



ANNUAL REPORT **2012-2013**



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Overview

The year 2012-13 was a high performance year for CSE, and programme teams achieved 80 per cent of their planned outputs against targets. The institution's work remains highly visible. CSE was referred to or quoted in more than 1200 news clippings (national and regional media), and also appeared in more than 150 TV news reports in the year. CSE teams produced seven key publications in 2012-13, in addition to dozens of policy briefings and other research and advocacy collateral. Almost all CSE programmes have inducted training as part of their work, and more than 2200 people were trained by CSE in the year. Major public conferences hosted by CSE were well received and led to significant outcomes, including the Anil Agarwal Dialogue on urban water and waste, the conference on Food Safety & Toxins, and the release of the ratings of the Iron & Steel sector.

CSE initiatives led to significant policy outcomes. The minister of environment issued official transit passes to residents of a village in Odisha to sell bamboo outside their villages, opening up livelihoods options for millions of forest dwelling communities across India. Similarly, CSE was asked to present the findings from its landmark



Vice President Hamid Ansari at the Anil Agarwal Dialogue

report, Excreta Matters, to senior members of the principal opposition party, Bharatiya Janata Party. Many CSE recommendations on prudent urban water and waste management were incorporated in the 12th plan Five Year Plan of Planning Commission. Likewise, CSE's position was reiterated at the CSE-MoEF joint side event at the Doha CoP, when India's lead climate negotiator RR Rashmi endorsed equity to be the bedrock of any global agreement.

CSE programmes also led to questions raised in state Legislatures and in both house of Parliament – for instance, in the UP Legislature, following the CSE laboratory



Anil Agarwal Dialogue in progress



study on mercury in residents of Sonbhadra in the state's industrial belt. Following the release of iron & steel sector ratings in June 2012, questions were raised in both the houses of Parliament on the performance and safety of this sector. Several financiers of this polluting sector demanded better pollution control measures. Some CSE actions had direct, immediate outcomes; the CSE laboratory study on honey triggered an immediate ban imposed by the regulator on the presence of antibiotics in honey. The DTE expose on solar energy led the Ministry of New & Renewable Energy (MNRE) to create an Inter Ministerial Committee to bring in more clarity in solar guidelines. Similarly, the Haryana High Court ordered real estate builders to use only treated sewage for construction following CSE's workshop on groundwater.

During the year, the second and third tiers of staff have taken on more responsibility and more independent charge of their programmes. However, institutionally, it has been a challenge to build capacities of staff to take charge of all programmatic responsibilities – including monitoring, evaluating and reporting. Mechanisms are being put in place

to build staff abilities in these spheres – for instance M & E training and more hand holding to help staff accomplish these vital tasks.

An associated challenge was to continue to keep key staff motivated. While several programme staff were given independent charge of their programmes, it was difficult to retain some senior staff – for instance, a senior manager of the environment education team who was given considerable autonomy and exposure decided to leave and join an associated environment education programme of a donor. Despite this, it was decided to continue with a decentralized model, as it fostered more 'ownership' and accountability over programme goals.

A key programmatic challenge that will need to be addressed is how to create vibrant cross cutting programmes, rather than more issue-based ones. For instance, there are significant overlaps between CSE's sustainable industrialization programme and the climate change programme. In short, teams have had to work more closely together than before, and mechanisms are being put in place to ensure shared accountability.

Some mature teams have undergone a programmatic evolution. For instance, the Media programme and the Green Schools Programme (GSP) have expanded to include associated, newer constituencies. The Media programme targeted rural, small town reporters for the first time this year, while the GSP team decided to fashion its schools programme to not only include environmental audits, but also to reward actual on-ground implementation, or 'change makers' in schools.

Almost all CSE programme teams were involved in training and capacity building activities – about 2214 persons attended CSE trainings, of which 750 were from south Asia. While research and training / capacity building have gone hand in hand, a reason why CSE trainings are considered to be of some impact, the sheer scale and pace of training has at times come in the way of research efforts. In fact, some teams have made the conscious choice to replan and to rationalise training efforts in order to focus more on research.

Research and advocacy

RESEARCH AND ADVOCACY

SUSTAINABLE URBAN MOBILITY AND AIR QUALITY

Policy advocacy: The team's research and policy advocacy activities focused on convincing city, state and the central government to remove incentives for diesel; demanding more stringent fuel economy standards; pushing a viable bus-based public transport system; and demanding measures to reduce alarmingly high toxic air pollutants in Delhi. To address the trans-boundary drift of air pollution, the team held an inter-state dialogue under the aegis of the Supreme Court-appointed Environment Pollution (Prevention and Control) Authority, of which CSE is a member. The ensuing report on non-motorized transport, *Onfoot and pedal*, was shared with Delhi's Lt. Governor, chief minister and other key officials; CSE also submitted a detailed work plan to them on a parking policy for the city.

City action plans: CSE worked closely with city administrations of Jaipur and Chennai –

the team organised a 'city dialogue on air quality and mobility challenges' with the Jaipur Development Authority; in Chennai, the team initiated research on air quality and mobility.

Capacity building: To improve capacities of concerned city administrators on air pollution and mobility strategies, the team conducted six orientation programmes/workshops for 155 officials and grassroots representatives from across the country.

Results

- Campaign to remove incentives for diesel:** CSE's campaign against toxic diesel in personal vehicles led to the ministry of petroleum to recommend additional taxes on diesel cars. The ministry of finance also set up a committee headed by Kirit Parikh to propose phasing out of fuel subsidies, while Planning Commission member BK Chaturvedi pledged to pursue measures to hike diesel prices. The government announced a hike in excise duties on big



Panelists at the Jaipur City Dialogue

- cars and diesel-run SUVs in the Budget.
- **Fuel economy standards:** In response to CSE's comments in a public hearing on proposed fuel economy standards, the Bureau of Energy Efficiency (BEE) tightened its draft standards. The move also got the nod from the Prime Ministers' Office.
- **Action on toxic air and sustainable mobility in Delhi:** Pushed by CSE's campaign, the chief minister initiated 'clean air action plan', in which CSE was inducted as a member. In response to CSE's advocacy gasoline refuelling stations in Delhi have begun to install vapour recovery systems to reduce benzene levels. CSE was made a member of a health department committee to create an air quality index.
- CSE's proposed **parking policy for Delhi was endorsed.** Parking rates were doubled in the New Delhi Municipal Council areas; other parts of the city will follow.
- CSE's comments on the Bus Rapid Transport System (BRTS) were used to defend this public transport option in the High Court **against an anti-BRT petition.**
- Raipur Development Authority (JDA)

decided to engage with CSE on parking management and other mobility related issues. JDA authorities also nominated CSE on the Rajasthan State Commission on Urbanization.

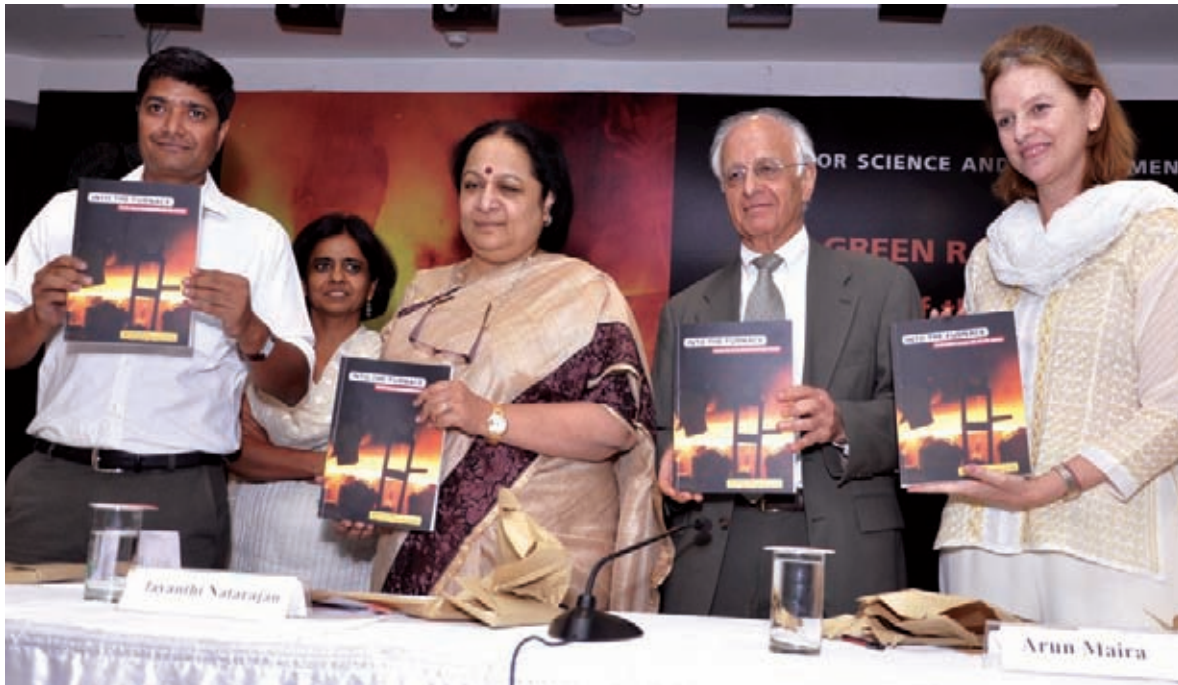
- Important **training outcomes** included how officials upheld key principles learned in their public statements (as quoted in news media). A transport department official in Maharashtra trained by CSE is now reworking his city's bus operation and developing separate cycle tracks and walking zones for students. CSE trainings also instigated direct action – Agartala's ARPAN Society is pushing regulators for a clean air and mobility plan for the city, and has started a bicycling club.
- The team generated more than 300 news articles in national and regional dailies.

SUSTAINABLE INDUSTRIALISATION

Policy research and advocacy: Tests carried out by CSE's Pollution Monitoring Laboratory found high levels of mercury in the environment and in the bodies of local residents of Sonbhadra, located in the resource-rich Singrauli area in Uttar Pradesh, the country's industrial



Participants of the training workshop on clean air and sustainable mobility programmes



Union minister for environment and forests, Jayanti Natarajan releasing the study on Iron and Steel sector

powerhouse with massive coal reserves and many coal-fired thermal power plants. The study's release, highlighting the sordid tale of pollution, poverty, non-compliance of environmental norms, official apathy and disease, generated much news media interest.

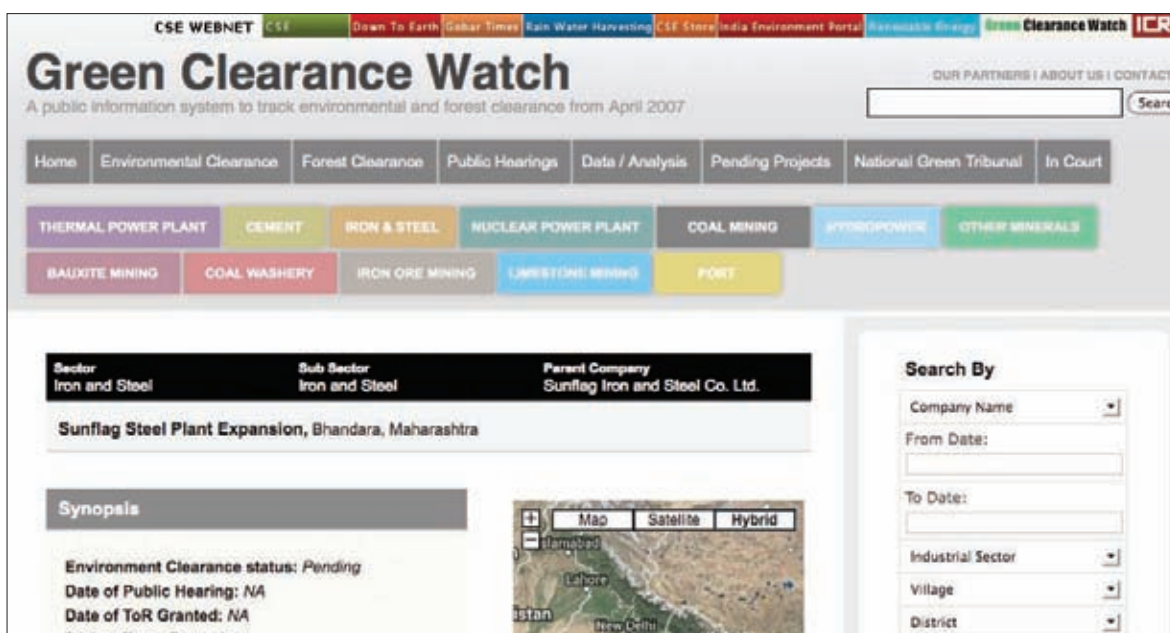
Green Rating Project: Iron & steel sector: In June 2012, CSE released a major study, *Into the Furnace*, on the environmental performance the important but highly polluting iron and steel sector in India. A special report on 'best available techniques' for Integrated iron and steel industries was shared with state EIA and Environmental Appraisal Committees, and with the ministry of steel. The team also published several in-depth articles in DTE.

Regulators' training programme: CSE conducted six training programmes for environment regulators in the year, training 123 participants from various state pollution control boards. The team conducted a two-week specialised training for 24 south Asian regulators (from Sri Lanka, Nepal, Bhutan, Bangladesh, Maldives, and Pakistan), and a training workshop for 24 environmental managers of corporate India. The team

continues to publish regularly in DTE, and publishes a quarterly e-newsletter, *Environmental Governance Quarterly*.

A promising new development was the cooperation agreement signed between CSE and the Swedish-Environment Protection Agency, in which Swedish experts were invited to India to teach Indian pollution regulators to pollution abatement approaches. Swedish EPA hosted a group of Indian regulators in Sweden for a week, to expose them to best practices in pollution management measures and environmental governance in Sweden & EU.

Community support programme: CSE prepared EIA guidelines for mining, hydropower, roads & highways, industrial projects, forestry, transmission lines, and tourism at the request of communities. A total of 12 training EIA and SIA workshops were conducted for Industry, regulators, NGOs, consultants, students and academicians. The team also put together the **Green Clearance Watch** portal, comprising in-depth data and information on all environmental clearances granted in key sectors by the ministry of environment. The portal includes crowd-sourced videos of public hearings.



A screen-shot of the Green Clearance Watch Portal

Results

- An MLA from Sonbhadra brought up CSE's study in the state Legislature and sought a response from the state authorities. A Polish investment group got in touch with CSE on the lab study and wanted to know the role of NTPC and Coal India in the pollution in the area. The study was also carried in the International Journal of Clinical Metal Toxicology and Business and Human Rights Resource Centre. Media coverage ensured widespread discussion from doctors and NGOs.
- Following the release of iron & steel sector ratings in June 2012, questions were raised in both the houses of Parliament on the performance and safety of this sector. Ministry of steel sent a circular to companies that the Parliamentary Standing Committee meeting in July has listed a discussion on CSE's report. Similarly, Planning Commission Member K. Kasturirangan said the report's proposed measures to reduce the sector's high emissions intensity will dovetail with the policy prescriptions in the 12th Plan. The report had repercussions on investments by foreign entities in polluting industries in India. International Finance Corporation, the World Bank's private sector lending arm, has pledged to review its lending guidelines for this polluting sector. Citing the CSE study, CLSA-U, an investment bank with interests in south Asia, stressed the need of better environmental due diligence for investment in industries and review for performance of the plants. Several industries came forward seeking help to improve their environmental performances.
- Participants to the CSE-Swedish EPA training gave a positive feedback; upon their return to their offices, some participants recommended several measures to make compliance and enforcement more effective.
- A key outcome of the regulator trainings has been the wide representation from 15 State Pollution Control Boards (SPCB), including from the heavily industrialized states and from those states with a large presence of extractive industries, such as Gujarat, Maharashtra, Odisha, Tamil Nadu, Andhra Pradesh, West Bengal, Uttar Pradesh, Karnataka, Rajasthan, and Goa. In an encouraging move, the Odisha SPCB nominated 10 of its newly-recruited officers to attend CSE's induction training. Public sector giants such as SAIL and NTPC have requested customized trainings for their environmental managers. Member Secretary of Gujarat

SPCB signed an MoU with CSE to train their industry officials and regulators; talks are on with Odisha SPCB.

- *Green Clearance Watch* received excellent feedback from NGOs, the Planning Commission, State Pollution Control Boards, ministry of environment, etc. From October 2012 - March 2013, about 9500 unique visitors visited the portal.

RENEWABLE ENERGY PROGRAMME

Policy research and advocacy: CSE monitored, analysed and recommended policy fixes to strengthen implementation of renewable energy initiatives. The team worked on a range of issues – from why biomass plants were falling sick; to off-grid solar in Bihar; critiquing the central government's attempts to bail out state power utilities; and advocating necessary measures in the 2nd phase of the Jawaharlal Nehru National Solar Mission (JNNSM); to

issues hampering wind power installation in Tamil Nadu; and documenting innovative uses of solar PV.

Two roundtable were organised in the year – to discuss research findings on off-grid and grid-connected solar; and to discuss the draft policy document issued by the Ministry of New and Renewable Energy (MNRE) on the 2nd phase of JNNSM. As part of its watchdog role, the team uncovered how the U.S. State Department had accounted its Exim-bank financing to solar power projects as part of climate aid under the 'fast start financing' deal done in Copenhagen in 2009. The expose found that the U.S. Exim bank funding is actually partly responsible for Indian solar manufacturing not being able to compete for large capacity (5MW and above) under JNNSM tenders.

Public awareness: The team published two books – *Facing the sun: Policy for sustainable grid-connected solar energy* and *Going remote: Re-inventing the off-grid solar revolution for clean energy for all*. In all, more than 30 articles, 10 blogs and several photo essays were produced by the team for *Down To Earth* and the renewable energy portal.

Results

- This remained a highly visible team, with its work covered and quoted in more than 30 national and international newspapers/journals and magazines during the year. Following the expose on solar energy published in DTE, the Ministry of New & Renewable Energy created an Inter Ministerial Committee to look into the allegations; the committee suggested more clarity in guidelines regarding the selection of EPC contractors and recommended physical verification of the company and more stringent and specific penalty provisions in case of violations of guidelines.
- Another expose in March 2013 uncovered issues with projects getting commissioning certificates without being commissioned. The team's expose has had a direct effect, according to A.K.



Chandra Bhushan, CSE deputy director general addressing the Round table meeting on renewable energy

Maggu, director, NVVN, who said projects were now being inspected more closely and fined for not commissioning their plants on time. Four people in the state authority responsible for giving commissioning certificates were suspended.

- Officials from the MNRE took serious note of CSE's findings regarding the U.S. Exim Bank, and have pledged to look into the matter.

CLIMATE CHANGE PROGRAMME

Policy research and advocacy: CSE tracked the climate change negotiations closely in Bonn and Bangkok and at the Conference of Parties (CoP-18) in Doha, where CSE jointly organised a side event with MoEF. The team published over 40 reports and blogs and eight briefing papers on climate change.

Adaptation experience sharing workshop: CSE's research resulted in a south Asia conference on Adaptation, in which NGOs, grassroots communities and INGOs shared experiences on issues and successes when implementing adaptation projects in the region.

Networking: The third National Research Conference on Climate Change was organised in November 2012 at the Indian Institute of

Science, Bangalore, in which over 250 researchers and scientists attended, and more than 90 papers were presented in different sessions divided into four themes - climate science/impacts, mitigation, adaptation and climate policy and politics. The Indian Climate Research Network website was launched at the conference, with more than 200 members, chiefly young climate researchers from research institutions and universities. This initiative is a collaboration among the country's leading climate institutes. Including IIT-Madras, IIT-Delhi, IIS-Bangalore and CSE, Delhi.

Results

- *At the side event organised by CSE and MoEF at the Doha CoP, India's lead negotiator, RR Rashmi, reiterated the imperative for any global agreement to be based on principles of equity. This reaffirms the foundation of India's position in climate negotiations.*
- The factsheets and the briefing papers prepared by CSE on climate change served as background reading material to journalists.
- The Adaptation meeting helped climate change affected communities identify best practices that could be replicated across the region and create an agenda for more climate resilient community-level practices.



ICRN conference in progress at IISc, Bangalore



CSE director general Sunita Narain with panelists at the national conference on safety and toxins regulations

FOOD SAFETY AND TOXINS PROGRAMME

The team's approach followed four pathways – policy engagement; public awareness and networking for safe food; advocacy & campaign; and, lab tests for toxins. The team worked with regulators, civil society and public to push for better regulations and raise awareness on food safety issues.

Policy engagement: In its campaign for stronger pesticide norms, the team continued engaging with regulators, including the Food Safety Standards Authority of India (FSSAI) and the Central Insecticide Board and Registration Committee (CIBRC). The team's report, *State of Pesticide Regulations in India*, found pesticides were still being registered without setting their Maximum Residue Limits (MRLs), and that existing MRLs still do not cover all crops, and that several MRLs do not comply with their Acceptable Daily Intakes (limits for the total pesticides in a body). Disturbingly, the report found state agricultural universities continue to recommend unregistered pesticides for various crops.

Public awareness & networking: To spread greater awareness on food safety, in particular the hazards of serving and

advertisers targeting junk food in schools, the team organized a quarterathon in Delhi (one-fourth of a marathon) titled '*Junk the junk food*', in which over 500 school children and other participants ran for the cause.

Advocacy & campaign: The team also organised a two-day national conference on food safety and toxins regulations for 40 experts and 100 stakeholders from industry, academia, regulators and civil society. The conference was widely covered by national and regional media. The team published more than 25 articles in *Down To Earth* and produced several editions of its popular e-newsletter, *Environmental Health Bulletin* that has 7000 public health and development professionals as subscribers.

Testing for toxins: CSE's Pollution Monitoring Laboratory conducted three major studies in the year – on Bisphenol A (BPA) in baby bottles; tests for heavy metals (mercury, cadmium, chromium and lead), in cosmetics, including fairness creams, anti-aging agents, lipsticks and lip balm. Although the tests found nothing alarming in baby bottles, tests on cosmetics turned up presence of cadmium and mercury in more than 15 of the 32 samples tested. The laboratory also tested water, soil, grains,



Orientation workshop on sustainable building programme

human blood, nails and hair of residents of Sonbhadra in Uttar Pradesh (site of many thermal power plans and a major coal belt area of India) and found high levels of mercury.

Results

- A major policy win for the team was that following sustained policy-level campaigning the team, the government finally issued regulations placing a ban on the presence of antibiotics in honey. This followed CSE's 2010 study and the aggressive advocacy with concerned regulators.
- The team's release of the lab-based study on high levels of mercury in Sonbhadra received extensive media coverage. The study was picked up by the International Journal of Clinical Metal Toxicology and Business and Human Rights Resource Centre. India's largest TV news network, NDTV, aired special coverage on Sonbhadra, and questions were raised in the Uttar Pradesh Legislative Assembly.

SUSTAINABLE BUILDINGS PROGRAMME

CSE's Green Building programme was set up to confront a big challenge: How to minimise the massive demands of energy, water, waste and carbon of India's rapidly expanding construction and building sector (most of the country's building stock and

infrastructure is yet to be constructed). The programme approach involves policy advocacy, capacity development, and information outreach to generate awareness on this emerging concern.

Policy advocacy: The team published a policy overview paper, *The Game of Town Making*, which focused on water, energy, land and carbon footprint of the real estate sector.

Capacity development: The team conducted three orientation workshops on EIA rules for large buildings, Energy Conservation Building Codes (ECBC) for commercial buildings, and national building bye-laws for regulators from the national capital region and other cities. Workshops were also conducted for 50 architects and engineers of the Central Public Works department (CPWD), the government's chief builder. Four city-level orientation workshops were conducted for key stakeholders – in Chandigarh, Kolkata, Lucknow and Panchkula.

Information outreach: The team organised a briefing workshop for news media professionals from leading national and local language newspapers across India. Journalists were briefed by leading architects, energy experts, activists, government officials and real estate developers, and then taken on a day-long

visit to explore innovations in several green buildings in the city. A popular two-page special 'Classroom' section was launched in *Down to Earth* magazine, featuring the work of 'green' architects and buildings.

Results

- A major outcome in the year for the team followed the CSE study, *Green building ratings: Overrated*. The study, which underscored the weaknesses in the green rating methodology and the sheer lack of transparency, led to the Indian Green Building Council, which awards the LEED ratings to buildings, introducing a section on 'performance monitoring' on its website, and also started to declare select performance data of the buildings it rated, bringing in more transparency.
- Partnerships were fostered with state level agencies and departments – for instance the Punjab government's key agency, PEDDA, said it would collaborate with the Chandigarh College of Architecture on using local materials and technologies. Similarly, the Punjab chapter of the Indian Institute of Architects has proposed collaboration with CSE. Representatives from the Haryana Renewable Energy Development Agency (HAREDA) approached CSE to conduct similar workshops in Haryana; the city level meeting in Panchkula was a direct follow-up activity.
- The partnership with CPWD on training its architects and engineers represents a partnership with the country's largest construction department. CSE has trained more than 75 CPWD engineers and architects.
- The team plays an important role in familiarising journalists to this relatively new sector; newspaper and TV journalists regularly contact CSE for quotes and perspectives on stories on the real estate sector. Likewise, the Classroom section on green buildings in DTE has proved popular, and the team has been receiving numerous queries and suggestions on the issues covered in the articles.

SUSTAINABLE WATER MANAGEMENT PROGRAMME

Advocacy on *Excreta Matters*: A major output was the January 2012 publication of *Excreta Matters*, CSE's 7th State of India's Environment (SOE-7) report on sewage, sanitation and water in 71 cities and towns in India. The team spent the remainder of the year conducting city-level workshops, book launch events and three roundtables on pollution monitoring and lake conservation. A major event for CSE in the year was the Anil Agarwal Dialogue *Excreta Does Matter*, which brought together 550 people, including top water and sewage experts from around the country to deliberate on challenges of urban water supply & sewage management, wetland protection, groundwater and non-conventional sewage treatment.



Audience at the Anil Agarwal Dialogue

Training & research on rainwater harvesting (RWH) and decentralised wastewater treatment (DWWT): The team conducted a total of eight training programmes in the year, training close to 200 people. Of this, four were on RWH

(training 106 persons) – three for municipal engineers from the JNNURM mission cities, and one on sustainable water management, water audit and efficiency. The team also conducted four trainings on DWWT for 94 persons, of which two were targeted at municipal engineers from JNNURM mission cities. The team published four research papers – two on pollution monitoring, and one each on urban lakes and rural sanitation, and launched an e-newsletter reaching 7000 subscribers.

Regional & state-level workshops: A region-level workshop on sustainable water and wastewater management was organised in Rajasthan for 90 participants, and a state-level workshop was conducted on energy and resource efficiency in Guwahati for 60 participants.

Technical guidance: The team provided technical guidance on RWH for more than 70 projects and on decentralised wastewater treatment for 11 projects from across India.

Results

- *Excreta Matters* had significant outcomes soon after it was published in January 2012: CSE was invited by the

Planning Commission in March 2012 to present its findings; CSE also made presentations to senior members of the principal opposition party, Bharatiya Janata Party (BJP), and to water resources ministers and Secretaries in BJP-ruled states. Several and state ministers said they found the report useful to frame policy, and pledged to raise this issue in Parliament and state Legislatures. *Many of CSE's recommendations have been incorporated in the 12th plan five-year plan of the Planning Commission for Industrial and Urban Water.*

- The Haryana High Court ordered real estate builders to use only treated sewage for construction following CSE's workshop in Gurgaon on groundwater & media reports.
- Ministry of Rural Water and Sanitation, recognised CSE as a Key Resource Centre (KRC) in sustainable rural sanitation and drinking water sustainability. Municipal corporations requested CSE's help for implementation projects on rainwater harvesting and wastewater treatment, and showed special interest in city water audits. Many trainees wanted detailed technical advice on their projects.



Regional workshop on sustainable water and waste water management in Jaipur

Public awareness

SCIENCE AND ENVIRONMENT REPORTAGE

This year, Down To Earth (DTE) produced two notable packages and special issues. *What's the agenda* served as a curtain raiser for the Convention on Biodiversity (CBD) meeting in Hyderabad in October 2012. *Invoking the Monsoons* celebrated the inspiration and engagement of the rainy season with a cross-section of writers, from policy-makers, scientists, farmers and travel writers writing on 'the real finance minister of India'. DTE continued its focus on mining, while CSE's renewable energy team members wrote extensively on off-grid solar.

DTE also chronicled events and trends that had significant environment and development import; for example, *Blind devotion* covered the environmental cost of the MahaKumbh along the Ganges river in Allahabad, the largest gathering in human history.

The magazine also tracked trending environmental health stories. *Chemical calories*, which explored the new discovery on obesity's linkages with sedentary lifestyle, unhealthy foods and environmental toxins, which modify human physiology, making it difficult to lose weight. *Elusive Vitamin* delved deep into the mystery on the deficiency of vitamin-D in India. Similarly, *India's Minamata* covered the presence of mercury in the environment of Singrauli, a town with numerous thermal power plants in Uttar Pradesh.

Results

- Due in part to CSE's advocacy to have the forest bureaucracy declare bamboo as a grass (DTE story, *Bamboo comes home*, January 2013), on March 3, 2013, Union Rural Development Minister Jairam Ramesh handed over a 'transit' pass to residents of village Jamguda in Kalahandi district, making this the first village in Odisha and the second in the entire country to get official permission



to sell minor forest produce (MFP) such as bamboo and *tendub* leaf. This landmark gesture and the orders sent earlier to state forest departments on transit passes, will open up livelihoods options for hundreds of thousands of forest-dwelling communities in India. Similarly, as a response to the same story, District Collector of Gadchiroli, Maharashtra, stopped the corrupt auction of Tendu leaves to a contractor and ordered an enquiry.

- Responding to the cover story, *Organic boom* (July 31, 2012), Ashish Bahuguna, Secretary of ministry of agriculture, invited suggestions from CSE on how to improve procurement methodology for dryland crops (oilseeds & pulses), on which the poor subsist. The International Competence Centre for Organic Agriculture ordered 500 extra copies of the issue to circulate among its members.
- The DTE special report, *Guar mine* (July 2012) was quoted in a number of international publications, including the German newspaper *Die Zeit*, which used the story as a 'consulting paper'. CSE received numerous queries on guar cultivation and market access.
- The National Biodiversity Authority discussed the DTE cover, *What's the agenda* (October 2012) in one of its meetings, in particular the section on agro-biodiversity. Now the authority is planning to start a fund for agro-biodiversity conservers in India. The cover story has also become a part of an UNDP report from India.

- The cover story, *Twotales of adrought* (March 31, 2013), helped change news media perception on the drought in Maharashtra. News anchors of popular channels were referring to the story for debates and discussions on the drought.
- Following the story *BPL millionaires* (June 2012), which investigated the several cases of industrial houses using tribal individuals as fronts to buy land in this scheduled V area, Amar Agarwal, state minister of health and urban development in the government of Chhattisgarh, ordered an investigation into the case of tribal land purchase and also ordered compensation payable to the actual owners of land.
- After reading the DTE special report, *Saharias face exile* (September 2012), Union Tribal Affairs Minister KC Deo wrote to Madhya Pradesh chief minister Shivraj Singh Chauhan to avoid displacing villagers without implementing Forest Rights Act. The work on irrigation project is now on hold and implementation of the act has started.
- A special report, *Tiger reserved* (July 31, 2012) has been used in filing a PIL demanding ban on tourism in the core areas of tiger reserves.
- *Water ATM* (January 2013) triggered numerous queries on how to get a water ATM (automatic teller machine) installed in their areas. The story was widely reprinted in national news media.
- The cover *Let solar shine* (December 2012) on the Remote Village Electrification Programme (RVEP) was discussed and used as a background research paper, while the ministry of new & renewable energy (MNRE) was formulating guidelines for phase 2 of the Jawaharlal Nehru National Solar Mission. The DTE special report *Out of Option* (August 2012) on the sub-standard Chinese solar equipment on sale at Exhibition Road in Patna (the biggest off-grid solar market in the world) caters to the energy needs of power-starved Bihar. The story was reprinted by news media and in blogs,

while several solar entrepreneurs contacted DTE to brainstorm on how to push more RE in Bihar.

- The DTE cover *Mining's quicksand*, on illegal riverbed sand mining for the booming construction sector, led the National Legal Service Authority (NALSA) to prepare a background paper and file a writ petition before the Supreme Court.
- Following a DTE web-special, *Homeless and sick* (March 2013), which pointed out the high incidence of Tuberculosis among Delhi's homeless, the Delhi government launched three schemes to curb TB, including to open TB control services for the capital's homeless.
- A DTE special report *Unique identity crisis* foresaw the serious overlaps and consequences for the National Population Register and Unique Identification Document. Soon after it was published, Members of Parliament, including ministers, raised concerns about data duplication between UID and NPR. The Prime Minister's Office has formed an inter-ministerial committee to resolve the issue.

DTE WEBSITE DISSEMINATION

DTE web focused on increasing coverage as well as expanding its presence in the digital space. DTE Web now keeps pace with major development with wider and in-depth coverage. DTE has already mobile and tablet editions. More to it we have been experimenting with: e-books, flipboard and parallax ways of presenting our contents. This is the future space for expansion. The year 2012-13 was good in terms of increasing readership.

Down To Earth online recorded 9,25,142 visits this year, a jump of 60 per cent over the previous year. The number of pageviews increased by 64 per cent, from 10,87,781 to 17,09,632. The number of readers coming to Down To Earth through social networking sites increased by 51 per cent (from 46,229 to 90,225), with a 74 per cent jump in traffic from Facebook and a 43 per cent increase from Twitter.

Building Capacities in Society

Sustainable urban mobility and clean air programme: CSE team conducted seven orientation programmes/workshops for 155 officials and grassroots representatives from across the country. Officials trained by CSE upheld key principles learned in their public statements (as quoted in media). A transport department official in Maharashtra trained by CSE is now reworking his city's bus operation and developing separate cycle tracks and walking zones for students. Trainings also instigated direct action – Agartala's ARPAN Society is pushing regulators for a clean air and mobility plan for the city, and started a bicycling club.

Green buildings programme: The team conducted 2 workshops on EIA & ECBC rules for commercial buildings & on national building bye-laws for regulators. A total of 75 CPWD engineers, architects were trained. 4 city-level workshops were organised for stakeholders (in Chandigarh, Kolkata, Lucknow & Panchkula). Representatives from the Haryana Renewable Energy Development Agency (HAREDA) approached CSE to conduct similar workshops in Haryana; the city level meeting in Panchkula was a direct follow-up activity. CSE's partnership with CPWD on training its architects and engineers represents a partnership with the country's largest

construction department. The programme familiarised journalists to this relatively new sector; Newspaper and TV journalists regularly contact CSE for quotes and perspectives on stories on the real estate sector.

Sustainable industrialization programme: The regulators programme conducted six training programmes during the year. 123 regulators were trained from various state pollution control boards (SPCBs). The team conducted a training workshop for 24 environmental managers of corporate India.

CSE and Swedish-Environment Protection Agency (Sw-EPA) in which Swedish experts were invited to India to teach Indian pollution regulators to pollution abatement approaches. Swedish EPA hosted Indian regulators (20) in Sweden for a week, to expose them to the latest in pollution management measures and environmental governance in Sweden & EU. Some participants recommended several measures to make compliance and enforcement more effective. Wide representation from 15 SPCBs, including from the heavily industrialized states and from those states with a large presence of extractive industries, such as Gujarat, Maharashtra, Odisha, Tamil Nadu, Andhra Pradesh, West Bengal, Uttar Pradesh, Karnataka,



Participants of training on urban mobility and clean air



City dialogue in Hyderabad



Participants of the EIA training programme

Rajasthan, and Goa. In an encouraging move, the Odisha SPCB nominated 10 of its newly-recruited officers to attend CSE's induction training. Public sector giants such as SAIL and NTPC have requested customized trainings for their environmental managers. Member Secretary of Gujarat SPCB signed an MoU with CSE to train their industry officials and regulators; talks are on with Odisha SPCB.

Trainings on Environmental Impact Assessment (EIA). The team conducted 12 trainings for 232 people on EIA, SIA & Urban Industrial Wastewater & Hazardous Waste. Participants of the training comprised

students, NGOs, industries, consultants, academicians and received excellent feedback.

Sustainable water management programme: Under the programme 8 trainings were conducted on urban rainwater harvesting (RWH) and Decentralized waste water treatment (DWWT) for 200 people. Organised a regional workshops on sustainable water and wastewater in Rajasthan for 90 participants. Ministry of Rural Water and Sanitation, recognised CSE as a Key Resource Centre (KRC) in sustainable rural sanitation and drinking water sustainability.



Meeting on the Water and Wastewater Recycling/Reuse

Municipal corporations requested CSE's help for implementation projects on rainwater harvesting and wastewater treatment, and showed special interest in city water audits. Many trainees wanted detailed technical advice on their projects.

Conducted state-level workshop on energy & resource efficiency in Guwahati for 60 participants

EDUCATION AND TRAINING

Media Resource Centre: The media programme conducted workshops and built capacities of 90 local, rural reporters in Sambalpur (Odisha) & Goa. The initiative was designed to help local reporters and stringers in small towns sharpen basic reporting skills and provide global context to the local issues. 4 Media Fellowships (tiger conservation, Renewable energy, climate change, & 'good news') and 12 briefings for journalists conducted in different cities. 33 fellowships granted, resulting in more than 100 news clippings.



Workshop under the media briefing programme

Overall, the programme interacted with about 650 journalists & generated 380 newspaper reports, generating increased coverage on environmental issues. Two CSE fellows – Soma Basu (ex-*Statesman*, Kolkata), & Pulin Kalita (*Dainik Assam*, Guwahati), won multiple awards for their stories published for CSE fellowship. The initiative was designed to help local reporters and stringers in small towns sharpen basic reporting skills and provide global context to the local issues.



Participants of the one month course of AAGC

Anil Agarwal Green College (AAGC): Conducted four (3-4 week each) interdisciplinary courses & several day-long orientation courses on environment. The summer and winter courses enrolled 72 students and young development professionals and journalists. About 250 students and faculty from Indian and international universities participated in AAGC orientation workshops. An indication of the popularity of these courses was the increased demand for such courses and the strong network/cohort of young environmentalists interacting in social media.

Environment Education: Gobar Times Green Schools Awards (national and state-level) were awarded to 11 Delhi-based schools and 25 schools from the rest of India. These awards recognize top-performing schools based on the results of an environmental audit conducted by students. The team 'localized' its audit manual for Sri Lanka schools and trained more than 100 teachers on how to conduct the audit; two Sri Lanka schools were also awarded for their initiative in controlling plastic waste on their premises. The team anchored a side event at the international Biodiversity CoP-11 in Hyderabad, produced a special edition of *Gobar Times* tabloid, and organised a roundtable on the role of schools in environmental policy making. The team also published a students' special edition of *Excreta Matters*, and continued publishing



Students at the *Gobar Times* Green School Award programme

the popular *Gobar Times* for students and the youth.

Results

- GSP is now a truly national programme, spread over 18 states, with a network of more than 15,000 schools. A key result was that the programme is now more than a simple audit exercise; schools have begun

to implement changes in their campus – from decentralised wastewater systems to innovative ways to recycle and reuse waste, to creating rainwater harvesting structures, etc. The audit exercise helped many schools network with local environmental NGOs and local government bodies in the area. Many schools also made GSP a part of the school curriculum.



School teachers at the training workshop on environment education

TRAINING DATA 2012-13

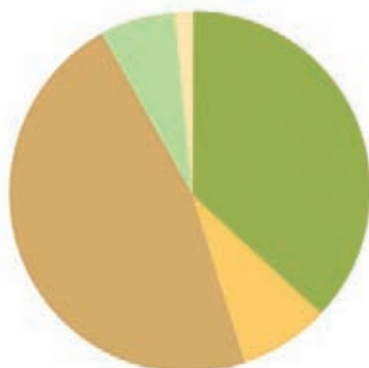
TRAINING NUMBERS

	Total	In Delhi	In India	South Asia
No. of Trainings	75	52	10	13
Days of training	388	324	17	47
Number of participants	2159	1145	533	481



SUBJECT-WISE

- Environment management & pollution control regulators 22%
- Rainwater Harvesting 9%
- Decentralised Wastewater Treatment 8%
- Green building 4%
- Air quality, mobility 13%
- Green schools 29%
- Information management 4%
- 1 month course on environment development 3%

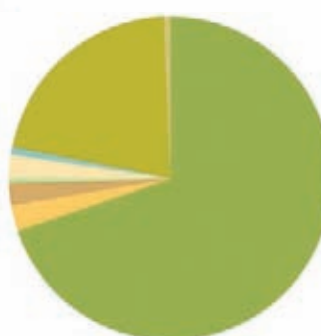


COMPOSITION OF PARTICIPANTS

- Government 37.2%
- NGO 7.1%
- Students and educators 42.6%
- Industry and consultants 11.4%
- Media 1.7%

COMPOSITION OF PARTICIPANTS
- NATIONALITIES

India	1462
Afghanistan	1
Bhutan	78
Bangladesh	111
Maldives	4
Nepal	104
Pakistan	5
Sri Lanka	381
Others	13
Total	2159



- India 67%
- Pakistan 4.8%
- Nepal 4.8%
- Maldives 0.2%
- Bangladesh 5.1%
- Bhutan 3.6%
- Sri Lanka 17.6%
- Others 0.6%

ENVIRONMENTAL RESOURCES

THE INDIA ENVIRONMENT PORTAL

The India Environment Portal (IEP) team continued to track important reports, studies, and research papers and news from approximately 80 print and digital newspapers from India and other south Asian countries. IEP served as an active information and knowledge intermediary by providing contextual, cross-tagged and up-to-date information on around 9,000 environmental subjects by identifying and documenting more than 4,00,000 records from various national and international sources – government, research institutions, NGOs, and industries.

Results

- The total number of visitors in 2012-13 stood at 735,339, representing a 24.76% increase from the previous year; page views in this period stood at 1,529,266 (23.09% increase from the previous year). Similarly, the total number of reports, studies and papers downloaded was close to 50,000 (26.40% more than in 2011-12). International traffic on the portal increased, specifically from the US (up 22%) and Canada (up by 18%). A special IEP newsletter, begun in February 2013 to 'push' data and information to users, has already received more than 1500 national and international subscribers, pointing to the viability

Leading national and international libraries of educational institutions listed the India Environment Portal as one of the 'Important electronic free resource on environment'.

REGIONAL PROGRAMME – SOUTH ASIA

CSE's regional presence has matured, as is evident from the **spread and varieties of engagements with many kinds of stakeholders**. For instance, the sustainable industrialization team's engagement in the region started in 2006 with a simple mandate

– to train NGOs and government bodies on EIA processes. Later, partly in response to the needs expressed by NGOs, industry bodies and government departments, the team diversified its training to other areas, including urban and industrial wastewater management and hazardous waste management. The team's work has evolved beyond training, and it now directly affects policy by preparing guidelines and environment management strategies for several countries in the region. Over the next few years, the team plans to build capacities of banks, insurance companies and private equity firms across south Asia on how to assess environmental risk and perform environmental due diligence to make more informed decisions when lending to infrastructure and industrial projects.

Of note also is that teams have spread their activities beyond national capitals – the Sustainable Industrialisation and the Food and Toxins teams are working at the district level in Sri Lanka and Bhutan, while the water management team has set up model projects in Chittagong and Khulna in Bangladesh. Similarly, new partners have been brought on board – CSE's Urban Air Quality and Mobility as well as the Green Buildings teams have tied up with Bhutan's National Environment Commission (NEC), while the Sri Lankan ministry of water supply partnered with CSE's Pollution Monitoring Laboratory. Similarly, Work for Better Bangladesh (WBB) has emerged as strong partner in Bangladesh, as has the Centre for Environmental Justice (CEJ) in Sri Lanka.

An encouraging development in the regional programme is that **activities are carried out in response to the demand** generated by CSE's previous engagements with a particular stakeholder in the country. Take for instance the case of National Environment Commission (NEC) of Bhutan: Following the participation of some NEC officers in a training programme on EIA conducted by CSE in India, the Sustainable Industrialization team was requested to conduct similar training exercises for NEC officials and also those of allied ministries and government departments in Bhutan.

Later, the NEC-CSE engagement was broadened under the terms of an MoU that covers training, preparing environment management guidelines and ‘inspection manuals’ for eight industrial sectors of Bhutan (coupled with training for associated officers on these guidelines). Dr. Ugyen Tshewang, Secretary, NEC subsequently requested CSE to help set countrywide guidelines for vehicle-washing facilities in Bhutan. Also, and on request from NEC, the team spent a week to conduct an inspection of Pasakha, Bhutan’s main industrial estate located near Phuentsholing at the India-Bhutan border.

NEC engaged directly with other programme areas too – CSE’s Urban Air Quality and Mobility team was requested to prepare an air quality and mobility action plan for Thimpu. For the coming year, NEC has asked for CSE’s help to guide policy for the country’s foray into the green buildings sector. The team will prepare a ‘green buildings’ manual for Bhutan, and conduct a series of capacity building trainings for NEC staff.

In Sri Lanka, following the EIA team’s training for staff of the Central Environment Authority (CEA), the team was requested by the Governor of Kandy Province to also advise it on setting environmental parameters for a biomedical waste incinerator facility in Kandy. Similarly, the Sri Lanka ministry of water supply and drainage requested CSE to undertake water quality tests to understand the widespread reports of CKDu (Chronic Kidney Disease of Unknown Etiology) in the north central region of Sri Lanka.

An important gauge of CSE’s reach and impact in the region is that several CSE teams **routinely receive requests to advise government bodies** in several south Asian countries, and across a host of programme areas. For instance, senior team members from the air pollution team are often solicited for their advice or invited to participate as experts in international conferences and policy workshops. The Board of Sajha Yatayat, a cooperative public transport company, contacted CSE’s Urban Air Quality and Mobility team members for their

assistance on reviving this cheap public transport service in the Kathmandu valley. Team members were also invited in December by the Sri Lanka Sustainable Energy Authority and the ministry of environment’s policy wing, Air Resource Management Centre (AirMAC), to help this regulatory body set fuel economy standards for Sri Lanka.

DISSEMINATION THROUGH WEBSITE

The South Asia Environment Portal (SAEP), a sub-site of the India Environment Portal, provided digitized news, features reports/documents, research papers and policy pronouncements on a host of environment-development issues (<http://sa.indiaenvironmentportal.org.in>). Most major government policies and action plans of the year 2012-13 from six south Asian countries are now available on the portal. The team also helped build capacities of information managers in the region on digital literacy. The portal is managed in CSE by the Environment Resources team.

Digital assets:

- The SAEP is a gateway to research on south Asian environment and development issues. Over 1,07,000 records were documented, processed, and keyworded (each digital asset is manually tagged) using 8,000 tags sourced from CSE’s master thesaurus to make information more easily searchable, contextual and easy-to-access.
- Environment News Service for south Asia launched, comprising about 90,000 newsclippings sourced from 26 South Asian newspapers published from Bangladesh, Nepal, Bhutan, Maldives, Sri Lanka and Pakistan.
- Online database of 17,000 reports, documents & policy papers by south Asian organisations now available
- Country profiles with thematic issue dossiers / photo-essays on the portal and the South Asia Environment Photo Gallery provides ready reference to critical environmental issues.

As an information outreach initiative, the team started a periodic e-newsletter, which has already attracted close to 1600 subscribers. SAEP also launched a virtual directory of 312 NGOs, government and non-government institutions, industries and environment experts. In the coming year, the directory will serve as the foundation for an interactive south Asian community of environment and development experts.

The monthly 'South Asia Green Files', a 'curated' compilation of key news & features on the region compiled from about 80 news sources (26 of which are south Asian), remained popular with its 150 subscribers (mainly academic and research institutions), despite the wide availability of digitized news sources.

Helping build capacities of information managers on digital literacy has become an important goal of the team. The team conducted two training workshops, which drew in 19 participants from Sri Lanka, Bangladesh, Nepal, Bhutan, Maldives and India. A key outcome of such trainings is that participants continue to network with CSE team members, especially to implement their 'action plans'. Training will be upscaled in the coming years. For instance, the programme entered into a partnership with Sri Lanka-based Television Trust for the Environment (TVE-Asia Pacific) to conduct a pilot training on new/social media for south Asian activists and digital information managers in Sri Lanka.

AWARENESS CREATION

Media programme

The media programme supports CSE's environmental advocacy and outreach in the region. The media strategy rests on three kinds of activities – by offering fellowships to regional journalists, by organizing pan-regional events, such as the South Asia Media Briefing Workshops in Delhi, and more recently, conducting 'Country Media Briefings', in which news media in target countries are briefed by CSE experts on pressing environmental issues facing the country. Over the past few years however, the media programme has gone beyond

playing a supportive role; it now engages with news media in target countries, usually in partnership with prominent media associations in target countries.

In July in Kathmandu, the media team, in association with the Nepal Forum for Environmental Journalists (NEFEJ), organised a country media briefing on 'Challenge of air quality and mobility management in South Asian cities', in which top urban mobility and air pollution experts from Nepal and India, briefed Nepalese news media on the poor urban air quality and public mobility in the Kathmandu valley (among the fastest growing 'cities' in the region) as also the opportunities available to plan differently in Nepal in order to avoid the mistakes cities like Delhi have made. More than 80 journalists, representing newspapers, magazine, TV, radio and internet, attended the event, and the event in the subsequent days was widely covered in Nepal's news media. In addition to conducting news events in target countries, CSE's media team also organizes south Asia media briefings, which bring together leading journalists and editors to deliberate on pan-regional environmental issues for the region's media.

The South Asia Briefing on Climate Change, held in Delhi and timed just before the CoP talks in Doha, has emerged as one among CSE's prime annual events. This year, climatologists, oceanographers, water and energy experts, together with government appointed climate negotiators and senior bureaucrats briefed the 60 journalists (including 20 senior journalists from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Myanmar and Sri Lanka) on the latest in negotiating stances, science & impacts of a changing climate, renewable energy, adaptation & financing, loss & damage, and CDM, among others. Besides national-level print and broadcast media, the event also drew in journalists from the regional press, bringing climate concerns to an important and underserved audience. Dozens of articles were produced during and soon after the event.

Climate Change programme

CSE in collaboration with the Indian Institute of Science, Bangalore, IIT-Delhi and IIT-Madras hosted the National Research

Conference on climate change, which showcased cutting-edge climate research in the region. This year, the event included a select group of researchers from south Asia. Over 250 researchers and scientists attended the conference. Participants from Bangladesh presented information and communication technologies (ICT) were deployed to help people adapt to climatic variations in Bangladesh. Case studies from Sri Lanka focused on traditional, sustainable water management practices were an effective adaptation measure.

Down To Earth magazine (DTE)

DTE remained an important source of information, and carried a wide range of stories and analysis pieces on the region. Stories articulated **regional concerns** – from ecological and biodiversity loss to environmental governance and poor water and waste management. Some DTE coverage concerned the region as a whole – for instance, on a WHO report that showed how India fares worse than Bangladesh and Nepal on maternal mortality and child deaths (*South Asia, Africa show poor progress towards MDGs*, June 2012), or a book review (*Polluted and revered*, February 2013) on the urgent river pollution crisis in south Asia, or how the governments of India, Pakistan, Bangladesh and Nepal plan to coordinate actions to ban harmful vulture-killing drugs, and start breeding and reintroduction programmes for the critically endangered vultures, which in this part of the world are witnessing the most rapid decline in numbers (*South Asian nations will now cooperate to save the vulture*, May 2012).

A key DTE story this year was coverage on the high incidence of renal failure in **Sri Lanka**, especially in the north-central region that has turned into a health crisis, and the Chronic Kidney Disease of Unknown Etiology, or CKDu has doctors, scientists and government puzzled (*Renal emergency*, September 2012). Puzzled because ‘patients’ (mostly male farmers above the age of 40) do not have diabetes or hypertension, the main causes of kidney failure. Thousands have died in the past decade and many thousands more need regular treatments and dialysis in

area hospitals. The story covered a study CSE in which samples of water, soil, fertilizer and pesticides were analysed for a host of parameters. Tests revealed people are exposed to poor drinking water quality; tests also contradicted a widely held belief that arsenic and cadmium in drinking water is the main cause of the disease. The story exhorted public health officials for wider and larger study, and until then, to provide safe drinking water in the affected areas. **DTE also carried an obituary by Nalaka Gunawardene of the celebrated environmental filmmaker Robert Lamb** (*The earth’s reporter*, May 2012).

From **Nepal** DTE carried an interview with Apsara Chapagain, chairperson of FECOFUN, considered the world’s largest community forestry movement, where she spoke on the need for constant vigilance to protect the community rights in face of continuing stiff opposition from the conservationist and forest bureaucracy (*Forests can’t survive without communities*, July 2012). Other stories from Nepal include poor food safety regulations (*Nepal battles poor food safety standards*, April 15), or the poor sanitation status. DTE also covered the precarious situation of groundwater in Kathmandu, the region’s fastest growing city (*Double whammy*, October 2012), and the debate on dams and energy production in the energy starved neighbour (*Politics of irrigation*, April 2013 and *Dam in check*, October 2012), and an interview with Anne Rademacher on her book that chronicles how the Bagmati river’s degradation resonates with the perceived social, cultural, religious and political disorder in the tumultuous democracy (*River restoration is not just an ecological act*, April 2012).

From **Pakistan**, DTE covered the country’s struggle with its polio immunisation programme (*What ails Pakistan’s polio eradication drive*, March 2013), and on how music and book stores are shutting shop in Peshawar in Pakistan, the latest victims of militant groups’ intolerance for anything they see as Western influenced (*Literature in bondage*, May 2012). From **Bhutan**, DTE covered the country’s bold initiatives, including the much-lauded one to

ban private vehicles from plying city roads on Tuesdays (*Tuesdays are pedestrian's day out in Bhutan*, June 2012). DTE also carried an interview of **Ugyen Tshewang**, Secretary, National Environment Commission of Bhutan (*How Bhutan is grappling with climate change*, February 2013).

Reportage from **Bangladesh** was focused around water and wastewater, and included such themes as the large public health crisis facing Chittagong due to arsenic contamination of groundwater, and how science is being brought to find solution to this scourge that affects millions in Bangladesh and India (*Nano arsenic mop*, September 2012). Reportage from Dhaka focused on the polluted Buriganga river (*Buriganga chokes on pollutants*, November 2012).

Networking and learning

In 2012-13, CSE's regional programme made significant strides across several programme areas in terms of undertaking research and contributing to significant policy changes in several countries. CSE teams active in the region have built enduring networks among key stakeholders in each country.

Poor air quality marks cities in the subcontinent, which is hardly surprising given the similarities in urban growth and planning, poor regulatory frameworks, and poor capacity to monitor and implement changes. Given CSE's acknowledged leadership in research and advocacy on improved urban air quality and mobility, it was natural for CSE's **Urban Air Quality and Mobility team** to engage with concerned government and city administrations, and once they had helped build capacities, with NGOs to push for better urban air quality.

The team organized a workshop in July in Kathmandu on 'air pollution and meeting transport challenges', which drew in more than 80 people. The workshop was organized in partnership with the Ministry of Physical Planning and Works and Transport Management (MoPPW & TM), the nodal ministry responsible for urban air quality in Nepal. Senior bureaucrats from Nepal (including the Secretary of MoPPW & TM, as well as the head of the newly-created

Kathmandu Valley Development Authority), in addition to experts and leading research institutions participated in the workshop, which was followed the subsequent day by a 'country media briefing on air quality and public transportation', conducted by CSE's Media Programme with its partner in Nepal, the Nepal Forum for Environment Journalists.

Soon after the workshop, 'air pollution and meeting transport challenges', the government of Nepal announced that it had started the process to revise ambient air quality norms and vehicle emissions standards for the country.

CSE's Urban Air Quality and Mobility team started work in Bhutan in 2012-13. The National Environment Commission (NEC), Bhutan's environmental agency, had approached CSE in May 2012 seeking support to help it prepare an action plan to deal with the problem of emissions and traffic issues in Thimpu City. NEC was leading a Task Force involved in preparing such a plan, but wanted CSE to get involved to strengthen the strategy by using CSE's experiences in working with various city and state administrations in India prepare air quality action plans. The team prepared a scoping / thematic paper that identified the goals, principles, and key strategies for clean air and sustainable mobility in Thimpu, while meetings with stakeholders and site visits in and around Thimpu helped the CSE team identify key local challenges and prioritize intervention areas.

The chief output from this activity was an action plan for clean air in Thimpu, with clear targets for various agencies involved, and timelines for implementation of the plan. The plan has been submitted to NEC, and city authorities have begun the process of implementing the plan.

The team also conducted a series of training programmes targeting regulators and policy makers responsible for transportation and air quality, in which close to 15 south Asian regulators were invited.

In Bangladesh, the team continued efforts to advocate for policies that promote cleaner air quality and public transportation. In partnership with their recent NGO partner, Work for a Better Bangladesh Trust (WBB), who helped conduct a ‘citizen’s survey’ in Dhaka on air quality and mobility. Survey results will be shared in early April 2013 in Dhaka with government and city transport department representatives.

Given the long and depth of engagement of the team with air pollution-related ministries and city administrations in the region, senior team members are often invited to participate as experts in international conferences and workshops. Team members were requested by the board of the just revived Sajha Yatayat, a cooperative public transport organization in Nepal, seeking assistance on how to revive this once lauded and affordable public transport service in the valley.

Likewise, programme staff were invited in December by the Sri Lanka Sustainable Energy Authority and the ministry of environment’s Air Resource Management Centre (AirMAC), a leading government policy institution, to help set fuel economy standards for the entire country.

The **Sustainable Industrialisation programme** was able to leverage existing relationships and make significant policy inroads, especially in Sri Lanka and Bhutan, where it worked closely with key ministries and government departments.

In Bhutan, the team has developed strong relationships with several key ministries, in particular, with the National Environment Commission (NEC). In fact, the NEC secretary had visited CSE to sign the MoU, which includes wide-ranging cooperation between the two institutions on

capacity building, monitoring and compliance of development projects (i.e. EIA), laboratory support for pollution monitoring in Bhutan, as well as broadly supporting research and knowledge dissemination.

The team prepared Environment Assessment (EA) guidelines for eight sectors of Bhutan’s economy, including for industry, forest, roads & highways, hydropower, mining, tourism, transmission lines and for ‘general’ sectors. The CSE team subsequently conducted a ‘stakeholder consultation’ to explain the guidelines in more detail to relevant NEC staff, and for line managers drawn from other key ministries in Bhutan. The team was subsequently requested to also prepare guidelines for vehicle washing facilities for NEC, and to conduct an inspection of Pasakha industrial estate, near Phuentsholing at the India-Bhutan border (<http://www.nec.gov.bt/index.htm>).

In Sri Lanka, CSE’s chief government partner is the Central Environment Authority, for whom the team conducted several training programmes on EIA and on Urban and Industrial Wastewater. CEA has requested CSE’s help to put together a ‘Compliance Assurance Manual’, a sort of industrial inspection manual for regulators, to better evaluate development and infrastructure projects in the country.

CSE’s **Food and Toxins team and the Pollution Monitoring Laboratory (PML)** were in the limelight, after the team conducted a series of water quality tests to understand the widespread reports of CKDu (Chronic Kidney Disease of Unknown Etiology) in Anuradhapura and Polonnaruwa districts in the north central region of Sri Lanka.

Following the day-long CSE orientation on biomedical waste management for health professionals in Kandy (see section on training, below), CSE has been requested to help CEA put together a detailed proposal, including implementation mechanisms, cost estimation, etc. for Sri Lanka’s first clinical waste management project.

In contrast with widely held views, the results of the CSE-CEJ study established that heavy metals – cadmium, chromium, arsenic and lead -- *in drinking water are not linked* to CKDu in the sampled areas, and that heavy metals were from a source other than drinking water. The study also found parameters such as total dissolved solids, alkalinity, hardness, calcium and fluoride were higher in groundwater than in other surface sources, and that people in affected areas were drinking relatively poor quality water as compared to those in the unaffected areas.

The tests were undertaken in response to a December 2011 request by the Sri Lankan minister for Water Supply and Drainage, Dinesh Gunawardana. Kidney/renal failure has puzzled public health professionals for many years now, as its prevalence is reaching epidemic proportions, and spreading to the adjoining districts of Ova, Eastern and North Western Provinces. The study, in partnership with Centre for Environmental Justice (CEJ), a leading environmental justice NGO in Sri Lanka, involved testing samples of water, soil, grains, pesticides and fertilizer collected from the key Coda-affected areas.

The study received wide media coverage, and the findings were released in Anuradhapura at a public meeting chaired by Sri Lanka's minister for water supply and drainage, Dines Gunawardene. The minister supported the recommendations made by CSE that the government needs to first provide clean drinking water and medical facilities to provide immediate relief, until more definitive studies that take account for more parameters, are conducted to isolate the causes of this widespread problem.

CSE's **Water Management team** was able to diversify its work beyond training with its government and non-government partners – from curriculum development, anchoring a region-wide Rain Convention, to providing guidance on the implementation of water and decentralised wastewater projects in Bangladesh, Nepal and Sri Lanka.

In Bangladesh, the team conducted several training programmes (see details in training section below), and designed the rainwater harvesting system in the office premises of a new partner, Work for Better Bangladesh (WBB). The team also advised its principal partner in Bangladesh, Water Aid-Bangladesh, on setting up a Raincentre (permanent exhibition showcasing designs and working models of rainwater systems) at the prestigious Bangladesh University of Engineering and Technology (BUET). CSE and Water Aid-Bangladesh jointly conducted a national-level 'Rain Convention' in Dhaka, whose long-term policy goal was to mainstream rainwater harvesting in existing laws and policies of Bangladesh.

In Nepal, the team helped design and conceptualise a rain centre for the ministry of urban development's training centre located in Nagarkot, and worked with its civil society partner, Centre for Integrated Urban Development (CIUD), in designing a rainwater harvesting system for Tri Chandra University campus and Kanya Mandir school, both of which are in Kathmandu. In Sri Lanka, the team advised the Ministry of Water Supply and Drainage, on how to revive the *Maharagama Lake* located in Greater Colombo. The ministry has also requested CSE for ideas and strategies on how to mainstream rainwater harvesting mandatory for the residential sector in the country; this will form part of the team's work plan for the coming year.

In Dhaka, several universities, including Independent University Bangladesh (IUB), Jahangirnagar University (JU), University of Information Science and Technology (UITS), Shahjalal University of Science and Technology (SUST), Bangladesh University of Engineering and Technology (BUET), North South University (NSU), and the University of Asia Pacific (UAP), invited CSE to help reform the architecture, urban planning and civil engineering courses by embedding decentralised water and waste management technologies as part of their curricula.

Meanwhile, CSE's **Green Schools Programme (GSP)** was able to build on the previous years' efforts, especially in Sri Lanka. The programme involves students auditing the environmental 'performance' of their own schools and assigning scores to a host of sustainability parameters, including air quality, energy, water, waste management and biodiversity, among others. Top schools in the country are then awarded.

CSE worked in close partnership with the Ministry of Education, Sri Lanka, to roll out a pilot phase of the programme across 100 handpicked schools representing all the Provinces of the country. The CSE team put together a customized audit manual for the teachers, and, in collaboration with the ministry, conducted two training workshops for master trainers. The result was encouraging – GSP has taken root in Sri Lanka. Not only did several schools complete

sections of the school audit, two schools were also declared winners of the GSP South Asia Awards. These student-teacher teams were invited by CSE to attend the *Gobar Times* GSP Awards Ceremony in Delhi, where they visited other GSP partner schools in the city to witness their work and share experiences.

CSE continued to track international climate change negotiations. CSE researchers also produced in-depth reports of climate change impacts in DTE, and engaged with young development professionals from south Asia on a three-week interdisciplinary course on climate change politics. CSE staff's live reportage on CoP 18 from Doha, Qatar, on the progress of activities, debate and discussions were also highlighted by the Climate Portal; a series of blogs focusing on the climate politics and negotiations were posted on the climate portal by leading climate experts. A few blogs on climate mitigation with special reference to solar energy were also posted.

An important outcome for CSE's Green Schools Programme (GSP) in the region was that the Ministry of Education, Sri Lanka, formally adopted GSP as a part of its environment curriculum for schools. A pilot was successfully conducted across 100 government schools representing all provinces in the country. This important outcome follows from the previous year's efforts to partner with the country's Ministry of Education and with the Central Environment Authority, to seed the programme in the formal education system in Sri Lanka.

A key activity for the team in 2012-13 was an experience-sharing workshop for frontline activists and civil society groups from India and south Asia engaged in implementing adaptation measures and technologies. Workshop deliberations provided insight into what constitutes adaptation today, how communities view adaptation, and its inter-linkages with development processes and the interventions needed to impact policy. The workshop also helped grassroots groups link and network with different sorts of climate stakeholders – including donor-led programmes, climate communicators, government representatives, and other development sector

professionals from India and south Asia.

Apart from these activities, CSE disseminated information to a wide variety of stakeholders through CSE websites and the India Environment Portal (IEP). The daily news service on climate, a compilation of latest reports, news and research compiled from 80 Indian and 20 south Asian newspapers and newsmagazines provided an up-to-date overview on the issue.

CAPACITY BUILDING PROGRAMMES

Training has remained a large and important component of the regional programme, and has reached an impressive scale. In 2012 – 13, of the total 2214 people trained by CSE, 744 were south Asians; or, one in three trained was a south Asian participant (one from Afghanistan; 78 from Bhutan; 111 from Bangladesh; 4 from Maldives; 108 from Nepal; five from Pakistan; and 437 from Sri Lanka). CSE teams conducted 15 trainings in Bangladesh, Sri Lanka, Nepal, and Bhutan. As compared with the previous year, the total south Asians trained by CSE has almost doubled from the previous year (CSE trained 386 in 2011-12).

The Sustainable Industrialization team alone trained 210 south Asian regulators and government officials in Sri Lanka and Bhutan in 2012-13. In Sri Lanka, the team conducted two training programmes on Urban and Industrial Wastewater in Colombo for CEA officials, and one training on EIA. CSE was requested by CEA to conduct day-long workshop on best practices on biomedical waste management in Kandy for health officers, doctors and nurses. The course was well received, and in a subsequent presentation to the Governor of the Province, CSE was requested to prepare detailed guidelines on establishing the country's first incineration-based clinical / bio medical waste management plant, the first of which is being planned in Kandy District. Once set up, this would serve as a 'model project' for other sites throughout the country. CEA officials also requested CSE's assistance in training key staff at area hospitals, including those at General Hospital, the Teaching Hospital in



CSE staff at the Training programme on RWH and DWWS in Bangladesh in collaboration with WaterAid Bangladesh

Peradeniya as well as for staff of Sirimawo Bandaranayake Memorial Hospital on bio medical waste management.

In Bhutan, CSE, in partnership with the National Environment Commission (NEC), conducted a five-day training on EIA in Paro in May for 53 participants, representing several Bhutanese ministries, including NEC, Department of Industry, Department of Geology and Mines and the Department of Cottage and Small Industry. In all, 23 government ministries and/or departments of the Royal Government of Bhutan were represented in the training event.

The Regulators' programme, set up to train Indian pollution control board officials, has also started exploring training opportunities for south Asian regulators. In 2012 – 13, the team launched a two-week course, 'Enforcement, Monitoring & Compliance', which saw the participation of 26 regulators and government officials from Nepal, Bhutan, Bangladesh, Sri Lanka, Maldives and Pakistan. There is a clear need expressed by south Asian regulators for CSE to scale up training.

The Urban Water Management team trained 211 people on rainwater harvesting and decentralized wastewater treatment in Bangladesh, Sri Lanka and Nepal. This

includes the 14 south Asian participants who attended RWH + DWWT trainings in India. Participants included NGOs, students, researchers and academicians.

In 2012-13, the Environment Resources team conducted three courses on information management and digital outreach, of which one was targeted specifically at south Asians. In all, the team helped build capacities of 20 south Asian information managers in the region. Participants included those interested in starting digitized information management systems in their institutions to NGOs interested in employing social media tools for more effective advocacy, as well as government libraries exploring digital asset management options. This team has an active alumnus (each participant is asked to prepare an 'action plan'), which continues to exchange ideas on how they have initiated digital information management practices in their institutions.

CSE's interdisciplinary courses on politics, policies and practices of environment management are targeted at students and young professionals from the region. These courses fulfil an important mandate – to build a cadre of future environmentalists. Young professionals

are briefed by some of the leading activists, academicians, and policy makers in addition to seasoned CSE research staff. Field trips and group assignments allow participants to explore grassroots level realities and the tools to communicate these to a broader audience. Four interdisciplinary courses were conducted in 2011-12, which drew in 23 students, young development professionals and journalists from across south Asia. The curriculum of the three-week winter course, *Challenge of the Balance*, articulates pan-regional environment-development perspectives, and attracts wide participation from south Asia. Alumni typically form enduring networks among themselves and with CSE. Many alumni continue to contribute to CSE by

volunteering their time, or opt to write for CSE publications, while a select few are hired by CSE on a full time basis.

The first contact that many south Asians have with CSE is by coming to CSE for a training programme. The Anil Agarwal Fellowships scheme for south Asians was set up specifically to help build such relationships. These fellowships (partial or full fellowships) support the participation of south Asian participants across most CSE training workshops held in India. In 2012-13, the fellowships scheme was considerably enhanced, and 120 south Asian participants were awarded the AA Fellowships for south Asia. These fellowships continue to play an important role in building regional relationships, and expand the scope of the entire regional programme.

Institutional Development

Programme achievement: CSE teams achieved 80% of their planned work outputs in 2012-13. CSE produced seven major publications in the year -- on water, industry, renewable energy and food safety. Major public events and conferences, including the Anil Agarwal Dialogue, the conference on Food Safety and Toxins, the renewable energy meeting on off-grid solar, the release of environmental rating of the Indian iron and steel sector; and the GSP Green Schools Award, witnessed a large public turnout, and large news media interest.

Training emerged as important activity for the institution. In all, CSE programmes trained 2214 persons, of which about 750 were from south Asia. Trainings are being conducted for regulators, government officials, students, architects, school teachers, NGOs, media and industry professionals, among others. Today, most CSE programmes have a south Asia component, and enduring linkages have been built between CSE and various ministries, NGOs, universities and industry bodies in almost all south Asian countries (except Pakistan).

Recognising performing staff: The previous year's initiative of handing over independent charge to middle level managers has borne fruit, and has helped CSE identify leaders; outperformers who have shown leadership in teamwork and have expanded the scope of their work, were rewarded by a raise in their designation.

CSE staff in prestigious committees: CSE staff members have been invited to be part of important committees, including the selection committee to choose members of the National Green Tribunal; UTTIPEC Working Group of the Delhi Development Authority; the Rajasthan Government State Urbanisation Commission; NCERT (Science and Environment Exhibition); Monitoring & Evaluation of Environment Activities of the Ministry of Environment and Forests; Bureau

of Indian Standards (BIS, on Water Resources); the academic board of CEPT University, Gujarat; the Uttar Pradesh State Ganga Committee; as well as the BIS committee on EIA; among others.

Gender Ratio: CSE's gender ratio in 2012-13 was 46% women and 54% men.

Staff benefits schemes:

- Medical insurance cover of Rs. 1 lakh for those on regular pay rolls;
- Interest-free loan for emergency situations, as well as short or medium-term loans;
- In-house gym started this year; CSE staff contributes a minimal fee to cover the cost of a gym instructor; CSE bears the cost of maintenance of infrastructure.
- Flexi-timings for CSE staff started, keeping in mind the traffic situation in Delhi and suburbs. Staff need to reach office any time between 9 am and 11 am, and can leave office between 5 pm and 7 pm, so long as they complete a minimum 8 hours of work;
- Subsidised canteen on premises serves fresh, hot subsidised meals to CSE staff.

Build an environmental cadre through Volunteers and Interns: in 2012-13, CSE engaged 90 interns and volunteers from different parts of India and 17 students from foreign universities, whose contribution (in days) was equivalent to 13 regular staff members. Eight were recruited as full time/part time staff. Volunteers and interns contributed actively to all programmes in CSE, such as research and database compilation related to environment impact guidelines, transportation strategies and policies, designing and planning waste water management and reuse systems, research on forest clearance processes for mining projects, green building insights and benefits, organising events and training programmes, and writing for *Down To Earth*, among other tasks. Past volunteers helped

gain visibility for CSE during the Biodiversity CoP (CBD) meeting in Hyderabad. Contributions by volunteers and interns in research and dissemination have been substantial; most interns published articles with their bylines, and have contributed a total of 13,334 words in *Down To Earth*. Several students from south Asian universities interned or volunteered with CSE in 2012-13.

Planning and monitoring: In 2012-13, all CSE teams underwent a meticulous annual planning exercise, and individual tasks were carefully designed to meet institutional growth and to ensure every individual's professional growth as well. Programmes tracked their performance through regular review meetings. Teams actively participated in campaign initiatives such as the "Quaterathon", organised by CSE.

Infrastructure and development: CSE has started construction activities for a new training centre, the Anil Agarwal Environment Training Institute (AAETI), in Tijara, near Alwar in Rajasthan. AAETI is being constructed to demonstrate cost-effective technologies, and innovative and sustainable building designs to minimise wastage and optimise available resources at the site. The project has identified five key areas in which to meet 'green campus' goals: site planning; materials selection and construction; energy use; and water and waste management. Campus performance parameters and targets have also been set for a variety of indicators to ensure 'green campus' goals are met.

Some of the key 'green features' of the campus:

- Planning the site to maintain natural slopes and drainage patterns;
- Optimum orientation of buildings and openings to maximize the use of daylight and natural ventilation and improving thermal comfort;
- Using ecological materials and construction technologies such as rammed earth and fly ash bricks for walls and the use of bamboo for the roof of the academic and administrative buildings. All construction materials used in the project will be responsibly sourced using locally available, recycled and/or waste material wherever possible;
- Solar energy will be used to meet a major portion of the campus' energy requirements;
- Low energy consuming lights, fans, and equipment will be used along with passive/low-energy cooling and heating systems. Stack ventilation and misting are being considered. The use of air-conditioning will be restricted;
- A comprehensive water management plan has been prepared for the site: Wastewater, treated using natural decentralized systems, will be reused for irrigation and flushing. The entire campus is designed to harvest rainwater to recharge groundwater or stored for future use using a network of swales, channels, recharge pits and storage tanks. CSE is also planning a 'Water Innovation and Information Centre' on the campus.
- The landscaping is being planned using hardy, native and environmentally appropriate species to minimize irrigation. Some part so the campus will be used for organic farming.
- All organic 'wastes' will be composted, and garbage will be segregated and recycled.