



# green governance

## newsletter

Vol. IV, ISSUE--I

THE WEST BENGAL POLLUTION CONTROL BOARD

MAY 2003, Kolkata

### From the Chairman's desk

In response to an order by the Supreme Court of India, the Central Pollution Control Board identified four cities, namely, Ahmedabad, Kanpur, Kolkata and Pune as being as polluted or more polluted than Delhi and requested the Governments concerned to prepare an action plan to reduce the level of pollution. The Government of West Bengal and the WBPCB have accordingly prepared an action plan and initiated action to put it into effect. .

Let us take a look at the status of the environment in Kolkata. The annual average of Respirable Particulate Matter (RPM) is higher than the national standard. While the RPM level remains below the national standard for 7 months a year, the unhealthy period is from November to March — December and January being the worst months. NO<sub>x</sub> level also shoots up beyond the standard in November and December, though the annual average is still below the national standard. The level of benzene, a known carcinogen was monitored in the winter of 2000-01 at five traffic intersections in Kolkata at a respirable height. The figures were way above the WHO limits.

What factors are responsible for this state of affairs? Particulate matter is generated mainly from combustion of fossil fuels in industrial operations and automobiles. The WBPCB has estimated that industrial sources contribute 48 per cent of the total pollution load, automobiles 50 per cent and the remaining sources 2 per cent.

Thanks to the joint effort by the industry and WBPCB, most large and medium industrial units are now alive to their responsibility in creating a cleaner environment and generally conform to the prescribed emission norms. However, small-scale industries have not yet come into full compliance. Boilers operating in various types of small industries, e.g., rubber, dyeing & bleaching, paper & board, small pharmaceuticals; ceramic kilns clustered in Belgharia,

iron foundries and rolling mills in Howrah significantly contribute to particulate pollution. The Board has taken up a project with the assistance of Indo-Canadian Environment Facility to provide assistance to the small-scale industries to replace coal-fired boilers and ceramic kilns by gas fired ones. The switch over to cleaner fuel would significantly diminish the pollution caused by the industries. The plans to reduce air pollution by the transport sector are also ready for implementation.

The gravity of the situation was underlined by a study carried out by researchers of the Chittaranjan National Cancer Institute, which was reported in an earlier issue of this journal. The group had found that the health status of the residents of Kolkata was much worse than the control group in the Sunderbans and linked the condition of the Kolkata residents to the ambient air pollution. Their recent study compares the health status of people highly exposed to vehicular pollution, e.g., traffic policemen, street hawkers, taxi drivers, automobile service station workers and petrol pump workers, with that of a less exposed group of individuals with office jobs. They have found that 89 per cent of the highly exposed group showed symptoms of respiratory illnesses as against 68 per cent in the less exposed group. Lung function was impaired in 90 per cent of the former group as against 44 per cent of the less exposed group. The damage was not, however, restricted to lungs. The higher exposure to vehicular pollution resulted in an enhancement of the risk of cardiovascular disease, alteration of immune defense and neurobehavioural problems like transient losses of memory and vision or speech problems.

In the next issue of this journal we will report the progress achieved in the implementation of the action plan to reduce air pollution in the Kolkata Metropolitan Area.

## Plastic carry bags: danger in debris

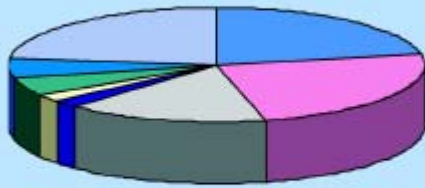
*Plastic has become a ubiquitous component of our lives but is deleterious to the environment once discarded.*

When Alexander Parkes introduced the first man made plastics in 1882, little did he realise how this invention of polymer chemistry would change the lives of people. The versatility of plastics has led to its use in almost everything we use today, from telephone parts to car parts, from drinking

water bottles to the refrigerators they get stored in. Also from the computer we use at office to the television we watch when we get back home, plastics prevail. The use of plastics has grown exponentially over the last fifty years in India, from a meagre 61,000 tonnes in 1960 to 4 million tonnes today.



Plastics: End-use consumption pattern in India



The per capita plastic consumption in India is over 3 kgs per

Source: Indian Plastic Federation

### Plastics: Its uses

This all-pervasive use of plastics stems from the benefits it has to offer — lightness, flexibility, durability and water-resistance — to name a few. Of the wide range of plastic polymers, thermoplastics and thermosetting plastics are the most popular. The thermoplastics, which are mostly used are polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC), polystyrene (PS), nylon, polyethylene terephthalate (PET) while thermosetting plastics include polyurethane (PU), phenol formaldehyde resins, amino resins, epoxy resins etc. Several industrial sectors are highly dependent on plastics, namely, packaging, pipes, cables, electronics, automobiles and aviation, medical including population control systems, agriculture and water management, appliances and household products, and many others.

### Plastic Perils

Plastic carry-bags, however, can be an ‘urban nightmare’. Shoppers throw them away carelessly the moment they take out the stuff they had used them to carry. Discarded plastics, in general, pose a threat to human health and environment. Being non-biodegradable by nature, plastics remain intact for hundreds of years without rotting or transforming into compost.

Littering of plastics damages the environment. Plastics waste find their way into various surface water bodies, hindering the natural re-aeration process. Plastics choke municipal sewer lines and storm water drains and clog the bar-screens of sew-

age treatment plants. Spread on the ground, they interfere with various agricultural operations and also prevent natural recharge of underground water. Plastic-filled litter in public places contributes to visual pollution. Consuming food, which has been wrapped in coloured plastic has lethal effects on health. These coloured bags contain harmful toxic metals like chromium and copper that cause allergies. Confusing them with real food, animals consume plastics that cause internal injury, intestinal blockage and starvation. Municipalities routinely report the death of cows and other animals from ingesting plastic bags.

In India, plastics account to 4 percent volume of the total of one-lakh tonnes of solid waste generated everyday. Thus in terms of quantity, the safe plastic disposal is a matter of great importance. The municipal authorities presently have two options for plastic disposal, incineration and landfill, neither of which is wholly satisfactory. Plastics remain fairly inert in the landfills or large open pits in which they are dumped. Besides, the large volume to mass ratio of plastics aggravates the already-receding landfill space. On the other hand, open and uncontrolled burning possibly has even graver consequences as it produces environmental hazards far beyond the burning site. The hazard comes in the form of unintended by-products, the persistent organic pollutants, commonly called the POPs. Incineration of plastics especially, chlorinated ones like PVC and PU releases harmful dioxin, which is a potent human carcinogen. However, various studies reveal that controlled incineration is effective as it recovers



Cows eating plastic waste: if they only knew how fatal this could be!



maximum energy from fuel and ensures complete breakdown of the toxic substances. Non-governmental organisations like Greenpeace contest this. They argue that dioxins are released as part of incinerator stack gases, bottom ash, fly ash and in the effluents of pollution control devices. In a developing country like ours, incineration is in any case not practicable due to the high cost involved.



*Crushed plastic waste piled on the bank of the river*

### Tackling the ravage by recycling

Thus recycling is perhaps the only satisfactory solution to plastic waste disposal. In the conventional process of recycling, the discarded plastic materials are chopped, washed and converted into flakes or pellets that are transformed into new plastic products. Various countries in the West use plastic pellets for

#### Plastic Lumber

*Cupboards, tables, marine docks and even railroad ties made out of plastic and not wood? A brief look at what plastic lumber has to offer explains its advantages over traditional hardwood. Plastic lumber, made of recycled plastic in countries like USA, Canada and Australia, is a high-quality product that is both an environment-friendly and an economically viable alternative to traditional hardwood lumber. Plastic lumber contains no hazardous chemicals and cannot leak or contaminate the soil. Unlike wood, it does not crack, split, splinter, erode or weather and is resistant to gas, oil, salt, sunlight, chemicals and insects. Engineers estimate that the workable life of plastic lumber is between 15 to 20 years in underwater marine applications and over 50 years in construction applications such as for decks and houses. Made of 100 per cent recycled plastic, plastic lumber can be further recycled. Thus using plastic lumber would save not only trees but also the environment from the consequences of discarded plastic.*

producing materials like plastic lumber, which has several *advantages*.

In developing countries, discarded plastic bags and other items are picked up by rag pickers from the streets and sold to the plastic industry. Recycling provides livelihood to rag pickers, waste collectors, waste dealers and recycling enterprises. However, thin plastic carry bags cause a serious environmental problem. While consumers unthinkingly litter them, waste pickers do not have any incentive to collect these bags because to earn a reasonable amount of money, they have to collect a huge quantity. On the other hand, they often pick plastic items from bio-medical waste such as used plastic syringes and other medical appliances like plastic bottles, catheters, blood-bags etc, most of which are clandestinely recycled.

### The Regulatory Response

To combat these problems, the Ministry of Environment and Forests, Government of India issued the 'Recycled Plastics Manufacture and Usage Rules, 1999' under the Environment (Protection) Act, 1986. The Rules, issued on September 2, 1999, were framed with the dual objective of containing environmental problems caused by the disposal of carry bags and reducing the threat to human health caused by carrying ready-to-eat foodstuff in bags made from recycled material. The salient features of the Rules are:

- No carry bags having less than 20-micron (20- $\mu$  equivalent to 0.2 mm) thickness, can be manufactured, stored, sold and/or used.
- Carry bags made from recycled plastic would have to be coloured, specially marked and should not be used for carrying ready-to-eat foodstuff.
- The recycling procedure should strictly follow the Bureau of Indian Standards specifications, and,
- Carry bags manufactured from virgin granules should either be transparent or white.

In view of certain shortcomings of these Rules, the MoEF has drafted a set of amended rules that would prohibit the manufacture, sale



and use of carry bags below the size of 8" × 12" (20 cm × 30 cm). The bigger plastic bags because of their higher cost, would automatically be used less by the consumers as they would have to pay for it, and also draw the ragpickers to retrieve them from garbage as these would fetch a higher price.



*Ragpickers: picking plastic from waste*

### Rule-making in West Bengal

The West Bengal Pollution Control Board, in exercise of the powers conferred by section 33A of the Water (Prevention and Control of Pollution) Act, 1974 and by section 31A of the Air (Prevention and Control of Pollution) Act, 1981 introduced a set of rules for the ecologically sensitive areas of the state. The Rules impose a blanket ban on the use, sale and manufacture of plastic carry bags in certain areas of the state with effect from September 15, 2001, namely,

- Entire Sundarban area,
- Coastal Regulation Zone areas like Digha, Sankarpur, Frazerganj, Sagar, Bakkhali etc,
- Hill areas of Darjeeling district, and
- Entire forest area of West Bengal.

### Enforcement of the Rules

The West Bengal Pollution Control Board has conducted a series of raids in units manufacturing plastic carry-bags as well as wholesalers' premises and shops and establishments using these bags. Penal action has so far been taken against 228 units. The Board has directed 54 units to close down for storing, manufacturing or using plastic carry

bags below 20- $\mu$  thickness. Besides, bank guarantees have been imposed on 75 other units with the condition that should they again violate the Rules, the units would be closed and the bank guarantees forfeited. Moreover, 93 units have been let off after they furnished an undertaking in stamp paper that they would comply with the statutory provisions. The proceedings on six other units have been dropped as the units had complied with the legal standards. The raids are continuing.

### Time to make the right choice

No law can miraculously solve this problem unless people shed their habit of misusing plastics or throwing them. To reduce the burden of discarded plastics, there is an urgent need for increased public awareness as people are responsible for the pollution caused by plastics. The excessive use of plastic carry bags can be easily curbed by encouraging alternatives. While no single substance is a perfect substitute, people in the past conveniently used cotton, jute or bags, which were durable, reusable and biodegradable. A few do's would help to curb the use of plastic carry-bags considerably:

- ☞ Take a cloth or jute bag or even a durable re-usable plastic bag to the market to carry home groceries, vegetables, fish or meat.
- ☞ Choose refillable containers like glass. These could be reused for food/soft drinks storage.
- ☞ Reduce packaging and whenever possible, buy in bulk. About 52 per cent of the plastics used go into packaging. Less use of plastics in packaging would minimise waste considerably.
- ☞ Use recycled paper or jute packaging. This would lessen the burden on the environment. Avoid single-use, disposable packaging.
- ☞ Bin the bags. Plastic carry bags if disposed of properly in bins would minimise visual pollution and facilitate recycling.

These steps require little time and effort and yet can work wonders towards protecting our environment. Thus, to combat the problem of discarded plastic, practice the 3 R's: REDUCE, RE-USE and RECYCLE. ■



## Board welcomes new Chairman and Member Secretary

Shri HIRAK GHOSH, IAS, Principal Secretary, Department of Environment, Government of West Bengal was appointed the Chief Executive Officer of the West Bengal Pollution Control Board on June 18, 2002. He took over the chairmanship of the Board on November 8, 2002 from Shri Manabendra Mukherjee, the Hon'ble Minister-in-charge, Environment and Information Technology, Govt. of West Bengal.

Shri Ghosh has held posts in the State and the Central Government as well as the International Labour Office at its headquarters in Geneva and in Kathmandu. He has experience in various subjects including working environment, industrial safety

and health. As Joint Secretary in the Ministry of Labour, he represented the Government of India in the Governing Body of the ILO and in the ILO's Committee on the formulation of the Chemical Safety Convention. He was the National Director of the ILO's project on Major Industrial Hazards. He participated in the 12<sup>th</sup> and the 13<sup>th</sup> World Congress on Occupational Safety held in Hamburg and New Delhi respectively.

Shri K. S. Ramasubban, IAS relinquished the charge as the Chief Executive Officer of the Board on June 17, 2002. The Board acknowledges the leadership of Shri Ramasubban during his tenure as the Member

Secretary and later as the Chief Executive Officer of the Board.

Shri Ravi Kant, IAS, who had previously served as the Special Secretary, West Bengal Health Systems Development Project, Department of Health & Family Welfare, Government of West Bengal, joined the Board on June 4, 2002 as the Member Secretary. He is a civil engineer from the IIT, Roorkee. He completed his Masters degree in Economics from the University of Manchester, UK, after he had served as District Magistrate, Howrah.

The Board also welcomes Shri Sultan Singh, IPS, appointed as the Additional Director General of Police (Pollution Control).

## Book release by Chief Minister on World Environment Day



Chief Minister releases book on World Environment Day, 2002

Two environment related books of general interest were released by Shri Buddhadeb Bhattacharjee, the Hon'ble Chief Minister of West Bengal on the occasion of the World Environment Day on June 5, 2002 at Paribesh Bhawan in Kolkata. The Hon'ble Minister-in-Charge, Environment and Information Technology, Government of West Bengal, Shri Manabendra Mukherjee was also present at the function. These books, published by the West Bengal Pollution Control Board and the Department of Environment, Government of West Bengal are titled:

- ❑ *Health Effects of Air Pollution — A Study on Kolkata, and,*
- ❑ *Biodiversity Strategy and Action Plan for West Bengal.*

The first one is an outcome of a five-year-long investigation on the impact of air pollution on the health of the population of Kolkata. The study done by the Chittaranjan National Cancer Institute has revealed that people in the city suffer much more from respiratory disorders than the rural population on account of their exposure to a high level of air pollution in the city. The second book illustrates the rich biodiversity of our state and proposes an action plan for preserving it.

Speaking on the occasion, the Chief Minister stressed the unique biodiversity of the Sundarbans and indicated the initiatives taken by the State Government for the preservation of this ecologically sensitive zone. The Chief Minister expressed his deep concern on the encroachment of the East Kolkata Wetlands in the name of urbanization and said that a new legislation would be made to deal sternly with the problem.



## Sit & Draw competition for children on World Environment

The West Bengal Pollution Control Board arranged a 'Sit & Draw' competition for children of different age groups at the Netaji Indoor Stadium in Kolkata on the occasion of the World Environment Day, 2002. More than 700 children, including large numbers from far-flung districts of the state, participated in the programme. Shri Manabendra Mukherjee, Minister for Environment & Information Technology, Government of West Bengal distributed prizes to 21 children of various age groups, who had been successful in the similar



*Environment Minister addressing children during sit & draw competition*

competition held in the previous year. The Board acknowledges the cooperation of Sahara India Pariwar for sponsoring the event and

M/s Berger Paints India Limited for publicising the matter through newspaper insertions.

## Financial assistance project for pollution control launched

Shri Buddhadeb Bhattacharjee, Chief Minister, West Bengal formally launched the India-Canada Environment Facility (ICEF)-WBPCB joint project on "Pollution Prevention and Waste Minimisation for small-scale industrial units in Kolkata Metropolitan Area" in the presence of Shri Manabendra Mukherjee, Minister-in-Charge, Departments of Environment and Information Technology on the World Environment Day, 2002. He also inaugurated the web page ([www.wbpcb.gov.in/icef](http://www.wbpcb.gov.in/icef)), covering all relevant information on the project.

The project would provide financial assistance to the extent of 50 per cent of the cost of conversion of coal fired boilers used in

various small scale industries in the Kolkata Corporation Area and ceramic kilns in the Kolkata Metropolitan area, to oil or gas fired ones. The total approved project cost is Rs 16.49 crores, out of which the ICEF would contribute Rs 4.80 crores, the WBPCB Rs 4.18 crores, the remaining being met by the owner. The successful implementation of this project will significantly diminish the particulate emission load of the Kolkata air. Speaking on the occasion, Shri Ujjwal Chaudhuri, Project Director, ICEF, lauded the Board for taking up this innovative project and assured cooperation in the successful implementation of the project.

## Project Management Plan Meeting of ICEF project

A meeting of the Project Management Plan of the India-Canada Environment Facility (ICEF) Project (see above) was held in Paribesh Bhawan on 21<sup>st</sup> and 22<sup>nd</sup> May 2002. The representatives from the rubber, dyeing, bleaching, ceramic and other industries including the office bearers of various organisations attended the meeting. Dr Sudhangshu Sinha, Senior Project Officer, ICEF, New Delhi was present in the meeting on behalf of the project authority.

The procedure for accessing financial assistance provided under the reimbursement project was also explained.

Two other important events of the ICEF took place during the year. On September 4, 2002 the

first Steering Committee Meeting on 'Pollution Prevention and waste minimisation of small-scale industrial units in Kolkata Metropolis Area' of the ICEF Project was held in Paribesh Bhawan. On December 31, 2002, five industrial units were given funds in this first funding-disbursement function held at the Bengal Chemicals' premises. In both these occasions, Shri Manabendra Mukherjee, Hon'ble Minister-in-Charge, Environment and Information Technology, Government of West Bengal, Shri Hirak Ghosh, Principal Secretary, Department of Environment and Chairman, WBPCB, Shri Ravi Kant, Member Secretary, WBPCB and other officers of the Board were present.



## Consent for Diesel Generator sets for non-industrial

The West Bengal Pollution Control Board has decided that all diesel generator sets having a capacity 15 KVA and above, used for non-industrial purposes, i.e., those used in residential buildings, commercial buildings, office complexes, cinema halls, banks, educational institutions etc, should obtain a 'Consent to Establish' and a 'Consent to Operate' from the Board. This decision was taken in the 120<sup>th</sup> meeting of the Board held on August 20, 2001. While a specific

cell of the Board looks after the consent administration for the non-industrial diesel generator sets operating in Kolkata, the various regional offices deal with it in the other districts of the state. Separate application forms for 'Consent to Establish' and 'Consent to Operate' for Diesel Generator sets are available at a price of Rs. 40/- and Rs. 50/- respectively from 30 designated branches of the United Bank of India located in the state.

### Notifications related to emission and noise standards from stationary generator sets

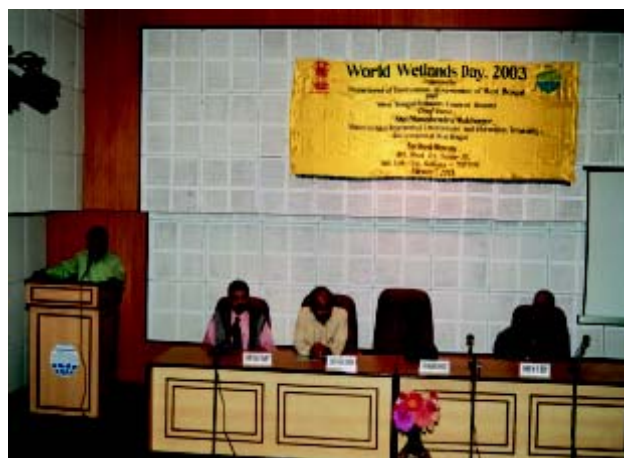
- GSR 7 dated 22.12.1998 : Standards/Guidelines for control of noise pollution from stationary diesel generator sets.
- GSR 371(E) dated 17.05.2002 : Noise limit for generator sets run with diesel
- GSR 742(E) dated 25.09.2000 : Noise limit for generator sets run with petrol or kerosene
- GSR 7, 83(A) dated 22.12.1998 : Noise limits at users end regarding mandatory acoustic enclosure/acoustic treatment of the DG room.
- GSR 7, 83(B) dated 22.12.1998 : Noise limit for diesel generator sets (15 – 500 KVA) at manufacturing end.

For further details on the notifications, visit [www.wbpcb.gov.in](http://www.wbpcb.gov.in)

## World Wetland's Day celebrations

Every year, February 2<sup>nd</sup> is celebrated as the World Wetlands Day. This date marks the signing of the 'Convention on Wetlands' in 1971 at Ramsar, Iran. The Department of Environment, Government of West Bengal and the West Bengal Pollution Control Board (WBPCB) jointly organised this event, held on February 7, 2003 at the auditorium of Paribesh Bhawan. The event was particularly significant, as the East Kolkata wetland, the world's oldest and largest integrated resource recovery system, was declared a Ramsar site in 2002. Shri Manabendra Mukherjee, Hon'ble Minister-in-Charge, Departments of Environment & Information Technology, Government of West Bengal graced the occasion as the Chief Guest. Speaking on the occasion, the Hon'ble Minister encouraged the non-governmental organizations to increase awareness about sustainable freshwater use, and the protection and management of the wetlands in a wise manner. Shri Hirak Ghosh, Principal Secretary,

Department of Environment and Chairman, WBPCB, Shri Ravi Kant, Member Secretary, WBPCB and other officers of the Department and the Board as well as experts from various organizations spoke on the occasion.



Environment Minister addressing the crowd on World Wetlands Day, 2003

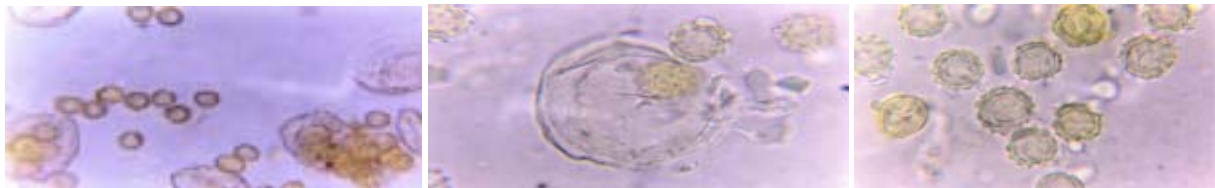


## Green rain falls on Sangrampur!

In the morning of June 7, 2002, the residents of Sangrampur, a small village on the bank of river Ichhamati in Bashirhat in the district of North 24 Parganas of West Bengal experienced of what appeared to be 'green rain'. Again on the next day, the local people witnessed greenish-yellow droplets falling on the rooftops and trees in certain areas of the village. Apprehending that the 'rain' could be harmful, the villagers approached the local administration to investigate into the matter. The West Bengal Pollution Control Board found that the coloured rain droplets were nothing but faeces containing traces of honey excreted by a large swarm of bees flying overhead. Along with the faeces, biological analysis also revealed the presence of pollens from plants like highly toxic weed of Parthenium (*Parthenium hysterophores*), common ground weed (*Tridax procumbens*), coconut (*Cocos nucifera*), mango (*Mangifera indica*) and common grass (*Cynodon dactylon*).

Similar incidents have been reported in other parts of the world from time to time, notably in Cambodia. In India also, an occurrence of an unusual yellow rain of biological origin was reported in 2001 in some villages in the southern districts of Kottayam and Idukki in Kerala.

The scientists of WBPCB, working in close association with some non-governmental organisations (NGOs) having experience in bee rearing, discovered a beehive in close proximity to the site where green rain had occurred. The leaves in the shrubs beneath the beehives were found to be littered with similar bee faeces, which on analysis showed the presence of different kinds of pollens. It was suspected that the bees in some of the hives must have been afflicted with 'Nosema', a disease, which caused this unusual excretion. This was evident as some dead bees were found on the rooftop of a residential house, wherefrom the residues of the coloured gluey raindrops had been collected.



*Microscopic view of the pollen grains of Parthenium, common ground weed, coconut, mango and common grass*

### Green rain : in the news

Green and yellow pre-monsoon rains lashing an eastern Indian town have sparked panic among superstitious villagers, but scientist say the phenomenon is nothing but bee droppings. The oddly coloured rain, which began Friday, has sent droves of villagers to Hindu temples to pray for divine mercy on Sangrampur, 50 kilometer east of Calcutta in the state of West Bengal..... However, researchers have concluded the rain is nothing more than excretion from bees that have consumed a cocktail of pollen from mages, coconuts, parthenium and grass.

— ABC News Online, June 12, 2002, [www.abc.net](http://www.abc.net)

A NERVOUS India was last week gripped by fears that it was under attack from chemical weapons. For two days, green rain fell from the sky on the town of Sangrampur, east of Calcutta, spattering clothes and buildings. Villagers rushed to temples to pray, and warnings spread that the rain could be contaminated with toxins or chemical warfare agents. But to everyone's relief, the cause turned out to be altogether more innocent. The villages were being bombed by bees, and they were using excrement.

— New Scientist. Internet edition. June 20, 2002. [www.newscientist.com](http://www.newscientist.com)



## Environmental updates: from the net

### World Summit on Sustainable Development (WSSD) — from Vision to Action

The World Summit on Sustainable Development (WSSD) was held in Johannesburg from 26<sup>th</sup> August to 4<sup>th</sup> September 2002. The Indian delegation to the WSSD was led by Shri TR Baalu, Minister for Environment and Forests and by Shri Yashwant Sinha, Minister for External Affairs. The WSSD has come out with a Plan of Implementation, which is a medium term programme for realizing commitments of International Community in partnership with other stakeholders. In addition, a Political Declaration issued after the Summit brings out the concerns of international community regarding poverty alleviation, access to clean drinking water and sanitation, increasing access to energy and health services, changing the present unsustainable patterns of consumption and production, and management of natural resources.

For further details, view <http://envfor.nic.in/news/julsep02/wssd.html>

### Climate Talks in Delhi - COP 8

The Eighth Session of the Conference of Parties (COP-8) to the United Nations Framework Convention on Climate Change (UNFCCC) met in New Delhi from October 23 to November 1, 2002. Among the outcomes of COP-8 are:

- Adopted the Delhi Ministerial Declaration on Climate Change and Sustainable Development.
- Adopted rules of procedure for the executive board of the Clean Development Mechanism (CDM).
- Completed work on the reporting required of developed countries to assess their compliance under the Kyoto Protocol.
- Adopted guidance to the Global Environment Facility (GEF) for managing two new funds established at COP-7 to assist developing countries.
- Adopted new guidelines for national communications to be submitted by developing countries reporting on their emissions and steps they are taking to meet their commitments under the Framework Convention.
- Requested the Intergovernmental Panel on Climate Change (IPCC) and the Montreal Protocol's Technological and Economic Assessment Panel to conduct a special report on the question of HFCs/PFCs - compounds that have replaced ozone-depleting substances but contribute to climate change.

For further details, view <http://www.pewclimate.org/cop8/summary.cfm>

### India's eleven new Ramsar sites

The Ramsar Bureau is very pleased to announce the designation by the Government of India of 11 new Wetlands of International Importance, bringing the Party's total to 19 Ramsar sites covering 648,507 hectares...

East Calcutta Wetlands. 19/08/02. West Bengal. 12,500 ha. 22°27'N 088°27'E. World-renowned as a model of a multiple use wetland, the site's resource recovery systems, developed by local people have saved the city of Calcutta from the costs of constructing and maintaining wastewater treatment plants. Thus the system is described as "one of the rare examples of environmental protection and development management where a complex ecological process has been adopted by the local farmers for mastering the resource recovery activities." The wetland provides about 150 tons of fresh vegetables daily, as well as some 10,500 tons of table fish per year, the latter providing livelihoods for about 50,000 people directly and as many again indirectly.

For further details, view [http://www.ramsar.org/w.n.india\\_11new.htm](http://www.ramsar.org/w.n.india_11new.htm)



## Notice to manufacturers, godown owners and users of plastic carrybags

*Manufacture, sale and use of plastic carry bags of thickness less than  
20 micron is banned and a punishable offence*

- ☞ In compliance with the Rules notified by the Ministry of Environment & Forests, Government of India, the West Bengal Pollution Control Board has banned the manufacture, sale, distribution and use of plastic carry bags of thickness less than 20 micron in this state with effect from 1st January, 2002.
- ☞ Violation of this order is a punishable offence and the violator may face a fine upto Rs. 1,00,000 and imprisonment up to 5 years.
- ☞ Carrying and storing of ready-to-eat foodstuff in coloured plastic carrybags is banned and is a punishable offence.
- ☞ The buyers, sellers and users of plastic carry bags are requested to consult the following table for clarification and proper implementation of the order. This table shows the minimum weight of a packet containing 50 plastic carry bags (thickness more than 20 micron) of different sizes generally used. Sellers, buyers and user can easily determine whether any plastic carry bag is less than 20 micron in thickness from the table.

Commonly used sizes of plastic carry bags	No. of pieces per packet	Minimum average weight per packet
8" × 10"	50 pcs.	80 grams
9" × 12"	50 pcs.	110 grams
11" × 14"	50 pcs.	160 grams
13" × 16"	50 pcs.	220 grams
16" × 20"	50 pcs.	340 grams
17" × 23"	50 pcs.	430 grams
20" × 26"	50 pcs.	560 grams
24" × 30"	50 pcs.	780 grams
27" × 30"	50 pcs.	900 grams