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Overview

In 2013-2014, CSE has continued to maintain its stature as an influential environmental policy advocacy institution. It has been able to evolve and build on the lineage of its long-standing campaigns and programmes. For instance, the air pollution programme has transformed and broadened its ambit, from an earlier focus on clean fuels to now also mobility management and public transport. Similarly, the water management programme's scope has broadened from community-led rainwater harvesting to now also decentralised wastewater treatment and a clearer alignment on supporting the government's push on sustainable water and waste management in rural and urban India.

The institution was able to respond to emerging challenges by strengthening newer programmes, such as the ones on Green Buildings and on Renewable Energy. CSE's watchdog role continues to bring results,

Evaluation by Thomas Alveteg and Sanjukta Sarkar, SIPU (February 2014):

CSE is... a unique organisation — a watchdog and green think-tank with a clear potential to continue expand and play a crucial role in providing a constructive South perspective to the international environment and climate debate — a role which mostly is played by organisations from the North.

with targeted, action research leading to outsized impacts.

Meanwhile, programme leadership at CSE has matured, with many teams now headed by a young cadre of managers, with considerable autonomy. During the last 5 years, about 60% of CSE staff recruited was less than 30 years old — 33% are between the ages of 31 and 40 years, while 6% were above 40. CSE maintains a gender ratio of 46% women to 54% men. The contribution



Anil Agarwal Dialogue in progress

(in days) of the 430 interns and volunteers hired by CSE is equivalent to 75 regular staff members. As many as 10 were recruited as full time/part time staff and interns contributed actively to all programmes. Many individual staff members are plugged into important policy bodies to directly drive change at the national, regional as well as at the global process level.

CSE's approach of privileging strategy over scale has been validated – it continues to discover and invest in catalysts – from regulators, the media community and the youth, among others. In this context, one marked change has been the phenomenal increase in sector capacity building and training efforts. In the last two years alone, CSE has trained more than 4500 people in India and south Asia. Most programme teams have broadened their strategy to include training key stakeholders in their respective fields — this underscores the urgent need and the un-satiated demand to capacitate frontline managers, implementers and decision makers to drive change. Last year alone, CSE trained 2384 people with a total of 68 trainings. Partly to meet this demand, CSE is constructing a separate, state-of-art training facility, Anil Agarwal Environment Training Institute (AAETI) close to Delhi, with green campus features and residential quarters.

Of particular note in this period was the institutional-level support CSE secured to carry out its work at the global level, which will help establish perhaps the South's first global NGO. This will demand not only a massive expansion in scope of existing programmes, but also institutional-wide changes and routines in order to successfully take on this huge but exciting challenge. The first year of the five-year support will be used to scope for potential in-country partners in Africa, Asia and elsewhere, and to explore the potential for CSE perspectives and knowledge to inform global networks and processes.

CSE also remains a very visible organisation – generating hundreds of news articles and large number of TV/broadcast episodes every year, which serves as clear evidence of the



public interest in its research findings and messaging. Institutional visibility has increased because of the emphasis on information outreach, which is increasingly digital – CSE websites have attracted more than a million visitors each year during the last 5 years.

During this period, there was a rapid expansion of the geographical reach of programmes and interventions to cover the south Asian region. Many important partnerships and Memorandum of Understandings (MoUs) were signed with leading regulatory bodies, environment agencies, ministries and civil society groups across south Asia – on training, research and implementation projects.

Programmes were able to on average achieve close to 80% of targeted activities and planned events. CSE has also strengthened its internal systems of planning, monitoring and evaluation to support its programmatic work – part of this was only natural, given the increasing demands of donors, while a part of it was driven by the need to see clearly articulated results.

Research and advocacy

SUSTAINABLE URBAN MOBILITY AND AIR QUALITY

Vehicular air pollution in urban India has been one of our key areas of work. CSE's Clean Air and Sustainable Mobility programme had originated in the realisation that there was a crisis brewing on urban air quality and public health in Indian cities due to rapid motorisation. Over 50 per cent of cities have particulate pollution level that is officially classified as critical. This has compounded the problem of energy insecurity and climate impact. The transport sector uses up more than 40 per cent of the petroleum products. Massive use of diesel in vehicles is further aggravating the local toxic risk as well as climate risk because of high black carbon emissions.

Motorisation and dieselisation are happening based on outdated vehicle technologies and fuel quality—seven to 12 years behind Europe. On the other hand, the

daily travel length and duration is increasing rapidly in cities with growing dependence on personal vehicles, traffic congestion because of increasing numbers of vehicles, and sprawl-based urban design. Indian cities cannot fight this battle of dirty air, car bulge and fuel guzzling alone. Small steps are being taken across cities, but these are too little and too late—they need to gather pace backed by good science, technical and regulatory capacity, and an aware and involved public.

Between 1996 and 2014, CSE worked concertedly to introduce clean fuel (compressed natural gas or CNG) and pushed public transport as the option for breaking the mobility gridlock in cities. One of the most significant success stories that emerged out of these efforts was the transformation of the travel mode in Delhi, the nation's capital: The city now has the biggest CNG-run public transport system in the world.



CSE director general Sunita Narain addressing the audience at the workshop on transport and climate

However, it is time to move on literally - and CSE is looking towards expanding the scope of this programme to a global scale based on co-benefit principles of public health, climate change and energy security. By 2030, CSE aims to propel the key regions in the Southern world towards meeting the World Health Organization (WHO) guidelines for ambient air quality. While about 25 per cent worldwide CO₂ emissions are attributed to transport, nearly one-fifth of global black carbon emissions come from the transportation sector, with a relatively large share coming from diesel vehicles. Worldwide, as per the 2010 Global Burden of Disease assessment, outdoor air pollution contributes annually to over 3.2 million premature deaths and over 74 million years of healthy life lost.

Evidently, clean air action in the Southern regions would require significant reduction in vehicular emissions through technology improvement as well as mobility management. This programme is expected to catalyse change in the targeted countries; these countries are currently working with differentiated targets based on their unique

imperatives to set emissions standards roadmaps to get clean vehicles and fuels. One of the key clean air strategies will be to eliminate dirty diesel from the region to provide climate co-benefit. By 2030, the targeted regions should also reduce vehicle miles travelled and achieve an 80 per cent public transport ridership with scaled up walking and cycling, and accessible and compact city designs to reduce travel distances. This will contribute to the new global transport agenda of doubling the share of public transport, walking and cycling by 2030.

India needs to tap into the emerging best practices in the Southern world as well as in developed countries to understand the principles for good regulatory practices, planning and public awareness to accelerate action locally. At the same time, India can share its own learning with these nations. On a global scale, reducing emissions from long-range transportation systems - such as railways, aviation and marine—will also require more effective and guided participation of the southern world. The Southern world needs to engage effectively to



Participants attending a workshop on transport and mobility

ensure a fair deal in which even as emissions targets are improved, unilateral market restrictions are avoided and Southern countries with growing aviation industries and a large marine presence can refine their national strategies to address this emerging challenge.

KEY ACTIVITIES

Air pollution campaign in cities: As part of the ongoing campaign on air pollution and public health we extensively raised the issue of smog, rising air pollution in cities and weak action to protect public health. This led to extensive reportage in Delhi and others cities. Media also highlighted the Delhi air quality in comparison with our Beijing and other cities. Throughout the year CSE raised the issue of rising air pollution and result of studies which were released during the year.

The issue of air pollution raised by CSE led to formation of a committee by the Department of Health on Air Quality Index, involving CSE and Medical community and regulators. Further several parliament questions were raised and the received extensive media reportage.

Intervention at the Supreme Court: CSE played a key role in filing a report through the Supreme Court appointed committee — Environment Pollution (Prevention and Control) Authority (EPCA) on 'Priority measures to reduce air pollution and protect public health' as an interlocutory application (IA). The report was presented by amicus curiae Harish Salve. The bench has taken cognizance of the fact that Delhi has not been able to sustain its air quality gains and air pollution levels are rising again. The bench, headed by Justice Patnaik, acknowledged the gravity of the air pollution problem and issued notices to the Union of India and the state governments of Delhi, Haryana, Rajasthan, and Uttar Pradesh to respond to the recommendations of the report. Court also asked the Central Government on why environmental compensation charges cannot be imposed on diesel cars which are growing at faster rate.

Campaign against CNG price hike: Indraprastha Gas Limited announced a steep hike of Rs 4.50 paise per kg in the price of CNG in December 2013 making it expensive at Rs 50.1 per kg, the second successive hike in three months. As a result of our campaign and ongoing developments which also challenged the price hike, government finally reduced the price of compressed natural gas (CNG) by Rs 15 per kg in Delhi in February. We welcomed the government's decision.

Campaign for fuel efficiency norms for vehicles: We carried forward our campaign to demand fuel efficiency norms for vehicles in India led to declaration of fuel efficiency norms for passenger cars. However, this was not easy, CSE remained in discussion and directly engaged with the BEE, MORTH, and Other concerned agencies to push for the standards. During this process, CSE also slammed reported efforts by industry to dilute car fuel economy standards already approved by PMO after public consultations. Our advocacy prevented the industry-led dilution and BEE retracted from their original proposal and revised and notified the new & tightened fuel efficiency norms.

Campaign for car restrain measures: Our campaign agenda of parking policy reforms to initiate process to restrain cars and shift demand towards public transport given inputs for the Master Plan revision. This has led to several proposals on parking pricing reforms. Our recommendations have been included in the official parking policy draft. Based on NMT assessment we engaged with concerned departments and UTTIPEC.

Public transport promotion: While the bus transport services have improved in the city, we continued to raise the demand for increasing ridership of buses. Also, buses are essential public transport mode as they connect all the areas of cities and along with the mass transit network can result in overall increase in modal share of public transport. During the month of October minister of environment declared a symbolic measure that he will reach to his office by using public transport on every Wednesday, while we

welcomed the decision we said that instead of making it a gimmick the government should try to improve the services in such a way that all people use the public transport irrespective of any working day.

Countrywide assessment of clean air and mobility action: CSE conducted a rapid assessment of air quality and identification of wide spectra of actions in cities which provide a direction of change, and a learning curve. Based on our research we published a book *“Good News & Bad News: Clearing the Air in Indian Cities”* This book brings to the results of our extensive effort to assess the emerging good practices in air quality and mobility practices in our cities to cut pollution, congestion and energy guzzling. This puts a spot light on the positive policy action – the ‘Good News’ in cities - mega, big and small, in the areas of urban air quality and health, public transport, walking and cycling, intermediate public transport and integration, restraint on vehicle usage through parking policy and fiscal strategy and unique efforts in our hill towns.

CSE organised a unique event on 26th September 2013 in New Delhi to celebrate positive action on sustainable mobility in Indian cities. The event engaged in dialogue with change makers from different cities of India who made a difference to mobility and air quality related concerns. This occasion was to acknowledge positive action to create policy stake in change and deepen public understanding of what is needed to move forward. This event also culminated ongoing efforts to identify and assess the emerging good practices in different cities of India. On this occasion, the community of change makers including policy makers, civil society actors, experts, political and industry actors, among others came together from across the country to share ‘good news’ as well as the challenges.

City dialogues in selected cities to build support for action to improve mobility and air quality: CSE along with Tamil Nadu Pollution Control Board and Chennai local bodies, Bhubaneswar development Authority, and Chandigarh Administration,



Releasing the book on 'Good News & Bad News: Clearing the air in Indian cities



Panelists of the workshop on air quality and transportation challenges held in Kathmandu

organised citizens' dialogue on air quality and mobility challenges to build policy support for reforms and city action planning to achieve sustainable mobility plan for the cities. During the dialogues we presented our findings of consultations with city stakeholders, our assessment of air quality and mobility challenges of the cities, and on-ground assessment of city action on NMT to improve access. These programmes were attended and participated by a large number of stakeholders and received extensive coverage in media.

CAPACITY BUILDING ACTIVITIES

The city based action has demonstrated that the growing pressure of transportation reforms is making enormous demand on regulatory capacity to design and implement mobility related regulations. This is a very new area of governance and demands deepening of understanding of the emerging issues and strategies; exposure to policy tools, and rigorous capacity creation in the relevant agencies to carry forward the reform process. In addition to the orientation programmes

and workshops in Delhi, we have expanded the scope of our capacity building programme and moved out of Delhi to organise orientation workshops in other cities to sensitize and discuss the clean air and sustainable mobility agenda with the multi stakeholder group including regulators, academia, civil society groups and media persons in a city or at regional level.

Regional orientation workshops: Two regional orientation workshops were organised in Guwahati (targeted at the northeast region) and Lucknow (targeted at northern region including select Uttar Pradesh cities, Jammu & Kashmir, Punjab and Chandigarh).

Orientation workshop on Parking policy: As CSE has been advocating for formulation and implementation of a Parking policy as a travel demand management measure in cities to reduce usage of personal vehicles, a special interaction orientation workshop on Parking policy was organised in Delhi on July 26, 2013 to discuss the emerging best practices in parking policy and how cities can

craft a parking policy focusing on TDM principles with the concerned stakeholders. CSE along with international expert, Paul Barter and Manfred Breithaupt of GIZ were the key resource persons. Around 50 participants including regulators from India and South Asia, international experts, planners, consultants, students, media etc participated in the orientation workshop.

Training programme on Policy, Planning and Design for Sustainable Mobility, March 25 – 27, 2014: We expanded our target groups and conducted a specialised training programme for students and academics on March 25 - 27, 2014. Masters students in Urban and Regional Planning; Geography; Architecture and Planning; Faculty, department of Architecture; M.Phil and PhD Research scholars from Delhi, Gujarat and Uttar Pradesh participated in the programme. The participants found the training programme very useful. According to them, it enriched their understanding and changed their perspective on sustainable mobility, which has been missing in their curriculum.

CSE Workshop Series on Transport and Climate: CSE organised a two-day workshop series on the theme of 'Transport and Climate' on July 24 - 25, 2013 in New Delhi. Globally cities are following divergent strategies including vehicles emissions and efficiency regulations, urban design interventions, direct measures to restrain personal vehicle numbers and usage to reduce auto-mobility and secure environment and public health. Experts from the US, Europe, China, Singapore, Hong Kong, and Brazil shared their learning curve and experts from India captured the lessons and case studies from Indian cities.

SOUTH ASIA: Achieving clean air sustainable mobility in cities: In addition to India, CSE expanded the scope of our work and initiated our work at the regional level in South Asia. We have conducted stakeholder workshops in Dhaka, Colombo and Kathmandu to build a forum for city dialogue on air quality and sustainable mobility in South Asia and to find solutions to the

daunting air pollution and mobility challenges facing our cities.

These workshops brought together a wide spectrum of stakeholders including policy makers from concerned Ministries, departments/agencies, experts, academicians, civil society groups and others who are involved with the implementation of the clean air, transportation and mobility related policies in the respective cities/countries to discuss the air pollution and transportation challenges and future action. These are experience sharing workshops, learning from each other and leveraging our work. As a follow up of the workshops, Kathmandu Metropolitan City office in Kathmandu to engage with us on parking policy. Sri Lanka has involved us in preparation of the cabinet note on fuels roadmap. Also engaged with fuel economy standards roadmap. Bangladesh Road Transport Authority has shown interest to work on a transport plan for Dhaka.

SUSTAINABLE BUILDING PROGRAMME

There is no doubt that greener buildings are key to sustainable development—buildings contribute to resource extraction for building, energy and water use and discharge of effluents. Therefore, ensuring that existing buildings are retrofitted for resource efficiency and that future buildings substantially reduce their resource footprint is critical. Countries like India can get it right today as over 80 per cent of the building stock will only now be built. But they can also get it horribly wrong if they do not have the right regulations for stipulating and measuring the green performance of buildings. A few years ago, we asked why CSE should work in this area, which is dominated by large numbers of certification agencies and consultants. We found that there were no institutions working in the public policy space, which would critique developments and push for reforms. So, while there is a buzz about 'green buildings', there is still little understanding of what we mean by green buildings that are both sustainable and affordable. CSE believes

that green is not about first building structures, which use lots of materials and energy, and then fixing it so that it becomes a little more efficient. Building green is about buildings, which optimise on the local ecology, use local materials as far as possible and most importantly, build to cut the power, water and material requirements. This is the only way that we will be able to substantially reduce the footprints of the building sector on the environment.

KEY ACTIVITIES:

International conference on designing compact and accessible cities: CSE carried out an exhaustive study of urban design of old and new cities and effect of it on the cities' mobility access and carbon footprint. The findings were deliberated and released at a conference held on July 25, 2013. The role of urban design interventions and car restraint measures to reduce auto-mobility and environmental impacts were deliberated. The discussion focused on emerging approaches in urban design and planning interventions for sustainable mobility and evaluated transit oriented development models emerging in different cities of the world (Curitiba, Hong Kong, Singapore and European cities) including India (Delhi, Naya Raipur) to integrate land-use policies with transportation strategies for sustainable mobility.

Energy and sustainable buildings: An assessment of status of adoption and implementation of energy efficiency measures in the east and northeastern region of the country was undertaken during the year. The findings were published and released at Regional Dialogue on Sustainable Building, Bhubaneswar on December 13, 2013 in association with the Bhubaneswar Development Authority (BDA). This workshop was continuation of four city-level dialogues started last year.

Construction and demolition waste in cities: A briefing paper on the issue of construction and demolition waste was published to push for expediting Indian

Standard update to include recycled C&D waste so as to increase the uptake of the product and reduce the ecological impact of the waste and demand for naturally sourced building material. The findings were discussed at the daylong Conference: "Waste to resource: Addressing construction and demolition waste in cities" jointly organised with the Environment Pollution (Prevention and Control) Authority (EPCA) and in New Delhi on December 23, 2013.

Analysis of building sector of India: The green building team has compiled a three year research in the form a book "Building Sense: Towards a sustainable future." The book will be published shortly.

Classroom Series in *Down To Earth*: The team carried a 20 issue long classroom series in the *Down To Earth* magazine to demystify jargons of the green building industry and showcase good practice from across the country. Also consolidated all the green building related information on a specialized web-page on DTE website to improve access to the teams research and documentation work.

AC Calculator: An online calculator was introduced to help public to access the efficiency of their AC and calculate possible savings by shifting to more sensible temperature settings. This initiative got very popular on the website attracting heavy traffic.

Orientation programme for Regulators: A training programme titled 'Sustainable Buildings for Sustainable Cities: Policies and Practices' for the engineers and architects of CPWD – Ghaziabad was organised. It was attended by 25 participants belonging to varied professionals fields such as civil engineering, architecture and electrical engineering. The course was conducted from 6th -8th August at the Anil Aggarwal Green College. The participants indicated in their feedback that they had benefitted from the course and would endeavor to utilise the knowledge that they had gained during the training in their work in order to design and construct sustainable buildings.

SUSTAINABLE INDUSTRIALISATION

We see inter-related environmental challenges of industrial growth. First, there is the reform and strengthening of planning, monitoring and regulatory procedures, especially in the design and application of the environmental impact assessment (EIA) tools. Second, we find that regulatory systems in India and the global South are struggling to catch up with dealing with newer pollutants, even as the old pollutants have continued to grow. There are key issues of affordability of developing societies as the cost of pollution control grows. Third, there is the need to mitigate emissions and to work towards low-carbon growth strategies. All this, we believe, is not possible unless industrialisation is much more resource-efficient and works in the interests of all.

The capacity of regulatory institutions to implement environmental regulations and monitor environmental performance of industries effectively is weak in most regions of the developing world. As in India, the work of pollution control boards, including decision-making and rules for compliance and enforcement, often occur in an accountability and information vacuum. The lesson from India's environment clearance process combined with global best practices could provide a valuable Southern perspective on environmental governance in emerging economies. This will strengthen policy and implementation regimes.

Our sustainable industrialisation programme seeks to prevent lock-in of greenhouse gas emissions and local air pollution, promote optimal resource use, and reduce environmental damage from extractive and manufacturing industries even as the emerging economies grow to reduce poverty and improve standard of living. The long-term goal of this programme is to push for changes in the clean technology roadmap for energy and resource-intensive industries and strengthen the environmental governance and regulatory capacity in the Southern regions for low carbon growth and less resource-intensive pathways.

KEY ACTIVITIES:

GREEN RATING PROJECT

Thermal Power Sector: Scoping and Framework development: Under Scoping and Framework Development objective GRP intended to develop analytical framework to assess the environmental and social performance of the sector. The initiative included activities to create representative sample of industries, ensure maximum participation and subsequent data collection. Under the objective following activities were performed:

Selection of representative sample & maximum participation: For the purpose of rating of coal and lignite based thermal power sector a representative sample of 46 plants (1 plant recently commission was excluded) were selected across the country. The methodology adopted in selection of plants included following factors: region-wise power generation capacity distribution, company-wise regional power generation capacity, inclusion of one plant across every company across all 250MW capacity plants. Shortlisted companies were sent invitation letters for voluntary participation in the project. The companies were communicated and followed up through email, phone, letters, fax, etc. Only 50 per cent participation was arrived, as major PSUs such as NTPC and state owned units declined to come forward.

Technical Advisory Panel (TAP): An external panel of experts was constituted intended to ensure independency, consistency and quality of GRP result. Presently 4 expert members were selected who have expertise in thermal power sector and regulation. The 1st meeting with TAP was held in the month of April 2013 to shortlist study sample and finalizing the questionnaire. The second meeting was held in March 2014 for development of indicators for rating.

Information collection through Questionnaire: An extensive technical

questionnaire was finalized in consultation with TAP. The questionnaire was shared with shortlisted plants in order to collect required information for the study. Out of 23 participating plants, only 13 have so far availed the information in the required format.

Survey guideline preparation and sharing with GRN: To carryout site survey and information collection, GRN personnel are identified who have expertise and ability to perceive the information during site survey and collate the same. To keep the GRN survey reporting uniform, a guideline and information collection was finalized and shared with the identified GRNs.

Plants short-listing and invitation ensures wide and voluntary representation of plants in study sample. GRP selected a sample of 46 coal and lignite based thermal power plants representing eastern, western, southern and northern region of country with diverse range capacity. Performance of the sample plant will represent nearly 50% coal based thermal power generation capacity in the country. This will also reflect the performance of diverse thermal power plants across the country. Only 50 per cent of the sample plants have come forward for the rating.

Through TAP meeting GRP collected expert ideas from external expert to finalize the questionnaire to collect information from plants. This represents the initiation of voluntary disclosure of data from targeted companies/plants. It drives industry to become more transparent.

Research (administering survey, analysis and report compilation): Framework development activity is followed by survey of the plants. The process includes thorough plant survey including interaction with community, media, regulatory agencies and civil societies. Coal and effluent samples are collected to verify real time pollution control performance of the plant. Based on information submitted, site survey and sample test an environmental profile of the plant is

prepared. Company profiles includes performance assessment of the plant vis-a-vis benchmark along with documentary evidence.

Site survey and data entry: GRP team has carried 25 plants surveys whereas GRN has completed 8 plants surveys. The remaining plants surveys are expected to finish by June 2014. Every plant survey is followed by data entry and draft environmental profile preparation to document the performance of the plants in the rating. Site survey for non-participating plants include all except within plant survey. 14 plants' information has been incorporated in a common data entry sheet which serves the purpose of comparatively analyze the plants data at one platform. Information from all the plants, surveyed and un-surveyed has to be integrated in this sheet.

Draft BAT document: Best Available Technology document comprises the updated technology and techniques to achieve higher efficiency in the particular industry. The document covers global best practices as well as Indian best practices in comparison. The Indian industries performance is included once the rating is finalized. Therefore, global best figures are, till now, included in the document.

Draft Environment profile: Based on collected information, site surveys and secondary source information, an environment profile is prepared for every plant. The draft profile is shared with the plant for their feedback. It also becomes a verified information source for final rating. Till now 24 environment profiles have been drafted. 6 final profiles have been shared with the plants for their feedback.

Research phase of the project represents on-ground verified of information on operations and sustainable business practices of plants, including their interaction with communities and stakeholders. The research phase integrates a unique feature of rating that is verification of data already submitted by plants. Those plants that are not participating voluntarily, external plant

survey and secondary source of information are used for them.

Rating Impact summary– Pulp & Paper sector: GRP initiated a brief assessment of improvement in pulp & paper sector since last two GRP ratings (in 1999 and 2004) for the sector. The exercise is intended to take a note of the sector's performance since 1995 till 2013. 16 plants have been selected those were already participating in earlier ratings for the purpose. A brief questionnaire was prepared and shared with the plants for information collection on specific parameters. The analysis of the information has been done to come out with a factoid kind of report and subsequent public outreach through release and DTE cover story. The report has been ready and DTE story is being prepared for release.

Tracing of improvement in paper sector shall come out with the impact of GRP is impact in the sector- how GRP, through its 2 ratings in 1999 and 2004, have successfully pushed the sector towards global level. Being a water guzzler and highly energy intensive sector, the improvement in sector would assist in energy, water and other natural resource conservation.

Briefing paper for water use in industries in India: This is a small project intended to assess the water efficiency of major water sectors: pulp & paper, thermal Power, cement and iron and steel. The paper assesses the current business as usual scenario and water efficient scenario of water consumption in these sector. The draft format of the report is ready and being finalized.

Assessment of water efficiency of water guzzling sectors in India, will presents future water requirement in the sectors. Business as usual scenario is expected to exert extreme pressure on limited natural fresh water resources we have. The water efficient scenario, based on the global best practices, would be left only option to continue sustainable business.

TRAINING AND SOUTH ASIA CONSULTANCY TEAM

Collaboration with GIZ: CSE worked with GIZ on training programme on e-waste for regulators and also developed a Facilitator's manual on the same. The programme was very successful and signed an MoU with them for doing research and quality training programmes.

Collaboration with World Bank for capacity building of BSPCB officers: CSE collaborated with The World Bank for conducting capacity building programmes for Bihar State Pollution Control Board (BSPCB). There were 4 training programmes for BSPCB which received very good feedback from the Board Officials.

Collaboration with Geological Survey of Mines Bureau, Sri Lanka: During the year CSE signed a MoU with the Geological Survey of Mines Bureau (GSMB), Sri Lanka to work together. Soon after MoU was signed, 10 GSMB officials came to CSE to undergo training on Mining in March.

Training programmes were also conducted in South Asia. There were 3 training programmes in Bangladesh, 3 training programmes in Sri Lanka and 2 programmes in Bhutan. Also published guidelines on EIA of wind power projects and conducted two workshops in Pune and Bangalore which were attended by 80 stakeholders from the wind power sector. Overall 33 training programmes were conducted in India and South Asia. The team trained over 826 people and devoted as many as 250 days for training.

Training programmes in India: Trainings on India focused on a range of environmental issues such as Environmental Impact Assessment, Social Impact Assessment-general and sector specific (mining), Urban and Industrial Waste water Treatment and Hazardous Waste Management. The team upscaled the SIA programme from 3 day to five days and it received a good response. All the trainings that were conducted received a good feedback.



Participants of the EIA training programme

The EIA/SIA training programmes have received a good feedback and there is a constant demand to conduct such programmes. A very positive feedback was obtained for updating programmes of hazardous waste management and social impact assessment to five days. The two week EIA mining training programme was attended by 10 participants from Geological Survey of Mines Bureau (Sri Lanka). CSE would be training more of their officials in the future on mining.

Regulators Training Programme: The aim of this programme was to bridge the capacity constraints that challenge the abilities of Indian regulatory bodies, especially in ensuring adequate compliance and enforcement of regulations, to address the environmental impacts of such rapid industrialisation. The team conducted programmes on E-waste, Waste management, Compliance, monitoring and Enforcement, Wastewater Treatment for Indian and South Asian Regulators.

The regulators training programmes saw good participation in all the programmes conducted during this period. The programmes had regular participation from States such as Gujarat, Maharashtra, Andhra Pradesh, Madhya Pradesh, Jammu and Kashmir and Odisha. Other States which participated in our programmes include Himachal Pradesh, Goa, Karnataka, Kerala, Bihar, Uttar Pradesh, West Bengal and Meghalaya. We also received a participant from Nagaland Pollution Control Board for the first time in our August (2013) programme. Overall the training programmes have received good responses from different State Pollution Control Boards (SPCBs) in terms of participation and feedback.

Training Programmes in South Asia: The team conducted programmes in Bhutan, Sri Lanka and Bangladesh on wastewater treatment, enforcement, monitoring and compliance and environmental management. The team trained over 281 regulators in South Asia.



Participants of the EIA training programme

The South Asia programmes have been widely appreciated by the concerned environmental regulators of Bhutan, Bangladesh and Sri Lanka. CEA, Sri Lanka has requested CSE to conduct training programme on waste management in the next financial year 2014-15. Also, CSE provides technical support to Bhutan from time to time.

EIA Training Programme on wind power projects: The team conducted two day training workshops on the EIA of wind power projects in Pune (29-30 August, 2013) and Bangalore (17-18 September, 2013). The stakeholders involved were from Suzlon, CLP wind farms, Ela foundation, Bombay Natural History Society, Ferguson College, Centre for Science and Technology, Tata Consultancy Services, Tata Power, Gamesa Windfarms , ILFS, TERI Bangalore, CEMC, NTPC Renewables, Sahara India, IIT- Bombay, Thiagarajar College of Engineering- Chennai, CSTEP, KSJ Technocrats, Nature Conservation Foundaton, Renewable Logen Asia Pvt. Ltd, Anekal Read Centre, IEDCL, Tamilnadu Agricultural University, Shakti Sustainable Energy Foundation amongst others. The programme receive an overwhelming response with a request to conduct it in other

states where wind power projects are coming up for sensitizing the various stakeholders involved. The programme received an overwhelming response with a request to conduct it in other states where wind power projects are coming up for sensitizing the various stakeholders involved.

The stakeholders involved were from Suzlon, CLP wind farms, Ela foundation, Bombay Natural History Society, Ferguson College, Centre for Science and Technology, Tata Consultancy Services, Tata Power, Gamesa Windfarms , ILFS, TERI Bangalore, CEMC, NTPC Renewables, Sahara India, IIT- Mumbai, Thiagarajar College of Engineering- Chennai, CSTEP, KSJ Technocrats, Nature Conservation Foundaton, Renewable Logen Asia Pvt. Ltd, Anekal Read Centre, IEDCL, Tamilnadu Agricultural University, Shakti Sustainable Energy Foundation amongst others.

Capacity Building of Bihar Pollution Control Board: This year, the team collaborated with World Bank to strengthen the capacity of BSPCB officials. Under this, the team conducted three programmes and trained 77 officials this financial year. In the following year, two exposure visits would be conducted by the team.

Environmental Governance in South Asia in Collaboration with Ministry of External Affairs: The team in collaboration with Ministry of External Affairs conducted two week programme on Environmental Governance in South Asia from 3-14 March, 2014. This programme was attended by 14 participants from Bangladesh, Sri Lanka and Myanmar.

The Director of Ministry of External Affairs, Mr. HK Sharma, interacted with the participants who gave a very encouraging feedback of the programme. The participants requested for more such training programmes to enhance their skill and capacity. The Director is looking forward to collaborate with CSE for various programmes in the future.

EIA guidelines on wind power projects: The team prepared EIA guidelines on wind power projects with an aim to convince the government of the need for an EIA law in this sector, and two, to assist project developers who want to undertake EIA studies, even if there is no formal EIA law in place.

The team conducted two programmes, mentioned in section 1.4, in Pune and Bangalore, which received an overwhelming response. The guidelines have been appreciated by the concerned stakeholders.

Facilitator's Manual on E-waste Training for Policymakers and Regulators: The team in collaboration with GIZ developed the facilitators manual on E-waste Training for Policymakers and Regulators. The manual would be used as training material for conducting E-waste training programmes for regulators.

POLICY RESEARCH AND COMMUNITY SUPPORT

Green Clearance Watch: The team involved in the continued analysis of environmental and forest clearances granted by the Ministry of Environment and Forests (MoEF) since 2007. A portal called the "Green Clearance Watch" (GCW) has been developed as a one-stop resource base that contains information and statistics on environment and forest clearances granted by the MoEF. The team



Training participants on a field visit

is also now in the process of incorporating information of coastal regulation zone (CRZ) clearance in the portal. The portal also includes video recordings of public hearings of selected projects that are considered to have significant impact on the surrounding environment and the community, review and analysis of administrative and judiciary decisions influencing the process of environmental governance and decision making, and any such relevant information that involves and influences the process of green decision making.

The Green Clearance Watch (GCW) bolsters CSE's sustained effort towards ensuring an environmentally sustainable and equitable development and helping communities be a part of the decision making process. The effort is aimed at increasing transparency in the environmental /forest/coastal zone clearance regime in India.

Policy research and advocacy for improving the forest clearance process: A report on forest clearance has been prepared that attempts to analyze the major problems associated with the process of forest clearance in India and what can be done to improve it balancing ecological and economic needs, and making the process more transparent. The report suggests certain measures that can be helpful in streamlining the clearance process and also addressing the loopholes in forest management that has led to the undue exploitation of this valuable resource and also communities dependent on it.

Coastal zone management in South Asia: Country fact sheets on coastal zone regulation and policy in South Asia. Factsheets prepared for India, Bangladesh, Sri Lanka, Pakistan and Maldives. Also a factsheet was prepared considering implications of integrated coastal zone management for addressing climate change concerns of the coastal areas in South Asia.

Meeting/Event: South Asia Convention on Coastal Management: Puducherry, India; January 19-21, 2014. To discuss the matter

of coastal zone management in depth as observed for south asian countries, a South Asia Convention on Coastal Management from January 19–21, 2014 at Puducherry. Senior government officials, researchers and civil society organisations from Bangladesh, India, Maldives, Pakistan and Sri Lanka came together for the event to deliberate on limits to the coast and its management and regulatory issues.

In a one of its kind convention, government representatives, researchers and NGOs from across South Asia — India, Pakistan, Bangladesh, Maldives and Sri Lanka — came together to discuss coastal management issues in their respective countries. It emerged at the Convention that regulatory systems need strengthening both in terms of decision making and enforcement. Systems for monitoring post-clearance are another weak area that needs to be looked into. There was general consensus at the Convention that there is a need to share experiences and knowledge in the region on coastal management strategies.

COMMUNITY SUPPORT

As various projects of different capacities are proposed from time to time, a number of public hearings are held in each state every month across the country. Though the EIA Notification clearly outlines the procedure for ensuring a democratic participation in the process, many a times the way public hearings are conducted merely remain an eye-wash for undertaking a bureaucratic exercise, while actually maneuvered to serve special interests with little deference for the community concerns. To bring transparency in the process and ensure that community concerns are taken into account while decision making, the team has been involved in covering public hearings of selective projects considered to have significant ecological and social costs and/or are fraught with controversies.

As much as we would like to cover the maximum number possible, covering public hearings from all around the country is a large-scale project. It is not possible for CSE



CSE director Sunita Narain at the South Asia Conference on Coastal Management held in Puducherry

alone to shoulder the task. Therefore the team seeks co-ordination of partners including non-profit groups, environmental organizations and activist in this regard.

Video recording of the public hearings covered are incorporated in the Green Clearance Watch (GCW) and thus shared in the public domain. Occasionally the coverage of public hearings are also accompanied by reportage from the ground which the team takes forward through Down to Earth.

Environmental Impact Assessment (EIA)

Review: An Environmental Impact Assessment (EIA) was made mandatory in India in 1996 under the Environment (Protection) Act, 1986. If properly executed, it is an important tool for ensuring optimal use of natural resources for sustainable industrialization. However in several occasions the EIAs are not done comprehensively taking into account all matters of environmental and social concerns pertaining to a development activity. Also being a technical document, it creates complexity for the community to

understand the impacts of a proposed activity as identified in the EIA reports.

The team has remained involved in reviewing EIA reports for communities to provide them better understanding of the impacts of a proposed project and also the issues or concerns that the EIA may have not taken into account. The EIA reviews are undertaken as a response to requests received from communities following their concern about proposed activities. The following EIA reviews were done by the team:

Fathepur East Coal Mine: On the request of Ekta Parishad, CSE carried out an analysis of the EIA report of a coal mining project (Fathepur East Coal Mine), a 10 MTPA coal mine coming up in Raigarh, Chhattisgarh. The proposed project belongs to the Fathepur East Coal Pvt. Ltd. – a joint venture five different power companies, Visa Power Ltd., Green Infrastructure Pvt. Ltd., (now known as Athena Infra projects Pvt. Ltd.), R.K.M. Powergen Pvt. Ltd., Vandana Vidhyut Ltd. and JLD Yavatmal Energy Ltd. The main issues concerning the project were: impact of

forest land diversion, cumulative impact of the project, impact of road transportation on air quality, etc.

CSE technically evaluated the Environment Impact Assessment (EIA) and Wildlife conservation and management plan reports of the project and helped the community to understand the environmental and social implications linked with the project.

Gare Palma Coal Sub Block IV/6: On the request of Raghubeer Pradhan of Ekta Parishad, CSE carried out an analysis of the EIA report of a coal mining project Gare Palma Coal Sub Block IV/6. It's a 4 MTPA project of Jindal Steel & Power Ltd. and Nalwa Sponge Iron Ltd., whose environmental clearance was suspended by the National Green Tribunal (NGT). The clearance was suspended because the NGT observed that the clearance was given without conducting a proper public hearing. While the EIA notification clearly states that the location for a public hearing should be the project site itself or in close proximity, the venue for the public hearing was fixed as Khamariya village, which was not close to the project site. Khamariya was a remote village, which ensured that the affected people were not able to participate in the hearing. Hence the project proponents had to reapply for the clearance, and had to go through a new public hearing process. CSE did an analysis of the new EIA report submitted by the project proponents for the fresh clearance and found that the present EIA is not a fresh report, but an updated version of the previous one. CSE also did a live coverage and update of the second public hearing.

Chilhati Cement Plant – ACC: ACC's Chilhati Cement Plant's public hearing was proposed to be conducted in Bilaspur district, Chhattisgarh. However the EIA report of the document was not made available public by the company. The aggrieved NGO – Ekta Parishad approached CSE. The matter was taken forth by CSE involving communication with concerned administrative officials, which finally led to the cancellation of the public hearing as a consequence of non availability of the EIA report.

Dholera Special Investment Region, Delhi Mumbai Industrial Corridor: The Delhi Mumbai Industrial Corridor project is Indo Japanese funded project which is proposed to increase the freight movement between Delhi and Mumbai. The entire project is divided into three phase. Each phase is proposed to be completed in 10 years. Along the industrial corridor special investment regions are identified and they are developed into industrial cluster. Dholera is one of the industrial cluster identified along this dedicated freight corridor.

Following the request of Mahesh Pandya from Paryavaran Mitra of Gujarat, CSE did an EIA review of the project.

Nalwa integrated steel plant: Nalwa Integrated steel plant (0.198 MTPA sponge iron) located near village Taraimal, Raigarh district, Chhattisgarh proposed to expand its plant by another 0.726 MTPA sponge iron capacity. The expansion proposal by the company included iron and steel making, steel rolling sinter plant, coke oven, oxygen plant and producer gas plant, waste heat and char using power plant, etc.

On the request of Raghubeer Pradhan of Ekta Parishad, Chhattisgarh, CSE did an EIA review of Nalwa integrated steel plant. The main issues concerning the project were: cumulative impact of the project, impact of road transportation on air quality, water impacts etc. The NGOs used CSE's analysis to raise relevant concerns at the public hearing.

CLIMATE CHANGE

CSE has played a major role in shaping international climate negotiations. Our publication Global warming in an unequal world: A case of environmental colonialism was instrumental in advocating the idea of equity in climate change negotiations. Today, equity and 'common but differentiated responsibility and respective capability' are the foundations of the UN Framework Convention on Climate Change (UNFCCC). CSE has always believed that it is in the interest of the developing countries to get

an ambitious and equitable climate mitigation deal, as they will be the worst sufferers of the impacts of changing climate. A warming world means that the poorest in the developing countries are going to bear the brunt—from failing monsoons to sea level rise and from increase in extreme weather events to water scarcity. Climate change will make poverty alleviation even more difficult. CSE, therefore, has on one hand advocated an ambitious and equitable global deal in which the developed world takes the lead in cutting its emissions and supports developing countries to move towards a low carbon growth path; on the other hand, we have pushed low carbon growth and climate co-benefit agenda in India. We have pushed for tighter fuel efficiency norms in automobiles. We are demanding tighter emission norms for diesel vehicles to reduce black carbon emissions.

Climate change is among CSE's oldest programmes, and runs like a crosscutting theme across several programme areas. CSE has on one hand advocated an ambitious and equitable global deal in which the developed world takes the lead in cutting its emissions

and supports developing countries to move towards a low carbon growth path; on the other hand, it has pushed the low carbon growth and climate co-benefit agenda in India – from pushing for public transport and cleaner fuels in urban transport to pushing for ambitious renewable energy targets, to benchmarking industries on energy and emissions and demanding a low carbon growth strategy for them.

CSE's contribution to India's position on climate change and the equity principle in international negotiations at Conference of Parties (CoP) is well recognized. For instance at a side event organised by CSE and the ministry of environment (MoEF) at the Doha meeting, India's lead negotiator, RR Rashmi, reiterated the imperative for any global agreement to be based on principles of equity, this reaffirming the foundation of India's position in climate negotiations. CSE continues to play an important watchdog role at the talks, and was among the first NGOs to criticize the 'Copenhagen Accord' and insisted on Indian government not officially accepting it.



Warsaw CoP

CSE recognises that in a warming world, mitigation is not going to be sufficient – poor countries will need to mainstream climate adaptation in all development plans and policies. CSE works with the government to mainstream decentralised water management as an adaptation tool in the world’s biggest employment guarantee scheme, the Mahatma Gandhi National Rural Employment Guarantee Programme (MNREGA). Following the research and publication of CSE’s study on the adaptation challenges in an eco-sensitive region such as the Sundarbans, the Minister of State, Department of Sundarban Affairs, Irrigation and Waterways of the government of West Bengal sought CSE’s cooperation to work out appropriate policies and plans for the affected communities.

KEY ACTIVITIES

Climate Portal: The Climate Change portal continued to make available up to date and relevant information on climate change related issues. News on various aspects of climate and development from 80 Indian and

29 South Asian newspapers and newsmagazines covering 28 states and all the South Asian nations were regularly tracked by the team to provide a unique and wider media perspective on this subject. This also enhanced our understanding of the capacity amongst the media to research and report, which has been very significant in developing capacity-building workshops for the South Asian reporters CSE. Research reports, studies and research papers along with the state-level and national-level policies and action plans were also documented and contributed to developing a rich knowledge-base on this portal. But the focus during the year was on documenting research, practices and studies on climate mitigation and adaptation with special reference to India and South Asian countries. Besides this, the team also captured opinions of leading climate experts by documenting presentations and blogs of leading climate experts from India and the South Asia. During later part of the year, the team made an effort to document and present information and data through interactive infographics and maps.



Public protesting at the Warsaw CoP

Reportage at Warsaw COP: CSE took a group of Indian journalists to the COP in Warsaw. The group comprised senior journalists with a distinguished record of having covered climate change issues, for leading national and regional news media, including *Times of India* (Delhi); *Press Trust of India* (Delhi) and *The Hindu* (Delhi). About 50 stories were published by the journalists supported by CSE while at Warsaw. This was in large part due to the comprehensive day-to-day updates and guidance on their story ideas during the daily morning briefings led by the CSE climate team.

The climate change team covered climate change negotiations held at Warsaw using live updates, videos, blogs, news stories, regular media updates and social media. The live updates were a big hit among the media and captured the essence of negotiations as they progressed on important issues. Blogs were written and circulated widely through the website to climate change networks worldwide. CSE engaged actively with networks to ensure equity remains at the heart of negotiations. Equity has been a central issue for CSE in climate negotiations. Ensuring that any outcome under the climate negotiations is embedded in an equitable framework requires that CSE not only engage with national actors but also reach out to as many international actors as possible, including civil society. Climate Action Network (CAN) is one of the largest environmental networks focused on climate change and active on the issue of equity. CSE, a member of CAN, took part in the discussions within CAN and coordinated the equity working group. A team member of the climate change unit co-chaired this group along with representatives from northern constituencies. During the climate talks, CSE's primary engagement with CAN was in shaping the emerging discussions on equity. CSE wrote two detailed articles analyzing the outcome of Warsaw after their return.

Climate change exhibition: In 1992, the UN Framework Convention on Climate Change was signed. Equity and justice were the cornerstone. Carbon dioxide concentration in the atmosphere then was 356 ppm (parts per

million). There was hope - we would stabilize "greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". But since then: Promises were made. Meetings happened. Science rang the warning bells. Debates raged. Action plans emerged—Kyoto Protocol, Bali Action Plan, Copenhagen Accord, Cancun Agreement, Durban Platform, Doha Gateway.

Differences emerged alongside action plans. Promises were broken. Trust lost. Reneging on past commitments became the norm. Hope suffered. Meanwhile, carbon dioxide concentrations consistently increased. The world is at 400 ppm now. The world has advanced since, but not as it should have. Developed countries have not moved to low carbon growth path and developing countries' demand to grow has been misinterpreted as the right to pollute. The UN Framework Convention itself has become inconvenient. But the Convention can still deliver. A new global deal to avert dangerous climate change based on equity and justice is possible. The idea of Climate Talkies, a cinematic depiction of two decades of climate change negotiations, was to drive home the point on how climate change negotiations have progressed, or not, since 1992, and what should not happen in the future.

CSE hosted the Climate Talkies Exhibition on three separate occasions in 2013, and presented it to a range of different audiences. On September 18-19, CSE presented Climate Talkies for the first time at its annual South Asian Media Briefing on Climate Change, where a team of nearly 125 journalists from all over South Asia—India, Bangladesh, Sri Lanka, Bhutan, Myanmar, Maldives, Nepal, Pakistan, Afghanistan—had gathered. As the 6/4-sized posters pasted on vinyl boards were being arranged before the inauguration of the exhibition, one could see, from a distance, names of different Hollywood movies—*Sound of Music*, *Men in Black*, *Great Expectations* and so on.

The exhibition attracted huge crowd the next day as word on it spread—and this trend

continued through the five days that the exhibition was there, until November 22. The post card versions of the posters were all over, with people taking sets of twos and threes to send to their friends and relatives. Some of them took the post cards and presented them to climate change negotiators at the conference venue, which became alive with discussions of Full Monty, Apocalypse Now and Waiting for Godot. Here, the poster depicting the Warsaw climate talks became the talk of the town. It was very interesting to see varied reactions to Climate Talkies. Some said they could not stop laughing because the posters were so entertaining, some admitted that the posters make them sit and think about what will be the future of climate talks, some wondered why climate talks had not progressed in the past 20 years, but it was clear that the underlying message of the exhibition had gone out, loud and clear.

Training on climate change: A training programme on climate politics and negotiations for probationary Indian Foreign Services (IFS) officers took place from July 15-17, 2013. In all, there were 36 participants for the training titled “Where words mean the world: Climate Change negotiations.” This was a short, intense course that introduced participants to how multilateral environmental agreements or MEAs are negotiated, real-time.

The idea behind conducting such a course was to provide an engaging context to its participants to be able to answer questions such as ‘Will the world manage to prevent run-away climate change? What are MEAs, such as the one on climate change, really about?’ In exploring answers, participants were expected to experience, among other things, the real challenge in diplomacy that exists. The training took place over a course of two-and-a-half days with presentations ranging from the science and politics to specific case studies on how renewables were faring in India. A mock negotiation was central to the training course. It required participants to be well-versed with different country-groups positions on various issues

and key geo-political developments for different regions which in turn informed the debate taking place within UNFCCC. The two-and-a-half-day training was divided in three ways. The first day served as an introductory session to engage the participants on the science and politics of climate change. Various presentations were made by different experts, both from within CSE and outside. Case studies on renewable energy in India were also presented to link the larger international politics to what was happening on the ground. On the second day, the mock negotiations took place. The idea behind this was to give the aspiring diplomats a sense of what it was like to be in a negotiating room and to wear the different group hats. They were expected to come prepared for this and a draft negotiating text was handed to them, which was to form the basis of their negotiations and a deal eventually. The participants were excited and very involved throughout the mock negotiations. Many of them later responded that the whole experience mirrored closely the real negotiation process that many of us watch or read about in the news. They said they were felt it was a highly enriching experience for them and something that they will remember for a lifetime. The third day was a wrap-up section with a presentation by the Director General of CSE on the status of MEA’s and how developing countries’ position have evolved (or not) over time. It was time to sit back and think about how we needed to position ourselves in future negotiations. The training was carried out without any glitches and judging from what the participants had to say, a good learning experience for them. It can now be said that not only was the goal for the training program met, it also became clear that CSE has the resources and the expertise needed for carrying out more such trainings catered to different stakeholders.

ICRN Conference: The Fourth National Research Conference on Climate Change took place at IIT Madras on October 26-27. The conference was organised jointly by the Indian Institute of Technology (IIT) Madras, IIT Delhi, Indian Institute of Science (IISc)

Bangalore and Centre for Science and Environment, Delhi. Over 200 participants from India and South Asia attended the conference which comprised of more than 90 presentations and posters on different aspects of climate change. The talks were broadly classified into climate science and impacts, mitigation, adaptation and climate policy and renewable energy. The opening remarks at the conference were presented by Dr M S Swaminathan, father of the Green Revolution in India. He outlined the importance of climate change and broadly classified the areas of study into temperature change, precipitation, rise in sea level and the difficulties in predicting extreme weather events. He added that in India, with the introduction of the Food Security Bill, food has become a legal right of every Indian citizen. However, one must also keep in mind the seasonal variations of food and the risks associated with agriculture and that made adaptation to climate change a crucial subject to study. The conference saw about 25 presentations on climate change adaptation, ranging from adaptation in the Mahanadi basin to contribution of policies such as Mahatma Gandhi National Rural Employment Guarantee Act to climate change adaptation. Presentations from South Asia covered topics such as decrease in milk yield and increased incidence of diseases among livestock in Nepal, and how farmers of Mustang, Myagdi and Chitwan have adopted adaptive strategies such as integrated farming, changing herd size and composition, veterinary and livestock services, improved feeding practices, institutional arrangements, weather warning and water services.

Vulnerable India report: CSE's report titled "Vulnerable India" is a study that deals with the impact of climate change on the poor and vulnerable by addressing adaptation from the lens of ecological poverty. The study assessed and reviewed the existing climate policy, the finance mechanism and the current levels of engagement of institutions to tackle social vulnerability resulting out of existing climate vulnerability. This study provided the climate change team with a

very wide overview by their exposure to various players ranging from professionals, including NGOs, scientists, farmer organisations to nodal ministries in charge of implementing climate policy in the country. The study was done to assess the climate change policies in India and it was a consultative study—with officials in ministries such as water, agriculture, rural development, panchayati raj, and institutions such as the Planning Commission. The report gives out recommendations on the way ahead. Some of these include recognizing the serious risk posed by climate change to India, prioritizing the needs of the poor, integrate rather than isolate responses to climate impacts, accelerate decentralization, invest in accountability and redress mechanisms and review national institutional arrangements for climate finance

FOOD SAFETY AND TOXINS

Toxins in our food are the chemicals used during the growing and processing of food, which even in miniscule quantities add up to an unacceptable intake of poisons. Exposure to pesticides through our diet leads to chronic diseases. The best way is to manage the food basket—calculate how much and what we eat—to ensure that pesticide limits are set at safe levels. We have no option but to ingest a little poison to get nutrition, but how do we keep it within acceptable limits? This means setting safe pesticide standards for all kinds of food.

Then there are toxins, which should not be present in food at all. For instance, a few years ago, CSE found antibiotics in the honey sold in Indian markets. It was there because industrial honey farmers fed bees antibiotics as a growth promoter and for disease control. Ingesting antibiotics makes us resistant to drugs. CSE argued for standards for antibiotics in honey produced for the domestic market, which were set by the government. The question for us remains how to ensure that this added and necessary emphasis on food safety protects the interests of small producers. This is why we



First Food book release

believe that we need policies to change the business of food so that it is safe and it protects livelihoods.

It is also clear that food has to be not just safe, but also nutritious. Today, the world's panic button has been pressed on the matter of food that is junk—high on empty calories and bad for health. There is more than enough evidence that bad food is directly linked to the explosion of non-communicable diseases in the world. There is enough to say that enough is enough.

KEY ACTIVITIES:

Expert Round Table on Environmental Remediation in and around Union Carbide Factory, Bhopal: Institutional logjam was evident on the issue of soil and groundwater remediation in and around the Union Carbide Factory site in Bhopal. Even after about three decades of the Bhopal gas tragedy and several state and central committees, and judicial intervention, the toxic pesticide and chemical waste is

continually contaminating the nearby groundwater affecting the health of the local population. Incineration of the 350 MT toxic waste was perhaps a smaller issue than the bigger needs of groundwater remediation.

The team analysed over 15 studies conducted over the last two and a half decades and tracked the developments in the judiciary and government. In order to break the logjam, the way-ahead was discussed over a roundtable for two days with stakeholders including the state and central governments, affected local community and scientific community.

An action plan – Environmental in and around UCIL, Bhopal – was collectively developed by experts during the discussions, which was also presented to the Joint Secretary MoEF towards the end of the two-day discussions. With a five year action plan spread over immediate and medium –and long-term, the action plan addressed the key issues of how to manage the 350 MT of toxic waste; remediate soil and groundwater; decontaminate and decommission the plant

structure and equipment; and fate of the UCIL going forward.

The Action was released over a press briefing at Bhopal and got extensive positive media coverage locally and nationally. It was also covered by few International media houses. The Action plan was later sent to parliamentarians and respective policy makers.

Heavy metals in cosmetics available in India: CSE's Pollution Monitoring Laboratory (PML) had found heavy metals such as mercury, chromium and nickel in over 40% of fairness creams and lipsticks tested. The programme team extensively corresponded with manufacturers/marketers of the respective products to understand the reasons for the same and actions taken so far.

After having collated the responses from the industry, the programme team released the cosmetics study findings through social

media, press release and followed up by media interaction. Information was shared through a separate webpage, DTE story and PML study report. Besides, the lab results, the information package included state of affairs in Indian regulatory landscape, global best practice standards, and responses by the industry. The release got extensive media coverage in India and was captured in several global news pieces.

The analysis of the results along with a set of recommendations was sent to respective policymakers at the center and state FDAs. The intervention made by CSE was received well by health ministry, Bureau of Indian Standards (BIS), Drug Controller General of India (DCGA) and CSE was invited to a BIS sectional committee meeting on cosmetics. The committee chair (DCGA) agreed to the findings and the need to set the standards for individual heavy metals. Based on the CSE study, a question was also raised in the parliament and Minister of Health answered on the state of the affairs.



Media briefing in Bhopal

Campaign against junk foods: The programme team got the opportunity to push for its position on junk foods through a Expert Group that was constituted by the FSSAI and was set by the Hon'ble High Court of Delhi based on a PIL. The prayers of PIL included a ban on junk foods in schools and near-by areas, regulations on marketing and promotions targeted at children, a policy for school canteens. Sunita Narain, DG, CSE as a chair of the working group led the initiative and the programme team developed a guideline document with inputs from other members through a series of meetings.

Though the outcome is subject to the court judgment in this case, the document submitted is expected to provide a useful platform for a much stronger advocacy and outreach. The short-comings in the final report submitted to the Hon'ble court by the FSSAI were also highlighted.

Others: The programme team was also involved in several activities that are part completed during the year. The outputs and outcomes of these would be reflected in subsequent years. These activities include policy research on mobile radiations; monitoring of mobile tower radiations in Delhi and NCR; research on antibiotic resistance and its use in industrial production of food animals; follow-up advocacy through write-ups, press releases on historical campaigns such as pesticides etc.

Finished product standards for individual heavy metals in cosmetics: Based on CSE's study and recommendations, BIS in principal has agreed to set the standards for individual heavy metals such as mercury, chromium in all cosmetic products and make suitable amendments. As of today there are standards for total heavy metals in finished products. A process has been formalized, wherein Central Drug testing laboratory would provide data on historical testing done on samples. The data would be shared and discussed at the cosmetics sectional committee of the BIS to determine limits for individual metals in cosmetics. CSE has also requested to be a part of this exercise.

Standards for Trans-fatty acids: Based on CSE's junk food study In 2012 and subsequent advocacy, FSSAI has notified standards for presence and labelling of trans-fatty acid limits at 10% by weight in fats, oils, emulsions, hydrogenated vegetable oils etc. Earlier there were no such limits. While this is far from best practices in international standards, FSSAI is inclined to further taper it down to 5%. CSE is continually advocating for more stringent standards.

Regulation of erstwhile 'Energy Drinks': CSE's previous campaign on caffeine content in energy drinks has been instrumental in notification by FSSAI wherein better labelling requirements around health warnings are set such as not recommended for children, pregnant and lactating; amount of caffeine; no health or energy claims etc. The caffeine content is kept at 320 ppm which is higher than in the soft drinks, but the drinks would no longer be called energy drinks, they are caffeinated beverages.

WATER ADVOCACY AND RESEARCH

CSE has been an important thought-leader in this sector. It has already influenced global policies and strategies to focus on the need for technologies to augment water resources in a decentralised manner through rainwater harvesting and to use that water to optimise on benefits. In fact, CSE's massive documentation of the extraordinary wealth and ingenuity of people living across different ecological systems to manage water (*Dying Wisdom: The Rise, Fall and Potential of India's Traditional Water Harvesting Systems*) is a guide on reinvention of solutions for today's challenges. Today, rainwater harvesting has been made mandatory in many cities in India and several states as well as the central government have launched schemes to popularise and support it. In addition, the Indian government has recognised the need for decentralised water management strategies in its rural employment generation programme (MGNREGA). The challenge is to ensure effective implementation of these programmes so that there is wider acceptability and upscaling.



Participants of the training programme

KEY ACTIVITY

Workshop in Colombo Sri Lanka: Towards conservation of waterbodies: CSE organised a day long workshop on conservation of waterbodies in Sri Lanka on June 11, 2013. The workshop was attended by more than 70 people including researchers, activists, city planners, advocates and regulators from Sri Lanka. Sh Dinesh Gunawardane, Hon'ble Minister of Water Supply and Drainage also attended the meeting. It was an initiative to influence the policy debate on conservation of waterbodies in South Asia and to push policies that encourage participatory and locale-specific systems for their conservation.

Workshop in Dhaka, Bangladesh; Excreta does matter – A knowledge sharing seminar on water and waste: CSE organised a knowledge sharing seminar in partnership with the Bangladesh Institute of Planners (BIP) on September 4th, 2013 to share knowledge on river conservation, pollution monitoring, urban sewage treatment, groundwater and lake management in India and Bangladesh. More than hundred people

participated in the workshop and shared their views and opinions. The participants included regulators, policy makers, municipal engineers, researchers, academicians, students and NGOs of Bangladesh.

Workshop in Khulna, Bangladesh; Excreta does matter- A knowledge sharing seminar on water and sanitation: A seminar on water and sanitation in partnership with Centre for Coastal Environmental Conservation, a Khulna based NGO was organised on September, 8, 2013 to share the knowledge on urban groundwater, lake management and sanitation in India and Bangladesh. More than sixty people participated in the seminar and shared their views and opinions. The participants included regulators, policy makers, municipal engineers, researchers, academicians, students and NGOs of Bangladesh.

CSE's knowledge sharing seminar on traditional tank systems in India and Sri Lanka: CSE, New Delhi, India, organised a half day knowledge sharing seminar in Combo, Sri Lanka on November 26, 2013. The meeting focussed on the state of tanks of



Workshop on 'Water resources conservation: village ponds and lakes'

both the countries, their restoration schemes and policies. The meeting was attended by researchers of Peridanya University, representatives from International NGO like UNESCO and Sri Lanka based NGO like Rainwater Harvesting Forum, Future in our hands, Movement for Land and Agriculture Reforms, scientists from Department of Agriculture, Sri Lanka, independent consultants, media and environmentalists. Both Indian and Sri Lankan participants agreed that the threats to these old traditional systems seemed to be similar and there is a need of strong legal policy for protection and conservation of these tanks.

Roundtable (consultation) meeting for finalisation of legal framework for the protection of inland waterbodies in South Asia: A two days roundtable (consultation) meeting was held on December 17-18, 2013 in New Delhi for finalization of legal framework for the protection of inland waterbodies in South Asia. CSE worked jointly with the Enviro Legal Defence Firm (ELDF) to come up with a draft framework legislation which can be presented to different law making authorities in the South

Asian countries (including India). Nineteen people from India, Bangladesh, Sri Lanka, Pakistan and Nepal that included eminent lawyers, legal advisers, and representatives of prominent NGOs attended the meeting to discuss the loopholes in the existing laws and policies related to the protection and conservation of inland waterbodies in South Asia. CSE drafted a framework legislation for protection of inland waterbodies in South Asia which has been highly rated by the eminent lawyers, researchers, activists of India, Pakistan, Sri Lanka, Bangladesh and Nepal.

Briefing paper: Legal, institutional and technical framework for lake/wetland protection: This paper describes the existing legal, institution and technical framework existing in different countries. It also mentions the successful case studies on conservation of waterbodies from the different parts of the world. This paper is the first step towards development of model law for the conservation of waterbodies in India and other parts of South Asia. The paper has been well viewed and received many hits on the website. There were queries about the

technologies and laws of conservation of waterbodies after the publication of the report.

Status paper for River Ganga: Past failures and current challenges: The paper makes a critique of the existing plans and policies to revive the river. The paper also talks about the future challenges and raises questions on what can be done to revive the river. The paper has been well viewed and received many hits on the website. After the publication of the report, National Ganga River Basin Authority has requested CSE to submit a proposal whereby they can work together with the institution on the revival strategies for the river.

Water wealth: Briefing paper on state of groundwater management in Bangladesh: This paper gives an overview of the groundwater status in different geological regions of Bangladesh. The paper also talks about the groundwater contamination, related health impacts and role of lakes in groundwater recharge. There is a detailed review of the existing laws and policies on groundwater and lakes in the country. This

paper talks about ways of groundwater recharge, lake and stormwater management in Bangladesh. The paper has been well viewed and received many hits on the website.

Plan for restoration of cascading tank systems in Anuradhapura district, Sri Lanka The paper talks about the reasons of deterioration of this system and also suggests plan for restoration of this cascading system. The paper was well appreciated by the activists, lawyers and researchers of Sri Lanka. After the publication of the report, the eminent lawyers and activists recognised a need of an umbrella law for the protection of the tanks and lakes in Sri Lanka.

Draft framework legislation for use, protection and conservation of inland wetlands in South Asia (December, 2013): CSE worked jointly with the Enviro Legal Defence Firm (ELDF) to come up with a draft framework legislation which may be presented to different law making authorities in the South Asian countries (including India). The framework has taken care of the loopholes of the existing laws and policies related to the protection and conservation of



State level workshop on 'Mainstreaming rainwater harvesting'

wetlands. The legal framework is the starting point for a set of activities that will include recommendations to the central and state governments about appropriate institutional and technical measures for wetland protection.

CSE was invited to a workshop (Wetlands governance in South Asia: Issues and options) organised by International Union for Conservation of Nature.

Technical consultancies and model projects:

CSE provided technical advice to 138 projects: Out of this, more than fifty per cent are for institutions, 14 per cent are for colonies/apartments/townships, 22 per cent are for individual residences and rest are for industries.

Model project: CSE helped Embassy of Sweden, New Delhi to plan and design rainwater harvesting in their premises. CSE also provided design for rainwater harvesting scheme for Bharat Heavy Electricals Limited (BHEL), Sector 17, Noida.

Media interactions: Water team of CSE did regular radio campaigns on water conservation on Radio One and Akashvani. The team also interacted with the following media on water issues: Press TV, The Thirdpole, Dainik Jagaran, The Shillong Times, Hindustan Times, PTC, Punjabi, IBN Live, Radio Australia, NDTV profit, ARD German Radio.

RENEWABLE ENERGY

CSE programme on renewable energy is designed to accelerate the deployment of renewable energy and strengthen energy access for the poor by designing relevant policies and programmes especially for decentralised, off-grid clean power options. The co-benefits of moving to renewable energy sources are immense- energy security, climate protection, reduced pollution and health benefits. However, challenges to upscale remain. There is urgent need for a long-term plan to move

from subsidy, incentives and tax exemptions and allow renewable energy to reach grid-parity and most importantly to play a role to provide access to large numbers of energy poor.

KEY ACTIVITIES

Small Hydro Power (SHP): CSE team analysed data of 8 small hydro and 16 big hydro power projects on the upper Ganga basin. This was done for the inter-ministerial group (IMG) which was looking into hydro power projects and ecological flows on River Ganga. The monthly flow data of 24 different streams for one year was analysed. Based on the flow parameters the tariff and energy calculations were made. Finally recommendations were submitted which showed that even after maintaining the ecological flow, there was not much reduction in the energy which could be harnessed and its subsequent effect on tariff.

Dissemination: A meeting was conducted based on the draft report "Green Norms for Small Hydro Power" in New Delhi on 9th may, 2013 to discuss the issues concerning environmental impacts of small hydro power development in the country. The meeting was well attended by various stakeholders including people from the government, academics, industry, NGOs etc. The final report was released on June 14, 2013 at Dehradun. Copies of the report was sent to all concerned stakeholders in the Government especially MNRE, MoEF, NGOs, Researchers etc.

Advocacy and outcome: The report was well received by various stakeholders especially by the government. As it was first complete documentation of environment impact of small hydro projects in the country, it was an eye-opener for the policy makers. The efforts taken by CSE to document environmental impacts of SHP are well appreciated.

Wind Energy: The use of wind power in India has been gaining importance with rapid installation in the last few years. The 12th five year plan targets to add 15,000 MW.

However, most of the new wind farms are coming up in forest areas as these areas are easy to acquire, without the requirement of any environment impact assessment. The wind power sector is in urgent need of effective environmental norms to make it actually green

Based on the findings on the research on wind power, a draft report was prepared which highlighted the need for green norms to regulate wind power development. The draft report was discussed with the stakeholders and After incorporating the discussions and comments received a final report on “Green Norms for Wind Power” was made which was released at Pune on 3rd July 2013.

RE team also assisted EIA team to research and develop a manual on “EIA guidelines for wind power sector”. The manual is a comprehensive document which includes steps to carry Environment Impact Assessment (EIA) of wind power projects as well as global best practices for wind power development. The draft manual was also released on 9th May in New Delhi. The draft manual received comments from stakeholders which was reviewed and finalised. It was released at Pune during EIA training workshop held between July 29-30, 2013.

Advocacy and outcome: The report on “Green Norms for Wind Power” was well received by various stakeholders especially by the government. As it was first complete documentation of environment impact of wind power projects in the country, it brought out many hidden facts such as large scale destruction of forests to set up wind mills in the country, impact on flora and fauna with respect to bird deaths etc. The effort of CSE to document environmental impacts of wind power is well appreciated. Presently MNRE and MoEF are discussing the report with respect to negative impacts of large scale installation of wind farms without any regulation. Very soon stricter regulations are expected for wind power installations which would help to make the sector actually green.

The wind industry association has also taken due consideration of the CSE findings. At a meeting held between CSE and wind industry representatives, the wind industry assured that it was taking all steps to ensure that environment is not being damaged by wind industry.

Mini-grid development in India: The concept of mini-grid development was an outcome of the research and meetings held around the off-grid publication, released last year. Field visits were carried out in the state of Maharashtra in order to get a sense of how mini-grids are actually helping communities. The research focused primarily on understanding the economics of the projects. Besides that, three other important components were studied: funding model, performance of the power plants, and how the electricity is being used. All four components varied on a case to case basis.

Dissemination: The findings of the research on the mini-grids formed the base for conducting the national level meeting in Raipur in August 12 - 14, 2013. As a part of the meeting, CSE team took the participants to remote villages in Chhattisgarh which are suppose to be entirely dependent on solar mini grids to meet their power needs. The visit was very interesting and useful as it brought out many hard facts such as “poor in this country have to shell out maximum money to use power”. The two day deliberations on mini grid brought out key issues facing the mini grid development in this country related to financing, development model, maintenance etc.

Advocacy and outcome: The Ministry of New & Renewable Energy is in the process of finalising the Rural Energy Access Programme which will redesign the energy future of rural India. This programme will primarily push for community-based power plants with the optimized technology for the region that would provide low cost solutions. As an impact of the Raipur discussions, MNRE has sought CSE suggestions for designing their policy. The recommendations are in progress at the moment.

Citizen's Report – Renewable Energy: CSE released its *Citizen's Report on the State of Renewable Energy* in India in February 2014. The report, first of its kind, takes a holistic view of renewable energy development in the country.

It is based on our research, travel and interactions with a wide range of stakeholders. Researchers from CSE travelled across the country and documented the performance of various large and small scale renewable energy projects. We have looked at solar, wind, small hydro, biomass, municipal waste-to-energy and decentralised renewable energy sectors. We have analyzed the performance, trend, policy challenges and barriers in developing these sectors further. Based on our research and findings, we recommended many ways for the sustainable growth of the renewable energy sector from the need for an integrated energy policy, reforming Ministry of New and Renewable Energy and incentivising the renewable energy deployment with an aim to achieve grid parity and reach energy access.

Dissemination: A book was released during the “Anil Agarwal Dialogue: Energy Access and Renewable Energy” at India Habitat Centre (IHC) on 27-28th February, 2014 to discuss the issues concerning renewable energy development with the aim of energy access in the country. The meeting was well attended by various stakeholders including people from the government, academics, industry, NGOs etc. The book is being distributed to all the relevant stakeholders as a part of disseminating knowledge and awareness for the need to mainstream renewable energy through citing examples of how it is being done in various parts of the country and what can be learnt from these instances.

Advocacy and outcome: The report is still being disseminated and the outcome of the report is not visible as of yet. It was well received at the inauguration and sold a lot of copies on the very day.

Concentrated Solar Power (CSP): Research work on concentrated solar power in India is



Book release of Citizen's Report on the State of Renewable Energy



Participants at the Anil Agarwal Dialogue on Renewable Energy

in progress. Based on that, an article was done in Down to Earth. The research started with gathering information from various developers and conducting interviews with them. It will be used to publish a report on CSP at the end of the year. The report is in final draft stage and we aim to publish it at the earliest.

Green Norms for Green Energy – New Delhi: Renewable Energy team organized a one day conference on ‘Green Norms for Green Energy’ on May 9th, in New Delhi. The meeting discussed the need for increase in renewable energy capacity in the country while creating safeguards to avoid negative environmental and social impacts. It was attended by participants from across the country including NGOs, researchers and other stakeholders.

The key focus was on small hydro power and wind power. The discussions centred on diversion of long stretches of rivers, fragmentation of forests due to linear intrusion, rapid diversion of several hectares of forest land, and regulatory loopholes. The participants concluded that there is a need for impact assessment and regulations to

minimise environmental impact. CSE also released a draft EIA manual for wind power seeking comments and suggestions from the participants.

Green Norms for Small Hydro Power – Dehradun: Renewable Energy team organized a public meeting in Dehradun to release its report Green Norms for ‘Green Energy: Small Hydro Power’. The meeting talked about the fact that small hydro power sector is not as ‘green’ as it is painted out to be. It has considerable impacts on environment. It was attended by a number of stakeholders including civil society groups, hydropower experts, industry and government officials. The conference focused on the rapid hydropower development in specifically in Uttarakhand. The notion is to utilize the hydro power potential in an ecologically sustainable manner. There should be guidelines and norms put in place so that there is much needed balance between environment and development.

Our report Green Norms for Green Energy: Small Hydro Power provides detailed analysis of hydropower projects in Uttarakhand and Karnataka. CSE has done a

detailed analysis of the ecological impact of small hydro power and global best practices of environment regulations.

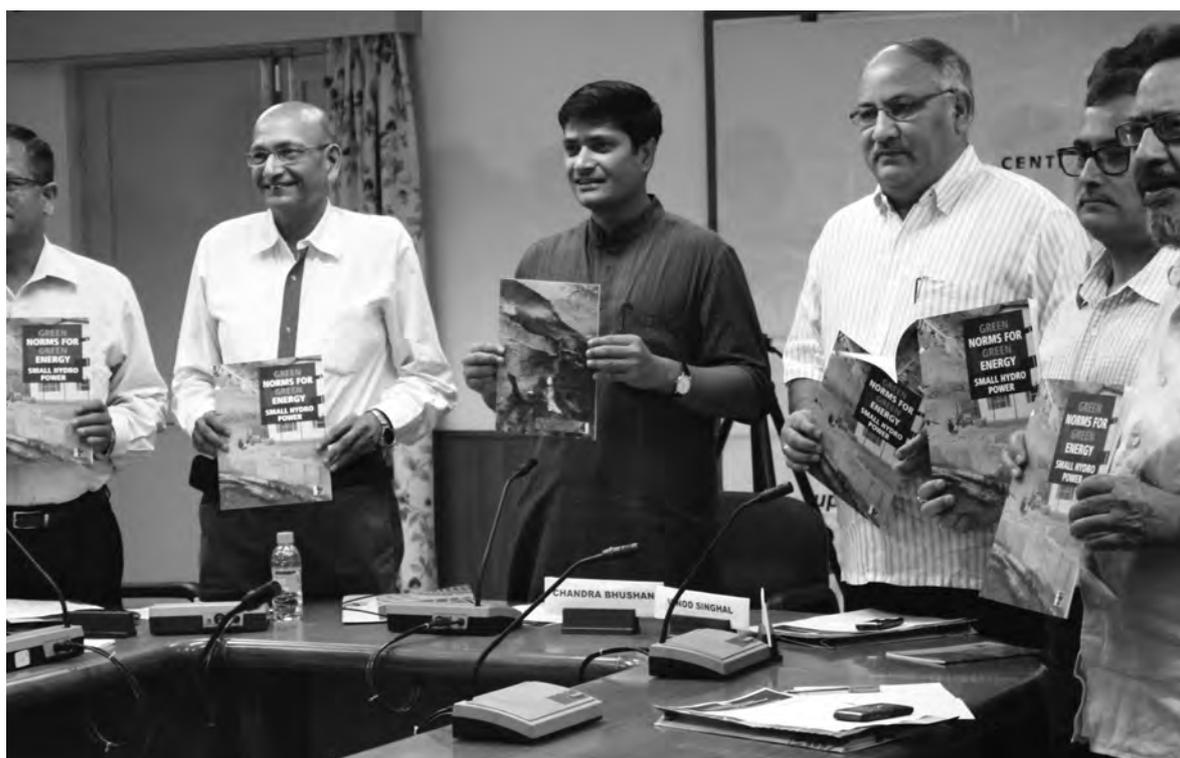
Green norms for Wind Power — Pune: Renewable Energy team organized a public meeting in Pune to release and discuss its report “Green Norms for Wind Power”. The meeting talked about the fact that wind power sector is not as ‘green’ as it is painted out to be and can lead to significant environmental damage if left unregulated. It was attended by a number of stakeholders including civil society groups, wind power experts, industry and government officials. The conference focused on making the wind power development in the country sustainable and free of any negative impacts. The notion is to utilize the wind power potential in an ecologically sustainable manner. There should be guidelines and norms put in place so that there is much needed balance between environment and development.

The report Green Norms for wind power provides detailed analysis of wind power projects in India. CSE has done a detailed

analysis of the ecological impact of wind power and global best practices of environment regulations.

Workshop on Scaling up renewable energy based mini-grids for rural electrification - Raipur: CSE organized a workshop in collaboration with Chhattisgarh Renewable Energy Development Agency (CREDA), to identify the business model/ policy framework that would help in rightly incentivizing this sector. The first part of the workshop included a field visit to few notable remote villages in the Barnawapara Wildlife Sanctuary in Chhattisgarh. The visits engaged the participants into understanding the operation model employed by CREDA in order to sustain their mini-grid performance in the villages. It also gave insight into the financial model CREDA uses in developing mini-grids in rural areas.

The deliberations in the workshop included the views of several stakeholders with experience in providing these mini-grid solutions in remote villages. The discussed rationale behind the scale up of mini-grids is that there will be a reliable



Book on Green Norms for Green Energy being released at a function

source of power supply and that the electrified villages will not have to wait for the conventional grid power to step up the aspirations of the rural poor.

The consultations insisted on the view that urgency is required from the government in order to scale up the setting up of mini-grid projects in the country especially where it would make economic sense. The participants unanimously agreed that correct financial incentives coupled with good transmission infrastructure at the tail end of the grid are the need of the hour.

It was concluded in the discussions that these programmes need to be efficiently incentivized from the centre to make them sustainable over the life cycle of the power plant. Moreover, these mini-grids would have to be technically sound in order to export surplus power into the grid and import power whenever demand exceeds the capacity of the local mini-grid.

Wind EIA training - 29-30 August, Pune:

The final version of the manual “EIA Guidelines for Wind Power” was released during Wind Power - EIA training held at YASHADA, Pune during 29-30 August 2013. As Pune is situated near to ecologically sensitive and fragile western ghat region, the training was important and successful as it brought together diverse group of stakeholders ranging from wind industry officials to NGOs, regulatory bodies etc. The training sensitized them about the environmental impacts of wind power, the need to properly assess the environment impact and made them aware of best practices being followed in the world.

Wind EIA training - 17-18 September, Bangalore:

The training was again conducted at RAMADA, Bangalore during 17-18 September, 2013 to enable stakeholders from the southern region of India to get insight into EIA for Wind Power Sector. The state of Karnataka was chosen as it accounts for major share of forest diversion for wind power projects. The training programme received overwhelming

response from range of stakeholders especially the industry, NGOs, students and other regulatory bodies.

The training was very useful especially for the industry. Gamesa has now approached CSE to help in giving training to their investors and other staff at various other locations in India such as Hyderabad, Indore and Gujarat.

South Asia Media briefing on Climate Change with focus on Renewable Energy, 18-19 September, New Delhi:

Centre for Science and Environment (CSE) organised its annual two-day briefing for South Asian journalists in September, before the deliberations for the 2015 treaty begin at this year’s Conference of Parties (CoP) in Poland. The briefing brought to the table the latest in negotiating stances, politics, science and impacts of climate change from all across South Asia. Journalists from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Myanmar and Sri Lanka, participated in the briefing.

The Future of Solar Energy : 23rd September, Gandhinagar:

The conference was jointly organised by CSE and the Gujarat Energy Research and Management Institute (GERMI). The objective of the conference was to take stock of the existing status of solar energy in India and develop a policy roadmap for its sustainable growth. The deliberations focused on how important it is to secure financing for solar projects and industry to prosper and how to develop the domestic manufacturing sector. The experts insisted that commercial lending should be encouraged to reduce dependency on central and state subsidies. Industry wants there should be more enforcement of renewable purchase obligations (RPO). Many speakers put forth the idea that solar projects should be granted ‘priority lending’ status for banks to allocate funds specifically to solar plants.

The conference supported the idea of developing an indigenous manufacturing sector. CSE recommended a financing

package to reduce the rate of interest for the loan taken by the developers. A lower rate of interest could be provided to solar power developers willing to use Indian solar modules and cells.

The rooftop solar programmes that are currently being drafted in many states were also discussed in the meeting. The participants expressed the pros and cons of different ways of financing the programmes either through net metering or feed-in tariffs. The issue still remains the possibility of connecting the rooftop solar projects to the grid, which is still not been approved by CERC.

CSE at CAG Stakeholders Workshop on New and Renewable Energy: CSE was invited by the Office of Comptroller and Auditor General (CAG) of India during their stakeholder's workshop on New and Renewable Energy on the issues and challenges being faced by Renewable Energy sector in India. The team members were invited as panelists for two different sessions on 'Small Hydro and Biomass' and 'Solar and Wind Energy' respectively. The issues and points raised by CSE was very well taken and appreciated. As CAG is preparing to audit New and Renewable energy sector of India, it has sought cooperation of CSE in assessing the Renewable Energy Sector of India. Articles published in *Down to Earth* on RE were being circulated by CAG as part of the delegate kit.

Anil Agarwal Dialogue on Energy Access and Renewable Energy: Anil Agarwal Dialogue brings together different stakeholders to discuss issues of national importance. This year, the Anil Agarwal Dialogue addressed the issue of energy access and the role of renewable energy in providing energy to all. The two-day conference was focussed on deliberating energy access issues, including electricity

for lighting and clean sources of energy for cooking, and the role of renewable energy to meet the overall unmet energy demand.

AWARENESS CREATION

Research and Reporting: During the period, the CSE RE team published stories in both *Down to Earth* magazine and web edition, spanning topics such as advocating necessary measures in JNNSM phase II policy document regarding viability gap funding, potential of the National Clean Energy Fund and extension of deadlines for solar thermal developments. The national media have covered some of the articles and quoted the CSE researchers as listed in Annexure below.

RE Pórtal: The Renewable Energy portal continues to help the team in helping in the work of disseminating information in to the public foray. As part of CSE's ongoing effort to bring about change in the Renewable Energy sector, the team is working towards creating a network of different stakeholders which will help understand their perspectives. The website is currently being revamped in order to bring more content for access to the public. We plan to the portal to act as networking platform for all stakeholders in the renewable energy sector. We intend the portal to become a one stop information source for all things renewable. We want to bridge the information gap that still exists related to renewable energy.

Newsletter: The newsletter continues to be sent to various stakeholders who may or may not have interacted with CSE but have an interest in the sector. Currently, the Renewable Energy Newsletter is being distributed to more than 1500 contacts. This has helped in reaching out to people for the events conducted by RE team.

Public Awareness

SCIENCE AND ENVIRONMENT REPORTAGE

Centre for Science and Environment covered a motley mix of environmental issues including the safety of buildings in India, how and why farmers are switching from food grain crop to vegetable farming, the state of India's mental health and the raging mining scams. There was a clear attempt to venture into areas that were not regularly covered by the magazine.

The floods in Uttarakhand this year left the state battered and bruised. Meteorologists, climatologists and geologists scampered to find a reason behind the freak event. But one of the take away from the natural disaster is the lesson that a lot of lives and property could have been saved had the state followed a proper environment management plan. CSE was there to report from ground zero right after the disaster struck. It was the first publication to term the catastrophe a 'man-made disaster', a term that was picked up by every media house in country. The mainstream media followed DTE's stories to report on the event. The reportage from Uttarakhand culminated in a cover story entitled *Heaven's Rage* published in the July 1, 2013 edition of the magazine.

South Asia was also one of the focus areas of CSE last year. Starting in September 2013, a series of in-depth analysis and feature pieces were commissioned and carried by the magazine. The idea was to understand the different environmental and development problems that plague this region, and explore problems and look at solutions common to the region.

AGRICULTURE:

Veggies Delight (April 1, 2013) captured a growing trend among small farmers to switch to vegetable farming. There is a rising demand for vegetables in the country and farmers are enthusiastically turning towards

these short-duration crops. The story concluded that farmers opting to grow vegetables because they offer greater returns at a time of low productivity of staple crops and drought.

WILDLIFE

Two cover stories looked at rhino and tiger conservation. *Curse of the Horn* (April 15, 2013) investigated the recent spurt in rhino poaching in Kaziranga and found that high international prices of rhino horns and overpopulation of rhinos in the national park is the main reason for the slaughtering of the animal.

Dark Twist to a Bright Tale (July 31, 2013) looked for reasons behind tiger deaths in the Jim Corbett National Park and found that land-grabbing by the rich and powerful in Delhi and the political rivalry between the Congress and the BJP was severely affecting the management of the park.

Human-elephant conflict is rising across India. Elephants kill every year nearly 400 people and about 100 elephants lose their lives. Enigmatically, the conflict is not restricted to the areas where elephants have traditionally been found. In fact, a large number of conflicts are being reported from regions that have had no elephant population for at least half a century is the finding from the cover of the *Out of the Jungle* (February 28, 2014).

SCIENCE

India's Mars Mission, the country's first interplanetary mission was captured in the cover story called "*Aiming for Mars.*" The story was reported from ISRO's command centre in Bangalore.

MINING

Chaos in Iron Age (May 15, 2013) looked at how illegal mining in Bellary and Goa was forming the basis for mining regulations in the country. *Troubled Beautiful Minds*

(August 1, 2013) looks at India's 30-year-old mental health programme and talks about the need to revamp IT in a way that care is available to all.

International aid has supported the economy of Afghanistan for 12 years. With aid flow gradually declining; the war-torn country will now have to find its own source of revenue. The government pins its hope on the mineral wealth, worth US \$1 trillion, underneath the country's soil. But it has faltered in its first mining project. The cover story *Mine Field* (October 1, 2013) looked at how, minerals can revive the economy only if the government brings transparency into the system and puts robust environmental regulations in place.

RENEWABLE ENERGY

One of the common problems in South Asian is that of energy. For the last few years there has been a growing demand for a South Asian Electricity Grid, a common electricity transmission and distribution system that spans from Afghanistan in the west to Bangladesh in the east. The idea was to look whether a common grid could help mitigate the energy crisis in the region. *Area of Darkness* (December 31, 2013), explored the possibilities of setting up such a grid and the problems that stop it from coming up.

CSE staff members travelled to Germany to study its energy transformation. *Germany in Transition* (September 1, 2013) analysed how Germany, once addicted to power derived from nuclear and coal sources, was making a successful transition to renewable energy. This de-carbonisation model, the story concludes, could be one that other nations can follow.

GRASSROOTS

Toilets for All (January 31, 2014), looked at how Bangladesh and Sri Lanka have managed to bring down open defecation, while most of India is still struggling with it. But certain states in India like Sikkim, Haryana and Jharkhand are faring much better than the others.

CLIMATE CHANGE

Coastal Mess (January 15, 2014) looked at the pressures of developmental activities on South Asia's coast. Given that coastal South Asia is vulnerable to climate change, proper planning is imperative before developmental activities are taken up in such areas. Reporters brought back stories of unsustainable development from Sri Lanka, Bangladesh and India, which was collated into a cover story.

NATURAL CALAMITY

As global warming intensifies, frequency of extreme weather events will also increase. In the 2013 India witnessed a freak hailstorm destroy crops in central and northern India and a super-cyclone that almost threatened to flatten parts of Orissa and Andhra Pradesh. The cover story in the November 15, 2013 issue of the magazine entitled *96 Hours that Saved the Day*, looked at how a prepared Orissa government managed to minimize human causality, even though the destruction of farmland and livelihood was immense.

HEALTH

A mystery kidney disease has assumed epidemic proportion in South Asia. The reason for this disease is not known. CSE staff travelled to different parts of India and Sri Lanka to meet people with this disease and analyze the state of research on this disease. The story *Silent Epidemic* appeared in the December 15, 2013 issue of *Down To Earth*.

GOVERNANCE

India is paying a heavy price for the large number of bilateral investment treaties, or BITs, it has signed in the hope of attracting foreign investment. This has led to a slew of global investors upset with policy changes made by the government and are seeking huge compensation from India in international arbitrations. *A Treaty Too Many* (May 1, 2013) captures how these investors are using provisions of the various BITs to seek not just monetary damages but also revocation of domestic regulatory measures.

Transition Failure (June 15, 2013) analyzed the Union Government's efforts to transfer cash directly into the beneficiaries' account. The story found that the target groups were not receiving their benefits due to lack of infrastructure.

OTHER ISSUES

CSE published a report, titled *Structural Collapse*, on major building collapses in three metros — Delhi, Mumbai and Kolkata. It found that a tedious clearance system in the construction sector has led to corruption and shortcuts, making most buildings in these metros unsafe.

CSE also published a special issue celebrating rivers in India. *River, Up Close and Personal* (August 15, 2013) carries a collection of writings on different facets of rivers in the country.

Other major stories published included Pune and Bangalore's waste management problems entitled *Why Waste* (March 31, 2014); heart diseases among young people *Matter of Heart* (March 15, 2014); and different models of milk cooperatives *Churning in Milk* (February 15, 2014).

IMPACTS

Is cycling a crime? (July 31, 2013). CSE was the first to report on the cycle and NMT ban and analyze in detail why such a ban makes no sense for Kolkata. After the report was published environmentalists and activists in Kolkata took to the streets to protest the ban, the regressive notification got widespread press coverage in national media and in international press like BBC, Guardian etc. Now a PIL has been filed at the Kolkata high court. The Kolkata administration partially lifted the ban on cyclists in end of February 2014.

The cover story, *Sterile Research* (October 31, 2013) on the decline of the national agriculture research system (NARS) has had noticeable impact. To start with the Minister for agriculture called a meeting of

the six DDGs to discuss the issues which CSE had identified as holding back or leading to stultification of research. It also led to the research head and joint director of IARI being replaced. Lab reports, a crucial process for monitoring research, have been introduced. All research labs have been asked to give the citation list and index of research papers produced by them. The government has decided to strengthen the seed sector and is going to invest more this year.

The former head of the ICAR's National Bureau of Agriculturally Important Micro-organism (NBAIM) in Mau (Uttar Pradesh), Dr. Dilip Kumar Arora, who was vice-chancellor of Sher-e-Kashmir University of Agriculture Science and Technology, Jammu has been asked to resign three years ahead of completion of his tenure. This followed a special focus (box) we had on the corruption in the institute. The story was widely circulated among the scientists and was distributed to all the laboratories.

Budgeting power, published in the (July 31, 2013) issue of the magazine talks about a mini-grid model in Rajasthan where payment model was innovated through real-time prepaid meters. Though the model empowered people to budget their power, it limited their aspirations, as they could not use fans/televisions because of high power cost. The story was picked up by many research institutions researching on mini-grids including Woodrow Wilson Institute of Public Policy. The researchers came to India and took services of the reporter in understanding the challenges associated with mini-grids.

Did Welspun fudge facts for its coal-fired power plant in Mirzapur? This story published on November 20, 2013 on the CSE website, led to the Expert Appraisal Committee of the MOEF issuing show-cause notice to Welspun. The company after receiving the notice, contacted CSE for advise for their power plant.

Poison in disguise, (May 15, 2013), was a story on fake cinnamon or Cassia being sold

in the market and its health effects. Cassia can lead to many diseases, including that of the liver. The Kerala government immediately after publication of this story sent notices to traders importing and selling Cassia and imposed a ban on it. The Union government also took steps by writing to the Ayurvedic and Unani medicine manufacturers advising them to use only the genuine cinnamon in their preparation.

Tigers on the prowl, (February 14, 2014) was a story that explored the reasons behind increasing number of tigers straying into human settlements. The story was discussed in National Tiger Conservation Authority, held in the third week of February this year. It has also been put up at NTCA's public awareness website.

Nicotine Anywhere (March 15, 2014) took on the multinational ITC on advertising nicotine laced chewing gums. The company exploited the fact that the three pieces of legislation that govern sale and distribution of drugs and cosmetics in India — the Drugs and Cosmetic Act, 1940, the Drug and Cosmetic Rule, 1945, and the Drugs and Magic Remedies (Objectionable advertisements) Act, 1955 — are silent on whether nicotine-based drugs can be promoted/advertised. The Drug Controller General of India (DGCI) claims that he only came to know about this infringement by ITC when DTE contacted him. The DGCI immediately issued notices and the company withdrew their advertisements.

The web story *why 700 liters of free water may remain a far cry for Delhi* analyzed Arvind Kejriwal's promise to supply 20 kilolitres a month to city households from January 1, 2014 was widely appreciated. Some AAP leaders couldn't help but react on Twitter by accusing the reporter of quoting incorrect data. When the reporter replied, another set of AAP leaders clarified the confusion and admitted that the figures in

the story were correct. They also admitted on twitter that the AAP leaders who were refuting the story were incorrect.

Ground Reports from Niyamgiri- On behalf of CSE, DTE was the only magazine to attend 9 of the 12 village council meetings which rejected the mining proposal by Vedanta in Niyamgiri hills. This was India's first environment referendum- media houses, activists and readers looked forward to the DTE reports that were published on the very day village council meetings were held. Editorials in newspaper houses like The Hindu spoke of the coverage. The ground reports were followed by analysis, profile and blog which got wide readership on the website.

The floods in Uttarakhand left the state battered and bruised. Meteorologists, climatologists and geologists scampered to find a reason behind the freak event. But one of the takeaways from the natural disaster is the lesson that a lot of lives and property could have been saved had the state followed a proper environment management plan. *Down to Earth* was there to report from ground zero right after the disaster struck. It was the first publication to call the catastrophe a *Man-made Disaster*, a term that was picked up by every media house in country.

The mainstream media followed DTE's stories to report on the event. The reportage from Uttarakhand culminated in a cover story entitled *Heaven's Rage* published in the July 1, 2013, issue of the magazine.

Several patent columns focus on IP regulation and article on US trade pressures on India to amend its regulations were picked and widely circulated. Perhaps following this a number of organisations have appeared before the US international trade commission in defense of India's trade policies and IP law.

Education and Training

MEDIA RESOURCE CENTRE

KEY ACTIVITIES

Media fellowships on Off-grid renewable energy - Power beyond the grid: Is renewable doable?

CSE Media Fellowship Programme invited journalists from India writing/reporting in any language to apply for its 16th Media Fellowships to address, analyse and report on the issue of off-grid renewable energy.

Four jury members shortlisted nine fellows from 43 complete applications from across the nation. Nine fellows generated 34 media clippings at the end of the fellowship. The fellows represented mainstream papers such as Hindustan Times, Jaipur Prabhat Khabar, Bahraich, and Dainik Bhaskar Jaipur as well as regional papers such as AajKaal Tripura, Kashmir Newz Srinagar, Central Chronicle Raipur and Navduniya

Media fellowships on Fragile Ecosystems of India: The fellowship on fragile ecosystems of India explored, captured and documented the events, changes and stories from the regions which are already fragile and extremely vulnerable to these climate-induced events. 8 fellows were shortlisted from 38 applicants from across India. They generated 28 media reports looking at the regions mentioned in the fellowship announcement. The fellows were from mainstream print media such as Hindustan Times, Dainik Bhaskar, The Statesman, regional print media such as Prajavani and radio Al Jazeera and All India Radio.

BRIEFING AND WORKSHOPS

Understanding environmental issues for better reportage A media briefing for local journalists, Leh, Ladakh: Furthering our initiative to work with pan cities journalists, we were approached by Leh based Ladakh

Arts and Media Organisation (LAMO) to hold a workshop for the local journalists in Ladakh. They however wanted us to extend our format to skill building in reporting for hand picked villagers who were being trained as water reporters. We saw this as an opportunity to not only extend our network, but also increase our research base into one of the remotest and under reported part of the country. We envisage to have a cadre of researchers and reporters bringing us stories from the ground, and feeding into the programmes such as climate change and renewable energy. The 2 days workshop was attended by 8 water reporters and 12 journalists from AIR, Reach Ladakh, Kashmir Times, Information bulletin and Ladags Sargyur. The journalists published articles covering the workshop. The water reporters and the journalists requested for a longer workshop looking at capacity building activities

Understanding environmental issues for better reportage - A media briefing for local journalists, Coimbatore, Tamil Nadu: CSE New Delhi and the PSG College of Arts and Science, Coimbatore, organised a workshop on environment and its reportage. The workshop was open to journalists working on local environmental issues, and journalism students. As the world is becoming increasingly connected due to globalisation, so are the environmental issues. Local issues with global impacts and vice versa was explored with a bird's eye view. While issues such as climate change, water stress, Western Ghats were covered in the workshop, the stress was on understanding how best to identify, research and report on them. Journalists from Tamil Nadu, Kerala, and Karnataka participated in the workshop.

South Asia media briefing on climate change: In May 2013, the Mauna Loa recording station in Hawaii, run by the US National Oceanic and Atmospheric

Administration, came up with a startling discovery: carbon dioxide had breached the 400 ppm mark for the first time ever. As we proceed in the 'danger zone', the world needs to get its act together and sign a legally binding climate treaty which will push for preventive action. The 'blind' negotiations continue this year in Poland, as urgency of collective action and responsibility rests on the world's shoulders.

CSE organised its annual two-day briefing for South Asian journalists in September, before the deliberations for the 2015 treaty begin at this year's Conference of Parties (CoP) in Poland. The briefing brought to the table the latest in negotiating stances, politics, science and impacts of climate change from all across South Asia. Journalists from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Myanmar and Sri Lanka, participated in the briefing. A 2 days media briefing with journalists from across the South Asian region. For the first time, we had a journalist from Myanmar. Media coverage, network of our journalist is continuously getting bigger, with representatives from national, and state level as well electronic media. We have successfully done 5 briefings, and it is coming together as a brand.

CSE initiative CoP-19, Warsaw: In continuation to our initiative to understand global climate negotiations for better media reporting about the ongoing discussion at the global forum, a group of 5 journalists are taken to Warsaw this year. The following journalists are supported by CSE, where they get to attend sessions, events and negotiations first hand:

1. Nitin Sethi, senior assistant editor, The Hindu, Delhi
2. Vishwa Mohan, assistant editor, The Times of India, Delhi,
3. Jayanta Basu, special correspondent, The Telegraph, Kolkata,
4. T G Biju, senior journalist, PTI, Delhi,
5. Hitendra Sharma, principal correspondent, Dainik Bhaskar, Jaipur

DTE Annual State of India's environment, 2014: The State of India's environment 2014

'*Down To Earth*' annual, brings together a set of well-reasoned and crisply-written analyses, reportages, reviews and overviews on some of the most significant developments of 2013 in fields ranging from water, mining and agriculture to governance, forests and climate change.

We are all witnesses in the changing world for Climate Alliance: "From overconsumption to solidarity" is a joint awareness-raising project of eight European and eight Southern civil society organisations, co-financed by EuropeAid. It aims to increase critical understanding and competence amongst European citizens with regard to Europe's responsibility for the social and ecological impact of its overconsumption on development in the Amazon region, sub-Saharan Africa and Asia. The project aims to encourage behavioural change that contributes to a more sustainable use of resources and to eradicating extreme hunger and poverty (Millennium Development Goals 1 and 7). CSE is one of the partners of the project, and looked at the aspect of climate change impacts in India. As case studies, the 2010 Ladakh cloud burst and 2013 Uttarakhand floods were portrayed. The panel exhibition and the web-documentaries which were put together as part of the project.

ENVIRONMENTAL RESOURCES

ACTIVITIES

Revamp and redesign of the India Environment Portal: A dedicated team of information and web specialists at CSE analysed the utility and outreach of the India Environment and revamped the India Environment Portal in 2013-14 to ensure that this portal continued to remain amongst the most popular online resource for specialised and contextual information on environment and development subjects with focus on India and the South Asia.

India Environment Portal with over 4,50,000 records on 9000 environment and geographical subjects: Till date, the portal has successfully documented and made

available over 4,50,000 most relevant and appropriate records covering more than 9600 environment, development and geographical subjects. Hence, today it is undoubtedly recognised nationally and internationally as the leading virtual single-stop gateway for specialised studies, research reports, government policies and regulations, opinions, and environmental news articles sourced everyday from over 120 international, national and regional print and electronic news sources.

350 Environment Leads, Specials and Dossiers: Over 350 most important reports, events and happenings of the year 2013-14 were analysed and presented as specialised environment information packages almost daily.

The India environment portal put-in a substantial effort to source and analyse the data and statistics on environment and present a selection of this data as interactive infographics. In 2013-14, the team sourced data and created over twelve infographics. These interactives were conceptualised and produced by the team consciously to simplify information and knowledge on a range of popular subjects – climate change, water pollution, elections, governance, etc. These have been amongst the most-viewed content on this portal. Over 400 specialised environment data sets available with the government departments - national and state were sourced and made available through the environment portal.

Content management on India Climate Resources Network website (ICRN): With latest national and international research, reports, studies. This site was also regularly maintained with other useful information – climate events, research/fellowships, jobs and a specialised Climate news bulletin.

Knowledge Services and Environment Channel on Environment Clearances (on youtube): Sourced, edited and uploaded videos showing public hearings on various industrial projects across India. IEP regularly tracked information, report and

environment/forests clearance meetings at national and state-level.

Specialised services on enviro-legal disputes, the court verdicts and the legal framework: Established a work flow to identify, source and document land mark environment-related petitions and court cases from the National Green Tribunal, High Court and the Supreme Court. Over 550 court cases and judgements have been cross-tagged and made available in the public domain.

A regular alert service on enviro-legal subjects started in January 2014 is being utilised by over 120 subscribers.

Vital statistics on India Environment Portal

Geographical reach:	226 countries
Visitors	7,21,500
Pageviews	14,93,505
Mobile + Tablet visitors	100000
Documents download per year	50000
Subscribers for weekly newsletter	1800

India Environment Portal: The Knowledge Hub on Sustainable Development

News	319557
Feature Articles, Research Papers	18702
Reports, Studies & Documents	11041
Opinions/ Blogs	3250
Court Cases/ Orders/ Judgements	550
Interactives	357
Organisations	404
Events/Announcements	393
Books	281
Multimedia – photos and videos	229
Presentations	84
Press Releases	54

Environment News Services: A searchable cross-tagged unique comprehensive news repository consisting of 319557 newsclips has been amongst the most popular services on the India Environment Portal. This service continued to present an overview on the state of the environment – international, national and regional by capturing the media perspective from over 120 newspapers covering 75 Indian cities & towns, and 26



Participants of the training programme on information management

South Asian newspapers from six countries — Bangladesh, Nepal, Bhutan, Maldives, Sri Lanka and Pakistan.

News services provided by the team includes daily environment news service and climate news service. The team also published 12 issues of India Green Files for about 525 subscribers; 12 issues of South Asia Green File for about 200 subscribers and 12 issues of Corporate Environment Inc for 150 subscribers. The team also provided specialised research support on –social and environmental impact of 45 major thermal power projects across India , sector-wise database of waste management companies in India, etc.

A weekly environment newsletter is sent to over 1900 subscribers which includes – researchers, scholars, industries, media, NGOs, government, etc.

Photo/film documentation: IEP team members have prepared a central database

consisting of over 1,50,000 photos. Besides this, the team continued to maintain and update an online photo gallery with 7000 geo-tagged photos. These photos were utilised by the centre for its communication and advocacy efforts through use in – fortnightly magazine Down To Earth, Gobar Times and other CSE publications. Photo research provided by the team also benefitted — newsletters, publications, marketing and various CSE websites.

The team also provided a vital support in tracking CSE appearances on television, and served about 18 specific requests – national and international for audio-visual assistance from individuals and institutions in the year. For example, Oxfam, Open Magazine, New York Times.

Films for awareness, advocacy and campaigns: Over 2100 films were packaged and distributed for environment awareness and education amongst NGOs, Industries, Academic/Research Institutions, etc.

Capacity building workshops on digital literacy: The team's hands-on training workshops on information management and social media remained popular, and the team conducted three workshops in India, Sri Lanka and Nepal. The team trained 98 information and communication professionals from India and six other south Asian countries- Bhutan, Bangladesh, Maldives, Nepal, Pakistan and Sri Lanka.

Recognition as the leading gateway for information on environment: IEP is recognised by the government of India as a leading gateway for information on environment and was invited for a presentation by the national-level Sectoral Innovations Councils at New Delhi. India Environment Portal was appreciated for the diversity of content and the way it is organised. Officials from Planning Commission, SIDBI and India Health Portal showed interest in collaborating with the portal.

National Data Sharing and Accessibility Policy — Project Management Unit (NDSAP-PMU) of the National Informatics Centre (NIC) has shown interest in collaboration with the India environment portal (IEP). IEP was also invited to participate in a consultation meeting for effective and wider implementation of the National Data Sharing and Accessibility Policy through the Open Government Data Platform of the Indian government.

India Environment Portal recognised for research – national and international: Information available on IEP is regularly used, referenced and quoted by leading national and international authors/publishers in their research reports and publications (in more than 60 national and international publications in 2013-14).

Content Collaboration/ interests shown by Government, Advocacy / Research organisations/Industries/Investors: Institutions, individual experts and researchers have shown interest in content and knowledge collaboration with the India environment portal. Some of the contributors have been – Ministry of New and Renewable energy, Climate Parliament, Green peace etc.

Industries and banks too have realised the potential of this portal and have been regularly updating the portal about their initiatives on environment and development. For example – Yes Bank, Adhunik Metaliks Limited, Lanco, etc.

Capacities built on information documentation and communication using new media (digital/social media): 98 information and communication professionals were trained by the team on various aspects of information documentation and communication using new media (digital/social media), from India and six other south Asian countries- Bhutan, Bangladesh, Maldives, Nepal, Pakistan and Sri Lanka.

Anil Agarwal Environment Training Institute (AAETI)

The Anil Agarwal Environment Training Institute (AAETI) aims to strengthen capacities within the government, in the civil society, in the private sector and practitioners and the academia, and will be supported by state-of-the-art research, information services and will provide a platform to interact and exchange ideas and best practices.

AAETI conducts short-term and long-term training programmes, tailored for different target groups, on a wide array of environment and development issues and topics. To encourage participation, the courses offered are linked to the training needs of the specific target groups. Some courses are synergised with certificate and diploma courses offered by mainstream universities, so that there is value addition to the career of the persons taking the courses.

CSE is developing the AAETI campus as a model green campus which will incorporate the best environmental practices in building design and construction, energy efficiency

and renewable energy, water and waste management, etc. The campus will serve as a technology demonstration and technology incubating centre for the development and propagation of environmentally sound technologies and services.

The construction at the site at Nimli, Rajasthan, about 2 hours by road from Delhi, is in full swing. CSE has obtained most of the mandatory land and environment-related clearances from the state authorities to start the construction of the proposed institute. CSE is putting in its best efforts to move things faster so that the entire training facility can be moved to the new training institute early as possible.

STATUS OF CONSTRUCTION

Construction will pick up pace as CSE has recently been granted the 'change in land use' (CLU) permission, which is considered the most challenging to obtain. The approval received for the AAETI building plan from the government will also help us moving ahead with the planned activities.



Construction of the swales



Temporary shelters at the Nimli site

The following construction related works are undertaken at the site:

500 meters long Boundary wall completed with Gabion stone wall method. The first two blocks were completed last year. Since then the remaining two blocks have been completed till plinth level. The walls of the worker's community centre and toilet block have been completed.

The site will have vegetated swales to allow percolation of storm water into the ground. The swales that will not be impacted by construction have been made at site. The construction of the swales was completed in early January 2014. The planning in the swales was done in March 2014 once the weather had improved.

Planting works have been initiated at the site with the first lot of planting done during the early months of the year. Some of the native trees were sourced from the nursery of the Rao Jodha park in Jodhpur since they are no longer available in the area. Tree guards have been installed around the saplings to protect them from animals and the elements. Dedicated staff has been employed to take care of the plants on the site. Additional planting work is being taken-up over the next few weeks during the monsoons.

- A small team of workers along with a dedicated site engineer are deployed at site.
- A temporary hand-pump has been installed.
- Two small temporary buildings to be used as a site office and for stores have been built using rammed earth walls and thatch roof. The doors and windows were installed in the site office and store rooms and the Toilet for the site office was completed in January 2014.
- The tank for treating bamboo to be used to construct the roof of the Academic Block has been built.
- The site boundaries have been demarcated using pillars and the buildings for the first phase of construction located on site.
- The sampling of Gabion Wall for the site boundary is initiated at the site.

TRAININGS UNDERTAKEN IN 2013-14

During the year, AAETI at the existing facility at Tughlakabad Institutional Area, New Delhi, continued to expand its training outreach. A total of 77 training programmes were conducted, attracting 2280 participants. These numbers represent an increase of 121 participants from the previous year, in which 2,175 were trained by CSE. Almost all CSE programmes have now mainstreamed trainings and workshops as part of their strategy of engagement with their respective stakeholders — ranging from environmental impact assessment (EIA), waste and pollution management to urban mobility, rainwater harvesting, decentralised wastewater treatment to information management, to name just a few.

While the majority of those trained in the year were Indians (1727), CSE trainings also attracted more than 536 south Asians — 112 Bhutanese, 180 Bangladeshis, 81 Nepalese, 163 Sri Lankans, among others. Of the 77 trainings conducted over a period of 400 days, 64 days of trainings were conducted outside India (52 in other south Asian countries). The following training programmes were conducted during the year:

Environment Impact Assessment (EIA): Builds capacity of environment regulators to assess the possible environment, social and economic costs of a proposed project. It looks at the tools and thumb rules to conduct an EIA.

Social Impact Assessment (SIA): This course takes participants through the entire SIA process – reconnaissance and baseline survey, land acquisition survey and the preparation of a rehabilitation plan for those potentially affected by an individual project.

Urban & Industrial Wastewater Treatment: Covers decentralised approaches to wastewater treatment and builds capacity in planning, designing and monitoring treatment systems. Includes hands-on experience in water sampling and analysis.

Decentralised Wastewater Treatment:

Helps you solve real-life problems in planning and designing rainwater harvesting and decentralised water treatment and re-use systems in both rural and urban scenarios.

Managing Air Quality: Focused on clean vehicle technology and fuels, management of in-use transport fleets and transit traffic, this course is designed to enhance understanding on air quality management and governance issues.

Urban Transport Reforms: Builds capacity in planning strategies to scale up public transport, designing multi-modal integration, bus sector reforms, walking and cycling as well as parking.

Hazardous Waste Management: Provides overview of the legal framework and covers the design of a landfill site, incineration and composting methods. Exposes participants to the status of hazardous waste in India – characterisation, recycling and possible re-use.

Green Building for Architects: Explores the scope of harmonising eco-friendly and healthy building concepts with policy-driven and market-driven approaches to accelerate adoption of resource-efficient practices in the building industry.

Challenge of the Balanace: Month-long orientation programme to give international participants first-hand experience of

Southern perspectives concerning the environment-development debate.

Agenda for Survival: Interdisciplinary month-long summer certificate course on environment and development issues that allows Indian participants to critically evaluate the critical issues that dominate the environment-development debate.

Bootcamp for young development professionals: Programme deals with ecological rights, natural resource management, food security, land tenures as well as environment and health concerns. The training includes a field visit to rural India.

Green Schools Programme (GSP): Aimed at teachers, educators and students to green their schools using CSE's own GSP manual. Includes examples of green change brought about by individual schools other than an annual rating of schools.

Empowering Institutions: Targeted at information professionals in NGOs, corporates, government and public sector undertakings, this course is for those interested in quality information management – sourcing and organising information and building contact databases.

E-Outreach: Designed to equip participants with tools to deal with the New Media age, this course deals with the how of using social media, pictures and video on the web, blogging, search engine optimisation and learning about measurement tools.

TRAININGS CONDUCTED IN 2013-14: A SNAPSHOT

Sl.	Programme	Total number of trainings	Total number of participants
1	Sustainable industrialization	31	826
2	Environment education	13	558
3	Water management	20	511
4	Sustainable mobility and clean air	4	166
5	Anil Agarwal Environment Training Institute	3	48
6	Green building	2	37
7	Information management	3	98
8	Climate Change	1	36
	Total	77	2280

leaves of important
survival trees of india —
MAHUA, ALDER, OAK,
KHEJDI, PALMYRA



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