TOXICS DISPATCH

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FOR PRIVATE CIRCULATION ONLY

Toxics Link
for a toxics-free world

Delhi knows 'No Mercury'

Mercury, a global contaminant has an adverse effect on the human nervous system and other vital organs and is mostly found in healthcare products in its elemental or liquid form. It is used in thermometers, blood pressure devices, esophageal dilators and dental amalgams. Nurses and other medical staff work with mercury-based products on a routine basis and are in danger of inhaling toxic vapour when breakages or leakages occur. It's therefore time people act against this adversarial mercury.

Mercury free alternatives are available for almost all the products. Many countries across the world have shifted to mercury free alternatives and have proper mercury management policies. In India, Toxics Link first took up the issue of 'Mercury in Health Care' in 2004. Through research, the mercury hazard was revealed and various positive movements have taken place in the past five years of campaign.

The city of Delhi woke up to the danger of mercury toxicity after this report, which showed that an average sized hospital, could release, conservatively, around 3 kgs of elemental mercury in the environment in a year. With very conservative estimates, a city like Delhi would be releasing around 51 kgs of mercury each year through dental practices alone. The city's total release would come from hospitals, dental clinics, crematoriums and laboratories. The problem is compounded as mercury generating sources are scattered and non-regulated coupled with a lack of accountability due to no laws and guidelines governing the release of mercury and lack of knowledge on viable alternatives for mercury.

Two things which were needed to bring about a change in the existing scenario in 2004 were— (i) urgent need to bring in policy for a gradual shift from mercury based equipments to safer alternatives and (ii) awareness drive amongst the healthcare institutes, pledging to do away with mercury without any compulsions from the government.

Both changes were institutionalised in Delhi, with the Delhi government and hospitals starting a dialogue on this heavy metal. Some big, private hospitals in Delhi

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The switch from mercury based thermometer to digital thermometer in Delhi hospitals

EDITORIAL

How green is green?

The upcoming Commonwealth Games, has the capital city of New Delhi abuzz with the word 'green'. There is much talk of greening the games. Ministers and citizen's alike are holding meetings to celebrate this. It seems that 'greening' has acquired the proportions of a virtue, and a passport of good behaviour. That is a welcome sign, for previously it was an effort to even bring such a notion to the table. However, is this real, or is this mostly 'greenwash' entailing superficial actions, with no real benefits? Let us see.

Over 100,000 trees have been cut for the games, leaving many streets bare and dusty. Previously soft, water absorbent earth stretches such as in flood drains (which streak through the city), grassy pavements, hedges on central aisles have been replaced by heat emitting concrete, poured mercilessly over the earth to make roads and parking lots. Large tracts of wooded areas, such as the 27.7 acres Siri Fort sports complex (Chartes Correa report to the Supreme Court of India) have been cleared to make stadiums. The riverbed has been converted from a sandy bank to athletes' residences, metro stations, flyover stretches, power stations, bypass roads and barricaded off. Several large populations of people living in shanty towns have been put out of sight on the outskirts of the city. The Delhi Ridge forest, previously a hallowed ground, has now been dug up of the metro lines, and is being surrounded by high walls to prevent illegal entry by any destructive other!

Delhi's waste generation is higher than ever. Urban solid waste exceeds 7000 mt per day and the landfills are choking. As a remedy, the municipality wishes to convert the reserve Ridge forest into a landfill. Less than 70 % of its 60 mt of medical waste is collected or treated properly even as over 17 incinerators continue to pollute the city, all of which are located in Government Hospitals. Hazardous waste to the tune of over 5000 mt per annum continues to be produced from its large number of metal, steel, electroplating and recycling units. Over 12000 mts of e waste is recycled under very hazardous conditions each year, throwing up strong acids, heavy metals, dioxins and furans into the air and water. Now as we have seen recently, city hospitals may be throwing out their radioactive waste in scrap yards, posing a deadly danger to people. Mercury is freely available in chemical markets here, which are a tinderbox anyway. Most of its 17 sewage treatment plants work below capacity, and mix the 'recycled' water back into the untreated drains, only to be dumped into the now dead river Yamuna. The coliform count here exceeds all numbers and even if it is completely cleaned there is no fresh water in it anyway – only sewage.

Meanwhile those who are earning their livelihoods from recycling waste continue to be more marginalized. There is evidence of new exploitations by the companies which have taken over water collection activities through PPP arrangements, as they now wish to 'corner' the large over 10 crore rupee trade as annual trade on plastics and metals. The government cannot decide if such people provide a service to the community or not. It swings between ignoring them, or outrightly banning them. The poor are not welcome in the city. On the other hand, the city has over 50 million vehicles already, and this is a growing number. Car parking takes up more space than the non-existent pedestrian walks, and aggression on the road belays any claims of Indians being of a peace loving nature. While the elite use more than 450 liters of drinking water per day, many cannot avail of even 30 litres. The ground water table is falling rapidly. Even so the sales of bottled water at 10 rupees liter is soaring which is incomparable to the 3 rupees per thousand liters supplied by the Jal Board. Who says the city cannot afford better? The list can go on.

So how 'green' can a Commonwealth Games be? Energy saving and waste collection in a few buildings stadium, seems like a bad joke. Try walking on the grass during the 45 deg C mid day heat, and then hop skip and jump on the burning 'concrete'. Green is not a word to be trivialed with. It takes work to earn that 'badge'.

Ravi Agarwal

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decided to shift from mercury as an outcome of the report. The government started giving out public notices in newspapers to sensitise the healthcare community and within four years there were mercury free hospitals in Delhi.

The Department of Health in Delhi, asked all the healthcare facilities:

- To budget for mercury free alternatives
- Any breakage needs to be managed properly by staff and requisite training needs to be provided to them
- Broken or new instrument requirements (thermometer/ sphygmomanometer) need to be replaced with digital/aneroid products

The department drafted and circulated a written policy to all government hospitals, which asks the hospitals to curb the use of mercury equipment.

The Delhi Pollution Control Committee (DPCC) has been very proactive in addressing this issue, it issued its first public notice, warning the hospitals about the hazards of mercury and its safe management and recycling. In May 2008, in a public notice, it clearly stated that usage of mercury is problematic and the hospitals should initiate steps to stop its use. All hospitals are required to provide a template on its commitment to minimise/eliminate mercury containing waste, and this declaration needs to be signed and placed at prominent locations in the

Delhi Govt Policy on Mercury waste

Objective

To prevent elemental mercury waste from reaching the three waste streams in healthcare and the elimination of mercury containing instrument/equipment in a time bound manner.

Responsibility

Responsibility will rest with the Medical Superintendent/head of the hospital/health care institution.

Salient features

Until such time that the objective of replacing existing mercury based instruments has been achieved, waste would be collected as per the described protocol in this policy.

Steps for replacement

- Any broken thermometer should be replaced by a mercury free one
- Any broken BP instrument should be replaced by a mercury free one
- Precision issues should be discussed with the physicians
- Nurses and nursing orderlies may be trained in dealing with mercury spillage and its proper collection
- Dental departments to ensure a fool-proof collection and storage of mercury-containing waste
- Hospitals should factor the **additional cost in their budgetary** proposal to implement the policy

institute. Moreover, this has to be treated as a condition for seeking authorization. The declaration also asks hospitals to adopt safe mercury handling standard international procedures to collect and store spilt mercury in suitable containers without affecting occupational health or the environment.

All the hospitals who have started some sort of mercury equipment replacement have different experiences to share, but largely everyone feels that once the industry decides to shift there will be no excuses.

Strength of a Mercury Phase out Programme

Delhi mercury phase out pilots the potential of a programme like this and pushes in for certain prerogatives:

C*ommitment:* Phasing out the use of a conventional method (mercury based equipments) is usually difficult and met with resistance. To be successful, commitment of the management is essential.

C*ommunication:* Most hospitals have drafted and circulated a written policy on mercury and included that in the hospital policy. Written correspondence has been sent to the staff to inform them about mercury reduction efforts.

Accountability: In few cases the Infection Control Committee / Senior Medical Administration Officer has been made the overall in-charge of the programme.

Training: Regular training is conducted for staff on mercury spills prevention and management.

Management Perspective

1. **Attitudes:** Most hospitals felt that it was difficult to change the mindset of personnel who were used to traditional mercury-based thermometers.

   On the other hand some hospitals that did extensive research before introducing the equipment were able to handle all apprehensions on accuracy and were able to convince the doctors.

2. **Finances:** Some hospitals felt that the cost of digital thermometers is higher than the mercury equipment. *True, if the only consideration is one time replacement cost from mercury to non-mercury instruments. Studies in few hospitals have shown that the recurring cost with mercury instruments far exceeds this cost difference in addition to the extra environmental and occupational hazard cost which the healthcare system does not even acknowledge at the moment.*

3. **Accuracy:** Most hospitals and clinicians feel comfortable with mercury equipment.

   Physicians are apprehensive about the accuracy of digital equipment. Accurate mercury free products are available, though relatively less readily. Hospitals have to proactively check for accurate products and adopt them.

4. **Calibration:** Some hospitals felt that if calibrated properly the non- mercury products work better.

   To be mercury-free might be a voluntary decision for a few more years, but as environmental laws and quality accreditations become stricter, this will soon be mandated. Thus, it is time for all of us to do some introspection and start changing.

Anu Agarwal

For further details contact: anu@toxicslink.org

FEATURES

Environmental Policy: utility for all?

Rajni, a domestic worker in the Sarita Vihar area of New Delhi trashes around 10 kgs of waste in a week accumulated from each house she works in, in the municipal green open bin right across the end of the lane of the residential colony area. But the concern for Rajni is not the waste collected and disposed in the bin, in fact she feels delighted because the waste garbaged in the bin is burnt every month. All that brings a frown on her face is that her house is right in front of this open bin and the stench from it, together with litter around makes her and her three children feel uncomfortable. She seeks inclusiveness in the model of development, planning and policy for environment, for it seems to her that, probably there could be a solution through participation.

The cloud around environmental policy, programme and procedures is confronted with the need for engagement. What filters is the need for interlinking the bottom-up participatory consultation with top-down planning, mustering the capacity of a wide range of stakeholders to reduce vulnerability of interest, and engagement of the consumers. To say in clear terms, there needs to be a level of consensus between the people who make the decisions and the people for whom these decisions have been taken. The best possible way can be by cleaning the processes and simplifying the roles and responsibilities of the final beneficiaries of a particular environmental planning. In order to sustain large-scale models of environmental planning, the policy makers need to develop a model of livelihood which can be possible largely through capacitating the people concerned and by including this right at the inception of policy making.

From the acumen of a commoner, environmental law instead of it leaves out a lot of everyday concerns that may be resolved if seen in terms of demography or even individualism. Creation of a livelihood model and embedding it within the very sinews of the policy would also help in minimizing, if not totally doing away with, the correlation of environmental degradation with poverty and economic growth, which according to National Environmental Policy 2006 is the key environmental challenge that the country faces.

Some of the suggestions to the policy makers:

Information in the public domain

The National Environment Policy of India builds on the existing policies (e.g. National Forest Policy, 1988; National Conservation Strategy and Policy Statement on Environment and Development, 1992; and the Policy Statement on Abatement of Pollution, 1992; National Agriculture Policy, 2000; National Population Policy, 2000; National Water Policy, 2002 etc). It is intended to be a guide to action: in

regulatory reform; programmes and projects for environmental conservation; review and enactment of legislations by Central, State and Local Government.

Much delineating from the policy intent and guideline is the issue of overuse of resources, pollution control, and use of toxic elements in our everyday lives which is regressive, for the solution lies in the hands of the people not much informed of the subject. What standards have been set, what benefit it holds, what future exists and more such issues on environmental policy need to brought to light to the actual beneficiaries for the issue is about the planet and people. Enhancing scientific information is also needed.

Putting the uncertainties into perspective

The biotechnology sector can be exemplified to highlight the concerns of the consumers. The genetically modified food is easily available and accessible, adding to the 'toxicity' of the world we live in. Anticipating the adversaries and bringing people in the nucleus of a policy on GM food can best serve as a possibility.

Climate concerns, weather risks, uncontrolled deforestation, soil erosion, air and water pollution, poor waste management, sanitation etc can also be exemplified to understand the uncertainties of future Looking at the behaviour, attitude and acceptance of people towards a policy directive will help in cracking the code.

Work on shorter time-scales

Environmental degradation is much in lieu of time and resources. And uncertainties are facts of life. Quite the opposite are the policy directives which are set for a period irrespective of the calamities that would occur, the inhabitant, and other unforeseen that can even be stated. The climate risk management in sectoral planning in the Philippines adopted by the World Bank can act as a pilot here as it presents an application of a policy in sectoral context, for the project is not based on time but on adaptation which rests on time only as a tool.

Guidance and Guidelines

Environmental milieu has accessibility and acceptance as its premise but much in contradiction are the Indian environmental policy directives flooded with guidelines for all consumers of environmental resources. The key here is how one can use the tool of guidance and guidelines in such a way that it should look neither imposed nor ignored.

Setting Priorities

Do the trends require change in work plans? Are specific areas becoming particularly risky? Is there a need to reassess locations and/or quantities of emerging stocks? Should more ties to other actors be built to enhance the flow of scientific information at the local level? Should awareness rising among sectoral agencies and other stakeholders be stepped up? Getting into the nitty gritties of these questions is needed .

Final Implementation

Environmental law includes regulations and cleanup regarding hazardous or chemical materials and the consequences for individuals who violate environment statutes; it provides environmental protection for prospective purchasers of environmentally impacted property; and environmental law policy prohibits the dumping of toxic waste or other hazardous materials in our lakes, rivers, streams and public land. The final implementation of these laws and polices need to be cautioned with the need and understanding of these regulations by the implementers of these laws and its enforcement to and by them, and this forms the last not the least leg of suggestions from the acumen of the people.

In 1970, the National Environmental Policy Act (NEPA), the Environmental Quality Improvement Act and the National Environmental Education Act were passed and the Environmental Protection Agency (EPA) was created. The main objective of these federal acts was to ensure that the environment is protected against both public and private actions that failed to take account of costs or harm inflicted on the eco-system.

The need is to act as catalysts than 'against' these public and private actions as no mandate can resolve the issue of environmental degradation, unless the premise of and for the policy is acknowledged, which is the people. And for those at the receiving end, it's time to think how much one can keep for it may not last for a lifetime!

Anjali Pandey

For further details contact: anjali@toxicslink.org

E-Waste Sustenance in India

Electronics industry is the world's largest and fastest growing industry. Developing countries like India have also been part of this global tech revolution, with information technology and telecom industry being recognized as one of the key engines of economic growth in the country. But the tech revolution, which has changed the way we use Electronic and Electrical equipments (EEE), has a downside as well. As a consequence of this growth, combined with rapidly increasing product obsolescence and changing consumer choices, a new kind of waste has emerged–e-waste or Waste Electrical and Electronic Equipment (WEEE). The issue of e-waste becomes more formidable to handle in developing countries on account of lack of proper infrastructure, poor legislations and awareness among citizens.

India currently generates huge quantities of electronic waste – roughly estimated to be around 4.5 lakh tonnes annually, which is handled across many cities in India mainly in informal sectors exposing poor workers to environment and occupational health risks. The informal sector is very well networked and handles around 95% of e-waste recycled in the country. These operations are well connected- to the supply chain processes of sourcing the raw material to finding market for the recovered materials during post-recycling operations. Most of these operators are neither registered nor authorised and operate in a clandestine manner.The actual processing is carried out in small clusters and behind closed doors often located in the periphery of the city. Some of the processes include open burning of Poly Vinyl Chloride (PVC) wires, acid bath, heating of lead solders, etc. These processes are highly toxic impacting both environment and human health.

Some of the immediate and long-term impacts of the current practices are:

- Release of toxics into air, water and soil;

- Health concerns to the workers involved directly in such operations;
- Low recovery of materials due to rudimentary processes (loss of resources);
- Loss of revenue to state as these recycling centres are not covered under any regulation;
- Disproportionate sharing of profits.

Roadmap for future

In India, E-waste is growing at the rate of around 10-15%, much higher than the global growth rate of 3-5%. With penetration of EEE on increase in the country, despite global economic slowdown, it is going to be a huge challenge in the future. Along with the traditional approaches, India needs to integrate newer principles to tackle this toxic pile.

At the heart of E-waste management will be a regulatory framework, with the key elements as

- Extended Producer Responsibility
- Reduction of hazardous materials in EEE
- Integration of informal sector for proper recycling

Sustainable e-waste management

Currently E-waste, in India, is covered under the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. E-waste is a post consumer, end of life waste and is produced by every user of electrical and electronic equipment, including government, corporate or business houses, institutions and individuals. Unlike hazardous wastes, the generation of e-waste is very dispersed and needs a different kind of system.

The CPCB 'Guidelines for Environmentally Sound Management of e-waste', is only a guidance document outlining some of the requirements for sound management. But the Guidelines are voluntary and not legally binding and clearly suggest the need for a specific Rule.

Legal framework

A key component of E-waste regulatory framework will be **Extended Producer Responsibility (EPR).** EPR imposes accountability over the entire life cycle of products and packaging introduced in the market. In Indian context, integration of Extended Producer Responsibility in the legal framework is very crucial and would trigger off many key aspects.

Reverse Supply Chain: India poses a different challenge compared to other countries. The collection infrastructure required to deal with this will have to be extensive. If private recyclers are left to take care of it, there are likely to be two major challenges. Firstly, the recyclers will limit these collection networks to major generating centers or large cities. Secondly, recyclers may provide such service only for positive value equipments, like computers or mobile phones; resulting in negative value goods like lighting equipments being still processed in informal sector.

Integrating EPR will ensure that all centers and all equipments, irrespective of the financial implications, will be covered. The onus of this would rest with the producers or the brand companies and hence a more effective system can be evolved. The already established reach of the producers, through their sales and dealer network, would be clearly an advantage.

Design for environment (DfE): Rational manufacturers, when made responsible for end-of-life management of their products financially and/or physically, would presumably try to find a way to minimise the costs associated with end-of-life management by changing the design of their products Individual Producer Responsibility (IPR), an extension of EPR, is a policy tool that provides incentives to producers taking responsibility of the entire lifecycle of his/her own products, to improve the design of their products.

Global policies on this, in the recent past, have impacted the Indian market too and we do see some eco-friendly products, mainly in IT sector. Though the global companies, impacted by international policies, have shown a move towards looking at DfE, there is also fear of non-compliant products or equipments being dumped in country like India where there is no mandate or clear responsibility. With EPR not part of current policy framework in India, the local brands have also shown little interest in investing in DfE. Integration of EPR can trigger this change.

Sound Recycling Infrastructure: The first Indian formal recycling plant, E-Parisara became operational in 2005. Since then there has been keen interest in this field and currently there are around 14 formal recycling plants in the country, authorized by Central Pollution Control Board. But this sector seems to have been plagued, by lack of assured raw material supply. The producer responsibility will have a huge impact on this, as this will mean definite supply of raw material for these authorized plants. Since the producers will be the source of waste to the recycler, they will also be in a position to demand for sound technologies and processes, thereby bringing in India 'Best available technologies (BAT)'.

Tools in Indian Context

EPR is a concept that could include a number of tools or their combinations, such as:

- Take-back requirements and recovery targets
- Advanced Recycling Fee (ARF)
- Disposal fee (DF)
- Deposit refund etc

In India, these would call for careful examination and will also require suitable adaptation, taking into account the mindset and prevalent culture.

Existing Informal Sector

In India, currently, around 25000-30000 people are involved in informal E-waste recycling. This work force is involved in various processes like collection, dismantling and recycling, some of it highly polluting and posing serious health threat.

The integration of informal recycling sector would need to be mandated. This will include upgradation of their skills, simplified authorization processes, tax cuts and so forth. The existence of the informal sector and its large network is a significant opportunity to be utilized for strengthening the reverse logistics of waste which can feed the formal network and be strategically integrated. The challenge lies in operationalising this resource and utilizing it to build a very strong and effective chain for recovery of assets.

Moving ahead

The uniqueness of the Indian context necessitates specific and unique arrangements for management of this waste. The concept of Extended Producer responsibility would be the most appropriate framework to deal with waste in the Indian context, as this would place many important and critical drivers for any regulatory initiative. The change is likely to be slow and gradual and would be driven by clarity of direction in the regulation.

Priti Mahesh

For further details contact: priti@toxicslink.org

Rashtrapati Bhawan Adopts 'Zero Waste Management'

Management of solid waste is a serious challenge faced by the urban and rural communities all over the world. And who could emulate the solution to it than the residents of Rashtrapati Bhawan, the house of the first citizen of the country: The President.

Residents of the President's Estate have taken a step towards solid waste management in order to create a 'Zero Waste Zone'. The President's Secretariat in collaboration with Toxics Link took an initiative to manage domestic waste through the community based solid waste management system in the premises of Rashtrapati Bhawan. With the concept of 'Zero Waste Management', the project was formally launched in July 2009 with an active participation from the residents of President Estate.

According to estimates, around 48 million tonnes of municipal solid waste is currently being generated every year in India.

In spite of several policy and organisational changes pertaining to the role of the local bodies, particularly the municipalities, collection and disposal of solid waste remains one of the major problems in urban India. The traditional method of collection and disposal in landfill sites is neither appropriate nor feasible in the contemporary context. The land required for landfills has already shrunk in view of the changing land use patterns. Purposely, the decentralised Solid Waste Management Systems (DSWMS) needs to be appreciated as a strategy.

There are altogether more than 1500 Households in the entire President's Estate. These households belong to different economic categories such as lower income groups (LIG), middle-income groups (MIG), and higher income groups (HIG). The approximate population is 7500 and the generation of waste is estimated more than one tonne (1000 kilograms) per day.

Awareness Workshop with the residents of Rashtrapati Bhawan

Composting Site in Rashtrapati Bhawan

Sprinkling of EM solution with water

The sustainability of an intervention depends upon the involvement of different stakeholders like the residents, community based organizations, Self Help Groups (SHGs), and waste collectors. The project purposely involved the already existing self-help group (SHG) members for performing the necessary activities for the composting of organic waste. These SHG members are responsible for segregating and turning of waste, sprinkling of Effective Micro-organism (EM) solution, drying, sieving of ready compost and the supervision of the entire waste management system.

Toxics Link distributed the Information Education and Communication (IEC) materials to all the residents for awareness creation. The IEC included: posters depicting segregation and flyers on 'Zero Waste'. These emphasized on the importance of source segregation, specifying components of source segregation by promoting the two-bin system at household level, and the roles and responsibilities of different stakeholders in solid waste management. The self-help group members and waste workers were trained about the technicality of the process of EM composting by organizing the participatory training and on site monitoring of the entire system. An awareness workshop was also organized in the auditorium of The President's Estate where in the all stakeholders like sanitary workers, waste collectors, SHGs, staff and general public participated in the workshop.

Impact of the Project:

The estimated generation of garbage from every household including the canteen waste was found to be around 1000 kilograms per day, which comprises around 750 kilograms organic waste (wet waste) and around 250 Kilograms inorganic waste (dry waste). When the project was initiated the door-to-door waste collection of waste from all the households and the canteen waste was taken care of by the waste collectors under the supervision of the sanitation

department and all types of collected waste i.e. organic and inorganic waste was stored in the community bins, and from these storage points the un-segregated waste found its way to the landfill site through the NDMC. The project has encouraged the resource recovery by promoting the decentralized composting of wet waste and the recycling of the recyclables that results into the landfill diversion of one tonne of waste. Further analysis shows that through these small efforts approximately 365 tones of solid waste can be diverted from the landfill site to the composting site per annum.

The organic compost can be used to maintain the parks, flowerpots and plantations in the area by the horticulture department and the residents. On the other hand, the two fold segregation i.e. primary as well as secondary segregation of waste has aided to improve the quality recyclables and the market value of the recyclables. The earning by selling the recyclables is an extra income to the waste collectors involved in the system, which encourages the workers to participate into the waste management system. Consequently, this lead to the recovery of natural resources through recycling and community based composting. The monthly revenue generation through the user fee for the door-to-door collection of waste is around rupees 12,000 which also contributes to the monthly salary of the workers.

Mohammed Tariq Gaur

For further details contact: tariq@toxicslink.org

UPDATES

1. Second phase of "EEJP" roll out

Environmental Equity and Justice Partnership (EEJP) is an independent grant-making programme of the Just Environment Charitable Trust and supported by Ford Foundation. The initiative is dedicated to helping groups and individuals to foster lasting improvement in the area of environmental justice by catalysing grassroots initiatives; triggering new imagination; bringing in new perspectives; encouraging crossover linkages; promoting community participation, and providing greater opportunities to connect to the environmental thinking. The project has two components—environmental small grant for the NGOs and environmental fellowship programme for the individual.

After successful completion of first phase of EEJP, from 2005-07, second phase of EEJP has been commenced in 2009 and the period would be from 2009 to 2012 comprising of three grant cycles. However unlike first phase of EEJP, activities of second phase of EEJP is limited to issues related to waste, pollution and toxicity. And already grant making process of the first grant cycle of the second phase has been completed.

Brief on first grant cycle (2009-10)

The call for application for the first grant cycle was announced in May. About 82 applications were received for small grant and 19 applications for fellowship programme. Initially applications were scrutinized by the programme team of Toxics Link and the selected applications were finally evaluated by four members of steering committee, comprising of eminent personalities having many years of professional expertise in environmental issues. Finally five fellowships and eight small grant applications were recommended by the steering committee for providing grant. The project of the grantees and fellows include: issues of banning polythene, protecting the rights of waste pickers, issues of environmental laws compliance, working towards a national policy on silicosis, and heavy metals testing of drinking water. These projects will be implemented in and around 10 states of the country. And mostly durations of the project will be from six to 15 months. For the details please visit http://www.eejp.org

Beginning of the second grant cycle (2010-2011)

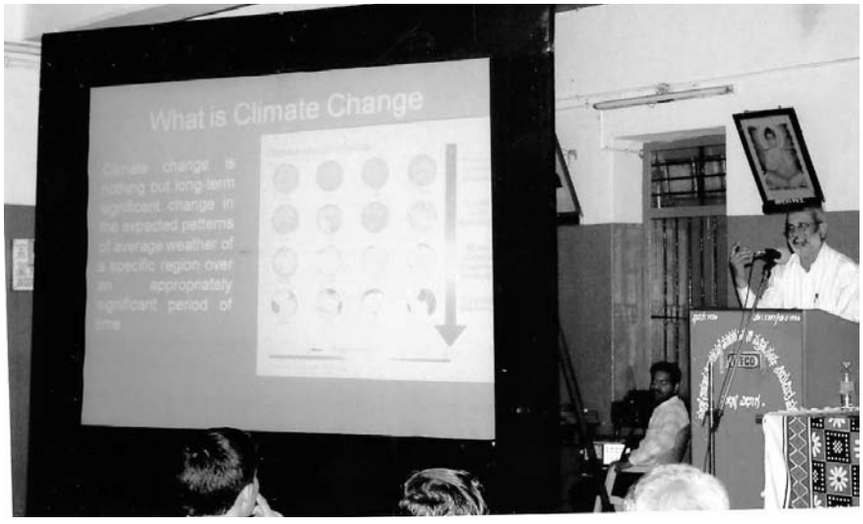
Call for proposal of the second grant cycle has already been announced in February and the process of selection of final grantees and fellows is undergoing.

For further details contact: piyush@toxicslink.org

2. 'Quotes from the Earth' Film Festival

Environment is a people's issue and concern, therefore thee engagement is both need and a demand. The best possible way of this engagement at grassroots is by highlighting the situation and taking feedback through films. With a purpose like this, a three-day film festival was organized in the Hubli city of Karnataka, hosted jointly by Toxics Link and Health Care Without Harm. The event was a big success with the media and the people in terms of awareness creation and wide participation. Some of the well known and poignant films such as Ganashatru, Cheluvi, Journey: Traditional water harvesting, Point calimer, Only an axe away, A green agony, Mere desh ki darthi, Work in progress, A fable from the Himalayas, 1000 Days and a dream, Harvesting hunger, Seed of the Plenty, and Thirsty Planet produced and Directed by sensitive Directors were screened at the festival.

The issue vis-à-vis the event was publicized through calling press meet, banners, advertising in local TV, wall posters and circulation of pamphlets through newspapers. Good cooperation was extended by state and regional officers of Pollution control Board. The programme was inaugurated by Additional Principal Chief Conservator of Forests, M.H.A.Shaikh, and presided by Environmentalist Mukund Maigur. "One more green revolution is needed to protect the environment. Deforestation and rapid urbanization are the major contributors to global warming and environmental degradation. Hence, there is a need for evolving the environmental development policy, keeping protection of environment as a main concern in mind," said Shaikh. Nagaraj, from Karnataka State Pollution Control Board (KSPCB) expressed concern over increasing pesticides in food while Mukund Maigur highlighted the impact of global warming on biodiversity and people's responsibility in anticipating and preparing for any new environmental threat. He added, "Cemented roads have become a barrier in rain water harvesting as they do not allow rain water to percolate in the ground". He even warned that most of the districts in northern Karnataka region in few years would become desert. Doreswamy from Toxics Link pointed out,



M.H.A. Shaikh, Rtd. Additional Principal Chief Conservator of Forests gives a presentation on climate change

Mobile exhibition at the film festival

"The endangered environment is facing threat from various quarters which has increased the level of danger in the name of development to an alarming level in the last decade. To add, biomedical and electronic waste have had a spiral growth beyond one's expectations." A mobile exhibition was also organized for the benefit of the community. More than 400 participants attended the programme, which includes students from nursing colleges, other colleges, NGO's representatives and general public.

For further details contact: doreswamy@toxicslink.org

3. ToT for healthcare in Nepal

Like India, healthcare is setting up in Nepal and so is vis-à-vis increase in the amount of medical waste with increasing population and lack of awareness. Even if medical waste is dealt with, onsite separation and in-house treatment facilities is lacking, resulting in relying on the municipalities' services. Thus only few percentage of infectious waste, that needs special treatments get mixed with rest of the non infectious waste, adding to the city garbage, finding its way either in river and/or temporary unsecured landfill sites, posing greater risks to environment and public health. Additionally, some of them get burned openly, in the drum and/or locally manufactured or branded so called incineration, thus producing high amount of Persistent Organic Pollutants (POPs), especially Dioxin and Furan. Other heavy metals like mercury, lead, cadmium etc also find its way to release in the environment with the existing practice of health care waste management and handling.

Furthermore, Nepal became party to the POPs Convention in the year 2007, aimed at restricting and ultimately eliminating their production, use, release and storage. Contradictorily; the government has been continuously approving the projects with the provision of waste incineration - an identified source of POPs sources especially of the unintentional POPs known as Dioxin and Furan.

With this lack of awareness about the health and environmental hazards of waste and its relation with POPs especially with Dioxin and Furan, it has been aimed to increase the level of awareness and build the capacity of the concerned stakeholders including health care facilities, municipalities, media and government institutions. A three days comprehensive Training of Trainers (TOT) training module, 'Health care Waste Management and POPs' from 9th till 11th of March 2010 was developed by Toxics Link with the help and participation of the national and international experts and held in Dhulikhel Village Resort, Dhulikhel Nepal.

Center for Public Health and Environmental Development (CEPHED) organized the ToT in close coordination, collaboration and technical guidance from national agencies like Management Division, Department of Health, Ministry of Health and Population, Ministry of Environment of Nepal, NGOs like Health Care Foundation – Nepal (HECAF) as well as International Organizations such as Toxics Link, Health Care Without Harm (HCWH), Global Alliance for Incinerator Alternative (GAIA), International POPs Elimination Network (IPEN) with the financial assistance from United Nations Development Programme/Global Environment Facility-Small Grant Programme (UNDP/GEF-SGP), and Swedish Society for Nature Conservation (SSNC).

The ToT programme on Health Care Waste Management was designed in a comprehensive way and included the life-cycle of the waste from being generated to its environmentally sound treatment and final disposal. The programme was designed so as to make it more practical, participatory as well as interactive. Each module was followed by the participatory exercise with the help of dummy and/or real case study and story in order to give participants a fair and clear idea to cope with the similar situation with their respective real work setting.

The overall course comprises of 14 modules: Introduction of medical waste

Mercury is one of the toxic heavy metals known to mankind. Its use in health care measuring devices is known since ages. More than 80% of the rural population of Nepal has thorough knowledge of Ayurvedic medicines. And sadly, mercury has also been used since ancient times in these medicines. We have moved a step further and come to a stage where at least we have safer alternate to mercury based medical equipments and there is global campaign against the use of it. Nepal too has joined hands for safe dispose of mercury equipments and elemental mercury, adopting the same in everyday lives.

Participants of ToT in Nepal

and Persistent Organic Pollutants (POPs); Health care waste; impact of health care waste; policies and legislation with compliance monitoring; administrative requirements; communication and training; health care waste minimization; waste handling, collection, storage, and transportation; waste treatment technologies; waste disposal; liquid health care waste and waste water management; health safety and practices; planning for regional training on medical waste management, and lastly monitoring and evaluation followed by closing ceremony with the distribution mercury spill management kit and participation certificate.

For further details contact: ragini@toxicslink.org

4. Round Table in Nepal

Twelfth of March 2010 Toxics Link team was in Katmandu, Nepal for the launch of a campaign on safe chemicals management. The event was an extension of Toxics Link's concerted effort to promote safer environment and health regime in this region with support from Swedish Society for Nature Conservation. The launch was a modest affair with about twenty odd professionals from twelve different institutes of national importance, including Environment Ministry, Health Ministry, Nepal Academy of Science and Technology and Global Environment Facility /UNDP attending the daylong deliberation. This was hosted by Center for Public Health and Environmental Development (CEPHED), a partner organisation of Toxics Link. Others who attended included Nepal Forum of Environmental Journalists (NEFEJ), Health Care Foundation, Nepal Academy of Science and Technology (NAST), Nepal Environmental and Scientific Services (NESS), and Society for Human Rights, Environment, Law, Governance Activities (SHELGA).

Distribution of mercury spill management kit and certificate to participants

As Nepal's agriculture contributes 40% of its National GDP, the issue of POPs is quite an explored area with organizations like NESS, CEPHED and SHELGA, working on the issue for quite sometime now supported by international organisations like IPEN. Dr. Toran Sharma of NESS belongs to the influential old brigade and is a strong advocate for phasing out AGRO-POPS. However, the novelty of work on heavy metals and E-waste management ensured a fast surfacing awareness level amongst common people and experts. For example, Health Care foundation of Mahesh Nakarmi works on mercury phase out from the hospital (the focus is not the mercury per say but safer health care). CEPHED has recently done some work on heavy metals, in collaboration with UNEP/ EEB and Toxics Link mostly concentrating on mercury in healthcare sector and lead in household paints. Some recent efforts are also there to take the issue of CFL by CEPHED, keen to up on the end of life management of this energy saving device.

The awareness among civil societies about e-waste management issue is picking but is still in its initial stage. The launch had the following few objectives:

- Get first hand information on ground zero and collate local perspectives
- Spread awareness
- Raise health issues connected with toxic pollution

Participants of round table in Nepal

- Develop scientific understanding
- Showcase global case studies and draw learning for Nepal
- Bring CSOs, other stakeholders and decision makers on one platform for better future coordination
- Enhance networking – bring in more interest groups and expertise
- Meet experts, know their views and build future strategy

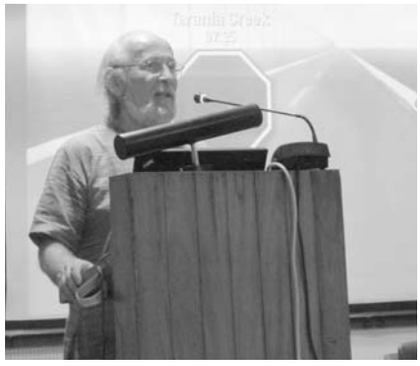
5. National Eco-Meet cum Exhibition for schools in Bal Bhawan

To target the mindset right in its formative stage, it is important to reach out to those who are in the process of building it, i.e. the children. Also, it is equally important to take the news and views on waste management from those who would lay the foundation for future. To keep with ideas like these, Toxics Link participated in the National Eco-meet cum Exhibition organized by the Department of Environment, Delhi from 12th to 15th of January The event was declared open by Delhi Chief Minister, Sheila Dixit and had participation from all working groups/CSOs for and on environment from the country. All schools ranging from government to private from Delhi and NCR participated in the exhibition. Engaging with the students, teachers and fellow organizations working on environment, Toxics Link set up a stall for information dissemination through distribution of pamphlets, circulars, leaflets, bookmarks, and other resource materials in which both the students and teachers from various schools were engaged. A model depicting the kind of wastes generated was made exemplifying that the globe or the world is in danger due to the spiral increase in waste like solid, biomedical, chemical and E waste. The forum grabbed the attention of a multiple kinds of audiences highlighting both the kinds of solutions and threats posed.

For further details contact: anjali@toxicslink.org

6. Public Lecture on Rain Forest Conservation

Toxics Link, in collaboration with Kalpavriksh and Australia India Council, organised an ecological lecture by John Seed, the famous rainforest conservationist who is known not only for his relentless peaceful struggle for protecting Australian rainforest but also for his innovative manner of presenting his story through poem, music and film. The lecture, which was a part of Environmental and Health lecture series organised by Toxics Link and hosted by India International Centre. The historical importance of the lecture lay in the fact that the world's first direct action in defense of rainforests that took place at Terania Creek in northern New South Wales (NSW) Australia in 1979 was strongly influenced by Mahatma Gandhi's principle of Satyagraha. In fact the movement hugely influenced the drafting of a historic legislation by NSW government in 1982 to protect the rainforests there.



John Seed talking about Australian Rain Forests

John Seed, who is also the founder-director of the Rainforest Information Centre, Australia talked about the struggle of a peaceful few to protect the subtropical rainforests in their area. A brisk Question-Answer session marked the end of this evening of ecology, film and music.

For further details contact: info@toxicslink.org

7. Public Lecture on Thames River restoration, lessons for Yamuna

The persistent polluting Yamuna river is a matter of grave concern and needs to be talked about from a solution perspective. Hence, Indian National Trust for Art and Culture Heritage (INTACH), South Asia Network for Dams, Rivers and People (SANDRP), Yamuna Jiye Abhiyan, and Toxics Link came together for a public lecture on Thames River Restoration, lessons that can be learnt for Yamuna. The lecture witnessed participation from all over the country and even UK. The lecture by Robert Oates, Director Thames River Restoration Trust (TRRT) was organized in INTACH, New Delhi on the 16th of February. Taking inspiration from TRRT and some of the points highlighted by Dr Oates as self sustainability, people's participation in the clean-up process, and

Chief Minister Delhi, Sheila Dixit glances through Toxics Link's information material

resource mobilization through full pay by consumers of Thames water, insight to the model of development and approach that can be adopted with respect to the cleaning process of Yamuna was seen. The lecture also highlighted key truisms like sewage, urbanisation being the main reason behind river pollution, and lack of people's participation linked to lack of resource mobilization.

The lecture received a lot of people and media attention

For further details contact: info@toxicslink.org

8. St. Paul's school eliminates E waste

Eco Club of St Paul's school with the teacher in-charge Manju Chawla

Do you know that India alone generates more than 4 lakh tones of electronic waste, which is highly toxic in nature and requires appropriate technology and process for its sound management? If not, then take cue from the students of St. Paul's School Delhi, who are well aware of the magnitude of the problem and have therefore collaborated with Toxics Link in an initiative towards collecting Electronic and Electrical Waste from their school, and are giving it to an authorized recycler to ensure that the collected E waste is recycled properly without harming the environment.

The students of St. Paul's school Delhi in collaboration with Toxics Link have therefore established a collection mechanism for eliminating this hazardous E waste from their school.

Under an initiative by Toxics Link, St Paul's school team of eleven students, part of the eco club of the school, along with teacher in-charge Manju Chawla, have pioneered this task of spreading the word about e waste hazards and the need for its safe management. A special bin has now been placed in the school campus wherein the students drop all kinds of E waste generated within the school premises and also bring it from their respective homes. They have plans to include the school neighborhood also in the collection programme for e waste, thus involving peoples participation in finding solution to this complex issue of managing e waste. Rema Alex Daniel, Principal of St Paul's school acknowledges efforts made by students and says, "We are really happy to collaborate with Toxics Link and put up a special bin in the school for collecting e waste and giving it to the recycler for proper recycling."

Robin Thomas, student of St Paul's school and leader of this newly formed E-waste group in the school, feels responsible. He says, "Contributing to the society and environment gives us a sense of achievement and an impetus to put in more of such programmes for the society and country." Satish Sinha, Associate Director, Toxics Link stressing on the critical problem, points out, "E waste generation and its improper recycling is a grave concern for the country today. Let's hope that there may be more initiatives like the one in St Paul's school, which can also be a learning lesson for many others."

For further details contact: priti@toxicslink.org

INTERVIEW

Victory against drought and dry spells

Sushmit and Rintu

Suparna Dutta delves into the realm of possibilities of turning a land from 'deficit' to 'surplus' water resources by interviewing the people behind such an endeavour Sushmit Ghosh and Rintu Thomas… A lodown…

Hiware Bazar in Maharashtra, is one of India's drought-prone locations and has come a long way from being a water deficit village to a water surplus one. It has become possible due to effective implementation of a community-based, decentralized approach towards rainwater management. Suparna Dutta in an interview with Sushmit Ghosh and Rintu Thomas, brings to light their initiative and much-acclaimed documentary, 'Water Miracle Village' on the Hiware Bazar's community based natural resource management, which brings forth a village's struggle and victory against drought and dry spells.

It is often said that the Third World War is going to be fought on water issues. Your comment

Rintu: The water crisis, in many ways, unites both the developing and developed nations of the world, since both these nations worry about how they would access clean water in the coming decades. With more than one billion people lacking access to safe drinking water, the world is inching towards a future where our growing demand for water can potentially threaten

the peace between nations. The crisis is already taking shape of everyday struggles, for water if not managed with discretion can result in looming water crisis, which is certainly going to haunt nations across the world.

How would you rate India in terms of water resource management?

Sushmit: Statistics show that India receives the second highest rainfall on an average (about 1150mm), which is just below Brazil. However, only 20-25% of this water is retained, and the rest is carried as run-off to the sea. This is just one of the many facts available to show how poorly we've been managing our water. I think there is a dire need to set up a comprehensive national water-policy because with population pressures set to put further stress on existing water-resources, along with over-exploitation and pollution of ground water, besides a considerable large agrarian sector that is almost entirely dependent on monsoon, things are set to go from bad to worse.

Tell us something about your film project on community's efforts at rainwater harvesting.

Rintu: Our film, The Miracle Water Village, portrays the water management practices of the village Hiware Bazar in Maharashtra in its journey from being a water-thirsty to a water-surplus village. Located in a rain-shadow area and receiving an annual rainfall of about 400mm, Hiware Bazar's topography makes it one of the driest and most drought-prone areas in India. Twenty years ago, in the face of looming water crisis, large-scale migration and poverty, the village decided to devise and design a collective model of rainwater management that involved the construction of a series of traditional water management structures that store and re-use rainwater. Hiware Bazar has demonstrated how community-owned, decentralized water management systems can be the simple answer to India's escalating water crisis. Today, the village is being studied by the World Water Forum as a model that can be easily replicated in any water-thirsty region in the world.

Do you think climate change and resultant impact on water resources is over-hyped?

Sushmit: I find it quite strange to read reports that some sections of the scientific community are claiming that climate change is over-hyped. In the past couple of decades, we have already witnessed substantial disturbances – from erratic monsoon patterns to flash floods and extreme dry spells to droughts. In fact, a 10-year study along the coast of Bay of Bengal points to the sea rising 3.14 mm a year in the mangrove swamps of the Sunderbans delta. This is against a global average of 2mm, thus directly threatening the lives of 4 million people and having an indirect impact on many millions. We're already beginning to see the impact of increasing temperatures on crop produce. The length of crop-cycles are decreasing, resulting in early flowering and reducing the grain-fill period – the shorter a crop-cycle, the lower the yield per unit area. Studies have found that for every degree increase in temperature, wheat production reduces by 4-5 million tons.

Tell us about some other films on water that have of late created ripples in the environmental film circuit.

Rintu: ***Flow*** is an incisive international documentary that looks at the question of the growing privatization of dwindling freshwater supplies in the world. With a series of interviews with scientists, experts and policy makers this award-winning film puts a lot of questions that haunt the world today, into a correct perspective.

Deeply Superficial (a documentary by the World Health Organisation) on the journey of the River Ganga from its pristine glaciers through the exploitative plains to its final merging into the Bay of Bengal is a powerful comment on how the river that sustains the lives of about 1.2 million lives is also the most abused and polluted. Addressing issues of water pollution, mismanagement and scarcity, the film questions how the river would survive on the face of global predictions that will go dry by 2050, threatening the lives of millions surviving on the Indo-Gangetic plains. The film was the recipient of the best documentary award at the Vatavaran Awards in 2009 as well as the IDPA awards 2009.

Do you think there is policy deficit so far as water in India is concerned?

Sushmit: I think the answer to this can be linked to the response to India's woeful water management. The very fact that we have such high rainfall and a plethora of surface water sources, yet we're in the middle of a water crisis, proves that the lack of macro-level policies are showing on the ground level.

Is community based resource management the most effective way in managing water in India?

Sushmit: With an agrarian population of over 660 million, most of whom depend on rainfall for their irrigation, I think that community based resource management is probably the most effective, environmentally sensitive and democratic way of managing India's water resources. Hiware Bazar's example proves that this is not just possible, but also probably the most viable way to take it forward, not just in India, but across the world. Just look at Hiware Bazar's numbers – the land under irrigation has increased from 40 hectares (1992) to 550 hectares (2009), milk production has increased from 150 liters per day to 4000 liters today and per capita income has gone up from Rs. 890 to Rs. 30,000 today – all of this, just by managing rainwater.

Give us some idea about the nature of water scarcity or crisis in India. Which areas are the worst affected?

Rintu: I think India's water crisis is largely man-made. Apart from wastage and pollution, an important aspect of mismanagement of water is the way we have exploited our groundwater aquifers. Being the largest consumers of groundwater in the world, we have been dangerously mining our groundwater reserves for decades. It is estimated that by 2050, groundwater levels in the Krishna, Kaveri and Godavari basins (which provide water to Maharashtra, Tamil Nadu, Karnataka and AP) are projected to deplete by 50%. Considering the agricultural sector is the largest consumer of groundwater, our water woes are directly linked to an impending food crisis too. With about 15% of India's food

produced by such un-renewable extraction of groundwater, such water pressures are already taking a toll on a large number of the 600 million strong agrarian economy, with increasing social unrest and farmer suicides. Therefore the problem can be narrowed down to mismanagement and myopic planning of water, which have slowly taken shape of a large crisis across the country.

Rintu Thomas and Sushmit Ghosh are independent filmmakers. They run Black Ticket Films, (www.blackticketfilms.com) a media outfit that produces documentaries on human rights, environment, gender and sexuality as well as short fiction. Their award-winning films have been showcased in film festivals across the world and screened on national television in India.

Their latest project, Water Miracle Village, commissioned by the British High Commission, will be screened on the National Geographic Channel on 5th June, World Environment Day.

For further details contact: suparna@toxicslink.org

RESOURCES

A. From external sources

1. Bullshit

A film by PeÅ Holmquist and Suzanne Khardalia, Swedish independent filmmakers
Duration: 73 mins

The struggle for the environment is no less than a freedom struggle, and this film about Vandana Shiva, Indian environmental activist and nuclear physicist, who was awarded the Right Livelihood Award in 1993 exemplifies it. It's a film on globalisation and patenting, on genetic engineering, biopiracy, and indigenous knowledge.

In this documentary, the filmmakers follow Vandana Shiva over a two-year period, from her organic farm at the foot of the Himalayas to institutions of power all over the world. Here Vandana Shiva does battle with one of her toughest opponents, Monsanto, a huge American biotech company, when they try to patent an ancient Indian strain of wheat. Together with Dalits, she tries to close down a Coca-Cola plant in Kerala, in a conflict involving groundwater pollution. In this film Vandana Shiva also tackles the question of farmers' suicide, a backlash of globalisation. The filmmakers describe Monsanto from the inside and arrange what proves a shaking meeting between Vandana Shiva and Barun Mitra, liberal think-tank, lobbyist and fierce critic of Vandana Shiva – and the man who gave her the "Bullshit Prize".

2. Life Running Out of Control

A film by Bertram Verhaag and Gabriele Kröber
Duration: 95 minutes
Directed by Bertram Verhaag
Produced by Michel Morales and Bertram Verhaag for DENKmal-Films and Haifisch Films
Music by Michel Bauer
Film Editor - Gabriele Kröber, BFS

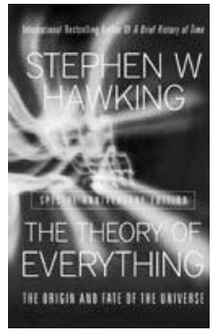
Thorough examination of the issues surrounding the genetic manipulation of plants, animals and human beings. The scientific explorations of the mid-1980s about genetically modified plants and food is well countered twenty years later by filmmakers Bertram Verhaag and Gabriele Kröber through their film highlighting the effects of genetically modified crops in 'Life Running Out of Control'. The two embark on a global journey to explore the effects of the ongoing experiments in the genetic manipulation of plants, animals and human beings. What they found out does not look pretty:

- Due to a disastrous crop of genetically modified cotton many Indian farmers face ruin, and choose instead to sell one of their kidneys or commit suicide.
- In Canada genetically modified canola seeds blow onto the fields of neighboring organic farms, thus making organic certification of those farmers' crops impossible.
- The Icelandic parliament sells the entire gene pool of its population to a private company, which intends to turn over the data at a profit to the pharmaceutical industry and insurance companies.
- The Human Genome Diversity Project collects blood, hair and saliva samples from 700 groups of people judged to be in danger of extinction on the pretext of preventive health care. The gene samples find their way into the laboratories of industry to provide the basis for valuable patents.

This leads to the conclusion that not only does genetic engineering pose a serious scientific problem; it also challenges fundamental democratic principles, and deserves the widest possible public discussion.

The 60-minute version was created for easier use in the classroom. It concentrates on the genetic manipulation of plants and animals only, and omits the section on eugenics.

3. The Theory of Everything



Author: Stephen Hawking
Publisher: Jaico Books
Price: Rs 195
Pages: 132

Stephen Hawking is widely believed to be one of the world's greatest minds: a brilliant theoretical physicist whose work helped to reconfigure models of the universe and to redefine what is in it. In his bestseller, 'The Theory Of Everything', Hawking presents a series of seven lectures covering everything from big bang to black holes to string theory that capture, which reflect, besides his immense depth of knowledge about the subject, and his characteristic wit as well. Hawking begins with a history of ideas about the universe, from Aristotle's determination that the Earth is round to Hubble's discovery, over 2000 years later, that the universe is expanding. Using that as a launch pad, he explores the reaches of modern physics, including theories on the origin of the universe, the nature of black holes and space time.

B: Toxics Link's internal resource:

1. Toying with Toxics

Duration: 18 Min, English, 2009

Children explore their world around through toys they play with. They express their energy, happiness and creativity through

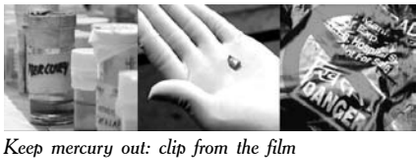
Clip from the film

these little friends. However, hardly do we realize that these toys are often vehicles of harm to children. Toy market in India is highly unregulated with no mandatory quality standards on manufacture or import. The chemicals used for toy manufacturing are sometimes highly toxic and are potential sources of long-lasting and terminal health conditions in children. Awareness level amongst parents is still quite low. Would we ever wake up?

2. Zero Mercury:

This film explores the slow but steady phase-out of mercury from healthcare sector in Delhi through consistent efforts of by Toxics Link

Duration: 15 mins



Keep mercury out: clip from the film

Some of the hospitals in Delhi have taken up the ownership of making their facilities as much mercury free as possible. Mercury based medical instruments such as thermometers and sphygmomanometers are being replaced by their non-mercury counterparts. Dental amalgams containing mercury are being replaced by composites. Overall there is an increased awareness about the harmful impacts of mercury to human health and environment both amongst the medical fraternity and general public.

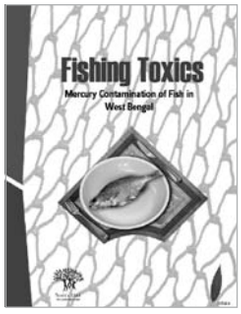
3. Mercury Trade

Duration: 2 mins

Shot with a spy cam: clip from the film

Shot with spy camera, this film captures the open and unregulated mercury trade in one of Delhi's busiest markets. In this market mercury is being bought and sold without any protective gears that are mandatory for the safe handling of this hazardous heavy metals. Shopkeepers, it seems, are totally ignorant about the dangerous impacts of mercury spill and have absolutely no idea about its management.

4. Fishing Toxics



Fish is a major nutrient and a diet for many in West Bengal. What if this popular human food is found out to be contaminated with mercury, which has adverse effects on human health, due to the contaminant's presence in fresh water bodies and lakes in the state of West Bengal? This might also pose a great threat to contamination of rivers and water bodes in other states, which have not been examined at all. Toxics Link in association with DISHA therefore felt responsible for highlighting this grave issue on the basis of a scientific study conducted in the lab and have come up with a report, which clearly shows that many types of fishes have high mercury content. The research by Dr Santanu Chacraverti and Dr Abhay Kumar is both scientific and exploratory.

NEWS

National

SC seeks Ridge Board's views on MCD's new dumping site at Bhatti mines

Member of the Ridge Management Board (RMB) told the Supreme Court that it has given no green clearance to Municipal Corporation of Delhi's plan to create a new garbage disposal dump at the abandoned Bhatti mines area in the Ridge area. Citing a 10-year-old study by the ministry of environment and forest and the Delhi government on urban environment and infrastructure improvement, Delhi government counsel S Wasim Ahmed Qadri sought urgent go ahead for the project from a Bench comprising Chief Justice K G Balakrishnan and Justices Deepak Verma and B S Chauhan. The civic body said it had along with the environment department of Delhi government carried out an extensive survey of the Bhatti mines area to identify the pits available for disposal of municipal solid waste by landfilling. Accordingly, a proposal was submitted before RMB for allotment of this land for Engineered Sanitary Landfill site, it said. On RMB's recommendation, an environment impact assessment (EIA) study was carried out by MCD to find out the suitability of Bhatti mines as an SLF site that fell close to the Asola Sanctuary. The EIA study clearly indicates that Asola Sanctuary fell outside the demarcated SLF site at Bhatti mines and the RMB has in principle cleared the proposal, MCD said.

Source: The Times of India, New Delhi, Mar 16, 2010

Government to set up e-waste treatment facilities: Ramesh

Environment Minister Jairam Ramesh on March 21, 2010 said the government will establish e-waste treatment facilities in the country. "It is for the first time we are including e-waste recycling facilities as part of hazardous waste managment programme for 140 highly contaminated sites in the country," Ramesh told reporters here .The Cabinet Committee on Economic Affairs cleared Rs. 3.5 billion project to clean up hazardous waste/municipal solid waste dump sites in Andhra Pradesh and West Bengal on pilot basis.

Source: The Times of India, New Delhi, March 22, 2010

Scrap dealer, workers suffer burns from radiation exposure

A scrap dealer and three of his workers suffered serious burns and complained of uneasiness after they were exposed to a radioactive isotope under mysterious circumstances at a scrap market in West Delhi. The material has been covered and the entire area cordoned off to prevent further damage.

Shop owner Deepak Jain bought a scrap consignment that included a metal piece, which may have contained the radioactive material, about a week ago. The metal piece was kept inside an almirah in his shop in Mayapuri Phase-II. When one of the workers, Jitender, cut the piece,

a white fluid oozed out, causing instant burn injuries. Mr. Jain also suffered burn injuries and patches on the skin when he lifted the piece. His hair started falling and his skin turned black.

Other workers also complained of nausea and vomiting as the mysterious injuries created a scare in the area. Police said the four were taken to Apollo Hospital, from where they were shifted to the All-India Institute of Medical Sciences. Mr. Jain's condition is said to be serious Suspecting it to be a case of radiation exposure, the police contacted the authorities concerned. A team of nuclear radiation experts visited the spot to examine the object. "They recorded strong radiation emission from the object, following which it was covered by the scrap as a temporary arrangement to contain the level of radiation," a police officer said. The police suspect that the scrap consignment containing the metal piece was brought from neighbouring Faridabad and that it originated from abroad.

Source: The Hindu, New Delhi, April 9, 2010

International

Rapid Increases in Tree Growth Found in US

Researchers from the Smithsonian Tropical Research Institute and Earthwatch met in Panama present mid-term research results from the HSBC Climate Partnership, a five-year initiative to identify and respond to the impacts of climate change. The program is supported financially by HSBC and involves a global team of bank employees — 'climate champions' — in vital forest research.

The first-ever research program of its kind has so far:

- Found rapid increases in tree growth in the forest around the Smithsonian's Environmental Research Center (SERC) in Maryland, USA, a finding attributed to increased atmospheric carbon dioxide and longer growing seasons, published in PNAS.
- Proposed a novel biodiversity theory relating stress and seed-size published in PNAS.
- Examined the effects a changing climate in forests is having on white-tailed deer, mice and even mosquitoes.
- Addressed the lack of a reliable method for estimating the carbon storage capability of secondary forests on a landscape scale by assessing how measurements from airborne LiDAR and other remote sensing technologies relate to ground-based measurements.
- Reviewed how human disturbance changes the way forests take up carbon in diverse environments.

Researchers working in broadleaf forest plots near Oxford, England, Atlantic rainforests in Southern Brazil and subtropical forests near Gutianshan Nature Reserve in China, as well as the SERC site in Maryland, have been putting HSBC employees to work. At Oxford, for example, data collected indicates that changes in forest structure have impacted moth populations.

Source: http://www.sciencedaily.com/releases/2010/03/100318132500.htm

Used CO2

Process improvements can reduce Carbon Dioxide (CO2) air emissions. Hungary last week carried out the first sale of certified emissions reductions (CERs) which Hungarian companies had already used to offset against their emissions in the European Union's emissions trading scheme. These emission offsets are sold internationally to other companies.

Under the Kyoto Protocol, countries were granted a certain number of permits to release greenhouse gases into the atmosphere, called Assigned Amount Units (AAUs), which are equivalent to one ton of CO2 and are roughly equivalent to a CER.

As an example Spain in 2007 bought 6 million tons of such emissions from Hungary to help meet their Kyoto Protocol needs. With the European rule change this can no longer happen. European governments have about 100 million used carbon offsets, equivalent to the national greenhouse gas emissions of Austria, which they can in theory resell to non-EU buyers. In theory air emissions will then gradually go down and allow some new development elsewhere. Hungary sold some 800,000 tonnes of used CERs, saying it would put aside the equivalent number of AAUs.

Source: http://www.euractiv.com/en/climate-environment/hungarys-sale-used-co2-credits-worries-carbon-traders-news-368250

The perils of coffee

Coffee starts the days of many people. With some stomach irritation can prevent proper enjoyment of the brew. Scientists have recently reported the discovery of several substances that may be among the culprits responsible for brewing up heartburn and stomach pain in every cup. Their report, presented at the 239th National Meeting of the American Chemical Society, included the counter-intuitive finding that espresso, French roast, and other dark-roasted coffee may be easier on the tummy because these roasts contain a substance that tells the stomach to reduce production of acid.

The scientists unexpectedly found that one of the coffee components, N-methylpyridium (NMP), seems to block the ability of the stomach cells to produce hydrochloric acid and could provide a way to reduce or avoid stomach irritation. Until the studies are done coffee drinkers will have to try the various coffee blends and find the one most palatable for them.

Source: http://www.eurekalert.org/pub_releases/2010-03/acs-bua030810.php

China owes 'climate debt' to the world

China has now become part of the rich nations league to be the "biggest polluter" of atmosphere. Seen as a major contributor to green house gas emissions, next to the US, it owes to the world what is being termed as "climate debt". Hammering the point was Ms Victoria Tauli Corpuz, Chairperson of UN Permanent Forum on Indigenous issues, at a seminar on indigenous people, Climate change and rural poverty. Leading the Indian delegation was Agatha Sangma, Minister of state for rural development. She spoke about India's effort to focus on "inclusive growth" and the different policies to help the poor, disadvantaged and marginalized segments of the population. Earlier, Sangma highlighted some of the Indian government's schemes for rural employment, watershed development and skill development of the rural poor. More importantly she pledged that India would, in the next three years, be a country which is what she called "open defecation free".

Source: Hindustan Times, New Delhi, March 26, 2010

Greenspeak

"We have modified our environment so radically that we must now modify ourselves to exist in this new environment."

Norbert Wiener

"In an underdeveloped country, don't drink the water; in a developed country, don't breathe the air."

Changing Times magazine

"We generate our own environment. We get exactly what we deserve. How can we resent a life we've created ourselves? Who's to blame, who's to credit but us? Who can change it, anytime we wish, but us?"

Richard Bach

"I think the environment should be put in the category of our national security. Defense of our resources is just as important as defense abroad. Otherwise what is there to defend?"

Robert Redford

"The difference between animals and humans is that animals change themselves for the environment, but humans change the environment for themselves."

Ayn Rand

"Environments are not just containers, but are processes that change the content totally."

Marshall McLuhan

"If all mankind were to disappear, the world would regenerate back to the rich state of equilibrium that existed ten thousand years ago. If insects were to vanish, the environment would collapse into chaos."

Edward O. Wilson

"Living simply has resulted in us becoming more aware of the environment and the impact we have on it."

Catherine Pulsifer

"Our environmental problems originate in the hubris of imagining ourselves as the central nervous system or the brain of nature. We're not the brain, we are a cancer on nature."

Dave Foreman

"We won't have a society if we destroy the environment."

Margaret Mead

Toxics Link

for a toxics-free world

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@toxicslink.org***

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

Toxics Link – Delhi
H2 (Ground Floor)
Jungpura Extension
New Delhi 110 014
T:+91-(0)11-24328006, 24320711
E: tldelhi@toxicslink.org

Toxics Link – Chennai
9/5 (2nd Floor), Second Street,
Padmanabha Nagar, Adyar,
Chennai 600 020
T: 91-44- 42607642
E: tlchennai@toxicslink.org
info@toxicslink.org

I: www.toxicslink.org

Edited by: Anjali Pandey
Designed & Printed by: **Systems Vision** *e-mail:* systemsvision@gmail.com