health expert, simply for leading medical efforts to bring asbestos hazards under control in India and for having a public discussion on the justification for banning asbestos. As medical and public health professionals, we support Dr Joshi and agree that efforts to ban the use of asbestos in India should be given serious and immediate attention by the government of India. We urge the government to take immediate action to correct the horrendous conditions prevailing at the asbestos mines and to close milling and mining activities immediately.

In short, we

- 1) Urge the Indian government to immediately close the mining and milling of asbestos in India and provide medical follow-up and compensation to the affected workers;
- 2) Support the ban on manufacture and use of asbestos and asbestos products as recommended by Collegium Ramazzini and the International Commission on Occupational Health;
- 3) Urge the ratification of the International Labour Organization (ILO) Convention 162 on Asbestos by the Government of India, and
- 4) Take strong objection to efforts by the asbestos industry to harass medical and public health professionals.

The resolution has been adopted by the Asbestos Symposium organised by the Indian Association of Occupational Health (IAOH).

¹The Collegium Ramazzini is an international academic society that examines critical issues in occupational and environmental medicine. The Collegium is dedicated to the prevention of disease and the promotion of health. The Collegium derives its name from Bernardino Ramazzini, the father of occupational medicine, a professor of medicine of the Universities of Modena and Padua in the late 1600s and the early 1700s. The Collegium is comprised of 180 physicians and scientists from 30 countries, each of whom is elected to membership. The Collegium is independent of commercial interests.



BANI

Mission Statement

ASBESTOS is a confirmed human carcinogen which has brought havoc to the life of millions of people around the world, therefore its continuing use needs to be eliminated. As a common voice of anti-asbestos alliance, Ban Asbestos Network of India (BANI), undertakes to raise public awareness and bring about action against asbestos hazards. BANI, as a network of individuals inclusive of organisations of civil society, unions and environmental and health professionals, recognise the urgency of a complete and immediate ban on usage of asbestos.

Objectives

▲ Ban

1. To work towards the immediate ban on the import, use, manufacture and trading of all forms of asbestos and asbestos products.

▲ Workers and Consumers

2. To help victims claim fair compensation and find alternative employment with a just transition to alternative livelihoods, as well as to provide guidance to individuals in need of legal advice so that it is recognised that their conditions are the consequences of asbestos exposure.
3. Replacement of all existing and new asbestos products with safer substitutes.

▲ Education and Awareness

4. Gather various social organisations on a common platform for a complete ban of asbestos.
5. Educate people on all aspects of hazardous effects of asbestos.
6. Ask for the medical training and education on diagnosis and treatment of asbestos-related diseases in curricula of medical schools.

▲ Database

7. The creation of a publicly accessible mesothelioma registry.

▲ Industry

8. Polluters' responsibility and polluter-pays principle to apply in clean-up and compensation, with full transparency to all relevant information, particularly regarding regulatory implementation.

▲ Government

9. Standards for the demolition and waste disposal process of replacement of asbestos products should be strengthened, enforced and operators rigorously licensed.
10. Ask government to implement measures to ensure strict compliance to existing laws, and protection of workers and their families, as well as consumers and the general public.
11. Ask the government to create and provide infrastructure to expand medical and public efforts.

For more information on BANI, contact Toxics Link

HAZWASTE UPDATE

Hazardous waste incineration standards drafted by CPCB

The Central Pollution Control Board (CPCB) recently drafted standards for composite hazardous waste incinerators and called an expert group meeting to discuss the standards. There are 116 hazardous waste incinerators already operating in the country without any standards.

With the construction of the new Treatment Storage and Disposal Facilities (TSDF) in Maharashtra, Andhra Pradesh and Gujarat, the State Pollution Control Boards have been requesting the CPCB to formulate standards. This is currently under way and the second draft has been circulated to members of the expert group.

Workshop on hazardous waste management laws and practices in India

The Law School at Banaras Hindu University (BHU) conducted a workshop on 'Hazardous Waste Management: Laws and Practices in India' as part of its Environmental Law Management Capacity-building project. The Law School at BHU is one of the five nodal centres selected by the Ministry of Environment and Forests for implementing and monitoring this, financed by the World Bank. Six such workshops will be conducted all across the country.



Common hazardous waste management facility for the NCR, Haryana and Uttar Pradesh

To implement the recommendation made by the high-powered committee for safe and environment-friendly management of hazardous waste generated in the country, the CPCB initiated a meeting to discuss a Common Hazardous Waste Management Facility for the National Capital Region (NCR), Haryana and Uttar Pradesh. The main objective is to promote the idea of private-sector participation in the area on the lines of the TSDF, developed by CRISIL in Talaja, Maharashtra.

The meeting was attended by all the stakeholders – Haryana Pollution Control Board, Uttar Pradesh Pollution Control Board, Delhi Pollution Control Committee, National Productivity Council, NCR Planning Board, Central Pollution Control Board, Ministry of Environment and Forests, and representatives of CRISIL.

The TSDF developed at Talaja, 70 km from Mumbai, serves the needs of the industrial areas of Talaja, Kalyan-Bhiwandi, Dombivli, Ambarnath, Badlapur, Patalganga and Tarapur.

The TSDF has a landfill capacity of 120,000 tonnes and an incineration capacity of 40,000 tonnes. It was built at a cost of Rs 45 crore (excluding the cost of land, 100 acres of which was provided free of cost by MIDC). For such a facility, the running cost is about Rs 750 per tonne of landfill, and Rs 5,000-15,000 per tonne of waste incinerated (depending upon the calorific value of the waste).

WTE UPDATE

Proposed WTE plant technology under examination

A query raised by Toxics Link regarding the polluting nature of the Australian firm Energy Developments Ltd's (EDL) proposed waste-to-electricity plant in Gazipur, East Delhi, has resulted in some positive action on this front at official levels. According to Ramesh Negi, Joint Commissioner, Municipal Corporation of Delhi (MCD), following a response from the Lt Governor of New Delhi, the MCD sent the query to the CPCBs as well as to Sunand Sharma, Managing Director, EDL India, in February 2002. The response from EDL was not found to be convincing enough. Currently, CPCB is examining the technology, while the MCD maintains that the project has been put on hold.

INCINERATOR UPDATE

Intervention application filed against incinerator order

An intervention application filed by Srishti, a Delhi-based NGO, in the High Court of Punjab and Haryana at Chandigarh (Civil Writ Petition No: 7203 of 2001) was admitted on 24 April, 2002. This was done in reaction to a news item that appeared in the Chandigarh edition of *The Tribune* newspaper dated 10 January, 2002 regarding a Court order of 3 January, 2002. The order had directed the states of Punjab and Haryana to install incinerators in all towns and cities having a population of more than 5 lakhs. The case is scheduled for hearing on 30 May, 2002.

Waste incinerators are considered obsolete technologies in developed countries due to the pollution caused by them and their high operating costs, and are being gradually phased out. Even the European Union Incineration Directive seeks to do away with incinerators.

PESTICIDES UPDATE

The curse of endosulfan

The Directorate of Agriculture, Kerala, on 22 March, 2002, passed an order lifting the ban on the use of endosulfan in Kerala, while continuing the ban on its aerial spraying of endosulfan. The decision was taken after the submission of the report by the expert committee formed by the Kerala Government under the chairmanship of Dr A. Achuthan, an environmentalist, with the Director of Agriculture as Convener, to study and report the effect of endosulfan on humans and on environmental pollution. The report also suggested a regional freeze on the use of endosulfan for five years and urged the government to provide medical care to the victims.

The State Government had earlier suspended the use of endosulfan until further orders on 25 August, 2001, owing to the repeated reporting of health and environment concerns. The Plantation Corporation of Kerala (PCK) had been aeri ally spraying endosulfan for two and half decades, two to three times a year. Their obstinacy to continue this ritual was cut short by the District Collector, Kasaragod, who prohibited the aerial spraying of endosulfan under section 133 of the Criminal Procedure Code. Meanwhile, the Pesticides Manufac-

Salient features of the Order

- ▲ Aerial spraying of all crops in Kerala prohibited.
- ▲ Pesticide holiday of five years in Perla division of the Plantation Corporation of Kerala (PCK).
- ▲ PCK to undertake ground spraying only, as per recommendations of Kerala Agricultural University.
- ▲ Cashew Research Unit to be set up to evolve appropriate plant protection strategies, assess the impact of the application or non-application of pesticides and identify appropriate cashew varieties and technologies in the region.
- ▲ Prohibition on use of endosulfan for all crops and plantations, issued earlier, to be withdrawn.

Order passed by the Directorate of Agriculture, Kerala

The Government of Kerala had received representations regarding the adverse effects of pollution caused by the spraying of endosulfan in the cashew plantations of the Plantation Corporation of Kerala (PCK) in Kasaragod District. The PCK, a state public-sector undertaking, has been resorting to aerial spraying of the insecticide endosulfan for about two decades two to three times a year in their 4,696 hectares of cashew plantations in Kasaragod District to control the infestation of tea-mosquito bug. In the above circumstances, keeping in view health and environmental concerns and pending a detailed examination of the effects of endosulfan on human health and the environment, the Government suspended the use of endosulfan for all crops and plantations in Kerala until further orders on 25.08.01, vide orders read as second paper. The District Collector, Kasaragod has prohibited the aerial spraying of endosulfan under section 133 of the Criminal Procedure Code. In the meanwhile, the Pesticides Manufacturers and Formulators Association of India filed OP/29371/01 before the Hon'ble High Court of Kerala against the ban imposed by the State Government. The High Court has directed the Government to take a decision in the matter without delay, if the report of the expert committee set up to examine the issue has been received. The High Court has also directed the State Government to take note of Section 27 of the Insecticides Act while arriving at a decision.

The Government, as per the G.O. read as first paper, constituted a committee under the chairmanship of Dr A. Achuthan, an environmentalist, with the Director of Agriculture as Convenor, to study and report the effect of endosulfan on the human population and on environmental pollution. The composition of the committee was as under:

1. Dr A. Achuthan, environmentalist; Chairman
2. Sri L. Sundaresan, Senior Additional Director (Director of Agriculture in Charge); Convenor
3. Dr K.P. Aravindan, Associate Professor of Pathology, Medical College, Kozhikode; Member
4. Dr Abdul Salam, Associate Professor and Head of Cashew Research Station, Madakkathara, Kerala Agricultural University; Member
5. Dr Samuel Mathew, Associate Professor, Kerala Agricultural University; Member

The expert committee submitted its report as per the reference read as fourth paper. At the same time, the Kerala Agricultural University has studied the environmental effect of the aerial spraying of endosulfan and submitted a report as per reference read as third paper.

The Government has examined the report of the expert committee constituted under the Chairmanship of Dr Achuthan and the report of the Kerala Agricultural

University. The Government has also taken into account the recommendations of the various expert committees set up by the Government of India to examine issues relating to the use of endosulfan as an insecticide. The provisions of the Insecticide Act, 1968 have also been considered. Accordingly, the Government is pleased to order as follows:

- a) Aerial spraying of endosulfan will continue to be prohibited for all crops in Kerala considering the difficulties in a hearing to conditions for safe aerial application of the insecticide in Kerala terrain.
- b) Perla Division of PCK (covering Padre and Muliya villages of Kasaragod District) will observe a pesticide holiday for a period of five years.
- c) PCK will undertake only ground-based spraying of pesticides in their cashew plantation after following due safeguards for prevention of contamination of water bodies in accordance with the package of practices recommended by Kerala Agricultural University.
- d) All spraying operations of PCK in its cashew plantations will be carried out under the direct technical supervision of a joint Kerala Agricultural University – PCK Expert Group. This group will provide technical guidance regarding plant protection operations in PCK cashew estates, recommend the pesticides to be used in accordance with the recommended package of practices, prescribe the modalities of application and monitor the spraying operations conducted by the PCK. It will ensure that health safeguards for workers engaged in application and for nearby inhabitants are strictly complied with. PCK will provide necessary logistic support for the Expert Group to carry out these functions.
- e) A small Cashew Research Unit will be set up by the Kerala Agricultural University in the PCK plantation at Perla utilising the infrastructure available with PCK. The mandate of the Unit would be to evolve appropriate plant protection strategies, assess the impact of the application or non-application of pesticides and identify appropriate cashew varieties and technologies in the region. The Government will provide assistance of Rs 3 lakh for the operation of this Unit from the existing cashew development scheme of the State Government.
- f) In the light of the above decisions, the prohibition on the use of endosulfan for all crops and plantations in Kerala, issued vide order read as second paper will be withdrawn.

By order of the Governor,
Sd/- C.S. Srinivasan, Secretary (Agriculture),
Directorate of Agriculture, Thiruvananthapuram
Date: 22/03/02

REPORTS

GEAC provides clearance for commercialisation of transgenic cotton

The Genetic Engineering Approval Committee (GEAC) has cleared the commercialisation of the first transgenic cotton variety. India is now one of 16 countries in which commercial plantation of genetically engineered crops is permitted. The Indian transgenic cotton hybrid has been developed by the Maharashtra Hybrid Seeds Co Ltd (Mahyco), using a technology obtained from the US multinational, Monsanto Inc.

GEAC is the statutory body set up by the Ministry of Environment and Forests for approval of large-scale use of genetically engineered organisms (GEOs). The approval comes with various conditions imposed on the private company for safeguarding the farmers and the environment.

Bt cotton has a foreign gene *Bacillus thuringiensis*, engineered into its genome or genes. Bt toxin targets only the bollworms with almost no effect on any other pests like thrips and aphids (a variety of sucking pests that attack cotton crops). This implies that while the number of sprays

against bollworm would come down, there would be no reduction in sprays against the others.

According to a press note by Gene Campaign, a Delhi-based NGO, "Bt technology was never developed for tropical Indian conditions where pest intensity and pest variety is high and where land holdings are small, leading to a form that will create more problems than just the development of resistance".

Farmer groups, and a group promoting organic farming, have demanded that the government reverse its decision to permit commercialisation of transgenic cotton, threatening to take it to court on a contempt charge. Vandana Shiva from the Navdanya Biodiversity Conservation Programme says that there are no tests of the impact of this transgenic cotton in the food chain. She says that the dramatic shift in agriculture and seed policy flowing from the decision was effected without any discussion inside Parliament or outside it. She also mentioned that comparisons with China are unwarranted as "China is not the home of cotton diversity, unlike India".

Sources:

Times of India, Mumbai, 5 April, 2002;
Frontline, national, 26 April, 2002



turers and Formulators Association of India filed a petition in the High Court of Kerala against the ban imposed by the State Government. The High Court directed the government to take a decision in the matter without delay, also directing it to take note of Section 27 of the Insecticides Act while arriving at a decision.

The government examined the report of the expert committee constituted under the Chairmanship of Dr Achuthan and the report of the Kerala Agricultural University, also taking into account the recommendations of the various expert committees set up by the Government of India to examine issues related to the use of endosulfan. The provisions of the Insecticide Act, 1968, have also been considered.

While the committee had recommended a comprehensive study into the pesticide poisoning issue before concluding that endosulfan was causing the health problems in Kasaragod, the government has lifted the State-wide ban, guilefully misinterpreting the Committee report and violating the precautionary principles.

According to Thanal, an NGO campaigning to ban endosulfan in Kerala, "while this order to ban aerial spraying of endosulfan has given some relief to the villagers of Kasaragod, this insecticide cannot be used in the kind of conditions prevailing in Kerala and otherwise generally in India. It still needs to be banned from agricultural use in the country."

The complete text of the order is reproduced on the page along side.

Inputs from Thanal at
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Fourth shipment of WTC scrap arrives in Gujarat

The fourth shipment of scrap from the destroyed World Trade Centers (WTC) in New York landed at the Kutch port in Gujarat. The cargo that was unloaded at the New Mundra Port, is jointly owned by the state government and the Adani group. The ship contained 18,641 metric tonnes of scrap. Environmental groups in India and the US have been, for the past couple of months, raising the issue of decontaminating the steel scrap from WTC wreckage before their shipment to other countries.

The scrap from WTC is feared to be contaminated with mercury, asbestos, polychlorinated biphenyls, dioxins and other chemicals which were present in the building when it went up in flames.

Source: Indian Express, New Delhi, 17 April, 2002



Chemplast to make toxic PVC plastic in Tamil Nadu

Polyvinyl chloride (PVC) is considered the most dangerous of all plastics. A lot can be said about the hazards and toxicity associated with PVC, however, simply put, it is called the poison plastic. Right from manufacture, through use to its final disposal, PVC affects human health and the environment. Worldwide, countries are adopting various restrictions and legislations to phase out PVC in modern-day applications.

Given PVC's harmful effects, it is worrisome that India is now receiving technology to make this deadly plastic. A case in point is the Chemplast (a Chennai-based company) plant which is to be set up in the SIPCOT industrial estate in Cuddalore, Tamil Nadu, to manufacture PVC resins.



Why 'NO' to the Chemplast PVC plant

Chemplast has chosen SIPCOT, which has been the seat of industrial activity in Tamil Nadu and historically has been a large source of toxic pollution. It hosts pharmaceuticals, petrochemicals, dyes and various other chemical industries whose effluents pollute the nearby Pennar and whose sludge remains unattended in the campus. Given the complex's location on the coast, local communities and fisherfolk have time and again raised their voices against marine pollution.

Now, such a toxic hotspot is going to receive more toxic material in the form of Vinyl Chloride Monomer

(VCM), the raw material used in PVC manufacture. The International Agency for Research on Cancer has classified VCM as a human carcinogen, based upon evidence of carcinogenicity in both humans and animals. It has been shown to have an association with tumours of the lung, liver and brain.

Epidemiological studies have shown the families and children of workers in PVC plants to have reproductive and developmental defects. To make matters worse, waste from the facility is going to be disposed of in an incinerator.

Further, PVC manufacturing has been proven to release dioxins, which count among the Persistent Organic Pollutants (POPs) and the most potent man-made human carcinogens. While India has just agreed to sign the International Treaty to eliminate POPs, such POP-generating facilities are being set up, which will negate any gains made by signing the treaty.

Recently, the Supreme Court High Powered Committee on Hazardous Wastes has recommended that new industries not be permitted to employ technologies or processes that intentionally, or unintentionally, generate endocrine disrupting chemicals or persistent organic pollutants.

*For more information, mail
Rajesh Rangarajan at
tlchennai@vsnl.net*

*Objection letters on the project
can be sent to*

The Chairperson,
Tamil Nadu Pollution Control Board,
76, Anna Salai, Guindy,
Chennai 600 032;
Fax: 044-2201198;
E-mail: chairperson-
tnpcb@lycos.com

or to

The District Collector,
Cuddalore District,
Cuddalore,
TamilNadu;
Fax: 04142-330555

AWARDS

Norma Alvares receives Padma Shri



Adv. Norma Alvares, a well-known environment lawyer and animal welfare activist in Goa, was awarded the Padma Shri by the President of India on 26 January, 2002. She was also conferred the Yashadami Puraskar for her work as an environmentalist by the Government of Goa, on Women's Day, 2002.

A former lecturer in History and Politics at Sophia College, Mumbai, Norma obtained a degree in law and has been practising public interest environment law since 1990. She is also a leading animal rights activist and the President and Founder Trustee of People for Animals, which has established several animal shelters in Goa to help authorities control stray dog populations and provide shelter to animals injured in accidents.

In her recent public interest case against Nylon 6,6, the company was charged with three cases filed by environment groups against its plant. Norma represented the local Panchayats before the Director of Panchayats and defended the Panchayat decision during the appeal. The cases were decided by a people's verdict, with the local Panchayat rejecting permission to construct the factory, after which, the three PILs were allowed to be withdrawn by the High Court.

For the past decade, Norma has argued free of cost more than 80 PIL cases in the Bombay High Court on environment, women's rights, animal welfare and other social issues for Goa's NGOs and citizen's groups.

Waste crusaders

Don't waste money on waste. 'Make money from waste', is Exnora International's catchy slogan. Exnora has been working on solid waste management issues with a focus on people's public participation towards a clean and zero-waste community.

Recently, Exnora awarded some of its volunteers who had taken up the work of zero-waste management in their communities and are now successfully carrying forward the campaign. Suresh Bhandari and Vellore Srinivasan are among these volunteers. They took up this campaign as a motivation and

awareness programme, which later grew with the help of the community and their liaising with municipal corporations.

Suresh Bhandari has been providing training on building compost bins in parks, schools

and dairy farms. His work with the principle of total transparency and team-building has helped him meet all challenges towards the zero-waste programme.

Mr Srinivasan started out with the task of de-silting the water harvesting sites at the Kalamburon Kotai hill. He then campaigned for zero-waste management in the Vellore fish market. Despite a big market with 105 shops, the market is unimaginably clean, with eight workers cleaning the market every three hours.

The waste water is not let into the open public drains. Instead, every two hours it is transported on a tricycle along with highly perishable garbage to the compost yard. In addition Mr Srinivasan has been able to get the municipality to put up a new compost shed and reduce the pressure on the existing shed.

'Model area - All about zero waste management', an enviro-city series by Nirmall, Exnora International



RESOURCES

NAGARA NYRMALYA

A short film on progressive solid waste management

Nagara Nyrmalya is an interesting depiction of a project undertaken in Basavanagudi two years ago by the Environment Support Group (ESG) in Bangalore. The film portrays the solid waste management initiative undertaken by ESG in collaboration with the human health and well-being division of UNEP, as a pilot project.

The project aims at developing capacities of *pourakarmikas* (solid waste workers also called *safai karamcharis*) to evolve a community-level municipal waste management strategy. The 11-minute film, directed by G. S. Bhaskar of Grassroots Media, is a first of its kind showing the Bangalore Mahanagara Palika appealing to citizens to segregate wastes, and help manage the 3,000 tonne-a-day of solid waste generated efficiently and in an eco-friendly manner. The film shows Santhimmi, a *pourakarmika*, essayed by writer-journalist Pratibha Nandakumar exhorting residents such as Ramesh (Aravind) and Vyshali Kasaravalli to segregate their solid waste.



In another programme ESG has published a flip chart – *What a Waste*, that outlines simple ways to tackle the huge waste problem. It informs viewers about the benefits of segregation, the contribution of *pourakarmikas* to help them establish a rapport with the residents of the ward which they have to keep clean.

For details contact: Leo Saldanha, Environment Support Group, S-3, Rajashree Apartments, 18/57, 1st Main Road, SRK Gardens, Jayanagar, Bannerghatta Road, Bangalore 560 041. Tel/fax: +91-(0)80-6341977, 6531339; E-mail: esg@bgl.vsnl.net.in

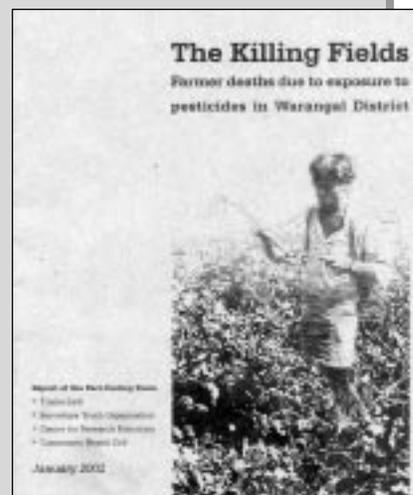
THE KILLING FIELDS

Farmer deaths due to exposure to pesticides in Warangal District, January 2002

A report of the fact-finding team constituted by Toxics Link, Sarvodaya Youth Organisation, Centre for Resource Education, and Community Health Cell

Warangal district in Andhra Pradesh has emerged as one of the main cotton growing areas in the country, which also means that the state consumes very large quantities of pesticides.

Recently a number of farmer deaths occurred in Warangal district during application of pesticides on cotton crops. To ascertain the cause and circumstances under which the deaths occurred, a fact finding team visited the villages and published a report which brought forth a number of facts surrounding these incidents.





Global Anti Incinerator Alliance/Global Alliance for Incineration Alternatives (GAIA) has called for a Global Day of Action against Waste Incineration on 17 June, 2002. Groups and communities around the world will be marking this important occasion of protest and solidarity with activities that will match their needs and capabilities. The success of this global project will depend on local initiatives, planned and implemented by GAIA member and non-member groups. We hope that more groups will join the Global Day of Action and send a truly global message to the incinerator industry that their polluting technology is unwanted. GAIA is preparing an Action Kit for the occasion, which will be available on the GAIA website.

To help and inspire other groups in preparing for their activities,

If you have suggestions or require information, please contact:

Toxics Link – Delhi

H2 Jungpura Extension
New Delhi 110 014

Tel: +91-(0)11-4328006/0711

E-mail: tldelhi@vsnl.com

Website: www.toxicslink.org

Toxics Link – Mumbai

4th floor CVOD Jain School
84, Samuel Street
Dongri, Mumbai 400 009

Tel: +91-(0)22-3759657/
3752050

E-mail: tmumbai@vsnl.com

Toxics Link – Chennai

8, Fourth Street
Venkateswara Nagar
Adyar, Chennai 600 020

Tel: +91-(0)44-4914358
E-mail: tlchennai@vsnl.net

please inform GAIA if you plan to take part in the Global Day of Action and what specific activities you plan to carry out.

For more information, contact:

Manny C. Calonzo, GAIA Secretariat;

E-mail: one-gaia@surfshop.net.ph;

Website: www.no-burn.org



E-toxic listserve

Toxics Link has started 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

Chronic solvent exposure cripples sperm

Men who are regularly exposed to moderate to high levels of organic solvents on the job may increase their chances of having a low action sperm count, or reduced sperm motility. This was reported by Canadian and British researchers in the October 2001 issue of *Occupational and Environmental Medicine*. They found that men with the highest solvent exposure, such as printers, painters and dry cleaners had low number of active sperm, and contributes to male infertility.

Organic solvents are chemicals found in paints, adhesives and cleaning agents, which on inhalation or absorption through the skin tend to invade the part of the male reproductive system where sperms are developed.

Researchers concluded that moderate occupational exposure to organic solvents was associated with a doubled risk of having low numbers of active sperm while high solvent

exposure was associated with triple the likelihood of a low active sperm count, implying that the exposure to high levels of solvents may interfere with normal sperm formation.

Source: EHP, 110(3), Mar 2002

Non-stick toxicant

Fluorinated polymers that are used in non-stick cookware coatings like Teflon emit persistent and possibly harmful compounds when heated, reported Canadian researchers. The chemicals emitted include trace amounts of ozone-destroying chlorofluorocarbons, perfluorocarboxylates (which accumulate in animal tissue), and trifluoroacetic acid. According to researcher Scott Mabury, the long-term environmental impacts of trifluoroacetic acid are not yet known but high water-borne concentrations of the compound can be phytotoxic and take decades to degrade.

Source: EHP, 109(10), Oct 2001