



ANNUAL REPORT **2011-2012**



Centre for Science and Environment

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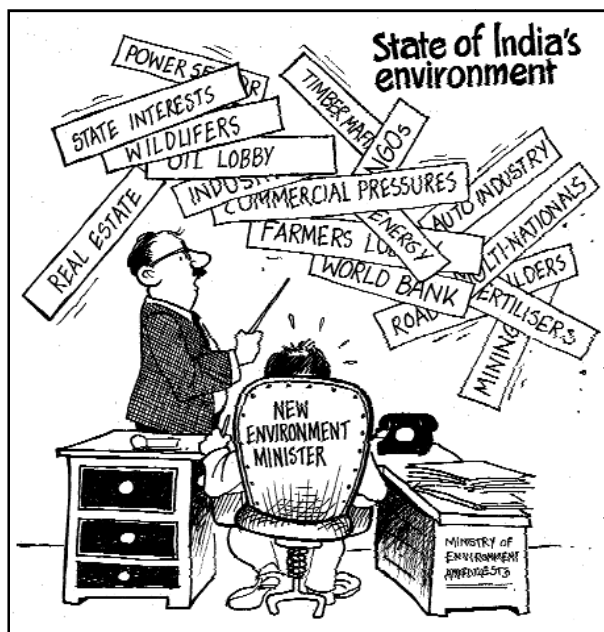
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CSE in 2012: Future directions

Centre for Science and Environment (CSE) was registered in 1981, completing 32 years in public service. It was set up to build awareness about environmental issues at a time when there was virtually no understanding of the green imperative. Since then, India's environmental concern has come a long way. CSE has been an important stimulus in the growth of this concern. It has built, through its research, an understanding of the nature of the problem, it has provided solutions, and it continues to create awareness of the urgency of changing the way to growth without pollution. In many ways therefore today, the environmental movement stands at a different point – environment is no longer a marginal issue. It has become a mainstream concern. The question is, where does CSE 'fit' into this changing scenario? What should be our role in future?

The current environmental imperative

India's environmental movement was first born in the 1970s, when the industrialized world was witnessing the impact of growth on its environment. In that decade, the air and rivers of London, Tokyo or New York were severely polluted, leading to grave health outcomes. The world was learning the pain of pollution. The world's first major conference on environment – the 1972 meeting in Stockholm – was held to find ways to deal with this growing scourge. India's key environmental legislations were enacted in this period – the Water Pollution Act, 1974 and the Air Pollution Act, 1980. But that was the age of innocence. India has still not witnessed the intensification of growth that would in turn destroy our environment.

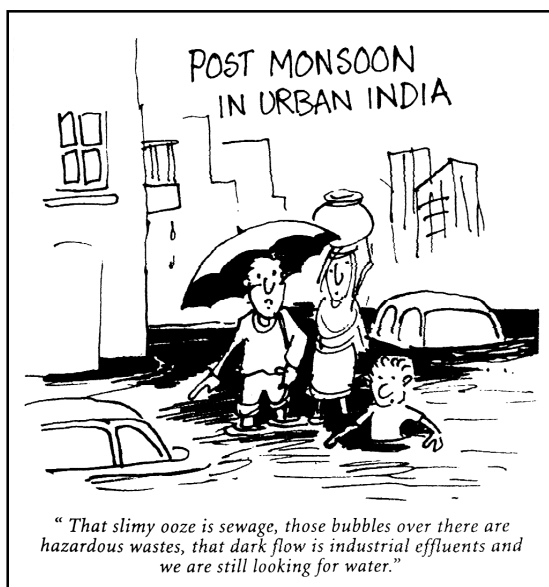


It was also in the 1970s that the second challenge of environment – issues of access and sustainable management of natural resources – had taken root. High in the remote Himalayas, the women had pushed out the timber merchants from cutting their forest. But their fight was not to protect the forest. Their fight was to assert their right to the resources of the forest. It was a battle over the right to resources. It was an environmental movement because the women of this village in Chamoli district knew that they had to protect the forest to protect their livelihood. It was a call to redefine development and growth.

But it is only in this decade of 2000 that these two sides of the environmental challenge have truly come home to India. Importantly, this is the decade where environmental issues became centre-stage in the

country. It is talked about extensively, considered in policy; nobody today would dare to say they aren't environment friendly. Car companies sell their products for luxury and sustainability; real estate giants boast about rainwater harvesting systems; Bollywood stars dance their fondness for all things green. And governments say they want low-carbon economies for the future. Being green is the in-thing.

But still matters are going from bad to worse. The pollution in our rivers is worse today than three decades ago. The garbage in cities is growing by the day, even as governments scramble to find ways of reducing plastic and hiding the rest in landfills in far-off places. Air pollution in cities is worse and toxins hurt our bodies, damage our lungs. All in all, the report card is not good. Perhaps the only sector which can claim success is forest protection; remote sensing data shows green areas are growing. But such protection has come at the cost of local economic growth of people who live in and around these areas. The poorest people of India still live in its richest forests. Clearly this is not the way ahead.



This, in spite of efforts to contain the problem: We have invested in building sewage treatment plants to deal with water pollution. We have improved the quality of fuels that run our vehicles; changed emission standards and set up institutions to regulate industrial emissions. But still we find we cannot catch up in this game of growth and its toxic fallout. This is because countries like India cannot afford to play the game, which is first-pollute and then-clean up. We need a trajectory of growth, which leapfrogs us from no-growth-no-pollution to growth-without-pollution.

In this past decade as well, the struggles for the control over resources have intensified. Across the country where land is acquired, or water sourced or forest destroyed for development projects, there are a million

pollution mutinies. The fact is in India, vast numbers depend on the land, forests and water in their vicinity for their livelihood. For them the environment is not a matter of luxury; it is not about fixing the problems of growth, but of survival. It is fixing growth itself. They know that when the land is mined and trees are cut, their water source dries up or they lose grazing and agricultural land. They know they are poor. And they are saying, loudly and as clearly as they can, that what others call development will only make them poorer.

This is what we call environmentalism of the poor. The fact is today development projects take local resources—minerals, water or land—but cannot provide employment to replace the livelihoods of all those they displace. It is for this reason that the country is resonating with cries of people who are fighting development itself. In this environmentalism, there is only one answer: changing the way we do business, with them and with their environment. It will demand we reduce our need and increase our efficiency for every inch of land we need, every tonne of mineral we dig and every drop of water we use. It will demand new arrangements to share benefits with local communities so that they are persuaded to part with their resources for a common development.

These are the same choices the environmental movement of the rich countries asked their countries to make, some two generations ago. They failed. This is why the challenge of climate change remains a challenge. Today, these societies are rich; they have cleaned up their streams and their black smoke. But their economic growth and their lifestyle put the entire world at risk because of climate change. These countries are mostly looking to find small solutions to the massive problem of increased emissions, linked to growth.

But it is important to note that the west's environmental movement had a different history to a country like India. It began after these societies had acquired wealth. So, the movement was a response to the garbage, the toxic air or the polluted water, resulting from the growth of their economies. They had the money to invest in cleaning and they did. But because they never looked for big solutions, they always stayed behind the problem—local air pollution is still a problem in most western cities, even if the air is not as black as ours. It is just that the toxin is smaller, more difficult to find or to smell. They keep spending. Keep investing in technology to deal with the present. As such, the rich world's environmentalists are garbage managers, nothing more. We want to emulate them, with much lesser resources and much more inequity and poverty. The fact is we cannot find answers in the same half solutions they invested in. This is the challenge of our next decade.

So, where do we go from here? As a society we increasingly care about environmental issues. This is good. But as a society, we are increasingly failing to manage the environment. We are failing in two ways here. First, in managing the ecological fallout of economic growth—the pollution and toxification, which comes from generating wealth. Second, we are failing to learn how to use the wealth of the natural environment to build economic wellbeing, what we call the development challenge of environment.

But what all this adds up to is a new chapter of environmentalism in the world. Climate change is forcing the world to some tough questions on how to be or not to be an environmentalist. We are learning that techno-fix solutions, of cleaning up pollution even as we continue to emit more, are not good enough. The rich world has failed to reduce its greenhouse gas emissions through its investment in efficiency. It now needs to find ways to reinvent growth without fossil fuels and to grow within limits. The world failed us at the climate conference in Copenhagen, then in Cancun and more recently in Durban, because the rich of the world are still not prepared to accept the writing on the wall: there are limits to growth, unless we can grow differently.

This is a lesson urban and middle-class India must learn quickly. Indians cannot afford this environmentalism of costly solutions that wants to put a band-aid on what is so badly broken. We must understand that our future lies in being part of the environmentalism of the poor, as this movement will force us to seek new answers to old problems.

So in many ways, India's environmental movement, like the rest of the world, is at a crossroads. But it has opportunities that do not exist for the old and established economies. It can do things differently. It can reinvent its growth paradigm so that it is inclusive and sustainable. The big question is if it will do this? This is the challenge of the 'new' balance that confronts India today. This is the challenge that institutions like CSE must address and help find answers.

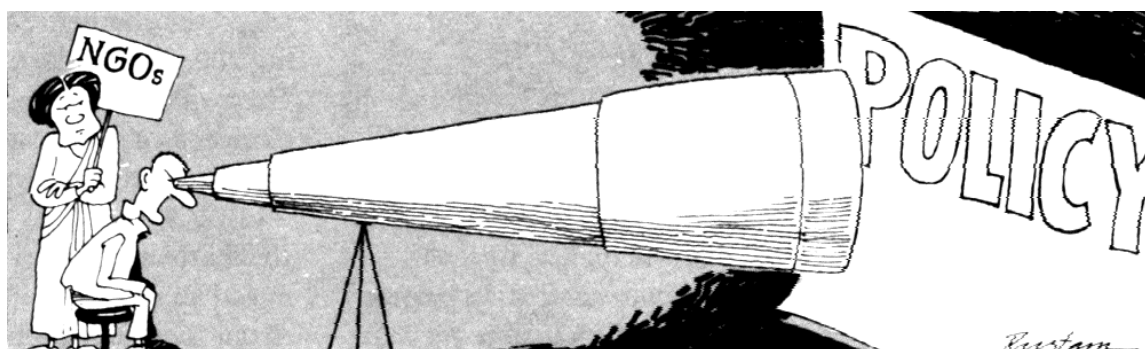


CSE's role in the current environmental imperative

CSE has new and exciting work ahead. The challenge of environment is far from over. In fact the new journey, of making sure that the ideas are implemented at the scale and pace needed, is only now starting.

This is because the idea of environment is accepted; indeed the imperative is uncontested; *but* practice is still poor. This is also because current technologies, methods and measures for environmental protection are capital intensive and often unaffordable by countries like India. In this CSE's role is to push the envelope of thinking and practice. Our work programme is adapted to these needs:

- **The challenge of innovative policy** – the need to do research on out-of-the-box solutions, and then to cajole and persuade society to agree to big ideas for the transition that is needed.
- **The challenge of scale** – there is an urgent need to implement solutions at the scale needed for the transition. The time for pilot projects or small measures is over. The scale of the challenge is huge. But more importantly, the pace of the change is enormous and fast. Society needs to find new solutions, but also find ways of implementing these at a scale that is meaningful and makes a difference.
- **The challenge of capacity** – if the need is to implement solutions at a scale, then the answer is to find multipliers in society who can implement changes; who can think and act differently.

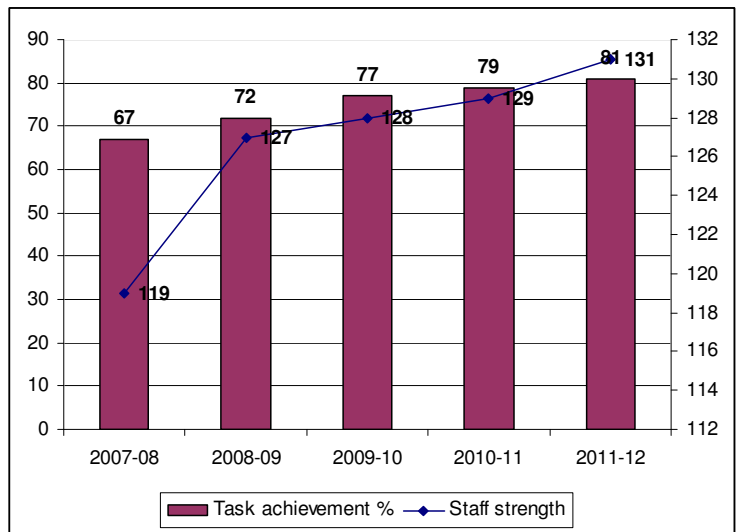


What will CSE do?

1. Continue to undertake rigorous (forensic-type) research with underlying principles and societal values so that it can provide answers to societal problems. *Our thought-leadership role.*
2. To take steps to support environmentalism of poor so that the rights-based movement on environment grows and provides society with the necessary push to look for different answers. *Our support role.*
3. To build a new programme to reach out to multipliers in society, who can help to build a larger circle of influence to drive change. To begin with we decided to work with three important groups – media, environmental regulators and public works engineers, and schools. *Our capacity building role.*
4. To build programmes in South Asia to grow the ideas across the region. *Our disseminating role.*

Key Achievements in 2012

The year was productive and fruitful -- new publications were brought out; our policy advocacy work resulted in substantial outcomes; and, the communication and training programmes extended their reach. CSE also established its presence in south Asia. Two new programmes were initiated – the Renewable Energy programme and the Green building programme. CSE also expanded its ongoing work on climate change and toxin management and set up dedicated teams to work on these issues in structured and sustainable manner.



CSE strives hard to be productive and impactful. To ensure that this objective is internalised and becomes part of the culture, we have institutionalised systems of annual planning by every staff member of every team. We back this up with a rigorous monitoring mechanism and periodic reviews. An important and macro indicator of how well we do what we aim to do is the annual task achievement graph. CSE, as a whole, has been improving its performance even as it has not increased its staff strength substantially. The graph shows that CSE's task achievement has grown from 67% in

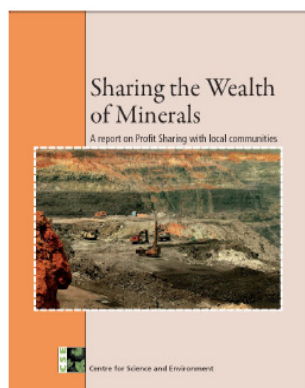
2007-08 to 81% in 2011-12 even as staff strength grew by only 10% during the same period. In the coming years, CSE will make a special effort to improve the monitoring and measuring of impacts and outcomes of our work.

After a long gap, CSE brought together civil society organisations from around the country to discuss problems relating to forest clearances. The Anil Agarwal Dialogue on Forest Clearances saw the active participation of more than 150 civil society representatives who interacted with government officials, lawyers and other experts on diverse issues relating to clearances for development projects – building and construction, mining, hydro-electric and other related issues. The year also saw the completion of many ongoing activities. The green rating of the iron and steel industry is complete and will be released in June 2012. The research on urban water challenges was completed and the result was a two-volume book, Excreta Matters that includes a detailed analysis of the water and sewage management status of 72 cities in India.

The team that looks at urban mobility and air quality undertook a series of meetings to look at issues relating to rights of pedestrians, public transport and parking policies, impacts of poor air quality on health. The food safety and Toxins team tested junk food to highlight the presence of harmful substances in junk food and organised a round table meeting with health experts and a media briefing to educate journalists from south Asia. Programme teams consolidated and expanded their work in south Asia. Many teams undertook policy studies, meetings and training in Sri Lanka, Nepal and Bangladesh.

Advocacy for profit sharing in the mining sector

CSE's campaign on sustainable mining contributed to the drafting of the Mines and Minerals (Development and Regulation) Bill, 2011. The Bill was presented in the winter session of the Parliament in 2011, where it was referred to a Parliamentary Standing Committee on coal and steel. Under this Bill, coal mining companies will share 26 per cent of profits with affected communities and other companies will share an amount equal to the annual royalty payable to the government. The money will be deposited with the District Mineral Foundation.



In 2011, CSE published the report, *Sharing the wealth of minerals* that strongly advocates the need for sharing the profits of mining with the local communities. The report reviews global best practices on profit sharing and suggests ways to implement the profit sharing mechanism in India. The report was released in Bhubaneswar (Odisha) in June and Ranchi (Jharkhand) in August. The meetings generated good discussions on the issue of profit sharing and key government officials, industry and civil society representatives participated. The aim of these meetings was to reassure both industry and the government that profit sharing would not affect growth and development; rather, it would lead to sustainable mining. In Jharkhand, the state government announced that 80 per cent of

the auction amount for stone and granite mineral concessions in the state will be shared with the affected districts/areas.

Advocacy for sustainable urban mobility and air quality

CSE's efforts to highlight the deteriorating air quality of Delhi paid off in a big way. The chief minister, Sheila Dikshit, called for a meeting to discuss this issue and invited CSE to present possible strategies to address the problem on a priority basis. Senior officials from all relevant departments of pollution control, transport, environment, power, and the police department, the PWD, MCD and DDA attended the meeting.

At this meeting the Delhi government agreed to CSE's recommendations of action plan that was specific, time-bound with clear lines of responsibilities of different authorities. Issues were discussed from a holistic perspective and the government agreed to put in place, long-term measures such as a



comprehensive and uniform public health alert system, system for real-time reporting of air quality status of different areas of city. The government has also agreed to work systematically to tighten emission norms, strengthen public transportation and address non-vehicular pollution. The finalisation of the action plan is ongoing and EPCA and the Delhi government will

monitor the implementation of the action plan.

Food safety and anti-toxins programme

CSE's study on the presence of antibiotics in honey released in 2010, catalysed the development of rules were made to regulate this. Soon after the study was released the Food Safety and Standards Authority of India (FSSAI) issued an advisory stating that no antibiotics should be found in honey. Based on the CSE study, questions were raised in the Rajya Sabha. The government asked the Bureau of Indian Standards (BIS) to set up a committee and look into the CSE study. The BIS constituted an expert panel that concluded that no antibiotics should be allowed in honey. In December 2011, the FSSAI scientific panel recommended a list of antibiotics with their Limit of Quantification (LOQs) determined by the LC.MC technique. The list included all the antibiotics that CSE had tested for. The final decisions are yet to be taken.

Urban Water Management

The Seventh State of India's Environment (SOE) report, titled *Excreta Matters, How urban India is soaking up water, polluting rivers and drowning in its own waste* was published in January, 2012. This two-volume publication provides a detailed description of the problems urban India faces on water and sewage, and maps where Indian cities get their water and where their waste goes. The reports include a detailed analysis of the water-sewage situation in 71-cities across India based on data collected from city authorities and other sources. The analysis puts together city profiles with maps to show the city's past, current and future water footprints.



The Planning Commission, the body responsible for formulating plans for effective utilisation of resources, invited CSE in March 2012 to present its finding to Montek Singh Ahluwalia, the Deputy chairman, including all Commission members. In the same month, CSE also presented its findings to LK Advani and senior members of the BJP, along with Water Resources Ministers and Secretaries in BJP ruled states. At both forums, there is considerable buy-in to CSE's push to look beyond hardware centric centralised forms of water and sewage management. There is increasing receptivity to CSE's approach to

maximise utilisation of a city's local water endowment by rainwater harvesting and decentralised wastewater treatment; in essence calling for local augmentation through collection of rainwater and reuse of sewage. This approach has been incorporated and reflected in the 12th plan five year plan of the Planning Commission for Industrial and Urban Water.

Reaching out to build informed public opinion

The India Environment Portal continues to rank among the top-most website on Google, for the key search terms "India and environment". Its geographical outreach spans over 100 countries as on date. During the year, 0.8 million people visited the site and there were 1.6 million page views. There has been a 300 per cent increase from in-bound web-links from major international and national organisations and websites. CSE's efforts to put in place a system to link to social networking sites resulted in increased visits by Facebook and Twitter users. CSE's popular e-bulletin reaches a targeted list of 0.38 million each fortnight.

Building a Committed Group of Environmentalists

Under the Anil Agarwal Green College (AAGC) umbrella, programme teams undertook programmes targeting environment regulators and other relevant government officials. A total of 819 government officials and 2047 other groups (teachers, students, consultants, academicians and others) participated in the capacity building training.

The South Asia Programme

CSE's work in south Asian countries is now well established and is respected in the region. CSE is now looked upon as a resource centre and its work is now the result of responding to requests from south Asian government or civil society agencies.

Box: Regional Outreach

| Agency | Programme |
|---|---|
| Sri Lanka | |
| <i>Ministry of Water Supply and Drainage and Lanka Rainwater Forum</i> | Training workshops for government engineers on rainwater harvesting and decentralised wastewater treatment, advice to set up model projects and Rain Centres |
| <i>Ministry of Education, Central Environment Authority</i> | Training for master trainers on environment education, implementing the Green School programme in 100 schools |
| <i>Central Environment Authority (CEA)</i> | Training workshops for officials of the Central Environment Authority on EIA and SIA and other pollution issues |
| Nepal | |
| <i>Centre for Integrated Urban Development (CIUD), Nepal, Ministry of Physical Planning and Works</i> | Training workshops for government engineers and other groups on rainwater harvesting and decentralised wastewater treatment, advice to set up model projects and Rain Centres |
| <i>Ministry of Physical Planning and Works</i> | Training workshops for government engineers and other groups on rainwater harvesting and decentralised wastewater treatment, advice to set up model projects and Rain Centres |
| <i>Purbanchal University</i> | Curriculum development, training environment laboratory staff, student courses on EIA and SEA |
| Bangladesh | |
| WaterAid, Bangladesh | Training workshops for engineers and other groups on rainwater harvesting and decentralised wastewater treatment, advice to set up model projects and Rain Centres |
| Bhutan | |
| National Environment Commission | Training government regulators on EIA and SEA & Drafting sector EIA guidelines |

Anil Agarwal Environment Training Institute

CSE plans to upscale its current training programme into a full –fledged residential training facility, the Anil Agarwal Environment Training Institute, at Nimli Village in Alwar District, Rajasthan. The institute will have training facilities for around 250 trainees and will include, class rooms, administration facilities and offices, a laboratory, kitchen and dining, hostel, faculty and staff accommodation, fitness and recreation for residents and supporting infrastructure and utilities. The site is located on the Tijara – Ferozepur Jhirka Road, approximately a little over 120 Km from Delhi, and covers an area of 4.17 hectares.

Research and advocacy

Sustainable urban mobility and air quality

The team's strategic intervention was targeted at both the national and at the city levels. At the national level, the team worked to strengthen the post-2010 emissions standards roadmap for vehicles, fuel economy standards, policies on transport and mobility, specifically under the government's flagship JNNURM reform policy. At the city level, the team worked with local groups in Kanpur, Hyderabad, and Kolkata to build policy awareness and give direction to city level policy and public discussion and action. The team continued with its campaign in Delhi and was successful in getting the Delhi government to initiate a number of measures – in the area of parking policies, air quality and public transport. In addition, the team upscaled its capacity building efforts, and targeted training programmes were conducted in India as well as in south Asian countries.

POLICY RESEARCH AND ADVOCACY

Policy advocacy for clean air

The team has been pushing for clean air in cities through a variety of actions. One of the campaign's key demands is for stringent, health-based ambient air quality standards and a legal compliance strategy.

a. Critique of the Government Study on Source Apportionment in Six Cities: The earlier Auto Fuel Policy 2003 had mandated source apportionment and emissions inventory studies in six cities to assess the contribution of different sources to pollution load. The results of these studies were to be the basis of the review of the next stage of emissions standards. The national summary of the six-city study on air pollution sources was released in 2010. The team analysed the national summary of the six-city study on air pollution sources that was prepared for the emissions standards roadmap.

There were serious flaws including apportioning the major share of air pollution to cooking LPG and road dust and underplaying the contribution of vehicles. Studies undertaken by NEERI for Mumbai



and Delhi were particularly flawed. CSE called for immediate revision and scientific explanation and rejection of untenable findings at a press conference. As a result, data for the detailed source apportionment studies from the six cities were released. The Ministry of Environment and Forests (MoEF) also withdrew the section relating to the contribution of LPG to PM_{2.5} levels in Delhi from the NEERI reports well as the main study.

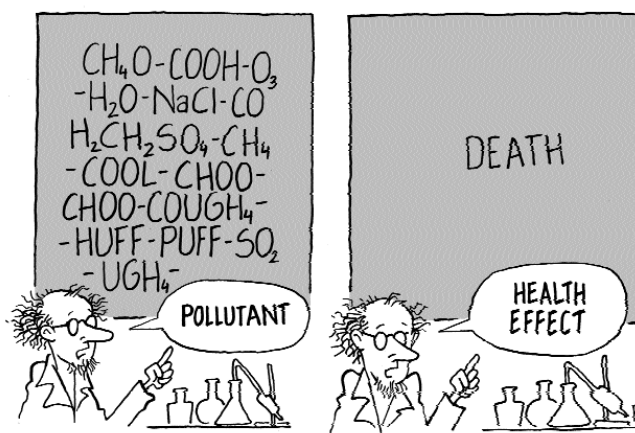
b. Critique on CPCB Study on Fuels for Vehicles: CSE countered disinformation in another case when the Central Pollution

Control Board (CPCB) and ICAT published the study, *Study of the Exhaust Gases from different fuel based vehicles for Carbonyls and Methane Emissions*. This study showed that conventional and

outdated diesel of Euro II and Euro III vintage in India are best fuels and CNG was the worst fuel from the air toxic point of view. CSE's analysis highlighted the discrepancies and missing links in the study that led to misleading policy conclusions. CSE engaged with the MoEF and the CPCB and ensured that the study was withdrawn.

c. Study on In-Use Emissions Standards: CSE undertook an analysis of emissions data from the on going Pollution under Control Certificate (PUC) programmes in Delhi to highlight the ineffectualness of current norms. CSE engaged with the Ministry of Road Transport and Highways, which responded by convening a multi-stakeholder group to review the PUC norms. The analysis helped to catalyse government action. The government has agreed to revise and make more stringent, the in-use emissions norms for the Euro IV, Euro II and Euro III compliant vehicles.

Importantly, the lambda test for testing in-use petrol cars in Delhi has been mandated for all cars as part of the PUC testing protocol.



d. Inputs for Policy Making: The team was invited to provide inputs to the Ministry of Environment and Forests on the way ahead for the 12th Plan to focus on the key strategies to bring stringency into fixing and meeting the air pollution reduction targets in our cities. The team also provided inputs to the consultation process initiated by the MoEF to expand the air quality monitoring in the country.

Dialogue with doctors on Air pollution and our health (August 31, 2011, New Delhi)

CSE engaged with doctors to enhance their involvement in the issue of air pollution and its impact on public health. The workshop on Air Pollution and Our Health was organised jointly with the Indian Council of Medical Research and the Indian Medical Association. Noted doctors, health researchers and air quality regulators participated.



The team had carried out an extensive review of the air pollution and health impact studies that have been conducted in different cities to take stock of the emerging evidences, trends and the way forward. CSE presented the results of its assessment. These studies highlighted the growing health impacts

of air pollution, the toxic nature of air pollution and how vulnerable sections of the population such as children are affected. These issues were discussed extensively by the doctors and health experts.

The speakers and panelists included the Secretary, Department of Health Research and Director General, Indian Council of Medical Research; Chairman, EPCA; Secretary, Union Ministry of Environment and Forests; Chairman, Central Pollution Control Board; noted doctors from All India Institute of Medical Sciences; Vallabhai Patel Chest Institute; Heart Care Foundation of India; Indian Medical Association; Nephron Clinic and Health Care Delhi; Sitaram Bhartia Institute of Science and Research; Chest Research Foundation, Pune; Post Graduate Institute of Medical Education & Research, Chandigarh and international health experts. Resource persons from international bodies including Health Effects Institute and International Council for Clean Transportation also participated in the discussions.

Sustainable Urban Mobility

This programme aims to secure substantive shift in modal share in favour of public transport and effective reduction in vehicle miles travelled.

a. Policy Advocacy under the JNNURM Programme: New policy development in the form of the bus funding scheme under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2009 has opened up new opportunities for transportation reforms in cities. One phase of this programme that had started in 2005 is coming to an end in 2012. The team has carried out rapid assessment of the JNNURM programme for transport to understand what has worked and what has not worked and the key lessons.

b. Conference on Clean and Sustainable Mobility for All: Agenda for Reforms (Sept. 28-29, 2011, New Delhi):



The workshop brought together key cities and departments, and also the key research bodies to discuss the key challenges regarding implementation of the National Urban Transport Policy, and the reform based JNNURM programme along with the state level transportation and clean air action plans. CSE presented its review of the first phase of the JNNURM programme. There were discussions on how the JNNURM programme can be leveraged to guide investments for sustainable

mobility. This engagement was further enriched by the best practices and lessons drawn from other global cities including ITDP from New York, London Transport Department, London, Civic Exchange in Hong Kong, and the University of Netherlands on cycling in Dutch cities, WBB Trust, a civil society group in Dhaka and Department of Finance in Colombo and ICCT. Around 90 participants had attended this conference.

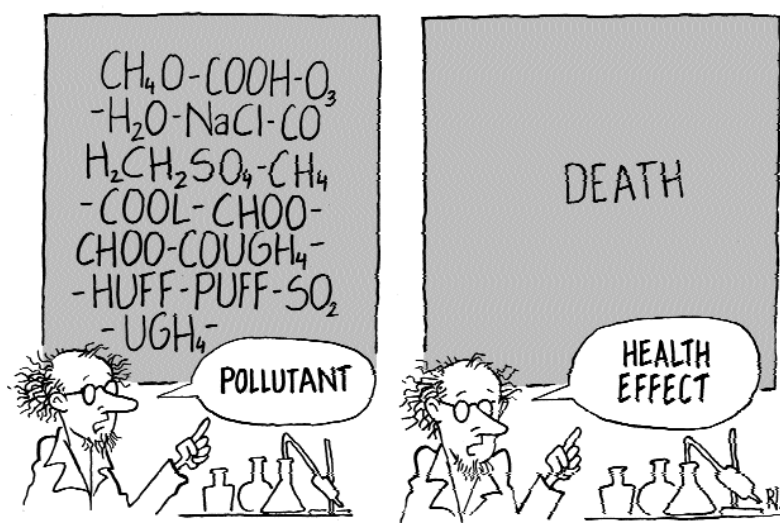
Advocacy for Fuel Economy Norms

CSE has been demanding mandatory fuel economy norms and also engaged with the various ministries concerned to get the process going. It was finally agreed that the Bureau of Energy Efficiency (BEE) will draft a proposal, the team organised policy research to feed the engagement and advocacy process. This included review of best practices around the world, standard design and implications, enforcement challenges etc. CSE further demanded that the government must open up this proposal for public consultation. The BEE came up with a draft proposal in November 2011 and opened it up for a public consultation. CSE made a detailed presentation on the draft proposal, citing the drawbacks. This was widely covered by the media.

Influencing city-level policies

CSE has been working for the past many years in Delhi to build policy awareness and give direction to city level policy. Part of this work has been to create public awareness, involvement and action. This work has now been expanded to other cities such as Kanpur, Hyderabad, and Kolkata. These cities represent rapidly growing mega cities as well as growing second rung cities that face very special mitigation challenges.

a. Advocacy for Improved Air Quality Monitoring in Delhi: To catalyse action, CSE has been regularly analysing air quality of Delhi and putting this information in the public domain. The analysis shows how Delhi is losing its air quality gains achieved through earlier actions such as improved fuel quality and emission norms and moving to alternative fuels. Pollution has worsened and levels of all pollutants (PM 10, PM 2, nitrogen oxide) are rising and newer pollutants such as ozone are adding to the mix of pollutants. CSE demanded that new air quality standards should be notified in which ozone should be included.



CSE is also leveraging air quality systems implemented during the Commonwealth Games to ask for permanent measures on air quality public information system. The team is now engaged with Central Pollution Control Board (CPCB), Delhi Pollution Control Board (DPCC), India Meteorological Department (IMD) and Indian Institute of Tropical Meteorology (IITM) to push for adoption of official air quality index and forecasting in Delhi and other cities.

CSE's reports on the deteriorating air quality of Delhi were widely covered by the media and elicited a response from the Delhi government. The Chief Minister of Delhi, Ms. Sheila Dikshit, called for a

meeting and invited CSE to make a presentation on the strategies to improve air quality in Delhi. The meeting was attended by key officials from all relevant departments such as the Municipal Corporation of Delhi, DPCC, CPCB, Transport and Power Departments, PWD, DDA and others attended the meeting. At this meeting the Delhi government agreed to CSE's suggestions to address the issue of air quality and an action plan specifying deadlines and departments responsible was drawn up. This will soon be published and with implementation will be monitored by the Delhi government and the EPCA.

b. Using Parking Policies to Reduce Car Use: The team's consistent advocacy for formulation and implementation of the parking policy as a travel demand management measure is slowly bearing results. The team carried out an extensive review of parking policy as a strategy to reduce car use. This paper was used to initiate a series of consultation and discussions in different policy and public forums to frame a parking policy as a demand management strategy. The forums include Environment Pollution (Prevention and Control) Authority (EPCA), Working groups of the Unified Traffic and Transportation Infrastructure (Planning & Engineering) Centre (UTTIPEC) and working group on Urban Transport under National Transport Development Policy Committee (NTDPC) coordinated by Institute of Urban Transport. The team is in dialogue with the key municipal agencies on this matter. The team is looking into the issues of parking pricing strategies, park and ride approaches, limiting parking spaces, amendment of Master Plan to change the current provision that allows conversion of green areas into parking lots, NMT parking, economics of structured parking etc.

The New Delhi Municipal Council (NDMC) has introduced increased and graded parking charges, demarcation of legal parking areas etc. The Municipal Corporation of Delhi (MCD) has also proposed substantial increase in parking charges, congestion tax, and higher taxes on vehicles to promote public transport alternatives. The court judgment in this case has taken on board the TDM principles recommended by the EPCA and CSE.

International Conference on Parking Reforms for a Livable City, August 17, 2011, New Delhi: The objective of this conference was to review and discuss how parking policy that the city governments are



framing as part of the transportation reforms can address mobility crisis in Indian cities. The conference was an opportunity to bring together a diverse group of city regulators and policy makers, civil society groups and experts from different cities of India and also a select group of international experts to capture the global learning from parking strategies. CSE called for a parking strategy a

demand management measure.

CAPACITY BUILDING PROGRAMMES

During the year, CSE organised a series of orientation programmes for regulators from India and South Asian cities to build regulatory capacity, facilitate intercity dialogue on common concerns, challenges and solutions through sharing of experiences. Six orientation programmes were conducted from April 2011 to March 2012 in which 82 regulators have participated. About 20 per cent of the participants were from South Asia (Dhaka, Kathmandu and Colombo).

The orientation programmes focused on the urban air quality and mobility management issues and brought together regulators from 17 states of India and from Bangladesh, Nepal and Sri Lanka. There had been representation from 38 cities and towns of India and 3 South Asian cities (Dhaka, Kathmandu and Colombo).

Around 59 per cent of the regulators come from metropolitan and other big cities and the rest from smaller cities. City-wise representation shows that representation from smaller cities is increasing. The programme is a combination of in-house lectures, lectures and interactions with experts, practitioners and demonstration of relevant projects in Delhi through field visits related to air quality monitoring, in-use emissions inspection upgrades as in Burari, CNG safety inspection for buses, BRT, ITS and traffic control in DIMTS, etc.

| Name of programme | Date | Nos. of participants | States Represented |
|---|-------------------------------|----------------------|--|
| Managing Urban Air Quality: Focus on Clean Vehicle Technology and Fuels | May 18 – 20, 2011 | 15 | Karnataka, Madhya Pradesh, Uttar Pradesh, Haryana, Rajasthan, Andhra Pradesh, Tamil Nadu and also from Kathmandu Nepal |
| Urban Transport Strategies: Agenda for Reforms | July 28 – 30, 2011 | 12 | Uttar Pradesh, Maharashtra, Karnataka, Kerala, Uttarakhand, Rajasthan and Haryana |
| Managing Urban Air Quality: Focus on Clean Vehicle Technology and Fuels | November 7 – 9, 2011 | 10 | Karnataka, Haryana, Uttar Pradesh and also from Kathmandu, Nepal |
| Urban Transport Strategies: Agenda for Reforms | January 31 – February 2, 2012 | 15 | Himachal Pradesh, Uttar Pradesh, Karnataka, Tamil Nadu, Delhi and also from Kathmandu, Nepal |
| Managing Urban Air Quality: Focus on Clean Vehicle Technology and Fuels | March 27 – 29, 2012 | 14 | Karnataka, Jammu & Kashmir, Tamil Nadu, Chhattisgarh, West Bengal, Haryana, Rajasthan in addition to Sri Lanka and Nepal |



Sustainable Industrialisation

This programme has three distinct components: Green rating of Indian industries, providing support to communities in their work to demand a sustainable industrialisation process, and, a capacity building programme for all stakeholders. The capacity building component for government officials has been upscaled and strengthened to form a new sub-programme. The team also undertakes policy advocacy cutting across these programmes for sustainable industrialisation policies.

POLICY RESEARCH AND ADVOCACY

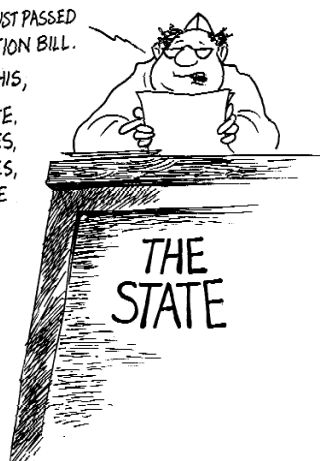
Policy Advocacy for Transparent and Rational Environmental Clearance Process

The team carried out a detailed analysis of environmental and forest clearances granted by the Ministry of Environment and Forests (MoEF) during the 11th Five year plan (FYP) period (2007 to August 2011). The analysis showed unprecedented forest clearances granted by the MoEF for a

variety of development projects. The analysis showed that between 2007 and August 2011, 8,284 projects were granted forest clearance and 2.04 lakh hectares (ha) of forest land was diverted. This diversion is about 25 per cent of all forest land diverted for development projects since 1981. The pace of forest land diversion, therefore, doubled in the last five years. CSE's analysis also showed that there is no assessment of cumulative impacts on water, forests, air and the health of the people, nor any evidence that projects that were given clearances were being monitored for compliance.

FOR A MORE PARTICIPATORY
DEMOCRACY, WE HAVE JUST PASSED
THE RIGHT TO INFORMATION BILL.
IT WORKS LIKE THIS,
YOU PARTICIPATE,
HE PARTICIPATES,
SHE PARTICIPATES,
THEY PARTICIPATE
... WE DECIDE.

THE CITIZENS



CSE used this analysis to disprove conclusively the contention that environmental clearances are hampering growth and development. In the early part of the year, India's top industrialists had written an 'open letter to leaders', saying that environmental clearances are delaying projects and hampering growth. CSE's analysis showed that in the last five years, the MoEF granted environmental clearance to an astounding 210,000 MW of thermal power capacity -- 60,000 MW more than what has been proposed till 2017. But, the capacity actually added in this period is a mere 32,394 MW.

The team made presentations to the Expert Appraisal Committees (thermal power plants, coal mining, mining and industrial projects).

Advocacy for Stringent Implementation of Pollution Abatement Measures

The MoEF, had in 2010, declared 43 industrial areas as critically polluted and passed an order to stop all industrial activity in such areas. However, between October 2010 and May 2011, the MoEF has taken 23 of these from the critically polluted list, based only on action plans.

The team undertook a review of the state of pollution in two of the industrial areas where the moratorium was lifted -- Vapi (Gujarat) and Cuddalore (Chennai). CSE found that these areas continued to be heavily polluted and the action plans submitted by the SPCBs were inadequate and did not address may important issues. The team tested samples of effluents and groundwater from the Vapi industrial area and found high levels of chemical toxins. CSE analysis of the action plan shows Vapi failed to give a clear plan on lowering levels of VOCs, benzene, PAHs and polychlorinated biphenyls, which is required urgently. The findings of the study were published as “*Dirty forever*”.



The industry hit back in response to the report and the Association of Vapi Industries, Association of Small and Medium Chemical Manufacturers (ASMECHEM), Vapi Waste and Effluent Management Company (VWEMCL) denied the findings of the report and started targeting everyone associated or mentioned in the report. Legal notices were sent to all those who had been quoted in the report demanding apologies and financial compensation ranging from Rs 1 – 5 crore. Some of the experts quoted immediately apologised and withdrew quotes given for the story.

Advocacy for Sharing Profits from Mining Activities with Affected Communities

In 2011, CSE published the report, *Sharing the Wealth of Minerals* that strongly advocates the need for sharing the profits of mining with the local communities. The report reviews global best practices on profit sharing and suggests ways to implement the profit sharing mechanism in India. The report was released in Bhubaneswar (Odisha) in June and Ranchi (Jharkhand) in August. The meetings generated good discussions on the issue of profit sharing and key government officials, industry and civil society representatives participated. The aim of these meetings was to reassure both industry and the government that profit sharing would not affect growth and development; rather, it would lead to sustainable mining.



In 2011, the government announced the draft Mines and Minerals (Development and Regulation) Bill, 2011. The Bill incorporated Key recommendations as outlined in the CSE report and introduced the concept of benefit sharing. Under this, coal mining companies will share 26 per cent of profits with affected communities and other companies will share an amount equal to the annual royalty payable to the government. The money will be deposited with the District Mineral Foundation. After the Cabinet approval, the Bill was tabled in the winter session of the parliament. The Bill has been referred to the Departmentally Related Standing Committee on Coal & Steel of Parliament for examination and recommendations.

Green Rating Project

During the year, the team continued its work on the Iron and Steel sector. The work is almost complete and the ratings will be released in June 2012. A total of 23 major iron and steel units were short listed for the process. Visits for surveillance and stakeholder interaction were completed to all 23 companies by September 2011. Company profiles reports were completed for each of the company giving complete details of production process, regulatory compliance and local community concerns. The rating has been completed and the rankings vetted by the four-member Technical Advisory Panel (TAP) committee comprising external sector experts.

Action and Reaction

Although the ratings have not been released, several companies have begun to take actions based on CSE comments.

- ★JSW Steel Ltd. (Bellary), with poor occupational safety performance, has taken cognisance of CSE feedback and has begun serious efforts to overhaul their occupational safety practices.
- ★Vizag Steel responded to the CSE profile by improving the metallurgical waste water treatment facilities. In addition, the company gave a written assurance that they have replaced faulty equipments, hanged tender procedures by building in pollution treatment cost.
- ★CSE's report on Durgapur Steel Plant was discussed with the West Bengal State Pollution Control Board resulting in the Head Office levying a penalty on the plant.
- ★ Neelachal Ispat Nigam Limited of Orissa acknowledged that the rating had enhanced their knowledge on technical, environmental and safety measurement indicators.

COMMUNITY SUPPORT PROGRAMME

Supporting Community Groups Through Technical Advice

A dedicated Community Support Centre (CSC) receives request for analysis of the EIA reports as well as for technical support to local communities and grass root level NGOs. The reports prepared by the centre are mostly used by the local NGOs, affected communities and civil society to raise relevant questions in the public hearing process, to approach the judiciary or enhance their campaigns. During April 2011 – March 2012, the CSC undertook technical analysis of 10 EIA reports in response to community requests.

At the Request of Communities...

- POSCO port project in Odisha
- Durgapur II Syria block in Raigarh, Chhattisgarh
- Durgapur II Taraimal block in Raigarh, Chhattisgarh
- Port expansion in Pipavav, Gujarat
- Coal washery in Raigarh, Chhattisgarh
- Thermal power plant of Universal Crescent Power Private Limited in Jamnagar Gujarat Ferro alloy project of MSP Sponge Iron Ltd. in Raigarh, Chhattisgarh,

- Nirma cement plant in Bhavnagar, Gujarat,
- Thermal power plant of East Coast Energy Pvt. Ltd. in Kakrapalli, Andhra Pradesh
- Thermal power plant of Korba West Power Company Ltd., Raigarh, Chhattisgarh

Anil Agarwal Dialogue on Green Clearances (Feb. 24-25, 2012, New Delhi)

A two-day symposium on environmental and forest clearances was organised to bring to the fore issues related to environmental clearances for development projects. The Dialogue saw participation from over 150 civil society representatives from across the country. Discussions focussed on the issue of processes and institutional frameworks for environmental clearances, including the framework for selection of EIA consultants. There were focussed discussions on clearance procedures and practices for power, mining and urban building projects. On the concluding day, civil society groups had the opportunity to interact with ministry officials to convey their concerns and discuss alternative solutions. The participants demanded a transparent public hearing process, incorporation of cumulative impact assessment in EIAs and for post-clearance monitoring.



CAPACITY BUILDING PROGRAMMES

The Regulators' Programme

Under this programme, CSE conducts training programmes on compliance, monitoring and enforcement for newly recruited officials of the central and State Pollution Control Boards. For mid level officials, the team conducts advanced training programmes on best and emerging practices on compliance monitoring and enforcement. Courses are of 1 month and 1 week duration.

The courses include field visits to industries, landfill sites, hazardous waste treatment sites, effluent and sewage treatment plants and proposed project sites. Participants are taken to the site to conduct hands-on exercises on inspection, monitoring, compliance assurance and audit. Visits are also organised to the local communities living closed to polluting sources to understand their problems and concerns. Participants get an opportunity to interact with officials from the MoEF, Central and State Pollution Control Boards, Planning Commission and other institutions and are exposed to rationale behind policies and procedures of the government. The training also gives exposure to various sampling, monitoring and measurement instruments, including hands-on exercises. Participants come

from varied background and specializations and from different states, each with its own pollution concerns. Young pollution control board officials have expressed appreciation of the month-long induction programme and have said that these programmes fulfil a felt need.

Strengthening capacity of regulators

| Name of programme | Date | States | No of participants |
|--|-----------------------|---|--------------------|
| National Minimum Training Programme for Regulators | August 1-30, 2011 | Jammu and Kashmir, Maharashtra, Madhya Pradesh, Karnataka, Sikkim, Orissa, Rajasthan | 17 |
| | February 1-29, 2012 | Jammu and Kashmir, Maharashtra, Madhya Pradesh, Karnataka, Sikkim, Orissa, Goa, Rajasthan, Gujarat | 20 |
| Hazardous waste management and remediation of contaminated sites | September 19-23, 2011 | Jammu and Kashmir, Maharashtra, Madhya Pradesh, Orissa, Rajasthan, West Bengal, Himachal Pradesh, Uttarakhand, New Delhi, Tamil Nadu, Sikkim | 24 |
| Pollution Monitoring Techniques and Instrumentation | November 14-18, 2011 | Jammu and Kashmir, Maharashtra, Madhya Pradesh, Karnataka, Orissa, Goa, Rajasthan, West Bengal, Puducherry, Kerala, Bihar, Uttar Pradesh, Haryana, Chhattisgarh, Tamil Nadu | 29 |
| Advanced Wastewater Treatment Technologies and the role of Decentralised Wastewater Management | December 19-23, 2011 | Jammu and Kashmir, Maharashtra, Madhya Pradesh, Karnataka, Orissa, Goa, Rajasthan, Karnataka, Tamil Nadu, Uttarakhand, Kerala | 24 |
| Environmental Management of Mines | March 12-16, 2012 | Jammu and Kashmir, Maharashtra, Madhya Pradesh, Tamil Nadu, Himachal Pradesh, Goa | 16 |

Feedback: What they say

- ★ *The programme was well conceptualised. This helped me to understand CEPI concept, methodology and calculation in much better way. (Workshop on Action Plan for critically Polluted areas) - Rajesh Debroy, Environmental Engineer, Central PCB, Delhi*
- ★ *The site visit to Vasant Vihar Nallah and Hauz Khas lake was a great experience. Such Training will greatly enhance our knowledge and do more to save environment especially the lakes through bioremediation technique. The concept of decentralised wastewater management was very interesting.(Workshop on Compliance and monitoring of centralised wastewater treatment systems and the role of decentralised wastewater management) - Kanti Choudhary, Executive Engineer, Madhya Pradesh*
- ★ *One month training programme was a great experience. The pattern followed during one month training was excellent and they had covered almost all the topics. I learned a lot through field experience of distinguished speakers who have lot of experience and are well established in the field of environment. The sound knowledge on the compliance definitely made the discussion interesting and worth.(National Minimum Programme on Compliance, Monitoring and Enforcement) - Yogesh Ashok Deshmukh, Field Officer, Maharashtra PCB*
- ★ *The programme covered all topics. I will recommend in our office to send more officers of Haryana State Pollution Control Board for this one month training programme. (National Minimum Programme on Compliance, Monitoring and Enforcement) - Naresh Kumar, Haryana State Pollution Control Board.*

Building capacity of diverse stakeholders for improved environmental governance

The team targets stakeholders of the industrialisation process -- pollution control board officials, local NGOs, EIA consultants, teachers imparting courses on EIA and others. The aim is enhance knowledge and understanding among all these groups about how the industrialisation affects people and the environment and what can be done to mitigate the negative impacts. The team started a new training programme on Social Impact Assessment (SIA) training from this year onwards.

| Name of programme | Date | States | No of participants |
|--|-----------------------|---|--------------------|
| Understanding EIA: From screening to decision-making | June 27- July 1, 2011 | Delhi, Andhra Pradesh, Rajasthan, Uttar Pradesh, Uttarakhand, Maharashtra, Bhutan | 24 |
| EIA workshop on mining projects | February 13-17, 2012 | Delhi, Uttar Pradesh, Uttarakhand, Maharashtra, Rajasthan, Odhisha, Bangladesh | 20 |
| SIA training programme | April 18-20, 2011 | Delhi, Uttar Pradesh, Uttarakhand, Maharashtra, Rajasthan, Odhisha, Tamilnadu, Kolkata | 30 |
| SIA training programme | August 10-12, 2011 | Delhi, Uttar Pradesh, Uttarakhand, Maharashtra, Rajasthan, Odhisha, Tamilnadu, Kolkata | 27 |
| SIA training programme | November 9-11, 2011 | Delhi, Uttar Pradesh, Uttarakhand, Maharashtra, Rajasthan, Odhisha, Tamilnadu, Kolkata, Meghalaya, Nepal, Sri Lanka | 29 |
| SIA training programme | December 15-17, 2011 | Delhi, Uttar Pradesh, Uttarakhand, Maharashtra, Rajasthan, Odhisha, Tamilnadu, Kolkata | 23 |
| SIA training programme | March, 26-28, 2012 | Delhi, Uttar Pradesh, Rajasthan, Odhisha, Tamilnadu, Bangladesh, Himachal Pradesh | 23 |

3. Renewable Energy Programme

The renewable energy programme is a new area of work for CSE. A new programme team was set up to work on renewable energy issues in a dedicated manner. To kick off this work, the team set for itself the task of mapping the renewable energy terrain, generate analyses and identify areas for policy advocacy.

POLICY RESEARCH AND ADVOCACY

Watchdog Journalism on Solar Energy Projects: CSE researched on and published an expose on the way that established procedures and norms were being flouted in the granting of contracts to private companies for setting up solar energy projects. CSE's expose showed that Lanco Infrastructure Ltd, which had bagged nearly 25 per cent of the total power allocation (235 MW), did so by establishing bogus front companies. These companies, with no prior experience in energy projects, had not even set up the solar plant equipment even after a year. In Rajasthan alone, three of these companies had to forego their bank guarantees for failure to commission the plants within a year of being awarded the contract. The other four were found to have commissioning certificates for their plants even though they were not finished as to avoid being fined.

CSE announced the findings at a press conference and demanded improved procedures, stricter implementation, and greater transparency in the administration of solar projects. The issue was widely covered by the media -- *Times of India*, *Financial Express*, *The Telegraph*, *Business Standard* and *Bloomberg* carried articles on this in print and web-versions. The Ministry finally set up an inter-ministerial committee to investigate the findings of the CSE study. The nodal agency, NVVN, has strengthened processes of project execution subsequently and has assured to improve its monitoring of projects.

Other sectors of renewable energy: The team looked at different aspects of the renewable energy programme and several reports were published. To assess the success of off-grid solar photo voltaic systems in the country, the team looked at the progress of Remote Village Electrification Program and visited three states – Rajasthan, Uttarakhand and Assam. RTIs were also filed to get information. The Off-grid solar photo voltaic scheme under the Jawaharlal Nehru National Solar Mission was also studied, with visits to Haryana and Uttarakhand. Research on the on-grid solar programme focuses on the Jawaharlal Nehru National Solar Mission (JNNSM) which is the main vehicle through which solar energy programme is being managed. The team also tracked the market-based incentive mechanisms such as Renewable Energy Certificates, (market based), Feed in Tariffs (FiT's) and Renewable Purchase Obligations (RPO) (mandatory mechanisms) amongst other things.

4. Climate Change Programme

CSE has been advocating for equity to be the foundation of climate change negotiations since 1992. As this was the last year of the extended Kyoto Protocol, it was imperative that a decision was taken in Durban on the future of Kyoto Protocol. As always CSE staff participated in the Durban conference and also sponsored the participation of national media representatives. The aim was to expand media reportage and make information on the negotiations available in the public domain to keep the pressure on the national and international community.

POLICY RESEARCH AND ADVOCACY

Research and advocacy on compliance and liability

Conference on Compliance and Liability in Climate Change Negotiations (March 1, 2011, New Delhi): CSE organised an international *Conference on Compliance and Liability in Climate Change Negotiations* with the aim of finding answers to one of the most challenging quandaries that climate change harbingers. This meeting of Southern lawyers, jurists, negotiators and researchers, was the

first of its kind in the region. Participants appreciated the convening of diverse stakeholders on this subject, as it is one that was hardly discussed or debated. Lively discussions ensued and it was agreed that there was a need to continue such meetings between lawyers and between lawyers and other groups such as scientists. All agreed that



there was a need to incorporate legally binding targets and instruments to compensate loss and damages and that liability and compliance issues must be mainstreamed in climate movements.

At the end of the meeting, it was agreed that future actions must be taken to forge partnerships between lawyers, researchers and negotiators of developing countries so that solutions for legal recourse to enforce accountability will be enriched by individual experiences and strengthened by collective actions. There is also a need to create public pressure through awareness campaigns and advocacy in order to force non-compliant states to compensate for the losses arising from climate change related damages.

Advocacy for equity in climate change negotiations

The imperative of equity in climate negotiations, December 5, 2011, Durban: At the invitation of the government of India, CSE co-hosted a workshop, *The imperative of equity in climate negotiations*, with the government of India. India's environment minister, Jayanthi Natarajan, made her first public address at this workshop. The event saw a packed hall listening to a panel which included the environment minister, Sunita Narain and Chandra Bhushan from CSE, Charles Di Leva from the World Bank and Ambuj Sagar from the Indian Institute of Technology-Delhi.

Research on challenges of addressing climate change impacts in the Sunderbans

Study on Impacts and Challenges of Climate Change in the Sunderbans: CSE undertook a study on the impacts and vulnerabilities of climate change for the people living here and what this means for the design of development programmes. CSE's research has tried to disaggregate concepts of 'mainstreaming' adaptation or 'climate-proofing' development and to find out if these ideas can be incorporated into workable policies and programmes. The research also establishes where and how adaptation policies need to integrate with different sectors and strategise both in the short and long range.



The report, *Living with Climate Change, focussing on the Sunderbans: Impact, vulnerability and adaptation challenges in the Indian Sunderbans*, was released at well attended meetings in Dhaka and Kolkata. In Kolkata, CSE partnered with South Asian Forum for Environment, to release the report. The report was released by Shyamal Mandal, Minister of State, Department of Sundarban Affairs, Irrigation and Waterways, Govt of West Bengal at a meeting held on February 29, 2011 in Kolkata. The

panel comprised key government officials, scientists, civil society actors and academicians to discuss various facets of adaptation challenges in Sunderbans. The meeting was widely reported in the media - *Anandbazar Patrika*, *Times of India*, *Hindustan Times*, *The Telegraph*, *Hindu Business Line*, *Economic Times*, *The Statesman* and television channels of IBN and Zee and German radio Bangla service covered the event.

Second National Research Conference, (November 5-6, 2011, New Delhi)

The second National Research Conference was held in November 2011 at the Indian Institute of Technology, Delhi, with the aim of promoting interaction and broadening engagement on climate change related research, and strengthening links among the community of climate researchers.

The conference was attended by more than 100 researchers and others working in this area and 50 papers were presented in different sessions. Government officials from the Ministry of Environment and Forests, Ministry of Earth Sciences and the Department of Science and Technology attended and interacted with research scholars. Government officials from the Ministry of Earth Sciences,

Ministry of Environment and Forests and the Department of Science and Technology interacted with the scientists. Valuable insights were gleaned from the engagement during the conference.

Young research scholars said they had gained immense knowledge and feedback on their work and expressed a desire for mentoring on research methodology and scientific modelling techniques. Many scientists also appreciated such meetings and said that such platforms helped them to stay updated and learn from each other.



5. Food Safety and Toxins Programme

POLICY RESEARCH AND ADVOCACY

Health-Based Caffeine Standards in Soft Drinks

Energy drinks have high caffeine content, an average of up to 320 ppm as per CSE laboratory study. According to the Prevention of Food Adulteration (PFA) Act of 1954, caffeine content of energy drinks have been capped at 145ppm in carbonated beverages. However, Red Bull, one of the branded energy drinks, managed to get a stay order on the amendment of the PFA act in 2010 and since then the energy drink market is expanding unregulated.

CSE's laboratory study analysed the caffeine levels in the commonly used energy drinks in India. The study found that in 16 samples tested:

- 38 per cent of the samples breached the limit mentioned on the label.
- 25 per cent did not mention the caffeine content on the label.
- 44 per cent breached the caffeine limit of 145 ppm.

CSE wrote to the FSSAI, policy makers and ministers to ensure strict norms for caffeine in energy drinks and standards should take into account total intake of caffeine from all sources. The advocacy is continuing.

Campaign on Regulation of Junk Foods

In February 2011, the Delhi High Court asked the Centre to take steps to ban junk food and carbonated beverages in schools, in response to a PIL filed by Uday Foundation. However, no action had been taken by the central or the state governments to do anything substantive to prevent the sale of junk food to schools even by October 2011. The Delhi High Court expressed its displeasure and gave the government another month to frame a policy and reply to the court.



In November 2011, CSE organized a roundtable on “*Should junk food be banned from school?*” The meeting brought together a mix of doctors, nutritionists, NGOs, policy makers, teachers and students to discuss the health impacts of junk food, especially amongst children. The event was widely covered in the mainstream media.

This was followed by a laboratory study of a host of samples of popular foods such as potato chips, snacks like *aloo bhujia*, noodles, soft drinks, burgers, French fries and fried chicken. All products tested for fats, trans fats, salt and carbohydrates showed high levels of all these substances. The CSE study also showed that very little information is made available to the buyer through labeling because of slack labeling regulations. As there is overwhelming global evidence on the health impacts of excessive amounts of salt, trans fats, fats, sugar and calories, there is a need for strict regulations of these substances present in junk food. The results of the laboratory study were released at a South Asia Media Briefing Workshop held on March 29-30, 2012.

The event generated wide media coverage of the issue of junk food. The media coverage, in turn, hastened action earlier envisaged by the UP government to ban sales of junk food in ICSE, CBSE and UP Board schools, within their premises and outside, with immediate effect.

Campaign on regulation of endosulfan

In 2010, the Persistent Organic Pollutants Review Committee (POPRC) of Stockholm Convention recommended that endosulfan be listed under Annex A of the Convention, which would mean a global ban on the chemical. As the process to ban endosulfan globally heated up, nationally, the pesticide industry increased its attacks against CSE through targeted vilification campaigns and filed several suits in courts of law.

In 2011 at the COP-5 of the Stockholm Convention, India agreed to the listing of the technical endosulfan and its related isomers in Annex A of the UN's Stockholm Convention, without any opposition but with exemptions. The Supreme Court of India, responding to a petition on endosulfan, banned the manufacture, sale and use of endosulfan throughout the country and asked for a health impact report to be submitted by Indian Council of Medical Research.

CSE continually monitored the situation and provided up to date reportage of the developments as they unfolded through the year. The monitoring helped in generating media coverage on the issue, which in turn, contributed to influencing the Supreme Court decision to stick with the ban despite determined opposition to the ban of endosulfan.

Laboratory Studies

CSE's Pollution monitoring laboratory undertakes analytical studies of presence of chemical toxins or other harmful pollutants to aid in awareness creation and policy advocacy. During the year, the team undertook the following studies:

- Study to ascertain levels of caffeine in energy drinks
- Study to ascertain levels of sugar, total fats, trans fats and calories in junk food
- Study to ascertain levels of physico-chemical parameters, heavy metals and pesticides in samples from CETP effluent water, groundwater and Damanganga river water.
- Study to ascertain noise levels at various locations in Delhi
- Study of CETP effluents from the Vapi industrial area

All of the studies were used by other CSE teams to support campaigns to bring policy change.

6. Sustainable Buildings Programme

POLICY RESEARCH AND ADVOCACY

Environmental Impact Assessment for Large Building Projects



CSE has focussed on the Environmental Impact Assessment for large building projects as a key tool for policy advocacy. The team carried out a detailed analysis of the clearances granted by various state level clearance committees and established the fact that the clearances are invariably given even in case of inconsistent and fictitious data provided by the project proponents. CSE staff also visited select projects and found that most projects are not adhering to EIA norms. The findings of the study were published as a report, *Buildings: Earthscrapers, Environmental Impact Assessment of Buildings*. The findings of the study were presented at the *Anil Agarwal Green Dialogue on Green Clearances*, in February 2012. Team members also met officials from the Ministry of environment & Forests to present key findings.

Mainstreaming Use of Water Efficient Fixtures

The team prepared a roadmap for mainstreaming use of water efficient fixtures that include setting frameworks to oversee this process. The paper called *Roadmap for Rating System for Water Efficient Fixtures: A Way to Sustainable Water Management in India*, makes a number of policy recommendations. The document also provides framework for implementation of

rating system for water efficient fixtures. The paper was discussed at a stakeholders meeting on the rating system for water efficient fixtures.

CAPACITY BUILDING PROGRAMMES

CSE has initiated a capacity building programme, targeted at government officials and others on concepts of green buildings. During the year three training programmes were organised for officials from the Central Public Works department, the Delhi Development Authority, New Delhi Municipal Corporation, Noida Authority, and others. A total 70 persons were trained during the year.

7. Sustainable Water Management Programme

POLICY RESEARCH AND ADVOCACY

Publication of the Book, *Excreta Matters*

The Seventh State of India's Environment (SOE) report, titled, *Excreta Matters* was published in January 2012. This two-volume publication provides a detailed description of the problems urban India faces on water and sewage, and maps where Indian cities get their water and where their waste goes. The reports include a detailed analysis of the water-sewage situation in 71 cities across India, based on data collected from city authorities and other sources. The analysis puts together city profiles with maps to show the city's past, current and future water footprints. These show how much waste is generated, where it is treated and disposed, and the condition of the cities' surface and groundwater. But more importantly, it expresses the serious concern that in our quest for more water for our cities, we are increasingly a generation that is losing its rivers, and contaminating and depleting our groundwater.

Response to the book was overwhelmingly positive, and was widely covered in the media. Key functionaries from state governments, including those from Haryana and Jharkhand have written to CSE asking for advice, guidance and collaboration on framing prudent water management policies. More than 500 copies were sold in a span of just two months.

CSE staff was invited by the Planning Commission to make a presentation on the findings of the book. CSE team members also provided inputs to a Planning Commission committee on the 12th Plan on urban water management.

There is considerable buy-in to CSE's recommendation that asks planners to look beyond hardware-centric centralised forms of water and sewage management. For instance,



CSE presented its findings to key members of the opposition, including LK Advani and senior members of the Bharatiya Janata Party (BJP), along with water resources ministers and secretaries in BJP ruled states.

Sustainability Audits in Haryana

CSE's water team conducted a study was to document the sustainability of rural drinking water supply sources. Even as schemes and guidelines have incorporated the concept of sustainability, little of this has been implemented on the ground. According to the Department of Drinking Water Supply and Sanitation, only two states, Madhya Pradesh and Karnataka, have used central funds specifically for sustainable water projects.

In Haryana, sustainability audits were conducted in 16 villages of 12 blocks spread across five districts of Haryana. About 276 people from 16 villages participated in the study.

The audit found that while piped water supply in the studied districts was good, the main water source was groundwater accessed through deep tube wells, and that few measures, if any, were being taken to ensure long-term sustainability through rainwater harvesting and groundwater recharge. The audit pointed out the near absence of community involvement in water schemes in the districts studied; only in one village did the audit find joint community effort to revive and regenerate a traditional *johad*, or check dam, for drinking water. The study also found that although many districts were acutely affected by fluoride and salinity, no action was being taken to improve water quality.

Box: Drinking Water Sustainability Audit in Haryana

| S.no | Districts in Haryana | Villages | Why we chose the district | Key findings from audited villages |
|------|----------------------|--|---|--|
| 1 | Rewari | Kundal, Nandha, Pali, Rajiyaki, Narayanpur | Overexploited blocks, urbanisation and fluoride and salinity affected | Positive <ol style="list-style-type: none"> 1. Coverage is between 85 – 90% 2. Piped water supply is more than 95% in Haryana 3. Water is used as a political tool by legislators and other politicians to ensure water supply to the last person. 4. Operation & maintenance is good. Negative <ol style="list-style-type: none"> 1. Systems for sustainability are non-existent. Alarming, as piped water supply is largely groundwater-based. 2. No system for catchment protection. 3. No system to address acute water quality problems. 4. Piped water supply resulting in problem of disposal of wastewater 5. Community participation is non-existent |
| 2 | Kurukshetra | Ramgarh, Niwarsi, Dhuda, Pipli majra | Full coverage and biological contamination, urbanization | |
| 3 | Palwal | Khataila sarai, Chirawari | Industrialisation, urbanisation and high population growth in last decade | |
| 4 | Mahendragarh | Dulana, Rewasa, Madhogarh | Overexploited blocks and fluoride and salinity affected | |
| 5 | Fatehabad | Hamzapur, Bhuthan kalan | Full coverage and agricultural area | |

CAPACITY BUILDING PROGRAMMES

Training Workshops on Rooftop Rainwater Harvesting (RWH)

The team conducted two training programmes for municipal officials, and three trainings for general practitioners, researchers and academicians. Municipal officials from different states were trained on the concept, policy and implementation of RWH. Municipal corporations also showed interest in implementing the projects with CSE's help. Many general practitioners came back to CSE to get detailed technical advice on their projects. One training programme was custom made for National Academy for Defence Production engineers.



Participants were briefed by several experts, including Sarvagya Srivastava from Central Public Works Department; Prof. PS Datta, Project Director, Nuclear Research Laboratory of the Indian Agricultural Research institute; Architect Vandana Menon; Prof. Shahshank Shekhar of Delhi University; and Dr. AD Rao, Central Groundwater Board. Likewise, Dr SD Singh of the Delhi Park and Garden Society shared his experiences on conserving urban water bodies, while Tanmay Kumar of ACC Limited and Prof. Prithvi Singh Kandhal from the National Centre for Asphalt

Technology showcased the porous pavement technology and its potential in groundwater recharge.

Training Workshops on Decentralised Wastewater Treatment

Three training programmes were conducted between April 2011 and February 2012. One training programme was organised for municipal officials, while two were targeted at general practitioners, researchers and academicians. Many general practitioners came back to CSE to get detailed technical advice on their projects. Invited experts invited to brief participants included Paritosh Tyagi, former chairman of the Central Pollution Control Board; Manu Bhatnagar, principal advisor to INTACH; Prof. VM Chariyar and Prof Vinod Tare of IIT Delhi; together with Dr RC Trivedi, former additional director of CPCB.

Training Workshops on Village Water Security Planning

CSE staff conducted a total of 14 training workshops, training 504 PHED (rural sector) engineers, NGOs, plumbers and *panchayat* water committee members in Jharkhand. The workshops focussed on strengthening village water security by community planning and participation. *Panchayat* elections were only recently concluded for the very first time in the state, and there was great interest shown by women *jalsahiyas* (water aides) in learning more about their role in planning for village water security.

Details of Training Workshops

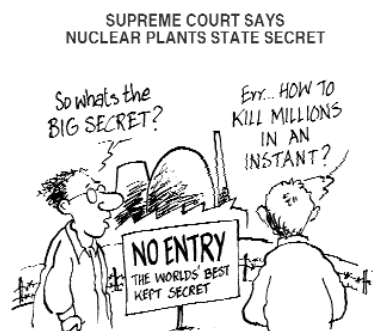
| S. no | Date of training | State/Union Territories | Total no of participants |
|--------------------------------|-----------------------|--|--------------------------|
| 1. Rainwater harvesting | | | |
| 1 | October 18-21, 2011 | Uttar Pradesh, Haryana, Karnataka, Delhi, Himachal Pradesh | 22 |
| 2 | December 13-16, 2011 | Uttar Pradesh, Haryana, Maharashtra, Orissa, Delhi, Gujarat, Punjab, Maharashtra, Assam, Karnataka | 32 |
| 3 | May 18-21, 2011 | Uttarakhand, Maharashtra, Andhra Pradesh, Tamil Nadu, Madhya Pradesh, Uttar Pradesh, Orissa, West Bengal | 20 |
| 4 | September 27-30, 2011 | Maharashtra, Gujarat, Delhi, Kerala, Jharkhand, Uttar Pradesh, Karnataka, Rajasthan | 26 |
| 5 | March 27-29, 2012 | Maharashtra, Uttar Pradesh, Delhi, Puducherry | 14 |
| Total | | | 114 |

| | | | |
|--|--------------------------|---|----|
| 2. Decentralised Wastewater Treatment | | | |
| 1 | September 6-9, 2011 | Delhi, Maharashtra, Gujarat, Uttar Pradesh, Mizoram, Himachal, Madhya Pradesh | 19 |
| 2 | September 28-Oct 1, 2011 | Madhya Pradesh, Bihar, Delhi, Rajasthan, Uttar Pradesh, Tamil Nadu, Gujarat | 11 |
| 3 | February 7-10, 2012 | Uttar Pradesh, Andhra Pradesh, Gujarat, Delhi, Uttarakhand, Puducherry, Maharashtra | 15 |
| Total | | | 45 |

| 3. Village Water Security Planning | | | | |
|---|---------------------------|---|---|------------------------|
| S.No | Participants | Date | District and State | Number of participants |
| 1 | PHED engineers | 24-27 August, 2011 | All districts of Jharkhand | 40 |
| 2 | PRI & NGO representatives | 9-14 September, 2011 (2 workshops) | All districts of Jharkhand | 88 |
| 3 | Plumbers and Masons | 15-16 September, 2011 | Ramgarh, Ranchi | 29 |
| 4 | Panchayat representatives | 10 November - 3 December, 2011(6 workshops) | Ramgarh, Ranchi, Khunti, Lohardaga, Gumla, Hazaribagh | 201 |
| 5 | Panchayat representatives | 13 - 22 March | All districts | 146 |
| Total | | | | 504 |

1. Science and Environment Reportage

The year began with the Arab Spring, a revolution that saw civilians take on corrupt and despotic governments. This was followed by the triple meltdown at the Daichi nuclear power plant in Fukushima in Japan. These set of events had their share ramifications for India. Whether it was



intensification of the anti-nuclear stir in coastal Kudankulam in Tamil Nadu or the anti-graft movement led by Anna Hazare, Down to Earth (DTE) comprehensively covered these events through continuous updates on the web, special reports and cover stories. Besides these developments, DTE extensively covered the renewable energy sector, community forest management and the mining sector. Health issues found a very prominent place in the magazine, with four cover stories and over two dozen special reports dedicated to the subject.

Agriculture: In the cover story, *GM Rush* (May 15, 2011), DTE analysed the growing dissent against GM crops, especially from politicians and state governments amidst a slipshod and weak regulatory mechanism of the government at the Centre. Another cover story, *Yellow Invasion* (August 1, 2011), looked at the dramatic increase in maize cultivation in the country, pushed by private companies and supported by state governments. A lot of this maize is being grown as an industrial crop, raising alarm about the food security of the country.



Energy: Renewable Energy and gas were two subjects that DTE covered extensively in the past year. Apart from a number of small reports, two cover stories were published. *The Great Gas Hope* (November 1, 2011) looked into the policy problems relating to supply of gas to critical sectors.

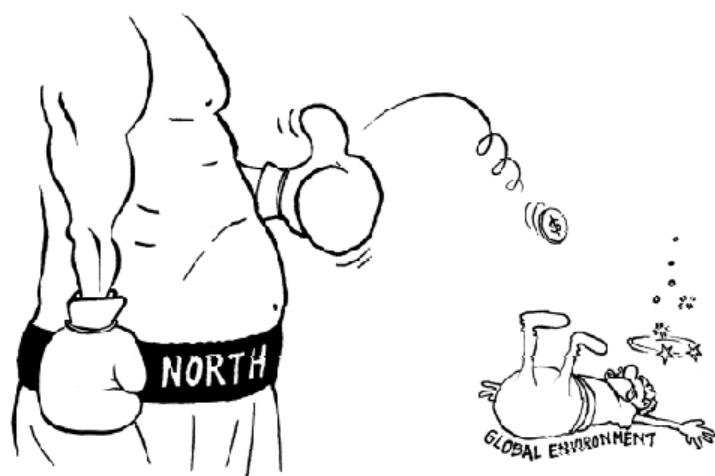
Huge investments in the power sector have not been utilised due to lack of steady supply of gas, primarily because the domestic production is dependent on one private company's whims, and all plans to import gas through pipelines have remained stranded for one reason or the other. *Solar Scam* (February 1, 2011) uncovered how one power and construction behemoth was trying gain monopolistic control of the fledging solar sector in the country by fraudulently setting up front companies against the rules that govern the Jawaharlal Nehru National Solar Mission.

Health: Issues relating to health was the most covered topic in 2011. Stories on hypertension, an urban lifestyle malaise, spreading to rural areas (April 30, 2011); the unethical nature of clinical trials being held in India (June 30, 2011), sound pollution and its health effects (September 30, 2011); and growing antibiotic resistance (October 31, 2011) featured as cover stories in DTE. The magazine also carried a cover story titled, *Cradles of Hope* (March 1, 2011), that looked in to how some of the most backward districts in the country managed to lower infant mortality rates.



Civil Society: Civil society groups under Anna Hazare started an anti-graft crusade in 2011. In the process, they temporarily became a parallel power house, trying to snatch away powers of legislating from Parliament. The uneasy tension between team Anna Hazare and government over the symbolic Lok Pal bill was captured in the cover story *Meltdown* (July 15, 2011). The story also analysed the changing landscape of the NGO sector, which started as community support groups and grew to become heavyweight quasi-political bullies.

Water: Two Indian rivers, Krishna and Mahanadi, are in crisis. In the race to industrialise, states have drawn plans to exploit their last drop. *River Sutra* (Feb 15, 2011), a cover story on these two rivers reported how this over-exploitation is leading to water being denied to farmers and also leading to inter-state squabbles. The Central government's flagship programme, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), took unprecedented strides to create water harvesting structures but as DTE's cover story titled, *Spot Water* (December 1, 2011) reports, many of these have failed to serve their purpose because of poor implementation. DTE also revisited Polavaram dam, after the Union Ministry of Environment and Forests (MoEF) gave it forest clearance, to find out that forest rights of close to 50 villages in Andhra Pradesh remained unsettled (*Polavaram Next*, May 1, 2011).



Climate Change: The climate change summit in Durban (COP17) was a turning point in many ways, as emerging economies like India and China for the first time agreed to take on commitments to reduce green house gases. DTE, which was present in Durban, covered the event on a daily basis, and also produced a cover story titled, *How to Divide the Sky* (December 30, 2011). A subsequent DTE cover story, *Future Shock*, (November 15, 2011), analysed IPCC's report on extreme weather events due global warming.

Mining and Industrial Pollution: Last year saw the mother of all mining scams. Illegal iron ore mining in Bellary, Karnataka became the focus of national attention. DTE did a detailed analysis of this scam in its August 3, 2011 issue titled, *Bellary Laid Waste*. DTE along with the Centre for Science and Environment's (CSE) laboratory also conducted studies in two industrial clusters, Vapi in Gujarat and Cuddalore in Tamil Nadu. Both these clusters were part of the original critically polluted areas list prepared by the MoEF, but were subsequently taken off this list because administrations in these two cities had claimed that they had taken ameliorative measures to reduce pollution. The cover story based on the CSE/DTE study, *Dirty Forever* (July 15, 2011), showed that the pollution levels in these hubs continued to exceed dangerous levels and the mitigative measures were nothing but eyewash.

Other major cover stories: Free trade agreements, Indian railways, forest management and land acquisition were other subjects covered by the magazine. *Treaty Monster* (January 15, 2012) looked at how free trade agreements are used by companies to subvert domestic legislations and claim billions of dollars worth compensation. The cover story titled, *Pull the Chain* (March 31, 2012) analysed the reasons for declining standards in safety and efficiency of the Indian Railways. Joint forest management, once touted as an equitable formula for use of forests by communities and the forest departments, has not delivered results. The cover story titled, *Games They Play* (September 1, 2011) looked at how the forest department has taken communities that protect forest for a ride and have not passed on the benefits to them. Issues of land acquisition were looked at in the cover story titled, *Losing Ground* (June 1, 2011), in the wake of the protest and violence in Bhatta and Parsaul villages in Greater Noida in Uttar Pradesh.

Special Issues: Two special thematic issues were published last year. The first, *Wildlife Special* (October 15, 2011), celebrated the world wildlife week. Ten top scientists and conservationists gave DTE readers a low down on what wildlife conservation means in this country. The second special issue titled, *Paraworlds* (January 1, 2012), celebrated science fiction writing in India.

2. DTE Website Dissemination

In September 2011, the DTE editorial team took a conscious decision to ramp up information dissemination using its website. The idea was to disseminate news quickly and widely, often reporting events as they happened. For this, the look and feel of www.downtoearth.org.in was revamped, and the distinction between articles written for the print and web editions was removed. The DTE website is now updated every day, and the design modified to allow top stories to be rotated every two to three days. In addition, a team of two copy editors ensure no delays are encountered in editing and uploading articles. This revamped web strategy also extensively uses social media, including Facebook and Twitter.

Eight months since these changes were implemented, the move has delivered results. Visitors to the website have increased by over 40 per cent, while the average number of page views has gone up 25 per cent. New visitors checking out the website is up by 30 per cent. There has also been an increase in the traffic to the website from South Asian and other countries. Nepal drives the highest traffic among the South Asian countries, followed by the UK and France.

Significantly, while earlier, search engines such as Google were the main source of traffic, now social media sites drive close to 75 per cent traffic to the website. What's more, traffic to the website via Google search has increased by 40 per cent. On average, about three to four articles or news reports are uploaded each day. Based on newsworthiness, content is now routinely packaged, consisting of a mix of fresh stories along with links to earlier DTE reports, and FAQs, etc. The 'DTE films' channel has been merged with the CSE videos channel to better drive traffic.



A Number of Articles Published

in the Past Year in Down To Earth

(DTE) Led to Probes, Policy Rethink, Court Interventions and Public Debate

The cover story, *Solar trick* (February 15, 2011), exposed how one company—Lanco—had managed to circumvent regulations, form dummy companies and create a monopoly in the fledgling solar power sector. A fact-finding team, sent to Rajasthan found the content in the DTE story to be true; these solar power companies lost their bank guarantees. After this investigation, the Union Ministry of New and Renewable energy, along with the Union ministries of power and corporate affairs, set up a three-member committee to look into the allegations made in the story.

Who messed it up? (15 September 2011), covered the rampant encroachment on Guwahati wetlands. The story was used by an NGO—Early Birds—to file a public interest petition in the Guwahati High Court, challenging the allotment of Doboka beel (wetland) to Assam Rifles. The court is presently hearing the case.

A DTE cover story on the state of clinical trials in India, *Ethics on Trial* (June 30, 2011), was widely appreciated both nationally and internationally. The story was picked up and discussed by several newspapers and electronic media. The story was also discussed in the US government's Presidential Commission for the study of Bio-Ethical Issues on ethics of clinical trials. The story was also circulated as reading material for the National Consultation on the Regulation of Drug Trials, organised by various voluntary health organisations of India in September.

Harmful combo drugs flood market (August 31, 2011) exposed how pharmaceutical companies circumvent drug pricing by combining two or more drugs in a fixed dose. The story showed how the use of unnecessary medication could lead to pathological complications. The Planning Commission has taken cognisance of this story and is now working on a plan to weed out irrational drug combinations from the market.

Disowned 100,000 (May 31, 2011) led to 700 families of the Taungya tribe in Uttar Pradesh to receive land rights under the Forest Rights Act, after it highlighted the apathy of the forest department towards these people who work in plantations.

DTE published a series of articles on Sundarbans. *A Hard Rain's Falling*, a reporter's diary (September 14, 2011), narrated the plight of a migrant worker who was left destitute when he broke his back in the Andaman and Nicobar islands. He was forced to migrate to the Andamans after the Sunderbans area witnessed massive distress migration post-Aila. After the story was published, Rs 2,36,000 was raised from across the world towards the boy's treatment in Vellore and recently returned home. He is now able to walk after suffering from paralysis for nearly six months.

The story on the Indian government trying to push new vaccines in the national vaccination programme also got wide attention. *Policy Draft Backs New Vaccines* (May 31, 2011), has been cited in the public interest petition (PIL) filed in the Supreme Court by NGOs that have challenged the introduction of new vaccines without first establishing the necessity of doing so by providing clinical evidence. *TB Turns Invincible* (February 29, 2012) was appreciated by Dr Madhukar Pai, Associate Professor, McGill University, Canada, who has authored several research articles on tuberculosis in India. He also sent the story to Stop TB Partnership for their TB journalism awards competition. The story, credited to DTE, was also uploaded on a blog, Journalists Against TB. Dr John Kenneth, Professor and Head, Division of Infectious Diseases, St. Johns Research Institute, also appreciated this story.

1. Environment Education

Green Schools Programme

The Green Schools Programme (GSP) is being implemented by more than 15,000 schools across India. During the year, many improvements were implemented in the entire process – from training to audit procedures and documenting the information to rewarding the schools. The major components of the GSP are a manual and a training workshop. The training programmes have helped to reach an enormous number of teachers and students and influence them on environmental thinking. More than 450 teachers and 1000 students participated in these programmes.

a. Partnership with state governments: The programme conducts GSP in partnership with government education departments in the states of Delhi, Andhra Pradesh, Sikkim, Maharashtra, Himachal Pradesh, Madhya Pradesh, Chhattisgarh, Tamil Nadu, Orissa and Punjab and also with Chandigarh (UT). Of these, Delhi, Sikkim and Himachal Pradesh have constituted the Chief Minister's Rolling Trophy for best efforts in the programme. The schools that win the awards at the state level will be nominated by the respective state agencies to compete for the National awards organised by CSE at Delhi. A total of 29 training workshops were conducted during the year.

b. GSP Veterans: A new category of schools was created, the GSP 'veterans'. These are schools that have been participating in the programme year after year. They work toward more challenging targets in implementing environmental practices in their schools. Some of these schools are also going beyond their school environment and are setting an example by making the entire neighbourhood, 'green'. A new manual, *How green is my neighbourhood*, guides these veteran schools in the task of greening their neighbourhood. The manual was released by the Honourable Chief Minister of Delhi Ms. Sheila Dikshit on March 28, 2012 during the green schools awards programme at the India Habitat Centre on March 27, 2012.

The Gobar Times Green Schools Award Programme



the Green School Programme.

The team reached out to more than 10,000 schools to invite participation in the award programme. Nearly 2000 teachers and 18400 students were successfully engaged in submitting green schools reports. A total of 175 schools were short-listed for the awards, 60 schools were awarded under the National and State level awards. As part of the state level awards, 388 schools participated in Delhi, Sikkim, Himachal Pradesh, Andhra participated in

Green and Greener

- Salwan Public School, New Delhi: The students of the school undertook a campaign to ban plastic wastes and made the school a “no plastic zone”. The next big step was when the students took the campaign to their neighbourhood. They produced cloth bags to substitute plastic bags and distributed more than 3000 cloth bags free of cost in the shopping areas. They undertook a door-to-door campaign for composting. The effort was so outstanding that the Delhi government took a leaf out of their efforts and undertook a similar campaign.
- St George’s School, New Delhi: St George’s School had over 7600 sq m of area that was dry and brown and used as a playground. The school students undertook a water audit and realised that a huge amount of grey water goes to waste. The school built an underground water tank to store the rainwater and grey water and used this water to water the playground and converted this to lush green grass. The school also uses thus recycled water to water plants and clean buses.
- G D Salwan School, New Delhi: The school re-engineered its water management practices and made changes in its physical infrastructure to enable it to harvest 100 per cent of its rainwater for ground water recharging. The school reuses 75 per cent of its waste water for irrigation.

Environment Education Products

Gobar Times has tied up a partnership with a leading national daily, *Hindustan Times*, under which *Gobar Times* contributes a page every month to *HT Next*, a supplement of *Hindustan Times*. *HT Next* goes out to schools in Delhi, Chandigarh and Mumbai. This partnership enables the team to reach a readership that is 20 times greater.

Broadsheet in Hindi: The team launched a broadsheet in Hindi to reach students of Hindi medium schools. During the year, six broadsheets, (1000 copies each) were prepared and sent to schools in Delhi, Bihar, Madhya Pradesh, Himachal Pradesh, and Gujarat.

Box: Gobar Times on the Net

The *Gobar Times* website was revamped and interaction through letters and Facebook pages has more than a 1000 hits each day. Spotlight highlights regular readers. The website also provides the green scores of schools that participate in the GSP. The detailed FAQ section enables a new visitor to understand the process of participating in the green schools programme. The Hall of fame displays the award winning schools at Delhi state level and National level. The detailed information on the website and our Facebook page enables the schools to share their work with other schools, teachers and students. Activity sheets are available for teachers and students.

Climate change: Natural resources: A book of activities: The book aims to help teachers teach environment better. Divided into two sections of Climate Change and Natural Resources, the book follows the curriculum guidelines and provides practical and interesting ways of teaching environment. Each activity sheet begins with a Curriculum Connect, a brief note to teachers that matches activities to the curriculum. *Gobar Gyan*, a background page, precedes each activity set, explains to students why they are being asked to do the task. The book has sold more than 1000 copies in the last three months. Teachers of several schools in our Green Schools network are using the book to make the students learn critical environmental lessons by making them do activity. The activities done by the students are recorded and used by teachers to assess the students under the new Continuous and Comprehensive Evaluation system introduced by CBSE.

2 Anil Agarwal Green College

Interdisciplinary Courses for Indian and International Students

Agenda for Survival (June 1-30, 2011): This flagship course offered by AAGC is for young professional and students from colleges in India. The course reaches out to students from all streams of education - social science, pure science, engineering, management, design and others. Participants from diverse educational streams from Chennai, Trichy, Coimbatore, Hyderabad, Delhi, Mumbai, Patiala, Vellore, Goa, Ranikhet, Bangalore, Pune, Kolkata and Delhi attended the course. Some of the final 22 short listed (11 girls and 11 boys) were offered Kamla Chowdhury Fellowship to meet their stay costs in Delhi.

The course went beyond class-based lectures, and included readings, case study presentations and weekly tutorials. Participants were provided with extensive reading materials, including reports, essays by eminent environmentalists across the globe. The course faculty was drawn from CSE research and programme teams. In addition, eminent academics, activists and policy makers were invited to speak to and closely interact with the course participants. The course also included a weeklong field visit to the hills of Uttarakhand. There were also several daylong field trips in Delhi. As part of their assignment, students produced a magazine, entirely on their own. Titled *Green and Grey*, this magazine included real-life reporting, analysis and opinion pieces.

Training Fellowships

Two Fellowship schemes have been instituted to support the participation of students and young professionals from India and South Asia in all AAGC courses. The **Kamla Chowdhry Fellowships** support the participation of students and young professionals in Agenda for Survival, the summer certificate interdisciplinary course on environment and development. Here, preference is given to candidates from smaller towns. The Fellowship is supported by a generous endowment from the late Dr Kamla Chowdhry, who played a critical role in India's environmental movement and deeply influenced international development efforts. Similarly, the **Anil Agarwal Fellowships for South Asia** supports the participation of two or three candidates from South Asian countries (Sri Lanka, Nepal, Bhutan, Maldives, Pakistan, Myanmar and Bangladesh; other than Indian nationals), in each training programme conducted by the Anil Agarwal Green College. These Fellowships have been instituted in the memory of Anil Agarwal, CSE's founder-director, and are targeted at students, development professionals (NGOs/CBOs), development journalists/information managers, government representatives, and environmental lawyers, among others.

Challenge of the Balance (Summer School, August 2-31, 2011): Participation in this course was sponsored by Engineers without Borders (EWB) and engineering students from across the world, selected by EWB, participated. A total of 25 participants, from UK and south Asian countries took part in the course. Course syllabus is similar to the *Agenda for Survival* course and covers rural issues, urban issues and global issues.

The rural module included natural resource management, environment governance, and environment conflict and included a field trip to Uttarakhand. The urban module facilitates interactions with several eminent experts on urban issues and includes short field trips to sites across the city. In the global module, students learned about climate change and issues involved in global environmental governance. The course culminated with an exercise of the production of a magazine, titled, *Paradigm*, where all the skills and knowledge gained can be presented.

This course is gradually gaining popularity in international universities. Lawrence University, Virginia Tech University in USA, New Castle, in UK and Engineers without Border Australia and Asian University for Women, Bangladesh have expressed their interest in sending their students for this course – which we offer twice a year – summer and winter school.

Challenge of the Balance (Winter School, Dec. 19 2011 to Jan. 6, 2012): For this winter school 14 participants from south Asian countries, attended. The background of participants ranged from renewable energy, environment science, water and sanitation, disaster management to creative writing, Chinese literature, and child health and nutrition. The course culminated with the students documenting their travel and study, *Insight*.

What they say

Feedback received clearly showed that the students found the courses rewarding. The courses taught them not just the journalistic skills of research, reporting and writing, but also allowed them to work as a cohesive group – writing shared stories, editing and even designing the magazine.

Agenda for Survival

** Pranietha Mudliar - junior researcher, ATREE – *“Through this course I met like-minded youngsters. Peer learning is undoubtedly best way and this course provided that”*.

** Savyasachi Anju-Prabir - photographer, *“Though I have travelled extensively in the hills yet this course gave me many an insight about people and environment. It gave me a different eye to look at environment development debate that I have been hearing so much all the time around”*.

** Kanika Sharma – law student, *“I am convinced that I would pursue a career as an environment lawyer”*.

** Revathi Palat Rao – studying journalism – *“I would like to come back to CSE and work with the Down to Earth team”*.

** Raghavendra Tenkayala lawyer, photographer and writer – *“Agenda for Survival gave me an understanding of the politics and sociology behind all the talk around environment”*.

** Samuel Benoit a Canadian student teaching at Panchgani – *“I will take back this learning to my school teaching in Panchgani and Canada”*.

Challenge of the Balance

** Alice Hubbard: MSc Renewable Energy; Centre for Alternative Tech /Univ of East London – *“Understanding environment from a Southern perspective was a good learning for me as I will be travelling to Bangladesh after the course. Thus these three weeks were a good preparatory study for me”*.

** Sarfaraz Banda, Bangladesh Water Development Board -- *“It is not always high end technology that is the answer to all environmental problems. A localised appropriate technology with adaptation strategies is. And that is what I learnt from this course”*.

** Owasim Akram, Plan Bangladesh -- *“I believe the knowledge we have gathered here will be replicated in our work not only in India but also in South Asia”*.

** Om N. Katel, Royal University of Bhutan, Thimpu, Bhutan -- *“Yes India is a world in a way, therefore learning about India is definitely rewarding. In addition, India’s decision towards environmental management affects the other south Asian countries, so I think it is important to have a clear understanding. This course thus is the right fit”*.

Bootcamp: Where Journalism Meets the Environment (Dec. 1-15, 2011): This course is designed to produce career-ready candidates with the knowledge, insight and skills to be effective environmental communicators, trained to work in contemporary newsrooms, research and development institutions and INGOs/NGOs. This was the first of such courses. A total of with 16 participants from India and South Asian countries of Sri Lanka, Bhutan, Pakistan and Nepal participated. The course culminated with the students documenting their travel and study - *Building Resilience in the Thar Desert*.

Participants travelled to Jodhpur to see and talk to people who mine red sand stone - interacting with silicosis affected miners (respiratory disease caused due to mining). They then went to live in Gagadi, a village near Jodhpur and visited homes of Bhil tribal community, living nearby. Here they saw various techniques of water harvesting – khadins, where sub soil moisture is harnessed; step wells, wells, ponds etc. They visited Mehrangarh Fort in the city and saw the water harvesting structures of the fort. Participants also visited *Khejardi*, and interacted with the villagers.

Reaching out

The Times of India's education section and newspaper regularly carries notices about courses offered by the AAGC. Similarly, *Career 360*, a magazine that guides youth on education, also regularly highlights these courses. *The Times of India Higher Education* – a guide to opportunities in India and Abroad 2011 has prominently carried a feature about AAGC's international summer and winter schools. Likewise, the field visits to Rajasthan (Jodhpur and Udaipur) were covered by the regional editions of *Rajasthan Patrika* and *Dainik Bhaskar*.

3 Media Resource Centre

Media Fellowships Programme

a. Water Bodies in India: Public Space, Private Design (August - October, 2011): Over 60 applications were received to report on issues related to the state of water bodies in India which are being threatened due to developmental pressures. A jury comprising MK Venu, Editor, *Financial Express*, Delhi; Pranjali Sharma, Executive Editor, *Bloomberg UTV*, Delhi; Navin Joshi, Editor, *Hindustan*, Lucknow; Sunita Narain, CSE; and Richard Mahapatra, Editor, *Down to Earth* selected eleven journalists for the Fellowship. About 40 news articles were generated as a result of this Fellowship on a range of wetland related topics – from regeneration to pollution.

b. Backs to the Wall: Tigers, Tiger Habitats and Conservation (October 2011 – July 2012): This Fellowship covered the issue of why the tiger continues to be highly endangered despite massive conservation efforts. Over 50 applications were received and a jury comprising Varghese George, *Hindustan Time*, Rajesh Gopal, National Tiger Conservation Authority, Madhu Sarin, Forest Rights Activist and Sunita Narain, CSE, selected 12 Fellows.



Box: Fellowship Details**Water Bodies in India: Public Space, Private Design**

| Sno | Name of journalist | Location | Name of newspaper | Subject of fellowship |
|-----|---------------------|--|--|--|
| 1 | Bhoomika Kalam | Lakes of Bhopal (Madhya Pradesh) | <i>People's Samachar</i> , Bhopal | Reasons for degradation of Bhopal's lakes |
| 2 | Haroon Mirani | Wular Lake (Jammu & Kashmir) | <i>Kashmir Newz</i> , Srinagar | Livelihood issues of water chestnut gatherers and linkages to the health of the lake |
| 3 | Nikhil Agarwal | Loktak Lake (Manipur) | PTI, Kolkata | Pollution and its impact on the lake and biodiversity and involvement of local communities in protection of the lake |
| 4 | Pankaj Singh | Bareilly's rivers, incl. Ramganga & smaller rivers (Uttar Pradesh) | <i>Hindustan</i> , Bareilly | Metallic pollution and overuse of groundwater |
| 5 | Pulin Kalita | Deepor Beel and other beels (Assam) | <i>Dainik Asam</i> , Guwahati | Pollution, encroachment of the beels and impact on birds |
| 6 | K Rajendran | Lakshadweep islands | <i>Kairali TV</i> , Trivandrum | Governance of the island's water bodies |
| 7 | Kumar Sanjay | Water bodies (Jharkhand) | <i>Dainik Jagran</i> , Koderma/Giridih | Policy and governance in Jharkhand relating to water bodies and water use |
| 8 | Shiba Shankar Nanda | Odisha | <i>The Dharitri</i> , Sambalpur | State of Odisha's water bodies and conflicts due to industrialisation |
| 9 | Ganadhalu Srikanta | Water bodies (Bangalore) | <i>Prajavani</i> , Bangalore | Encroachment and pollution |
| 10 | Sunil Kumar | Water bodies in Thrissur, Kuttanad and Aluva (Kerala) | <i>The New Indian Express</i> , Kochi | Focus on issues of urbanisation and sand mining |

Backs to the wall: tigers, tiger habitats and conservation

| sno | Name of journalist | Location | Name of Newspaper | Subject of Fellowship |
|-----|--------------------|---|--|---|
| 1 | Biswajeet Banerjee | Terai belt (Uttar Pradesh) | <i>The Pioneer</i> , Lucknow | Encroachment and conflicts |
| 2 | Anupam Trivedi | Corbett Tiger Reserve (Uttarakhand) | <i>The Hindustan Times</i> , Dehradun | Wildlife tourism and conflicts |
| 3 | Appu Gapak | Namdapha National Park (Arunachal Pradesh) | <i>The Independent Review</i> , Itanagar | Pressures of tiger conservation in Namdapha |
| 4 | Teresa Rehman | Kaziranga National Park (Assam) | <i>Dainik Janambhumi</i> , Guwahati | Human-tiger conflict after Kaziranga was declared a Project Tiger reserve |
| 5 | Pavan Shrivastava | Ratapani Sanctuary (Madhya Pradesh) | <i>Dainik Jagran</i> , Bhopal | |
| 6 | P Naveen | Panna and Bandhavgarh National Parks (Madhya Pradesh) | <i>DNA</i> , Bhopal | Problems of poaching |
| 7 | Tikeshwar Patel | Achaanakmaar Tiger Reserve (Chhattisgarh) | <i>Central Chronicle</i> , Raipur | Displacement of tribals and development activities inside sanctuaries |
| 8 | Bijay Misra | Satkosia Gorge Sanctuary & Baisipalli Sanctuary (Odisha) | <i>The Economic Page</i> , Angul | Community wildlife tourism |
| 9 | Anupama Kumari | Palamau Tiger Reserve (Jharkhand) | <i>Tehelka</i> , Ranchi | Elephant and tiger confrontations and threat to sanctuary from dams |
| 10 | Chandan Haygunde | Satpura Tiger Reserve & Sahayadri Tiger Reserve (Maharashtra) | <i>The Indian Express</i> , Pune | Illegal mining projects and threats from hydro projects |
| 11 | G S Shashidhara | BRT Wildlife Sanctuary (Karnataka) | <i>Prajavani</i> , Bangalore | Tourism and destruction of wildlife corridor |
| 12 | Anil S | Periyar Tiger Reserve (Kerala) | <i>The New Indian Express</i> , Kochi | Eco-tourism |

Media Briefing Workshops

a. Workshop on Water Bodies in India: Public Space, Private Design (July 26-27, 2011): CSE organized a workshop on water bodies in Vishakapatnam in Andhra Pradesh. It was attended by about 80 regional and national journalists writing in English, Hindi and vernacular languages. A visit to a contested project between industry and a wetland at Kakrapalli, where journalists met with and listened to the views of village communities helped to clarify the environment-development linkages and nature of conflicts.

The two-day briefing was organised in association with Samata and Vizag Journalists Forum (VJF) in Visakhapatnam. It was attended by about 80 regional and national journalists writing in English, Hindi and Vernacular languages. The briefing was particularly helpful to the selected fellows and other journalists who have been writing on water issues. The workshop included a field trip to the controversial East Coast Power Project site in Kakrapalli, Srikakulam district. A panel discussion was also organised with local activists from Sompeta, Kakrapalli and local journalists.



b. South Asian Media Briefing Workshop on Climate Change (November 16-17, 2011): CSE organised a two-day South Asia media briefing workshop on climate change against the background of the 17th Conference of Parties (CoP) that was held in Durban later. More than 60 journalists from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, attended the workshop to get an insight of the ongoing advances in the climate negotiations as well as progress on mitigation, adaptation, finance and technology fronts. The workshop brought together scientists, negotiators, experts and others to brief the journalists and answer their queries on climate change. The concluding session was addressed by the Minister of Environment and Forests, Ms. Jayanthi Natarajan.



The workshop resulted in reportage on climate change issues in both the national and regional media. There were reports in *The Assam Tribune*, *the Independent* (Dhaka), *The Shillong Times*, *Echo of Arunachal*, *Mathrubhumi Daily* (Kerala), *Dainik Bhaskar* (Jaipur) and online service tripurainfo.in.

c. CSE's South Asian Media Briefing Workshop on Food Safety and Environmental Toxins (March 29-30, 2012): The South Asian Media Briefing Workshop covered a range of issues – from the challenges of regulation of toxins and the health impacts of specific toxic contaminants such as pesticides, antibiotics in food to health impacts of junk food, and other toxins such as presence of chemicals in a variety of products in the home. Panellists and presenters included health experts (Indian Council of Medical Research, World Health organisation, national Diabetes, Obesity and Cholesterol Foundation), senior government officials (Ministry of Food Processing Industries, Food Safety and Standards Authority of India, state Food Safety Commissioners from Gujarat and Maharashtra), voluntary organisations (National Association of Street Vendors, Thanal) industry representatives (Kejriwal Apiaries, All India Food Processors Association), and nutrition experts (Nutrition Society of India).



Regular Media Engagement

a. Facilitation of journalists in the COP for Climate Change at Durban (Nov. 28 –Dec. 9, 2011):

CSE sponsored the participation of a selected group of journalists from print and electronic media to the CoP-17. Selected journalists were from among the key national dailies (*Times of India*, *Hindustan Times*, *Asian Age*), some regional majors (*Dainik Bhaskar* and *Nai Dunia*), top television channels (CNN-IBN and NDTV) and agencies (IANS). The journalists received a daily briefing on ongoing developments in the negotiations. They filed real time reports on the developments of negotiations as and when it progressed in Durban.

Participating journalists produced copious reports (more than 100) from Durban, which were carried by their respective newspapers and TV news channels.



Participation at the Durban COP

Nitin Seti – Times of India
 Bhasha Singh - Nai Duniya
 Mr Ritesh Joshi - NDTV
 Mr Siddharth Pandey - NDTV
 Chetan Chouhan – Hindustan Times
 Richa Sharma - IANS
 Rashmi Saigal – Asian Age
 Bahar Dutt - CNN IBN

Environment Resources Unit

1. India Environmental Portal

The team continued to make available processed information through the India Environment Portal. Information was sourced from reports, studies, and research papers along with news from approximately 80 print and digital newspapers. Daily News Bulletin on environment (India) covering most of the states and union territories of India was published every day. The team continued to maintain the In-depth sections on *Wildlife and People*, *Poverty and Environment*, *Water Pollution*, *Food Safety*, *Urban Transport*, *Mining*, *Industry and Environment*, *Bhopal Gas Disaster*. Two separate sub-portals were created, one on climate change and the other on renewable energy.

Box: Portal's resources

- News Clipping (288523)
- Feature Article (16295)
- Reports and Documents (7718)
- Opinion (3099)
- Book Review (266)
- Organisation (248)

The IEP continues to rank amongst the top most website on Google, for research on “India and environment”. Its geographical outreach spans over 100 nations as on date. During the year, 0.8 million people visited the site and there were 1.6 million page views. On an average 3500 reports/documents are downloaded every month.

There has been a 300% increase from in-bound web-links from major international and national organisations/websites such as Wikipedia, India Times, Huffingtonpost, Guardian.co.uk, National Geographic, Harvard.edu, Berkeley.edu, New York Times, Delhi University, Jawaharlal Nehru University. In addition, we now have roughly 25,000 on our Facebook account and a growing community on the twitter.

The Daily News Bulletin page on the IEP is amongst the top ten most visited pages. It has been found to be very useful and utilised by the portal visitors – national and international. It is also been used by various websites and displayed by them. The reports and Documents page on the IEP is also amongst the top ten most visited pages.

2. Capacity Building Programmes

Three training programmes for 41 participants were conducted by the team. These programmes are popular and requests for trainings on information management and web-based outreach from other states and South Asian nations have been received. Participants almost always go back and implement what they learnt in the training workshops.

From Classroom to Lab

** Amirtham Alexander, Executive Director, GREENS Biodiversity Sanctuary: Has started building a photolibrary and also visited CSE after the training for getting more help for this activity. He is also building a thesaurus on natural resources and biodiversity. He said “The training gave him full confidence to reorganise the information and start documentation from scratch”.

** Jaiamol J Naik, Deputy GM (Information Systems, B M Salgaocar & Bros Pvt Ltd, Goa: “A great balance of giving inputs on latest technology available and latest web trends to achieve organisational tasks of reaching to the world- a common goal of all organisations.”

** Sriyani, Science Librarian, University of Peradeniya, Sri Lanka “The training was very productive and you made us who are not IT specialists, confident to move forward in the digital age even without the knowledge of programming & such advanced knowledge. Initially, I plan to start on the thesaurus for the Faculty knowledge base.”

Content Contributors: realising the potential of the India environment Portal, several individuals and organisations regularly contribute to the portal to get a wider outreach.

** Shankar Sharma, Power Policy Analyst, Shimoga District, Karnataka – is a regular contributor on the IEP and sent the following reports for the IEP

Global Warming, CDM and Power Plants

India's low carbon strategies

Preventing nuclear emergencies

Coal Supply Debacle

** Parisar, an NGOs based in Pune is also a regular contributor on the IEP and sent the following reports for the IEP

Transport budget analysis 2011-12

Analysis of PMC's budget 2011-12

Parisar comments on proposed fuel economy standards

** Government of India too has realised IEP's potential and requested the portal to share peer-reviewed research paper with its visitors. For example,

Government of Sikkim sent the following research papers published in peer review journals

Traditional livelihood based on sheep grazing in the Khangchendzonga national park, Sikkim
Ecology, economics and equity of the pastoral systems in the Khangchendzonga National Park, Sikkim Himalaya, India

Reviving dying springs: Climate change adaptation experiments from the Sikkim Himalaya
Assessing the priorities for sustainable forest management in the Sikkim Himalaya, India: A remote sensing based approach

Rapid, cost-effective and high resolution assessment of climate-related vulnerability of rural communities of Sikkim Himalaya, India

The Alpine vegetation of the Khangchendzonga Landscape, Sikkim Himalaya

South Asia Programme

CSE's regional programme has made good progress since its inception and there is a demand for CSE inputs in a variety of ways in the region. CSE teams today work in close collaboration with key ministries in various countries in the region, and cover a gamut of activities -- from direct policy interventions on strengthening regulatory capacities of environment ministries in Sri Lanka, Bhutan and Bangladesh, to our efforts to spread good practices in air pollution and mobility planning in cities in Sri Lanka and Bangladesh, to skills-based trainings on rainwater harvesting and decentralized wastewater treatment in Sri Lanka, Bangladesh and Nepal, to our interdisciplinary courses for the youth and mid-career development professionals in the region.

Formal partnership agreements/MoUs were signed with government agencies and NGOs in Sri Lanka, Nepal and Sri Lanka, in addition to existing ones in Bangladesh. Today, key government partners in the region include Central Environment Authority (Sri Lanka); Ministry of Industry and Commerce (Sri Lanka); National Environment Commission (Bhutan); Ministry of Water Supply and Drainage (Sri Lanka); Ministry of Education (Sri Lanka); Department of Environment (Bangladesh); and the Department of Transportation (Bangladesh).

Country Programmes

Sri Lanka: Based on an MoU signed with Sri Lanka's Central Environment Authority (CEA), the EIA training team conducted two training workshops to help build capacities of key environment regulators on issues relating to EIA.

The Green Schools Programme (GSP) launched its environment education initiative in Sri Lanka. Following a south Asia consultation meeting in New Delhi in June, in which key personnel from the ministries of education from Sri Lanka, Nepal and India participated, a two-day stakeholders meeting was conducted in Colombo for 25 key educators and master trainers from all nine provinces to launch GSP programme in the country.

The Urban water management team conducted four training workshops on rainwater harvesting and decentralised wastewater treatment in Sri Lanka in collaboration with the Ministry of Water Supply and Drainage in Sri Lanka and the Lanka Rainwater Harvesting Forum.

CSE's pollution monitoring laboratory will be working with the CEA to test for heavy metals in water, industrial effluents and poultry feed to isolate the cause of an outbreak of chronic kidney disease of unknown aetiology (CKDU) widely prevalent in the mid-country.

Bangladesh: The Urban water management team organised a meeting of lake protectors and lawyers from India and Bangladesh in Bangladesh in partnership with Bangladesh Institute of Planners. The meeting focussed on legal and campaign strategies to conserve the lakes in south Asia. The meeting was well covered by the news media: Financial Express, The Daily Star and The New Nation.

The team also helped design and implement five demonstration model projects on rainwater harvesting and decentralised wastewater treatment in Bangladesh in close collaboration with WaterAid-Bangladesh followed by training workshops.

Nepal: The Urban Water Management Team provided technical inputs to its civil society partner, Centre for Integrated Urban Development (CIUD) on the planning and designing of rainwater harvesting model project at Tri Chandra University in Kathmandu and on designing a rain garden in the Patan area of Lalitpur district. CSE also provided technical support to the Department of Water Supply and Sewerage for the implementation of a rainwater harvesting project in Kabhre district in Kathmandu valley. CSE also conducted training workshops on rainwater harvesting and decentralised wastewater treatment.

Facilitating Information Spread and Exchange

CSE's work in the region was widely disseminated through coverage in *Down To Earth*, which included in-depth articles, analysis and features, together with web specials. Coverage from Sri Lanka in DTE included high agro chemical use and linkages with chronic kidney disease, analogue forestry and organic farming; coverage from Bangladesh included a review of the proposed forest & wildlife Bill, Dhaka's threatened urban wetlands, and ship breaking; while coverage from Nepal included an in-depth analysis of river pollution in the Bagmati river. DTE also carried pieces on Bhutan's foray into community forestry, while the magazine also carried profiles of leading public figures from the region.

The South Asia portal, an information getaway to research, feature articles, government reports and links to leading researchers, institutions and government agencies. The portal also carries web dossiers on key environmental issues together with country overviews of Bangladesh, Nepal, Bhutan and Sri Lanka, together with web special reports and photo features, in addition to thousands of cross-tagged news reports sourced from leading journals and news sources.

Activities for South Asian Participants in New Delhi

In addition to in-country programmes, several meetings and workshops were conducted in New Delhi that brought together participants from the entire region to facilitate exchange of experiences.

| Activity | Country level | Regional level |
|---------------------|---|---|
| Meetings / seminars | Stakeholder meeting on Green schools programme (Sri Lanka) | Stakeholder meeting on Green schools programme for participants from Sri Lanka, Nepal and India |
| | Meeting of lake protectors (Bangladesh) | South Asia media briefing on Food Safety and toxins |
| | Orientation on natural gas vehicle programme (Bangladesh) | International conference on parking reforms for a liveable city |
| | Release of Living with climate change in Dhaka | Conference on clean and sustainable mobility for all |
| | | South Asia media briefing on climate change |
| Training programmes | Urban water management trainings (Bangladesh, Sri Lanka and Nepal) 8 programmes | Training on enforcement, monitoring and compliance (Sri Lanka, Bhutan, Bangladesh, India) |
| | EIA trainings – 2 in Sri Lanka | Orientation workshops for air quality regulators (Bangladesh, Nepal and Sri Lanka) |
| | Information management | Workshops on Information management (Nepal, Sri Lanka, Bangladesh, Bhutan, Maldives) |
| | Anil Agarwal Green College | Students courses (23 south Asians) |

Participants of some of the south Asia programmes



External resources

Volunteers and interns

The volunteers programme has grown since its inception in 1996. The volunteers database has over 670 applications. CSE receives, on an average, over 300 applications every year for internships from university students. Volunteers contribute staff time equal to between 13-15 full time staff every year.

In 2011-12, 106 interns and volunteers, from India and abroad, worked in CSE, contributing to 3932 mandays. Volunteers serve as a potential recruitment base and every year atleast 1-2 staff members are recruited from the volunteer pool.

Volunteers working with the Sustainable urban mobility team undertook studies on parking pricing, congestion pricing, financing public transport, air quality and health issues, and aviation emissions. In addition, volunteers also worked on city profiles. Volunteers and interns working with the Sustainable Industrialisation team contributed to the work on the Green rating of the Iron and Steel sector. Those working with the water programmes worked on issues ranging from groundwater use and regulation, sand mining. They also contributed to the documentation of decentralised wastewater treatment systems. Those working with the science and reportage team contributed by helping with research for stories published in the *Down To Earth* magazine. In addition they worked on issues related renewable energy, assisted with photo documentation and helped in organising events.

Students from 44 different universities spread across 15 states of India of Punjab, Uttar Pradesh, Uttarakhand, West Bengal, Assam, Jharkhand, Rajasthan, Pondicherry, Tamil Nadu, Karnataka, Maharashtra, Gujarat, Madhya Pradesh, Himachal Pradesh, Delhi worked in CSE during the year.

From overseas

| Name of country | University/college |
|--------------------------|--|
| United States of America | Dartmouth College Barnard College, Columbia University University of Delaware St. Lawrence University American University and University of Peace, Costa Rica Mount Holyoke College University of Michigan |
| United Kingdom | University of Leeds London School of Economics Imperial College, London University of Nottingham University of Warwick |
| Canada | Carleton University, Ottawa |
| Bhutan | Journalist with Kuensel Corporation Limited |
| Germany | University of Kiel |

What they say

“Working with Down to Earth was a great experience. Here I realized my actual potential to work on stories. Reporting here is not labelled as a piece of writing and putting it across the people but it is an in-depth analysis and investigation of the events which further develops a reporter's understanding of the event which he/she can pass on to the readers” Salma Rehman, AJK Mass Communication Research Centre, Jamia Millia Islamia, Delhi.

“It was a great experience working here at CSE. I learnt a lot about various industries during the CREP guidelines report. I also worked on advanced wastewater treatment which is generally not incorporated into the engineering curriculum”. Sushant Rao, Delhi Technological University, Delhi

“My short period at CSE was a great learning experience. It helped me understand deeply the working of the country's pollution regulatory authorities”. Abhinav Goyal, Amity Law School, Delhi

“Working with CSE was a great experience, in the sense that researching along the lines given by my supervisor, as well as discussions with other interns, shed a great deal of light on topics that otherwise would have faded to the background. I now have working knowledge about a topic (electric vehicles) I otherwise would've known little about”. Aryanshi Kumar, Indian Institute of Technology, Delhi.

Awards and recognition

During the year, CSE Director-general, Sunita Narain, received the following recognition



Modernites' Award for Excellence 2011: Awarded by the Modern School Old Students association for landmark contribution to the cause of environment.

The Citizen of the Decade Award 2011: Awarded by the Rotary International District 3201, Kerala in January 2011, in recognition of her unstinting efforts at building Brand India both at home and abroad.

Kirloskar Vasundhara Sanman: Awarded by the Kirloskar Vasundhara International Film Festival, Pune, in recognition of analyzing and studying the relationship between environment and development and at creating public consciousness about the need for sustainable development

Doctor of Laws (Honorary), University of Alberta, Canada: Awarded in recognition of visionary leadership in advancing resource conservation, environmental literacy and informed democracy.

The M R Pai Memorial Award awarded by All-India Bank Depositors' Association (Mumbai).

PUBLIC AWARENESS OUTPUTS

Sustainable urban mobility and air quality

Papers and Reports

- Analysis of the national summary of the six-city study on air pollution sources put up on the MoEF
- Analysis of Study of the Exhaust Gases from different fuel based vehicles for Carbonyls and Methane Emissions of MoEF and ICAT
- Policy note on post-2010 emission standards road map
- *Air pollution and our health*: A briefing note.
- *Is clean diesel a myth or part of the solution*: Factsheets
- *Rapid assessment of the JNNURM programme*: A review paper
- Briefing paper: Air pollution and our health

***Down to Earth* reportage**

- *Shimla to levy green fee on private vehicles*, March 5, 2012
- *Fuel economy standards: a non-starter*, March 14, 2012
- *Carcinogenic benzene levels peak in Delhi*, March 15, 2012
- *Budget bites on vehicles*, March 16, 2012
- *Raise tax on diesel cars*, March 6, 2012

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- *Auto Expo review: diesel, electric cars dictated trends*, Jan 19, 2012
 - *How cities can improve mobility*, Oct 14, 2011
 - *No room left for the car*, May 15, 2011
 - *Four-stroke complements CNG*, May 15, 2011
 - *Lawsuit over bike lane in New York*, April 30, 2011
 - *Diesel cars dearer; cycles cheaper*, April 15, 2011

Sustainable Industrialisation

Newsletter on environmental governance: The team also launched the 'Environmental Governance' e-newsletter in October 2011. This quarterly e-newsletter received good responses and many readers have suggested incorporating news on specific topics such as waste management, e-waste, etc.

Down To Earth reportage

- *Apex court spanner in Nirma cement*, April 15, 2011
- *Nirma plant in trouble again*, June 15, 2011
- *Pay and take*, June 30, 2011
- *Gentle on critical pollution*, July 15, 2011
- *Lafarge's fait accompli*, July 31, 2011
- *Nothing official about it*, August 9, 2011
- *Mining for people*, August 15, 2011
- *Vedanta falters in Odisha*, August 15, 2011
- *Auto yes to coal*, September 30, 2011
- *A yatra to highlight the looting of land*, October 4, 2011
- *Court raps environment ministry*, October 15, 2011
- *Rs. 3,300 crore omission*, October 15, 2011
- *Captive coal block miners, too, must share profits with people*, October 24, 2011
- *Bokaro's displaced still await compensation*, October 24, 2011
- *Environment ministry seeks to curb shoddy EIA reports*, October 29, 2011
- *MoEF categorises offences relating to environmental clearances*, November 4, 2011
- *Reliance's unusual reward*, November 15, 2011
- *Cabinet dilutes new mining bill*, November 15, 2011
- *Serious inquiry*, November 30, 2011
- *Lobbying begins*, December 15, 2011
- *Waste manager dumps it in river*, December 31, 2011
- *Industrial units in Vapi continue to flout pollution norms*, January 5, 2012
- *Mines ministry says no to export ban on minerals to check illegal mining*, January 5, 2012
- *Nirma loses wetland*, January 15, 2012
- *Goa's dark side* - January 18, 2012
- *Ministry indifferent to illegal mining*, January 31, 2012
- *US sets mercury emission limits*, January 31, 2012
- *Green tribunal fines appellant for frivolous litigation*, February 9, 2012
- *Pollution glorified*, February 15, 2012
- *National Green Tribunal stays thermal power plant in Gujarat*, February 20, 2012
- *Sundarbans at risk*, March 15, 2012

Factsheets on forest clearances

Newsletter on environment regulation

Renewable Energy

Renewable energy portal: The team created a sub-portal on renewable energy within the India Environment Portal. The Portal has information on the different renewable energy programmes and information collected through RTI. The RE sub-portal is aimed to be a “one stop shop” for information on RE in the country. It will have databases, policies, programmes, technical documents, case studies, best practices, relevant newspaper clippings, relevant *Down to Earth* articles, etc.

Down To Earth reportage

- *National Solar Mission: bidders quote low tariff, bag projects*
- *The truth about solar mission*
- *Solar trick*
- *Lanco's allies*
- *Guarantee of 14 companies under solar mission encashed*
- *Solar mission projects set to miss deadline*
- *Solar mission continues to lure private players*
- *Gujarat set to develop India's first tidal energy plant*
- *Patronising dirty technology*
- *Centre considering fund to protect domestic solar industry*
- *BJP's promise of energy from waste heats up Delhi civic polls*
- *Full bank guarantees of three solar companies encashed*
- *Solar thermal technology to get a boost in phase two of solar mission*
- *Biodiesel from microalgae becomes a reality*
- *Life post Fukushima*
- *Green energy takes toll on green cover*
- *Desperate for gas*
- *Microcredit scheme for solar lighting system*
- *Falling silicon prices shakes up solar manufacturing industry*
- *Is REC an albatross for power distribution utilities?*
- *Energy market glitch*

Photo Essays

- *Biogas rediscovered*
- *Harvesting solar energy in Uttarakhand*
- *New gold rush*
- *Time to plug in*
- *Solar Streetlight project in Haryana*
- *Hope flickers*
- *Solar Power from the Rajasthani desert*
- *Vignettes from Sri Lanka's cloud country*

Climate Change

Climate change sub-portal: The Climate Change sub-portal was created within the India Environment Portal. Information can be searched by subject keywords such as climate agreements, climate economics, sinks, adaptation or type of information source as news clippings, documents, events etc. The blog section provides analyses and critical reviews on current developments by leading climate experts.

During the Durban climate COP, the climate portal and the CSE website became particularly vibrant with a host of information which was regularly fed by the CSE team from the location. Videos, press alerts and releases, daily reports, blogs. The site came alive every day with the latest from the conference.

Reportage on and from Durban CoP

- *The final outcome of the Durban Conference on Climate Change*, December 11, 2011
- *Indian environment minister Jayanthi Natarajan gives hard hitting speech, receives standing ovation*, December 10, 2011
- *The latest Indaba text: bad for the developing world*, December 9, 2011
- *Durban's final hours: our assessment and outcome*, December 9, 2011
- *Countdown: The last 24 hours*, December 9, 2011
- *REDD+: India goes all out on safeguards, Tuvalu plays spoilsport*, December 8, 2011
- *Double accounting and suchlike evasions*, December 8, 2011
- *Jeez, Mr.Stern: 2 degree C target is just a guidepost?*, December 7, 2011
- *New REDD+ draft decision circulating!*, December 7, 2011
- *New AWG-LCA text out!*, December 7, 2011
- *Green Climate Fund: Yes and NO*, December 7, 2011
- *What's critical at Durban: removing the firewall between developing and developed countries*, December 6, 2011
- *Equity and per capita entitlement has to be the basis for fair climate deal says UK Climate minister*, December 6, 2011
- *Jayanthi Natarajan's statement in Durban on the issue of a new legally binding treaty*, December 6, 2011
- *The Verbal Battle of Durban*, December 6, 2011
- *Press conference by Chinese delegation*, December 6, 2011
- *"We don't want an acclamation text": developing countries are now angry*, December 5, 2011
- *AOSIS ultimatum to BASIC*, December 3, 2011
- *Half way house: divided we fall?*, December 3, 2011
- *New proposal by LDCs*, December 3, 2011
- *Red flag to green fund*, December 1, 2011
- *India and China are doing their fair share*, November 30, 2011
- *Of stances, tactics and country positions*, November 28, 2011
- *India's agenda on the table at Durban*, November 28, 2011

Videos from Durban:

- *India's environment minister Jayanthi Natarajan speaks during a break of Indaba, the final negotiation process of the CoP17 at Durban*
- *NGO's flash protest - NGO's from around the world protest inside the convention center sneaking passed the UN security*
- *Do no support companies that burn waste, said the Global Alliance of Waste Pickers at a protest demonstration during the COP17 at Durban*
- *To boot out or not to boot out the USA: A debate between LDC & The EU*
- *India's Environment Minister Jayanthi Natarajan talks tough at the BASIC press conference at COP17, Durban*
- *Minister Maria Fernanda Espinoza, Ecuador also talks about why the World Bank cannot be trusted*
- *Chandra Bhushan, Deputy Director General, CSE, on the status of negotiations and the future of COP17, Durban*
- *"2020 may become 2000 and never..." Cuban negotiator on the status of the KP II and G77 unity*
- *Presentations at the 'Imperative of equity for an effective climate agreement' by*
- *Sunita Narain, Director General, CSE, Jayanthi Natarajan, Minister of Environment & Forests, India, Ambuj Sagar, professor, Indian Institute of Technology, Delhi, and Chandra Bhushan, Deputy Director General, CSE*
- *Ms. Luz Melon, Deputy Coordinator G77 & China Coordination Team on why developing countries are worried and angry about AWG-LCA*
- *Dr. Paul Quits Kelley, Nicaraguan negotiator & Member of transitional committee, Green Climate Fund*

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- *Global Day of Action protest march on 3rd December, 2011*

Food Safety and Toxins

Down To Earth reportage

- *Ethics on trial, Andhra to promote chemical free cultivation*
- *Who is watching GM crops?*
- *Punjab fails to monitor GM trial*
- *Stop passing the buck*
- *When business rules our kitchens*
- *FSSAI's scientific panel reconstituted*
- *Cap energy drinks*
- *Pesticide trap*
- *Centre bans gutkha*
- *New safety norms for toys*
- *Ban likely on junk food in schools*
- *Honey trade just got stickier*
- *'Poor nations need Codex education'*
- *EU approves stevia extract as sweetener*
- *Junk food in schools: high court asks FSSAI to frame rules*

The Environment Health Bulletin: A quarterly newsletter, *The Environment Health Bulletin* was launched in June. Three newsletters were sent out and the fourth is scheduled for March end. CSE also tracked the ongoing developments of regulation of endosulfan use and produced regular reports in the website.

Sustainable Buildings

Down To Earth reportage and web specials

- *Lavasa exposed*
- *Home truths*
- *High Court's blow to Lavasa*
- *Maharashtra amends water law*
- *Energy fixing*
- *Water may shift from State to Concurrent List*
- *Towards zero discharge*
- *Road to disaster*
- *Energy conservation is a moving target*
- *Don't plug this hole*
- *Maharashtra soft on Lavasa?*
- *Lavasa accepts green riders, finally,*
- *Water crisis in Tripura town*
- *Singapore taps its water*
- *Darkling waters*
- *Land over nature*
- *Serious inquiry*
- *Unhappy Bani*

- *Green living is easy*
- *Penny foolish, pond wise*
- *Cash clogged*

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- *Concrete invasion*
 - *In deep water*
 - *Aravallis razed*
 - *Curse of excess*
 - *Web Check: Getting serious about garbage*
 - *Mired in sewage*
 - *Smart but pricey*
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